

Do Nonmonetary Benefits Matter for Corporate Executives? Evidence from the Pay Premium for Quality of Life*

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Abstract:

We examine the effects of nonmonetary benefit on overall executive compensations from the perspective of the living environment at the firm headquarters. Companies that locate in a polluted, high crime-rate or otherwise unpleasant place pay higher compensation to their CEOs than companies locating in a more livable place. This premium in pay for quality of life is stronger when firms face tougher competition in the managerial labor market, when the CEO is hired from outside, when the CEO has short-term career concerns, and when the corporate governance is stronger. Overall, the geographic desirability of corporate headquarters is a substitution for monetary CEO pay.

Keywords: Quality of life, CEO compensation, Livability, Corporate location, Headquarters

JEL Classification: J33

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1. Introduction

Economists have long recognized the importance of nonmonetary payoff for managers, such as living environment, prestige, community standing and social respect (see Jensen and Murphy (1990), for example). However, the empirical evidence on CEO compensation mainly focuses on monetary reward, while the nonmonetary factors are largely overlooked. As pointed by Mathios (1989), a failure to account for the role of nonmonetary benefit can seriously distort our understanding of the compensation policies. From the perspective of geographic attractiveness, this paper is one of the very few studies incorporating important nonmonetary items into the overall CEO compensation package. In particular, we find a strong substitution effect of good living environment for the monetary CEO compensation: Companies in a place of lower quality of life (e.g., poor infrastructure, high rate of violent crime, heavy pollution, and unpleasant weather, etc.) pay higher monetary compensation to their CEOs than companies locating in more livable areas.

A substantial economic literature exists on the need for “disamenity compensation” and the importance of living environment for people’s career choices (Power (1980) and Myers (1987)). Given that people generally prefer a place with higher quality of living, companies must pay a higher compensation for keeping the same quality employees in an area with poor livability (Roback (1982)). Myers (1987, p.269) points out: “Firms can reduce the salary levels needed to secure adequate labor (or secure more and better workers at the same price) if they locate in an area whose quality of life is attractive to workers.”

Our primary quality of living measure is the index provided by Morgan Quitno Press, which is a leading research and publishing company that ranks cities and states in the US. Morgan Quitno measures quality of living from various aspects, including crime rate, cost of living, unemployment rate, education system, household income, weather, infrastructure, etc. Based on a large compensation dataset from 1993-2008, we first find a premium in CEO

compensation for quality of life at the headquarter locations. The premium is both statistically and economically significant. A CEO working in the least livable state (Mississippi) receives 10% higher compensation than a CEO in the most livable state (Minnesota), after controlling for the conventional firm and CEO characteristics. This pay premium in response to an unpleasant location is robust after accounting for cost of living, state income tax, and different ways of measuring annual compensation.

Furthermore, we find that competitive labor market force and managerial career concerns are important in explaining the premium for quality of life. Small firms, young firms, and firms with a large number of industry peers, which typically face tougher competition for managerial talents, tend to pay higher premium in response to an unpleasant corporate location. An externally hired CEO, who usually has better outside opportunities than an internal CEO, is also compensated more for poor geographic livability. Consistent with the view that a retiring CEO emphasizes more short-term compensation than long-term career concern, a near-retirement CEO is found to be associated with higher premium for life quality.

In addition, we study the interaction between corporate governance, living environment around the corporate headquarters, and CEO compensation. As is widely documented in prior literature, the compensation scheme in firms with strong governance is more likely to be determined by competitive market force, while CEO pay in poorly-governed firms is probably influenced by managerial power. If the pay premium for life quality is driven by the market force for managerial candidates, we should expect it to be most evident for firms with stronger governance. Based on various proxies for corporate governance, we find supporting evidence for the above view. This result also suggests that the premium in pay for quality of life is part of efficient contracting in the executive compensation practice.

Lastly, we do some additional investigation to further our understanding of the pay premium for quality of life. First of all, we use alternative rankings provided by *Business Week* and *Forbes* magazines for the quality of life across the US. Our results are largely unchanged under these different ranking methods. Second, we extend our investigation to all the top five executives and find that this premium applies not only for CEOs but also for top management teams.

Our paper contributes to the literature on executive compensation by providing the first systematic examination (to our knowledge) of the geographic attractiveness of the firm headquarters. We demonstrate that, in addition to conventional financial parameters like firm size and performance, the livability at corporate headquarters is also important in attracting executive talent and eventually influences compensation. Our results suggest that the nonmonetary benefits, like a nice living environment, are a substitute for monetary payoff to corporate executives.

The plan of the paper is as follows. We describe our sample and variable construction in the next section. We explore the existence and justification of the pay premium for quality of life in Section 3. Additional investigation is implemented in Section 4, and we conclude in Section 5.

2. Sample Formation and Variable Construction

Our primary proxy for quality of life across the US is the state ranking, published by Morgan Quitno. The ranking has been done on an annual basis from 1991 to 2010. Morgan Quitno measures quality of living based on 43 factors, including crime rate, cost of living, unemployment rate, education system, household income, weather, infrastructure, etc. As shown in the appendix, to determine a state's "Livability Rating," Morgan Quitno takes the average of

each state's rankings for those 43 factors. Among them, there are 24 factors that are negatively associated with the state's livability (for example, crime rate, living cost and unemployment rate). There are 19 factors that are positively associated with the state's livability (for example, per capita personal income, percent of days that are sunny and home ownership rate). The scale for each factor is 1 to 50 and all factors are given equal weight: The higher the ranking for each factor, the less livable. In other words, a higher average for these factors means that the state has less positive factors and/or more negative factors. Notably, these 43 factors are broadly consistent with economics literature on quality of life (see, for example, Blomquist et al. (1988), Gyourko and Tracy (1991), and Viscusi (1993)).

It is worth noting that there are various rankings for the livability in US cities and states provided by other institutions, like *Forbes* magazine and Bloomberg *Business Week*. We chose Morgan Quitno mainly because, unlike other rankings which usually cover only a limited number of US cities for the very recent years, it provides the widest time-series and geographic coverage. As shown in the later part of the paper, using alternative rankings gives similar results.

As Compustat only records the firm's current headquarter locations, we collect the historical record of firms' headquarters information from Compact Disclosure, following Pirinsky and Wang (2006). Further, we collect CEO compensation data from ExecuComp, accounting information from Compustat, and stock price information from CRSP. We use ExecuComp Item *TDC1* to measure an executive's total compensation in a given year, which is the sum of the executive's salary, bonuses, long-term incentive plans, the grant-date value of restricted stock awards, and the Black-Scholes value of granted options.

Based on existing literature, we also include a set of control variables that influence compensation policies. We measure firm size (*Firmsize*) as the natural logarithm of the firm

sales. To control for firm growth opportunities, we compute market-to-book (M/B) as the ratio of market value of common equity over the book value of common equity, where the market value is obtained as fiscal year closing price multiplied by common shares outstanding. Return on assets (ROA) is measured as the ratio of net income before extraordinary items and discontinued operation over total assets. We compute *Leverage* as the ratio of long-term debt and current debt over total assets minus book value of equity plus market value of equity; *Cash* as the ratio of the cash item over the firm's total assets; and *Capex* as the ratio of capital expenditure over the firm's total assets. To measure the firm risk, we use stock return standard deviation based on the firm's monthly returns over a five-year period. We also include the firm's annual stock return to control for the stock performance. All of the monetary variables are measured in 2008-constant dollars. To mitigate the effect of outliers, we winsorize all the continuous variables at the 1% level in both tails of the distribution. The final sample consists of 14,295 firm-year observations from 1993 to 2008.

3. Empirical Results

3.1. Summary Statistics

[Insert Table 1 Here]

As shown in Table 1, Minnesota, New Hampshire, Iowa, Utah and Nebraska are the top five most livable states; Tennessee, Alabama, West Virginia, Louisiana and Mississippi are the five least livable states. Our sample firms locate in each of the 50 states, except for Wyoming. The five states with the largest median sales are Rhode Island, Kentucky, Virginia, Kansas, and North Dakota. Not surprisingly, California has the most firm-year observations (15% of the sample observations), followed by Texas (9%) and New York (8%). It is worth noting that the

compensation pattern does not show a strong correlation with the states' ranks, suggesting that it is important to control for other firm characteristics in the regression analysis.

[Insert Table 2 Here]

Table 2 reports the firm and CEO characteristics. The mean (median) CEO total pay is \$5,168 thousand (\$2,925 thousand); the mean (median) salary and bonus is \$1,538 thousand (\$1,024 thousand). The median firm is quite large; its sales are \$1,428 million. The sample firms are performing well, with a median *M/B* ratio of 2.36, *ROA* of 5.08%, and annual stock return of 12.32%. Moreover, the median firm is moderately leveraged with *Leverage* of 12%, and has sizeable cash holdings of 4% total asset, and makes considerable investment with *Capex* of 4%. The median CEO is 56 years old and holds 0.32% of firm stock. Panel B presents the correlation matrix of firm and CEO characteristics. The extent of correlation among most pairs of firm and CEO characteristic variables raises little concern for multicollinearity.

3.2 State Liveability Ranking and CEO Compensation

In this section, we implement a multivariate test on the effect of livability on CEO pay. In particular, we estimate the following lead-lag OLS regression:

$$\begin{aligned} \ln(\text{CEO Pay})_{it} = & \alpha + \beta_1 \text{Rank}_{it-1} + \beta_2 \text{FirmSize}_{it-1} + \beta_3 \text{Volatility}_{it-1} + \beta_4 \text{RET}_{it-1} + \\ & \beta_5 \text{ROA}_{it-1} + \beta_6 \text{M/B}_{it-1} + \beta_7 \text{Cash}_{it-1} + \beta_8 \text{Capex}_{it-1} + \beta_9 \text{CEOage}_{it-1} + \beta_{10} \text{Ownership}_{it-1} + \\ & \text{Year fixed effects} + \text{Industry fixed effects} . \quad (1) \end{aligned}$$

The dependent variable is the CEO total pay or cash pay. *Rank* is the Morgan Quitno Rank for the livability for each state. The most livable state is ranked as 1, while the least attractive one is ranked as 49. It is worth noting that the livability in each state can be largely regarded as exogenous to the company itself, as it is difficult for a firm to influence the geographic desirability of the state.

We also control for a set of firm and CEO characteristics, including firm size, performance, growth potential, risk, availability of cash, investment, CEO age and CEO ownership. Fama and French's (1997) 48 industry dummies and year dummies are included to control for industry and time variation in executive pay schemes. Throughout the entire empirical test, p-values are computed based on robust standard errors.

[Insert Table 3 Here]

Table 3 shows a significant and positive association between the rank of livability and CEO compensation, indicating that companies locating in less livable states pay higher compensation to CEOs than companies in more livable states. In Column (1), we include livability, *Firmsize* and industry and year fixed effects. The coefficient of *Rank* is 0.003 and is significant at the 1% level. The result is also economically important: Firms in the ten least livable states pay 12% higher compensation to CEOs than the firms in the ten most livable states.¹

In Column (2), we introduce other firm characteristics that are commonly used to explain CEO pay, including firm operating and stock performance, firm risk, investment, and leverage (see, for example, Core et al. (1999)). The coefficient on livability rank is 0.002 and is significant at the 1% level, suggesting that a firm in the ten least livable states pays 8% higher compensation to CEOs relative to the firms in the ten most livable states, after controlling for firm characteristics.

We further control for CEO age and ownership in Column (3), and the coefficient of *Rank* is still 0.002 and significant at the 1% level. An extreme interpretation of this coefficient is that CEOs working in the least pleasant state (Mississippi) are paid 10% higher than the CEOs in the most pleasant state (Minnesota). In Column (4), we include the state fixed effects to control for the unobserved geographic heterogeneity that may influence CEO compensation. The

¹ Suppose the average livability rank for the ten most livable states is 5, and for the ten least livable states is 45. Then we obtain $0.003 \times (45-5) = 12\%$.

coefficient of *Rank* is significantly positive. Given the inclusion of state fixed effects, the interpretation of the results is: Firms in a state which experiences downgrade in their rankings tend to increase their CEO compensation.

The coefficients of control variables are generally similar to the existing literature (for example, Core et al. (1999)). A CEO receives higher total compensation in larger firms, in better-performing firms, in riskier firms, and in firms with less leverage. Also, older CEOs get paid more. Consistent with the argument that higher ownership is a substitute for annual compensation, we find that CEOs with higher ownership receive less annual pay.

[Insert Table 4 Here]

To further assess the robustness of the pay premium for quality of life, we perform several adjustments in measuring CEO compensation. First, a place with good natural environment tends to have high cost of living, which may lead to high level of executive compensation. This possibility may work against us finding a negative relation between natural environment and cost of living. As shown in the appendix, the cost of living has already been incorporated as a factor in the Morgan Quitno ranking. To avoid controlling for cost of living twice, we do not include cost of living in our baseline regressions in Table 3. However, it is still important to examine to what extent that our results are affected by the living cost. For this purpose, we adjust the CEO total pay to the corresponding living cost, using the city of Los Angeles as the benchmark. In particular, cost of living adjusted pay is computed as [total pay \times (Los Angeles' cost of living / the city's cost of living)].²

Based on cost of living adjusted total pay as the dependent variable in Column (1) of Table 4, the coefficient of *Rank* is 0.005 and is significant at the 1% level. This result implies that firms in the ten least livable states pay 20% higher living-cost-adjusted compensation than the firms in the ten most livable states. Notably, the magnitude of *Rank* is around two times bigger after

² The city-level cost of living data is from the Council for Community and Economic Research (<http://www.coli.org>).

adjusting for cost of living directly, which is consistent with the view that the living cost may lead to underestimation of the substitution effect of natural environment on monetary CEO pay.

Second, state-level income tax is a negative factor in the Morgan Quitno ranking and income tax may be positively associated with before-tax CEO pay. In other words, our results of pay premium for quality of life can be largely driven by income tax. To examine this possibility, we define tax-adjusted pay as $[\text{total pay} \times (1 - \text{state income tax rate})]$, where we apply the highest bracket of the state income tax rate.³ Even though we cannot observe the actual income tax paid by CEOs, the tax-adjusted pay variable should be a reasonable estimation for the CEO's compensation net of state-level income tax. Column (2) of Table 4 shows a significantly positive association between *Rank* and tax-adjusted pay. The coefficient of *Rank* is 0.003, indicating a 12% after-tax pay premium of firms in the ten least livable states over the firms in the ten most livable states.

In Column (3), we use ExecuComp Item *TDC2* to measure the CEO's compensation. Item *TDC2* is the same as *TDC1* except it replaces the value of options granted with the value of options exercised during the year. Kaplan and Rauh (2009) suggest that *TDC2* measures the *ex post* pay level and *TDC1* captures the *ex ante* pay. The coefficient of *Rank* is 0.002 and significant at the 1% level. Lastly, in Column (4), we examine the effect of livability on the CEO's salary and bonus. The coefficient on the livability rank is still positive and significant at the 1% level.

Overall, the pay premium for quality of life is robust after accounting for cost of living, income tax, and alternative measures of pay.

³ The information on state income tax is from Federation of Tax Administrators (<http://www.taxadmin.org>).

3.3 Justifications of Premium of Quality of Life

Once we have identified a significant and robust CEO pay premium for quality of living, it is important to explore what drives this premium. To address these questions, we did additional analysis in this subsection.

If a poorly-located firm faces higher competition in the labor market, it needs to pay a higher premium to the CEO. Otherwise, the premium can be relatively smaller if the firm has stronger bargaining power in the labor market. We use three proxies to measure the firm's competitiveness in the managerial labor market: firm size, firm age, and number of firms in the same industry outside the state. Chidambaran and Prabhala (2003) and Kalpathy (2009) suggest that firm size and firm age are positively associated with the firm's bargaining power in the labor market, as smaller firms and younger firms face tougher competition for managerial talents. Therefore, we expect that those firms will pay a higher premium in response to less attractive locations. Our third proxy is motivated by the literature of industry clusters (see, for example, Almazan et al. (2007) and Almazan et al. (2010)). If a large number of a certain firm's industry peers are located outside the state, it implies a high likelihood that the firm's CEO will be hired by its rivals in different states. In this case, the pay premium in response to less desirable environment will be more important. In contrast, if most of the firms in the same industry are clustered in one state, the pay premium for quality of life should be smaller because it is less likely for the CEO to move to more desirable states.

[Insert Table 5 Here]

The regression specification in Table 5 is similar to that in Table 3: $\ln(\text{Total pay})$ is the dependent variable and Rank is the key independent variable. In Column (1) of Table 5, we define Small Firm dummy, taking the value of one if firm size is below the sample median and zero otherwise. The coefficient of the interaction $\text{Rank} \times \text{Small Firm}$ is 0.004 and is significant at the 1% level. This result indicates that small firms tend to pay a higher premium in response to

unpleasant living environment. The economic magnitude is also sizeable: The partial effect of *Rank* on total pay is about 0.001 for large firms (*Small Firm*=0) and is about 0.005 (0.001+0.004) for small firms. In Column (2), we define *Young Firm* dummy based on the sample median firm age, where firm age is the number of years since the firm first appeared in CRSP. The interaction *Rank* × *Young Firm* has a coefficient of 0.005, which is significant at the 1% level. This result indicates that young firms are more likely to increase CEO pay in response to a less attractive location. Furthermore, based on the number of firms in the same industry outside a given state, we define *Outside Rivals* dummy based on the sample median. When *Outside Rivals*=1, it indicates that the firm faces a more competitive labor market for managerial talents because there are many potential rivals in other states. Column (3) shows a significantly positive coefficient of *Rank*×*Outside Rivals*, implying that a poorly-located firm is more likely to pay a premium when facing a large number of potential rivals. Overall, the results in Columns (1)-(3) support the view that the compensation premium for quality of life is more evident for firms that face tougher competition for managerial talents.

The pay premium for quality of life can be different between an internally-promoted CEO and a CEO hired from outside. CEOs appointed from outside the firm are usually the ones with better reputation, stronger managerial talent and richer outside opportunities, because the hurdle for hiring an outside CEO is higher than for hiring an inside CEO since insiders have the advantage of possessing firm-specific knowledge (Milbroun (2003) and Rajgopal et al.(2006)). To examine this idea, we flag the CEO hired from inside the firm based on ExecuComp database. In particular, ExecuComp records the date when the CEO takes the CEO position and the date when the CEO first joins the company. We define *Internal CEO* dummy as one if the CEO joins the firm more than one year earlier than she takes the CEO position, and zero otherwise. In Column (4) the coefficient of *Rank*×*Internal CEO* is significantly negative, consistent with the view that the pay premium for quality of life is more important for a firm to compete for outside CEO.

Another factor that may influence the premium for quality of life is the CEO's career concern. A CEO approaching retirement tends to be more short-term oriented (Gao (2010) and Gibbion and Murphy (1992)). A young CEO, who has greater concern about future development in the labor market, may agree to work as CEO in the poorly-located company even if the current annual compensation is not high. In contrast, a near-retirement CEO, who is usually more concerned about the short-term monetary payoff, is more likely to demand a high compensation premium for working in a less pleasant place. To examine this prediction, we define the *Retirement* dummy, using the age 65 as the cutoff, and include this variable and its interaction with *Rank* in Column (3). The coefficient of $Rank \times Retirement$ is 0.005 and is significant at the 1% level. The economic interpretation of this coefficient is as follows. The partial effect of *Rank* on compensation for non-retiring CEOs is 0.002, while its partial effect for retiring CEOs is 0.007 (0.002+0.005). Clearly, managerial career concern plays an important role in explaining the compensation premium for living in a less pleasant place.⁴

In summary, Table 4 suggests that the pay premium for life quality is largely driven by the competition in the labor market for CEOs. In particular, this pay premium is more evident when the firm is small, when the firm is young, when the firm faces a large number of rivals, when the firm tries to hire an external CEO, and when the CEO has a short career horizon.⁵

⁴ It is possible that CEOs of different age cohorts have different concerns about geographic livability and that the *Retirement* dummy captures this general age effect rather than career developments. To examine this possibility, we interact *Rank* with *CEO age*. The interaction $Rank \times CEO\ age$ is not significantly different from zero and its coefficient is almost zero. This result indicates that the compensation premium for quality of life is generally the same for CEOs of different age cohorts.

⁵ It may also be interesting to know whether the quality of life premium varies across gender. We then flag female CEO, and include the female dummy and its interaction with *Rank* in the regression. The coefficient of $Rank \times Female\ CEO$ is not significantly different from zero, suggesting that the compensation premium for the location desirability is not different between female CEOs and male CEOs. This result is understandable if men and women derive the same utility from living in a pleasant place or if the CEO and his/her spouse make the career choice together.

3.4 Quality of Life Premium and Corporate Governance

There has been an active debate in the executive compensation literature. One side believes that the compensation practice is driven by competitive market force. On the other side, the agency view suggests that the design of the executive compensation is a product of managerial power, in which executives influence their own terms at the expense of shareholders (Weisbach (2007)). Is the pay premium on quality of life driven by labor market force, or by managerial power in the sense that entrenched managers use bad locations as an excuse to grab more compensation? To address this question, we examine the effect of corporate governance on the premium of quality of life in this subsection.

Prior literature has shown that firms with stronger corporate governance are associated with better compensation schemes (see Hartzell and Starks (2003) and Core et. al (1999), for example). If the premium for quality of life is part of efficient contracting driven by labor market competition for managerial talents, we expect that firms with stronger governance are more likely to pay the premium in response to an unpleasant location. In contrast, if the pay premium is one of the excuses used by powerful managers to enhance their own pay at the expense of shareholders, better-governed firms should be associated with less premium in pay.

We use a few proxies for corporate governance. First of all, Gompers et al. (2003) construct the G-index to measure governance based on 24 firm-level anti-takeover provisions. They show that better governed firms (lower value of G-index) have a higher firm value and better performance. As a second measure, we apply the entrenchment index (E-index) developed in Bebchuk et al. (2009). This index is based on the same database as the G-index but uses only six of the provisions in the firm's charter. Bebchuk et al. (2009) show that out of the 24 provisions, these six have the greatest impact on firm value. The *E-index* ranges between 0 and 6;

higher values indicate weaker shareholder rights or more entrenched management. Third, we use a staggered board as a proxy for board effectiveness. Bebchuk and Cohen (2005) show that staggered boards are associated with an economically significant reduction in firm value. Our last measure of governance is institutional ownership. As widely documented by existing literature, institutional shareholders perform a strong monitoring role on managers. When institutional investors have larger amounts at stake in the firm, they tend to have stronger incentives to devote resources to monitoring. In particular, Hartzell and Starks (2003) show that institutional holding has a strong influence on the corporate compensation policies. We measure institutional influence as the proportion of the firm's shares owned by the institutional investors.

[Insert Table 5 Here]

Table 5 shows that better-governed firms tend to pay more in response to lower quality of living. In Column (1), we define *High G-index* dummy based on the sample median; the interaction $Rank \times High\ G-index$ has a significantly negative coefficient. Given that a big *G-index* value implies poor governance, this coefficient suggests that the compensation premium to a CEO for an unpleasant location is more evident when the firm is better governed. Similar results can be also found in Column (2), where the *High E-index* dummy based on sample median E-index value is used as the proxy for corporate governance. The coefficient in front of $Rank \times High\ E-index$ is negative and is significant at the 1% level. Further, we replace E-index with *Staggered Board* in Column (3). The coefficient of $Rank \times Staggered\ Board$ also attracts a significantly negative coefficient. The positive signs in front of *G-index*, *E-index* and *Staggered Board* are generally consistent with the argument that CEOs earn more compensation when corporate governance is less effective (Core et al. (1999)). Those coefficients of the interaction terms are also economically significant. Taking Model 1 for example, *Rank* and $Rank \times High\ G-$

index have the coefficients of 0.005 and -0.005, respectively. The interpretation is: When *High G-index*=0, the partial effect of *Rank* on CEO compensation is 0.005; when *High G-index* =1, the partial effect of *Rank* is reduced to 0 (0.005-0.005=0). In the last column of Table 5, we define *Large Institutional Ownership* indicator based on our sample median institutional ownership. Consistent with Columns (1)-(3), the significantly positive coefficient of *Rank*×*Large Institutional Ownership* indicates that firms with stronger shareholder control are more likely to raise pay in response to less desirable locations of the company.

Overall, these results suggest that the pay premium for quality of life is part of the efficient contracting driven by the market force.

4. Robustness Check and Additional Investigations

4.1 Alternative Ranking for Quality of Life

We are aware that not everyone agrees on one particular ranking for quality of life. In this subsection, we use alternative ranking to test the robustness of our results. In addition to Morgan Quitno, Forbes magazine and Bloomberg Business Week publish livability ranking among US cities. Forbes has published a list of “America’s Most Miserable Cities” annually from 2008 to 2010 and a list of “America’s Most Livable Cities” annually from 2009 to 2010. Bloomberg Business Week also compiles a list of “Unhappiest Cities” for US cities in 2010.⁶ Similar to Morgan Quitno’s approach, Forbes and Business Week also construct their ranking based on factors like suicide rates, divorce rates, crime, unemployment, population loss, job loss, weather,

⁶ Forbes magazine most miserable cities 2008-2010: Akron, Buffalo, Canton, Chicago, Cleveland, Detroit, Flint, Gary, Kansas City, Memphis, Miami, Modesto, New York, Philadelphia, Rockford, Sacramento, St Louis, Stockton, Toledo, Youngstown, Los Angeles, Charlotte and Providence (www.forbes.com/2010/02/11/americas-most-miserable-cities-business-beltway-miserable-cities.html).

Forbes magazine most livable cities 2009-2010: Little Rock, Peabody, Madison, Harrisburg, Denver, Pittsburgh, Worcester, Baltimore, Cambridge, Oklahoma City, Tulsa, Stamford, Des Moines, Bethesda, Portland, Lincoln, Bridgeport, Norwalk, Trenton, Ewing, Manchester, Nashua, Omaha, Council Bluffs, Harrisburg, Carlisle, Ann Arbor, Provo, Orem, Clearfield and Ogden (www.forbes.com/2010/04/29/cities-livable-pittsburgh-lifestyle-real-estate-top-ten-jobs-crime-income_slide.html).

Businessweek America’s Unhappiest Cities 2010: Portland, St Louis, New Orleans, Detroit, Cleveland, Jacksonville, Las Vegas, Nashville Davidson, Cincinnati, Atlanta, Milwaukee, Sacramento, Kansas City, Pittsburgh, Memphis, Indianapolis City, Louisville, Tucson, Minneapolis and Seattle (http://images.businessweek.com/ss/09/02/0226_miserable_cities/index.htm).

and green space. Under these alternative rankings, we re-examine the effect of livability on CEO compensation. Given that the rankings for Forbes and Business Week only cover recent years, we apply these rankings to our entire sample period from 1993 to 2008, assuming that the city's living environment is persistent over time. We define the dummies of Business Week's America's Unhappiest City, Forbes' America's Most Miserable City, and Forbes' America's Most Livable City as 1 if the firm's headquarter locates within ten miles of the cities in the respective rankings, and 0 otherwise.⁷ In our sample, 354, 1284, and 812 firm-year observations are in Business Week's America's Unhappiest City, Forbes' America's Most Miserable City, and Forbes' America's Most Livable City, respectively.

[Insert Table 7 Here]

Table 7 shows the results with Forbes and Business Week rankings. In Column (1), we use Business Week's America's Unhappiest City dummy as our livable measure and the coefficient is 0.134 and it is significant at the 1% level. The result suggests that firms around the "Unhappiest Cities" pay about 13% higher compensation to CEOs than other companies. Using Forbes' Most Miserable and Most Livable dummies respectively, Columns (2) and (3) give consistent results: Firms at the miserable places pay more while those locating around the desirable places pay less to their CEOs. Finally, we include both *Forbes' America's Most Miserable City* and *Forbes' America's Most Livable City* in the regression analysis and find the coefficients for both dummies are significant, the first at the 5% significance level and the latter at the 10% level. The coefficients for the two dummies are 0.055 and -0.057, respectively, indicating that firms located around Forbes' Most Miserable Cities pay 5.5% higher than those located in the normal places, while firms located around Forbes' Most Livable Cities pay 5.7% less than those located in the normal places.

4.2 Premium for Quality of Life for Management Team

⁷ Instead of using ten miles, we also construct the dummies based on the same Metropolitan Statistical Areas; our results are similar.

To further our understanding of how the company pays compensation premium to attract managerial talents in response to unpleasant locations, we examine how widespread the pay premium is within the senior management ranks. The ExecuComp database includes compensation information for up to the five highest paid managers. We re-estimate Equation (1) by using all the top five executive data (excluding the CEO).⁸

[Insert Table 8 Here]

Table 8 shows that the premium for quality of life is not only for the CEO but also prevalent for other senior executives. The coefficients of *Rank* are about 0.002 and are significantly positive in all the four regressions. Notably, the magnitude of these coefficients is similar to that reported in Table 3 based on CEO compensation, suggesting that the premium for quality of life is as important for CEOs as for other top executives.

4.3 Discussion

The purpose of this paper is not to explain the choices of corporate headquarter locations, but rather to examine the real effect of the desirability of corporate locations on CEO pay. But it is still an interesting question why some firms choose to stay in an unpleasant place and pay a premium to their executives. One possible reason is that households and firms differ in their objectives, utility versus profit maximization; many places least attractive to households are most attractive to firms (Gabriel and Rosenthal (2004)). Moreover, it is theoretically possible that a firm moves its headquarters to a more desirable place in order to attract managerial talent. But moving headquarters is rarely observed in practice. For example, Pirinsky and Wang (2006) find that over the period 1992-1997, only 118 U.S. public firms relocated their headquarters, and the primary concern for headquarter location decision was to get closer to customers.

Another possible channel for geographic desirability to influence compensation is that a good working and living environment increases the CEO's productivity, which in turn increases

⁸ We don't include executive age in Table 8, because about 50% of executive age is missing in ExecuComp database.

the compensation level. This argument is less likely for the following two reasons. First of all, we have controlled for stock and operation performance in the regression, which can roughly reflect the CEO's productivity. Second, this argument suggests that CEOs working in more livable places should receive higher compensation, which is just opposite to our findings.

One of the paper's assumptions is that the geographic livability from the CEO's point of view is similar to that of ordinary people, which is reflected in rankings of the overall desirability of living. Even though it is difficult to directly test this assumption, existing evidence does support its validity. For example, in a Fortune article, Sellers and Michels (1990) report, "Ask a bunch of CEOs about their favorite cities and you'll probably hear them evaluate urban life the same way anyone else would."

It is worth mentioning that a state's attractiveness to a CEO may depend on the CEO's origin. Yonkers (2010) show that CEOs have geographic preference towards working in their home states, especially when their home states are desirable for living. Moreover, CEOs working in their home states are paid less. Our paper is consistent with Yonkers (2010) in terms of showing the important role of geography in CEO compensation policy.

Ang et al. (2010) show that the level of CEO compensation is positively associated with the number of local CEOs, and they explain this finding as the effect of social pressure on CEO compensation. It is possible that a large number of CEOs live in some unpleasant place, which pushes up the level of CEO pay due to the social pressure effect. To investigate this possibility, we compute the number of firms in the same state as a proxy for the number of local CEOs, and include it as an additional control to re-estimate Equation (1). The result of the pay premium for quality of life is the same.

It is likely that firms in the same industry tend to cluster at the same place, and therefore, the geographic difference in CEO pay reflects the industry effect. In the regression analysis, we

have controlled for industry fixed effects based on Fama and French's (1997) 48 industry classifications. As a robustness check (unreported), we also control for industry fixed effects based on 1-digit, 2-digit, and 3-digit SIC codes; our results are largely unchanged. Moreover, we pay special attention to California for the following two reasons. First, most of the IT firms are clustered in California; therefore the industry fixed effect for tech companies may be confounded with the state fixed effect. Second, California is the most populated state by the number of firm headquarters and it is in the lower half of states by desirability, which may critically influence our results. To examine whether our results are mainly driven by California, we exclude the firms in California from our sample and re-do all the empirical analysis; the results are similar.

Our primary measure of total compensation is ExecuComp item *TDC1*. Starting in 2006, the definition of *TDC1* is slightly changed.⁹ To examine the effect of this inconsistency of *TDC1* definition on our results, we follow Walker's (2009) method to reconcile the *TDC1* definition between the 1993-2005 period and the 2006-2008 period. Our results are unchanged.

5. Conclusion

Do nonmonetary benefits matter in the overall executive compensation practice? In this paper, we empirically examine this question from the perspective of the living environment around corporate headquarters. We provide the first evidence that CEOs working in unpleasant places are paid more than the ones working in more livable locations. This compensation premium for quality of life is both economically and statistically significant after controlling for conventional firm and CEO characteristics.

This pay premium for life quality is more evident for firms facing tougher competition for managerial talents, for externally-hired CEOs, and for retiring CEOs. We also find that firms

⁹ For 1993-2005, *TDC1* consists of salary, bonus, other annual compensation, the grant date value of restricted stock, the grant date value of option, long-term incentive plan and other total compensation. For 2006-2008, *TDC1* consists of salary, bonus, non-equity incentive plan, the grant date value of restricted stock, the grant date value of option, deferred compensation, and other compensation.

with strong shareholder control are more likely to pay a premium in response to a less pleasant location. These results suggest that the CEO pay premium for livability is part of efficient contracting driven by competitive market force.

Appendix. Factors considered in Morgan Quitno's state ranking

Morgan Quitno considers 43 factors in its state rankings for livability. The scale for each factor is 1 to 50; all factors are given equal weight. For negative factors, a higher number implies poorer livability. Rankings for positive factors are inverted such that a higher number also indicates poorer livability. For example, a number of 50 for crime rate, a negative factor, indicates that the state has highest crime rate in the US. A number of 50 for median household income, a positive factor, means that the state has the lowest median household income. After averaging all the 43 factors, the state with the smallest average value is ranked as No.1, the most livable state.

Negative Factors

1. Percent Change in Number of Crimes
 2. Crime Rate
 3. State Prisoner Incarceration Rate
 4. State Cost of Living Index
 5. Pupil-Teacher Ratio in Public Elementary and Secondary Schools
 6. Unemployment Rate
 7. Percent of Nonfarm Employees in Government
 8. Electricity Prices
 9. Hazardous Waste Sites on the National Priority List per 10,000 Square Miles
 10. State & Local Taxes as a Percent of Personal Income
 11. Per Capita State and Local Government Debt Outstanding
 12. Percent of Population Not Covered by Health Insurance
 13. Births of Low Birthweight as a Percent of All Births
 14. Teenage Birth Rate
 15. Infant Mortality Rate
 16. Age-Adjusted Death Rate by Suicide
 17. Population per Square Mile
 18. Divorce Rate
 19. Poverty Rate
 20. State and Local Government Spending for Welfare Programs as a Percent of All Spending
 21. Percent of Households Receiving Food Stamps
 22. Deficient Bridges as a Percent of Total Bridges
 23. Highway Fatality Rate
 24. Fatalities in Alcohol-Related Crashes as a Percent of All Highway Fatalities
-

Positive Factors

25. Per Capita Gross State Product
 26. Percent Change in Per Capita Gross State Product
 27. Per Capita Personal Income
 28. Change in Per Capita Personal Income
 29. Median Household Income
 30. Public High School Graduation Rate
 31. Percent of Population Graduated from High School
 32. Expenditures for Education as a Percent of All State and Local Government Expenditures
 33. Percent of Population with a Bachelor's Degree or More
 34. Books in Public Libraries Per Capita
 35. Per Capita State Art Agencies' Legislative Appropriations
 36. Annual Average Weekly Earnings of Production Workers on Manufacturing Payrolls
 37. Job Growth
 38. Normal Daily Mean Temperature
 39. Percent of Days That Are Sunny
 40. Homeownership Rate
 42. Marriage Rate
 43. Percent of Eligible Population Reported Voting
-

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Table 1. State Ranking and CEO Compensation

The table reports the compensation for executives in states with different livable rankings. The sample consists of 14,295 firm-year observations based on CRSP/Compustat/Execucomp merged data from 1993 to 2008. The livable ranking is published by Morgan Quitno in the end of every year. The ranking scales from 1 to 50, with 1 meaning most livable and 50 least livable. Average Rank is based on the average Morgan Quitno ranking of each state during 1993-2008. CEO Total Pay is the variable *TDCI* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Sales is from Compustat. The compensation and sales are in 2008 dollars.

Average Rank	State Name	CEO Total Pay (\$K)		Sales (\$M)		Number of firm-year
		Mean	Median	Mean	Median	
1	Minnesota	4651	2946	5626	1616	505
2	New Hampshire	2798	1840	945	802	26
3	Iowa	2614	1692	1795	1120	109
4	Utah	2234	1466	949	616	69
5	Nebraska	5469	3268	4135	1232	63
6	Kansas	7622	5095	6908	3288	63
7	Wisconsin	3492	2801	3238	1613	345
8	Virginia	6856	3784	8058	3908	372
9	Vermont	901	633	379	381	17
10	South Dakota	912	649	760	579	20
11	Connecticut	5474	3447	5729	1429	346
12	Massachusetts	4781	2892	2395	810	584
13	Colorado	5299	2923	2360	997	197
14	New Jersey	5542	3453	6329	1487	440
15	North Dakota	2435	2656	2818	2608	8
16	Idaho	2820	1599	1467	725	65
17	Maine	5596	2798	1028	591	19
18	Maryland	5924	3861	5178	1384	165
19	Oregon	2993	2116	1771	586	180
20	Delaware	5533	4644	14696	1065	42
21	Washington	3423	2126	7963	1942	229
22	Indiana	4254	2070	3904	1261	186
23	Missouri	3541	2208	3107	1734	321
24	Montana	2103	1686	543	346	12
25	Hawaii	2349	2204	1465	1608	40
26	Nevada	3285	1829	1273	924	102
27	Illinois	4868	3400	7362	2316	843
28	Ohio	4173	2740	5894	2032	784
29	Rhode Island	5516	2689	8656	3226	57
30	Alaska	1610	1404	398	420	11
31	Michigan	4748	2670	7387	2235	382
32	Pennsylvania	5233	3094	4617	1934	653
33	California	5795	2994	3710	779	2188
34	Texas	5510	3091	6132	1513	1286
35	Arizona	4481	3219	2362	998	153
36	Georgia	4731	2569	6000	1477	422
37	New York	8280	4587	8889	2325	1209
38	North Carolina	4176	2558	5168	2074	349
39	Oklahoma	3739	2198	3102	1124	115
40	Florida	5027	3731	3869	1545	443
41	Arkansas	4337	1621	13438	2348	122
42	South Carolina	2673	2313	1732	1280	78
43	Kentucky	7200	5577	6178	4680	92
44	New Mexico	1626	1466	1647	1464	13
45	Tennessee	3961	2859	4421	1433	265
46	Alabama	4320	2179	1465	831	117
47	West Virginia	1334	1297	331	314	11
48	Louisiana	3272	1843	1829	934	128
49	Mississippi	1840	1166	601	488	49

Table 2. Summary Statistics of Sample Firms

The sample consists of 14,295 firm-year observations based on CRSP/Compustat/Execucomp merged data from 1993 to 2008. Total pay is the variable *TDC1* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Salary and Bonus are the variables *salary* and *bonus* in Execucomp, respectively. Firm size is natural logarithm of total sales from Compustat. Volatility is the standard deviation of monthly stock return for the prior sixty months. RET is the buy-and hold return on the firm's stock for the prior twelve months. ROA is net income before extraordinary items and discontinued operation divided by the total asset. M/B equals market value of equity divided by book value of equity. Cash is the ratio of cash item over total asset. Leverage is defined as the sum of current liabilities and long-term debt divided by total assets minus book value of equity plus market value of equity. Capex is the ratio of capital expenditures over total assets. CEO Age is the age of the executive from Execucomp. Ownership is the ratio of shares excluding options owned by the executives over shares outstanding. All the dollar-value variables are measured in 2008-constant dollars. Correlations with an absolute value greater than 0.02 are significant at the 5% level.

Panel A: Descriptive statistics of firm characteristics

Variable	N	Mean	Std	P25	Median	P75
Total pay (\$K)	14295	5168	6436	1433	2925	6043
Salary (\$K)	14295	782	367	515	729	1000
Bonus (\$K)	14295	756	1796	0	295	887
Sales (\$M)	14295	5240	10786	555	1428	4390
Firm size	14295	7.35	1.62	6.32	7.26	8.39
Volatility (%)	14295	12.14	5.77	8.02	10.70	14.77
RET (%)	14295	19.34	49.23	-9.41	12.32	36.61
ROA (%)	14295	4.88	8.71	2.07	5.08	9.00
M/B	14295	3.27	3.21	1.61	2.36	3.83
Cash	14295	0.09	0.11	0.02	0.04	0.12
Leverage	14295	0.15	0.14	0.03	0.12	0.24
Capex	14295	0.06	0.05	0.02	0.04	0.07
CEO Age	14295	55.65	7.24	51	56	60
Ownership (%)	14295	2.51	5.81	0.09	0.32	1.47

Panel B: Correlation matrix of explanatory variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Rank	1.00										
(2) Firm size	0.00	1.00									
(3) Volatility	0.06	-0.44	1.00								
(4) RET	0.02	-0.06	0.09	1.00							
(5) ROA	-0.02	0.18	-0.31	0.20	1.00						
(6) M/B	-0.01	-0.02	0.10	0.31	0.26	1.00					
(7) Cash	-0.02	-0.35	0.42	0.13	0.00	0.23	1.00				
(8) Leverage	0.02	0.18	-0.11	-0.19	-0.30	-0.30	-0.39	1.00			
(9) Capex	0.06	-0.04	0.02	0.03	0.13	0.07	-0.08	-0.06	1.00		
(10) CEO Age	0.01	0.12	-0.20	-0.04	0.06	-0.09	-0.13	0.05	-0.02	1.00	
(11) Ownership	0.02	-0.16	0.10	0.06	0.08	0.07	0.09	-0.11	0.06	0.13	1.00

Table 3. The Existence of Pay Premium for Quality of Life

The sample consists of 14,295 firm-year observations based on CRSP/Compustat/Execucomp merged data from 1993 to 2008. Total Pay is the variable *TDC1* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Rank is the state-level livable ranking published by Morgan Quitno at the end of every year. The ranking scales from 1 to 50, with 1 meaning most livable and 50 least livable. The definitions of all other controls are the same as in Table 2. Industry dummies are constructed based on Fama and French's (1997) 48 industries. Corresponding p-values from robust standard errors are reported in brackets. The notations ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)
Rank	0.003*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.003* (0.076)
Firmsize	0.411*** (0.000)	0.431*** (0.000)	0.416*** (0.000)	0.433*** (0.000)
Volatility		1.365*** (0.000)	1.597*** (0.000)	1.634*** (0.000)
RET		0.173*** (0.000)	0.176*** (0.000)	0.164*** (0.000)
ROA		-0.057 (0.679)	0.099 (0.463)	0.802*** (0.000)
M/B		0.033*** (0.000)	0.033*** (0.000)	0.034*** (0.000)
Cash		0.114 (0.403)	0.143 (0.286)	0.164 (0.202)
Leverage		-0.070 (0.323)	-0.124* (0.080)	-0.372*** (0.000)
Capex		-0.303 (0.112)	-0.188 (0.318)	0.260 (0.164)
CEO Age			0.003** (0.013)	0.003** (0.033)
Ownership			-2.844*** (0.000)	-2.621*** (0.000)
Constant	4.849*** (0.000)	4.364*** (0.000)	4.333*** (0.000)	4.039*** (0.000)
Year Fixed Effect	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes
State Fixed Effect	No	No	No	Yes
Observations	14295	14295	14295	14295
Adj-R2	34%	36%	38%	42%

Table 4. The Existence of Pay Premium for Quality of Life—Different Measure of Pay

The sample consists of 14,295 firm-year observations based on CRSP/Compustat/Execucomp merged data from 1993 to 2008. Cost of Living Adjusted Pay is Total Pay adjusted for the cost of living of the headquarter-located city. Tax Adjusted Pay is computed as [Total Pay \times (1 - state income tax)], where state income tax is the highest bracket of the state income tax. Ex-post Pay is the item *TDC2* in ExecuComp; *TDC2* is the same as *TDC1* except it replaces the value of options granted with the value of options exercised during the year. The variable, Rank, is the state-level livable ranking published by Morgan Quitno at the end of every year. The ranking scales from 1 to 50, with 1 meaning most livable and 50 least livable. The definitions of all other controls are the same as in Table 2. Industry dummies are constructed based on Fama and French's (1997) 48 industries. Corresponding p-values from robust standard errors are reported in brackets. The notations ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1) Ln(Cost of Living Adjusted Pay)	(2) Ln(Tax Adjusted Pay)	(3) Ln(Ex-post Pay)	(4) Ln(Salary+Bonus)
Rank	0.005*** (0.000)	0.003*** (0.000)	0.002*** (0.008)	0.001*** (0.001)
Firmsize	0.409*** (0.000)	0.422*** (0.000)	0.382*** (0.000)	0.250*** (0.000)
Volatility	1.432*** (0.000)	1.410*** (0.000)	0.362 (0.107)	-0.366** (0.014)
RET	0.184*** (0.000)	0.184*** (0.000)	0.314*** (0.000)	0.101*** (0.000)
ROA	0.220 (0.106)	-0.008 (0.944)	0.658*** (0.000)	0.044 (0.693)
M/B	0.031*** (0.000)	0.031*** (0.000)	0.039*** (0.000)	0.003 (0.388)
Cash	-0.003 (0.983)	0.344*** (0.000)	0.253* (0.076)	-0.229* (0.055)
Leverage	-0.106 (0.130)	-0.140** (0.030)	-0.085 (0.276)	0.098 (0.147)
Capex	-0.074 (0.697)	-0.223 (0.195)	-0.206 (0.346)	-0.519*** (0.003)
CEO Age	0.002* (0.068)	0.002* (0.095)	0.013*** (0.000)	0.009*** (0.000)
Ownership	-2.751*** (0.000)	-2.649*** (0.000)	-2.615*** (0.000)	-1.130*** (0.000)
Constant	4.210*** (0.000)	4.267*** (0.000)	4.203*** (0.000)	4.829*** (0.000)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	14251	14295	14280	14224
Adj-R2	41%	46%	34%	28%

Table 5. The Justification of Pay Premium for Quality of Life

The sample consists of 14,295 firm-year observations based on CRSP/Compustat/Execucomp merged data from 1993 to 2008. Total Pay is the variable *TDC1* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Rank is the state-level livable ranking published by Morgan Quitno at the end of every year. The ranking scales from 1 to 50, with 1 meaning most livable and 50 least livable. Firm Age is the number of years since the firm first appears in CRSP. Outside Rivals is a dummy variable, which equals 1 if the number of firms outside this state in the same industry is above the sample median and 0 otherwise. Internal CEO is a dummy variable, taking the value of 1 if the CEO was promoted from inside the firm and 0 otherwise. Retirement dummy equals 1 if the CEO reaches age 65 or above and 0 otherwise. The definitions of all other controls are the same as in Table 2. Industry dummies are constructed based on Fama and French's (1997) 48 industries. Corresponding p-values from robust standard errors are reported in brackets. The notations ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)
Rank	0.001 (0.390)	-0.000 (0.769)	0.000 (0.599)	0.004*** (0.000)	0.002*** (0.001)
Small Firm	-1.064*** (0.000)				
Rank×Small Firm	0.004*** (0.001)				
Young Firm		-0.071** (0.041)			
Rank×Young Firm		0.005*** (0.000)			
Outside Rivals			-0.008 (0.889)		
Rank× Outside Rivals			0.002* (0.100)		
Internal CEO				-0.025 (0.486)	
Rank×Internal CEO				-0.002* (0.078)	
Retirement					-0.162** (0.020)
Rank×Retirement					0.005** (0.028)
Firmsize		0.422*** (0.000)	0.441*** (0.000)	0.416*** (0.000)	0.416*** (0.000)
Volatility	-0.268 (0.225)	1.437*** (0.000)	1.840*** (0.000)	1.548*** (0.000)	1.522*** (0.000)
RET	0.157*** (0.000)	0.175*** (0.000)	0.159*** (0.000)	0.177*** (0.000)	0.176*** (0.000)
ROA	0.970*** (0.000)	0.071 (0.599)	0.828*** (0.000)	0.095 (0.481)	0.097 (0.474)
M/B	0.040*** (0.000)	0.033*** (0.000)	0.035*** (0.000)	0.033*** (0.000)	0.033*** (0.000)
Cash	-0.414*** (0.001)	0.177 (0.182)	0.216* (0.094)	0.141 (0.292)	0.136 (0.308)
Leverage	0.294*** (0.000)	-0.132* (0.061)	-0.405*** (0.000)	-0.119* (0.092)	-0.124* (0.079)
Capex	-0.662*** (0.001)	-0.189 (0.317)	0.103 (0.571)	-0.209 (0.269)	-0.203 (0.282)
CEO Age	0.004*** (0.001)	0.004*** (0.003)	0.003*** (0.009)	0.003*** (0.006)	
Ownership	-3.210*** (0.000)	-2.886*** (0.000)	-2.612*** (0.000)	-2.880*** (0.000)	-2.754*** (0.000)
Constant	7.939*** (0.000)	4.281*** (0.000)	4.031*** (0.000)	4.384*** (0.000)	4.519*** (0.000)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes
Observations	14295	14295	14295	14295	14295
Adj-R2	30%	38%	41%	38%	38%

Table 6. Corporate Governance and Pay Premium for Quality of Life

The sample covers from 1993 to 2008. Total Pay is the variable *TDC1* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Rank is the state-level livable ranking published by Morgan Quitno at the end of every year. The ranking scales from 1 to 50, with 1 meaning most livable and 50 least livable. High G-Index is a dummy variable that equals 1 if the governance index by Gompers et al. (2003) is above the median, and 0 otherwise. High E-Index is a dummy variable that equals 1 if the entrenchment index by Bebchuk et al. (2009) is above the median, and 0 otherwise. Staggered Board dummy indicates whether the board is staggered (Bebchuk and Cohen (2005)). Large Institutional Ownership is an indicator variable based on the median of our sample institutional ownership. The definitions of all other controls are the same as in Table 2. Industry dummies are constructed based on Fama and French's (1997) 48 industries. Corresponding p-values from robust standard errors are reported in brackets. The notations ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)	Ln(Total Pay)
Rank	0.005*** (0.000)	0.004*** (0.000)	0.007*** (0.000)	-0.000 (0.855)
High G-index	0.214*** (0.000)			
Rank × High G-index	-0.005*** (0.000)			
High E-index		0.237*** (0.000)		
Rank× High E-index		-0.004*** (0.002)		
Staggered Board			0.264*** (0.000)	
Rank× Staggered Board			-0.008*** (0.000)	
Large Institutional Ownership				0.067 (0.101)
Rank× Large Institutional Ownership				0.002* (0.075)
Firmsize	0.430*** (0.000)	0.435*** (0.000)	0.432*** (0.000)	0.423*** (0.000)
Volatility	2.302*** (0.000)	2.345*** (0.000)	2.249*** (0.000)	1.822*** (0.000)
RET	0.183*** (0.000)	0.179*** (0.000)	0.184*** (0.000)	0.174*** (0.000)
ROA	0.313* (0.086)	0.326* (0.076)	0.315* (0.085)	0.053 (0.658)
M/B	0.036*** (0.000)	0.037*** (0.000)	0.037*** (0.000)	0.031*** (0.000)
Cash	-0.020 (0.915)	-0.005 (0.978)	-0.046 (0.803)	0.020 (0.844)
Leverage	-0.158* (0.056)	-0.168** (0.042)	-0.137* (0.098)	-0.161** (0.047)
Capex	-0.226 (0.324)	-0.232 (0.311)	-0.209 (0.362)	-0.217 (0.283)
CEO Age	0.005*** (0.000)	0.006*** (0.000)	0.006*** (0.000)	0.004*** (0.002)
Ownership	-3.169*** (0.000)	-3.090*** (0.000)	-3.235*** (0.000)	-2.885*** (0.000)
Constant	3.673*** (0.000)	3.638*** (0.000)	3.590*** (0.000)	4.346*** (0.000)
Year Fixed Effect	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes
Observations	10046	10046	10046	11842
Adj-R2	41%	41%	41%	40%

Table 7. Alternative Rankings and CEO Compensation

The sample consists of 14,295 firm-year observations based on CRSP/Compustat/Execucomp merged data from 1993 to 2008. Total Pay is the variable *TDC1* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Business Week's America's Unhappiest City, Forbes' America's Most Miserable City and Forbes' America's Most Livable City are dummies defined as 1 if the firms' headquarters are located within ten miles from the cities in the three rankings, otherwise 0. The definitions of all other controls are the same as in Table 2. Industry dummies are constructed based on Fama and French's (1997) 48 industries. Corresponding p-values from robust standard errors are reported in brackets. The notations ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1) Ln(Total Pay)	(2) Ln(Total Pay)	(3) Ln(Total Pay)	(4) Ln(Total Pay)
Business Week America's Unhappiest City	0.134*** (0.000)			
Forbes America's Most Miserable City		0.059** (0.029)		0.055** (0.044)
Forbes America's Most Livable City			-0.064* (0.070)	-0.057* (0.081)
Firm size	0.441*** (0.000)	0.440*** (0.000)	0.441*** (0.000)	0.440*** (0.000)
Volatility	1.857*** (0.000)	1.863*** (0.000)	1.834*** (0.000)	1.847*** (0.000)
RET	0.158*** (0.000)	0.159*** (0.000)	0.160*** (0.000)	0.160*** (0.000)
ROA	0.822*** (0.000)	0.830*** (0.000)	0.821*** (0.000)	0.827*** (0.000)
M/B	0.035*** (0.000)	0.035*** (0.000)	0.035*** (0.000)	0.035*** (0.000)
Cash	0.207 (0.112)	0.205 (0.116)	0.212 (0.103)	0.208** (0.020)
Leverage	-0.422*** (0.000)	-0.412*** (0.000)	-0.411*** (0.000)	-0.411*** (0.000)
Capex	0.079 (0.663)	0.106 (0.559)	0.091 (0.617)	0.107 (0.551)
Age	0.003** (0.011)	0.003*** (0.010)	0.003*** (0.008)	0.003*** (0.004)
Ownership	-2.590*** (0.000)	-2.603*** (0.000)	-2.599*** (0.000)	-2.601*** (0.000)
Constant	4.051*** (0.000)	4.041*** (0.000)	4.042*** (0.000)	4.040*** (0.000)
Year Fixed Effect	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes
Observations	14295	14295	14295	14295
Adj-R2	41%	41%	41%	41%

Table 8. The Pay Premium for Quality of Life for Management Team (Excluding CEO)

The sample consists of 65,732 person-year observations based on top five executives (excluding CEOs) recorded in ExecuComp from 1993 to 2008. Total Pay is the variable *TDC1* in Execucomp, which consists of salary, bonus, value of restricted stock granted, value of options granted (using Black-Scholes), long-term incentive payouts, and other compensation. Rank is the state-level livable ranking published by Morgan Quitno at the end of every year. The ranking scales from 1 to 50, with 1 meaning most livable and 50 least livable. The definitions of all other controls are the same as in Table 2. Industry dummies are constructed based on Fama and French's (1997) 48 industries. Corresponding p-values from robust standard errors are reported in brackets. The notations ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1) Ln(Total Pay)	(2) Ln(Total Pay)	(3) Ln(Total Pay)	(4) Ln(Total Pay)
Rank	0.003*** (0.000)	0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.000)
Firm size	0.381*** (0.000)	0.432*** (0.000)	0.433*** (0.000)	0.426*** (0.000)
Volatility		1.563*** (0.000)	1.559*** (0.000)	1.410*** (0.000)
RET		0.119*** (0.000)	0.119*** (0.000)	0.120*** (0.000)
ROA		0.245*** (0.000)	0.243*** (0.000)	0.243*** (0.000)
M/B		0.001*** (0.006)	0.001*** (0.006)	0.001*** (0.004)
Cash		0.667*** (0.000)	0.672*** (0.000)	0.588*** (0.000)
Leverage		-0.764*** (0.000)	-0.760*** (0.000)	-0.741*** (0.000)
Capex		0.344*** (0.000)	0.334*** (0.000)	0.459*** (0.000)
Ownership			0.001*** (0.001)	0.001*** (0.000)
Constant	3.931*** (0.000)	3.314*** (0.000)	3.304*** (0.000)	3.366*** (0.000)
Year Fixed Effect	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes
State Fixed Effect	No	No	No	Yes
Observations	65732	65732	65732	65732
Adj-R2	40%	44%	44%	45%