Is Executive Compensation Shaped by Public Attitudes? *

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Abstract

We document that public opinion influences executive compensation. Transient negative shocks to the public's view of executive pay are followed by lower total CEO pay, and by a shift away from options-based compensation and towards other types of pay. CEO compensation also depends on persistent local social norms, such as state-level attitudes towards income inequality. In states where residents are likely to be more concerned with income inequality CEO pay is lower across all types of compensation. Therefore, by changing the incentives faced by executives, public attitudes may drive firm decisions and real economic outcomes.

JEL Classifications: G34, M52, J33

Keywords: executive compensation, public opinion, social norms, income inequality aversion

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1 Introduction

In recent years the topic of executive pay has been the subject of much public debate.[1] At the same time, the share of the U.S. population thinking that income inequality in general is too high has also risen (McCall (2003)). This raises the question whether there is a link between executive compensation and public attitudes towards fair pay.

The economics and finance literature on executive compensation[2] typically assumes a competitive labor market for executive talent, where public attitudes or social norms have no impact on pay. Theoretical work in economics (Akerlof (2007)), however, suggests that norms are important determinants of behavior, and therefore it is possible that they will also impact incentive design. In this paper we investigate whether it is the case that public attitudes influence chief executive officer (CEO) compensation, and find evidence in support of this hypothesis.

We investigate how firms react to transient changes in the public's opinion of executive pay, and also, how they adapt CEO pay to persistent local social norms, such as state-level attitudes towards income inequality. We find that both the transient and permanent components of social norms have an effect on the level and composition of CEO pay. Executive compensation changes in ways that are consistent with adaptation to the norm, or to the attitudes of the general public.

There are several reasons for why firms should react to public attitudes on CEO pay. First, firms violating social norms face high reputational costs (Dyck and Zingales (2002)).[3] Corporate reputation is often classified as an intangible asset and as a signal about the underlying quality of a firm's products (Milgrom and Roberts (1982)). Several studies show that there is a positive relation between a firm's reputation and its financial performance (Michalisin, Kline, and Smith (2000), Roberts and Dowling (2002)). In the context of executive pay, norms reflecting what people consider to be appropriate or fair compensation for themselves and for others around them might thus be important for the design of compensation contracts. Specifically, public attitudes regarding fair pay

[1] See, for instance, the article published on September 18^{th} 2008 in the New York Times titled "Need a Job? $17,000 an Hour. No Success Required."

[2] See Murphy (1999) for an extensive review. More recent papers include Murphy and Zabojnik (2004), Frydman (2005) and Gabaix and Landier (2008).

[3] As an example, Dyck and Zingales (2002) describe an instance of public outrage after U.S. networks reported how a Panamanian tuna boat killed hundreds of dolphins while fishing for tuna. The outrage let to a boycott of tuna products because tuna producers were suspected not to use dolphin-safe nets when fishing for tuna. The producers, although they had no fiduciary duty to environmentalist groups, then announced that they would only sell dolphin-safe tuna.

may matter for CEO compensation because firms want to avoid getting a bad reputation, which may occur if they keep paying high salaries to their CEO despite the public outrage. This view is also supported by anecdotal evidence. For instance, Goldman Sachs recently acknowledged that public anger about high bonus payments will constrain how much the bank will pay to the top five executives of the bank.[4]

Second, even firms that are not concerned about breaking social norms might be forced to adapt to those norms through the introduction of new laws. Specifically, if public outrage about CEO pay persists, it may trigger political interventions which could impose constraints on executive compensation (Jensen and Murphy (1990)). For example, during the period we study there were two important changes in regulation that followed such public outrage (in 1993 and 2004).[5] The intent of the two laws was to limit executive compensation, by either capping the tax-deductible amount of executive cash compensation or by requesting the expensing of executive stock options. While CEO pay packages continued to increase in size after these laws were passed, their composition changed in order to avoid the tax costs imposed by the new regulation (Rose and Wolfram (2002), Carter, Lynch, and Tuna (2007)). Thus, public opinion can also influence CEO compensation contracts through political interventions. Since the passing of new laws limiting CEO pay could lead to inefficiencies in contracting, it might be rational for companies to react pre-emptively and change aspects of executive compensation in order to appease the public and avoid the passing of new laws.

We relate various proxies of transient and permanent public attitudes to the level and composition of CEO pay during 1992-2006 in a sample of more than 16,000 firm-year observations. To measure transient public opinion, we use linguistic software to quantify the negativity expressed in state and national newspaper articles on executive compensation. To measure persistent social norms regarding income inequality we use state-level social capital indices such as the one developed in Putnam (1995). These indices are very persistent over time and measure social activity in a state (for example,

[4]See the article "Public anger to rein in top Goldman bonuses" published in the Financial Times on October 15^{th}, 2009.

[5]Starting in January 1994, Section 162(m) of the Internal Revenue Code (IRS par. 9001B, sec. 1.162) limited the corporate tax deduction for compensation paid to the CEO and each of the next four highest-paid executive officers to $1 million each, effective for compensation paid in tax years beginning on or after January 1, 1994. This new rule was part of the Omnibus Budget Reconciliation Act of 1993 (OBRA 1993), signed in August 1993. Also, in December 2004 the FASB issued the Statement of Financial Accounting Standards No. 123 (Revised 2004), or FAS 123(R), indicating that public companies will have to start expensing options beginning with their first annual reporting period after June 15, 2005.

the percentage of the population involved in volunteer work) which has been shown to correlate well with income inequality aversion (Alesina and La Ferrara (2000), Lambert, Millimet, and Slottje (2003)).

We find that transient public attitudes predict the subsequent level and composition of CEO pay. Negative coverage of executive pay (and specifically option based pay) in national or local newspapers leads to a lower level of total CEO compensation and a shift away from options-based pay and towards salary, bonus, perquisites and deferred compensation. This shift is more pronounced in large firms and those in the retail industry, whose reputation is arguably more affected by public opinion. We also find that persistent social norms lead to changes in the level but not in the composition of CEO pay. In states with higher income inequality aversion, as proxied by several social capital indices, all components of CEO compensation are lower.

An interpretation of these findings is that firms try to avoid regulatory changes to CEO pay and preserve their reputation, and respond to transient public outcry by reducing the type of pay that is publicly criticized while at the same time increasing other types of pay. In contrast, firms can not avoid changes in levels of CEO pay as a response to persistent social norms because these norms do not change over time and induce a constant pressure on the level of executive compensation.

We address causality and endogeneity concerns in several ways. First, we use worker compensation-related strikes as an instrument for testing the hypothesis that public outrage affects CEO pay. We argue that worker compensation-related strikes in a state are likely to make the topic of excessive executive pay more salient to the general public in this state, but they are unlikely to be caused by excessive CEO pay. Rather, these strikes occur because of failed negotiations between labor unions and the board of a firm. In addition, strikes are more likely to occur in economic expansions (Card (1990)) which alleviates the concern that public opinion regarding CEO pay and CEO pay per se may both be negatively affected by the business cycle. We find that strike activity in a state has a similar effect on CEO pay as public opinion measured by media coverage of executive compensation. In states where a worker pay-related strike occurred, we observe a shift from option grants to other forms of pay. Also, in all regressions we control for lagged stock market returns, as they may be a driver of both public opinion and the value of executive compensation. Finally, we use a system GMM model to account for the dynamic endogeneity of our negativity measures. These robustness checks do not change our results.

This paper contributes to two strands of the literature. First, we contribute to the small but growing literature on the impact of social norms on economic decision making (see, e.g., Akerlof (2007), Carlin and Gervais (forthcoming), Hilary and Hui (forthcoming)). On a more general level, Akerlof (2007) proposes that norms can explain observed consumption and investment choices, as well as the downward rigidity of wages. Carlin and Gervais (forthcoming) discuss the role of work ethics of managers on a firm's employment contracts, while Hilary and Hui (forthcoming) provide evidence that the degree of religiosity in a region influences corporate decision making. Social norms or local culture have also been shown to matter for people's decisions to engage in economic activities such as investing in the stock market (Hong, Kubik, and Stein (2004), Guiso, Sapienza, and Zingales (2008), Hong and Kacperczyk (2009)). We add to this literature by showing that social norms affect CEO compensation. CEO pay might thus be one channel through which social norms eventually influence corporate decision making.

Second, we contribute to the large literature on executive compensation and corporate governance (e.g. Murphy (1999), Core, Holthausen, and Larcker (1999), Holmstrom and Kaplan (2003)). Our results suggest that public attitudes towards CEO pay can change its composition and therefore could alter CEOs' incentives and behavior. Public opinion might serve as an additional source of corporate governance to limit abuses or the extraction of perquisites by executives, as proposed in theoretical work (Kuhnen and Zwiebel (2007)). These findings also provide an alternative interpretation to the result in Bouwman (2008) that executive compensation is positively related to the level of pay of CEOs of firms headquartered in the same geographical area. While Bouwman (2008) suggests that this may be driven by envy among geographically-close CEOs, we propose that local public attitudes towards executive compensation may also contribute to the similarity in pay of executives located in the same region.

The paper proceeds as follows: Section 2 describes the data, Section 3 presents the results, Section 4 discusses alternative explanations, and Section 5 concludes.

2 Data

Our data set consists of several types of information: measures of transient and persistent public attitudes toward CEO pay, state-year level controls that may drive compensation, as well as firm-year level CEO pay. The data items and their sources are discussed in detail in the following subsections, and are also briefly described in Table 1.

— Please insert Table 1 approximately here —

2.1 Measures of transient public attitudes towards CEO pay

Coverage of CEO pay in national and local press

The first measure of transient variation in public opinion on executive compensation is derived from newspaper articles. We downloaded U.S. newspaper articles from 1990 to 2006 that contained at least one of the following keywords: "CEO compensation", "CEO salary", "CEO pay", "executive compensation", "executive salary" or "executive pay".

We also counted the total number of newspaper articles for each year and state to get an estimate of the share of articles that are concerned with executive compensation. The primary data source we used to extract newspaper articles is the Factiva news database. However, we observed a large variation in the total number of articles for some states in our sample period. According to Factiva, this variation is caused by changes in contracts with the press agencies that provide the articles. This leads to variation over time in the sources included in the Factiva database.[6] To address this problem, for states with a large variation in Factiva coverage over time we supplemented the data set by consulting the LexisNexis database and the online archives of individual local newspapers. Our search resulted in 22,507 articles on executive compensation published in U.S. newspapers from 1990 to 2006.

Each article was downloaded and classified by source, date and state in which the newspaper was published. We distinguished national newspapers from local newspapers in order to be able to measure negativity towards CEO pay in the national press, as well as at the state level. We classified newspapers as national based on their circulation and their inclusion as a national newspaper in the US Department of Interior's Pro Quest Database. Specifically, we labeled the New York Times, USA Today, Wall Street Journal, Financial Times, Washington Post, Barron's as well as the Los Angeles Times as national newspapers. All other newspapers were classified as local newspapers.

To analyze the content of each newspaper article we used the Pennebaker, Both, and Francis (2007) LIWC computer linguistic program, an approach similar to that previously used in the finance literature by Tetlock (2007) and Tetlock, Saar-Tsechansky, and Macskassy (forthcoming). The program automatically processes text files and analyzes their content based on an internal dictionary. The program's default dictionary con-

[6]The Factiva search yields a large variation in the total number of articles for the following states: AL, AR, IA, ID, IN, KS, KY, MD, MN, NH, OR, RI, WV.

tains a category consisting of 499 (418) words to measure negative (positive) emotions in general text. These categories, however, might not suitably capture the tone of articles covering executive compensation, as the wording of such articles is more specialized than that of general readings. For example, words such as "lavish" or "backdating" have a negative connotation in the context of a discussion of CEO pay, but are not included in LIWC's default internal dictionary of negative words. We therefore use two alternative dictionaries to measure negativity towards CEO pay. First, we constructed our own dictionary for characterizing the tone of newspaper articles on CEO compensation. We randomly drew 160 articles, read them independently and manually collected keywords (listed in the Appendix) reflecting emotions towards executive compensation expressed in a given article. The negativity category contains these keywords as well as their grammatical variations such as singular and plural. Second, we use the dictionary developed by Loughran and McDonald (2009) to make sure that our results are robust to other classifications of negative words in a financial context.[7] The negative word list in Loughran and McDonald (2009) is also explicitly designed for characterizing the tone of financial text and translates negative word lists from standard psychological dictionaries into the realm of business.

For each newspaper article we measured the negativity with respect to executive compensation as the percentage of words in the article that are among those that belong to the negative category. The average negativity in a CEO-pay related article measured either in state or national newspapers is around 1%, as shown by the summary statistics presented in Table 2. There is a significant positive correlation (0.28) between an article's negativity defined using the default emotions category of the linguistic program, and its negativity according to our own category. The correlation between an article's negativity defined using the negative word list in Loughran and McDonald (2009) and its negativity according to our own category is 0.85. Therefore, while articles on executive compensation have a slightly different wording than typical narratives, their tone is characterized in a similar way by our negativity measure as well as the negativity measure based on the dictionary in Loughran and McDonald (2009).

— Please insert Table 2 approximately here —

The negativity of public opinion towards executive compensation in each U.S. state s and year t ($Negativity\_State_{s,t}$) is computed as the mean of our negativity measure

[7] We would like to thank Campbell Harvey for suggesting this alternative dictionary of negative words present in financial documents.

across all articles $n \in \{1...N\}$ on executive compensation in this state and year.

$$Negativity\_State_{s,t} = \frac{1}{N} \sum_{n=1}^{N} Negativity_{n,s,t} \tag{1}$$

The negativity of CEO pay coverage in national newspapers ($Negativity\_National_t$) is calculated similarly, as the mean of the negativity measure across all articles appearing in year t in newspapers labeled as national. Figure 1 shows that all measures of negativity – local or national, based on our own dictionary or on the one developed by Loughran and McDonald (2009) – exhibit a very similar pattern over time. While the overall level of negativity is higher for the negative word list of Loughran and McDonald (2009), all measures peak in 1992, 1996 and 2005, and are lowest in 1995, 1998, and 2000.

Strikes and work stoppages

As a second measure of transient public outcry regarding CEO pay we use state-level data on strikes and work stoppages from the the Bureau of Labor Statistics (BLS). On its website, the BLS provides a list of all strikes with more than 5,000 workers involved for a given state and year. We manually collect the reason for each strike from newspaper articles. If the strike was about worker compensation issues, we include it in the analysis.

2.2 Measures of persistent public attitudes towards CEO pay

Alesina and La Ferrara (2000) provide evidence that social participation is higher in U.S. localities with more income homogeneity, which is positively correlated with income inequality aversion (Lambert, Millimet, and Slottje (2003)). We construct several measures of the level of social participation in a state using data from the Current Population Survey (CPS) and the U.S. Census, as proxies for income inequality aversion.[8] Specifically, we compute (i) the share of people in a state that voluntarily participate in community organizations ($VoluntaryWork_t$) from the CPS, (ii) a state's voter turnout during the last presidential election ($VoterTurnout_t$) from the U.S. Census, (iii) the share of people who are engaged in neighborhood activities ($Neighborhood_t$) from the CPS, and (iv) the Putnam (1995) Index, as an alternative measure of social participation in a state. This

[8]The Current Population Survey (CPS) is a monthly survey of about 50,000 households. It is conducted by the Bureau of the Census for the Bureau of Labor Statistics and contains state-level employment and work life data from the non-institutional population.

index is based on 14 state-level measures of social capital including questions on leisure, social and personal activities of people in a given state. Finally, we develop an overall index of social participation by computing the principal component of the individual measures (i)-(iv).[9]

— Please insert Table 3 approximately here —

As it can be seen from Table 3, the level of social participation in a state is very persistent over time. In the Table each state is ranked according to its level of social participation measured as the share of people voluntarily working in community organizations. The autocorrelation coefficient for the annual values of the state-level variable $VolunteerWork_t$ is 0.92. States with the highest social participation include Utah and Iowa, while states with the lowest social participation include Nevada and New York. All of the other measures of state-level social capital are also highly persistent over time.

2.3 Executive compensation

CEO compensation data is obtained from the Execucomp database. $TotalCompensation_t$ is the total value of pay awarded to the CEO in year t (data item $tdc1$ in Execucomp). $OptionsValue_t$ is the aggregate value of the stock options granted to the executive during year t as valued using the S&P Black Scholes methodology (data item *blk_valu*). $Salary + Bonus_t$ is the sum of the CEO's salary and bonus in fiscal year t (data items *salary* and *bonus* in Execucomp, respectively). $OtherPay_t$ denotes the amount of pay received that did not come in the form of salary, bonus or option grants, and includes items such as perquisites, personal benefits, deferred compensation, tax reimbursements and restricted stock. Specifically, it is calculated as $TotalCompensation_t - Salary_t - Bonus_t - OptionsValue_t$. Our data set consists of 16,548 firm-year observations during 1992 to 2006 and covers 2281 unique firms.

[9]We also considered the state-level tax code as a potential measure of income inequality aversion, as the use of progressive taxation schemes is sometimes justified on the basis of preferences for fair wealth distribution (Mitra and Ok (1997)). However, while some studies show that individuals are concerned about income inequality when choosing between alternative tax structures (Ackert, Martinez-Vazquez, and Rider (2007)), others find that distributive preferences are mainly driven by efficiency concerns rather than income inequality aversion (Engelmann and Strobel (2004)). Thus, it is not clear that the tax code would help identify aversion towards inequality.

2.4 State-level controls

CEO pay may be in part driven by the cost of living and the size of the executive talent pool available in the area where the company headquarters are located.[10] To control for these effects, we use data from the Bureau of Economic Analysis on personal income per capita and size of population for each state and year in the sample. We also obtain state-year level values for the consumer price index (CPI) from the Interuniversity Consortium for Political and Social Research (ICPRS).[11] The state-year CPI is only available until 2003, whereas the personal income per capita is available for the entire duration of our sample. As the correlation between these two measures is 0.9, we use the personal income per capita as our measure of the cost of living, in order to be able to include in the analysis data beyond 2003.

3 Results

Formally, we propose that executive pay in year t in companies headquartered in state s depends in part on public attitudes a_{st}. This variable has a state-level fixed effect component s_s (i.e. some states are always more liberal when it comes to what constitutes fair compensation), a state-year level shock ϵ_{st} that captures a change in attitudes specific to the state, and a national shock η_t which indicates a nation-wide change in attitudes:

$$a_{st}=s_s + \epsilon_{st} + \eta_t.$$

The persistent component of state attitudes, s_s, is captured by survey measures of social participation in a state, which proxy for income inequality aversion, as there is very little time variation in these state-level characteristics (see Table 3). We measure the national shock η_t by the negativity and amount of coverage that CEO pay receives in national newspapers in year t. The state-level shock ϵ_{st} is reflected in the negativity and amount of coverage of CEO pay in local newspapers and strike activity in the state in year t.

[10] In the analysis, the location of a firm is defined to be the state where the firm is headquartered.

[11] The CPI is calculated by William Berry and his colleagues in ICPSR study #1275 and is available at http://webapp.icpsr.umich.edu/cocoon/ICPSR-STUDY/01275.xml.

3.1 Transient shocks to public opinion

We first investigate the impact of shocks to public opinion towards executive compensation. These shocks are measured as the negativity of newspaper articles in either national or local newspapers.

Our baseline model, using firm-year observations, is as follows:

$$CEOComp_{i,t} = \alpha + \beta_1 \cdot Negativity_{t-1} + \delta \cdot X_{i,t-1} + \epsilon_{i,t} \quad (2)$$

$CEOComp_{it}$ denotes the dollar value of either total compensation, stock option grants, salary and bonus or other compensation as defined in the data section, awarded to the CEO of firm i in year t.[12] The mean negativity of all newspaper articles on executive compensation in either national or local newspapers is captured by $Negativity_{t-1}$. We also estimate the model in eq. (2) by replacing the negativity of coverage by the total number of articles on executive compensation, $CEOComp\_articles_{t-1}$. As the negativity and amount of coverage of CEO pay are strongly positively correlated, and have similar effects on pay, we will focus the analysis on the negativity measures (computed at the national and local level).

The vector $X_{i,t-1}$ contains control variables measured as of time $t-1$ for firm i (we will drop the firm subscript from now on to simplify the notation): the industry-adjusted stock return of the firm ($Firm - IndustryRet_{t-1}$), the industry-adjusted return on assets of the firm ($Firm - IndustryROA_{t-1}$), the industry-adjusted sales growth of the firm ($Firm - IndustrySalesGrowth_{t-1}$), the \$ value of the firm's sales ($Sales_{t-1}$), the firm's market value ($MarketValue_{t-1}$), the lagged stock market return ($S\&P500Return_{t-1}$), the Gompers, Ishii, and Metrick (2003) corporate governance index ($GIndex_t$), and an indicator variable equal to one if the CEO of the firm is younger than 60 years ($CEOIsUnder60_t$). The industry adjusted performance measures control for the CEO's relative performance in the previous year. Firm sales and market value control for firm complexity and growth opportunities, as suggested in Baker, Jensen, and Murphy (1988) and Core, Holthausen, and Larcker (1999). The lagged stock market return controls for the impact of changes in economic conditions on CEO pay. CEO age is a control for the manager's outside option, which arguably is better for younger individuals (Kuhnen and

[12] Alternatively, we use the log value of compensation as dependent variable. The results remain stable (see Table 10). We use the dollar value of compensation in our main specification because some firms have \$0 value for option grants or other types of pay in certain years, and working in logs would mean we would need to drop these observations.

Zwiebel (2007)).

Regressions include fixed effects for the 48 Fama French industry codes, and state fixed effects. Standard errors are clustered at the firm level. To eliminate the effect of outliers, here and throughout the rest of the empirical analysis we drop firm-year observations where the annual total compensation of the CEO is higher than $50 million, and those belonging to firms whose market value is above $100 billion. These observations constitute 1% of our initial sample.[13]

To make sure that our results are robust to different model specifications and to address endogeneity concerns, Table 4 presents results of three static models and a system GMM model.

— Please insert Table 4 approximately here —

Column (1) contains results of a pooled OLS regression with standard errors clustered at the firm level. The results show that high negativity of media coverage regarding CEO compensation leads to significantly lower total compensation in the subsequent year (Panel A). This effect is entirely driven by a strong decrease in stock option-based compensation (Panel B). For salary, bonus and other types of compensation (Panels C and D) we actually observe an *increase* of the amount earned by the CEO. The results are also economically significant. An increase of one standard deviation (see Table 2 for summary statistics) in the negativity of national press coverage towards CEO compensation is followed by a decrease of $0.27 million in overall pay, a decrease of $0.41 million in options grant compensation, and an increase of $0.06 million in salary and bonus, and of $0.08 million in other pay.

Column (2) of Table 4 contains results with standard errors clustered at the firm and year level and column (3) contains results of a firm fixed effects model. We again find that high negativity of media coverage regarding CEO compensation leads to significantly lower total compensation (Panel A) and option-based compensation (Panel B) in the subsequent year, while we observe an increase of salary and bonus (Panel C) and other pay (Panel D).

Column (4) contains the results of a system GMM model. This model was designed to account for dynamic endogeneity (Arellano and Bover (1995) and Blundell and Bond

[13]One could of course argue that observations with extremely large total compensation are of most interest for this study. However, these observations could also be data errors which is why we exclude them from our analysis. Our results (see Table 10) get stronger if we include these observations.

(1998)) and has been used previously to model the endogeneity of control forces operating on a firm and the firm's decisions (Wintoki, Linck, and Netter (2009)). In our case, we need to account for the endogeneity of our negativity measure and executive compensation, as it is likely that executive compensation not only reacts to public criticism but at the same time elicits public outrage.

The estimation of a system GMM is done in two stages. In the first stage, we specify the model in first difference form:

$$\begin{aligned} \Delta CEOComp_{i,t} &= \alpha + \kappa_p \sum_p \Delta CEOComp_{i,t-p} + \beta_1 \cdot \Delta Negativity_{i,t} + \\ &+ \delta \cdot \Delta X_{i,t} + \gamma \cdot \Delta Z_{i,t} + \Delta \epsilon_{i,t}. \end{aligned} \tag{3}$$

This eliminates any unobserved heterogeneity. We are primarily interested in the effect of coefficient β_1. $X_{i,t}$ denotes the set of control variables and $Z_{i,t}$ denotes the set of instruments. The idea of system GMM is to model dynamic endogeneity by using lagged explanatory variables as instruments for current explanatory variables.

In our case, we use historical values of CEO compensation, negativity, and other firm-specific variables as instruments for current changes in these variables. In the second stage, we then estimate our level and difference equations simultaneously:

$$\begin{aligned} \begin{bmatrix} CEOComp_{i,t} \\ \Delta CEOComp_{i,t} \end{bmatrix} &= \alpha + \kappa \begin{bmatrix} \sum_p CEOComp_{i,t-p} \\ \sum_p \Delta CEOComp_{i,t-p} \end{bmatrix} + \beta \begin{bmatrix} Negativity_{i,t} \\ \Delta Negativity_{i,t} \end{bmatrix} \\ &+ \delta \begin{bmatrix} X_{i,t} \\ \Delta X_{i,t} \end{bmatrix} + \gamma \begin{bmatrix} Z_{i,t} \\ \Delta Z_{i,t} \end{bmatrix} + \epsilon_{i,t}. \end{aligned} \tag{4}$$

$CEOComp_{i,t}$ ($\Delta CEOComp_{i,t}$) denotes one type of CEO pay (the change in one type of CEO from $t-1$ to t). The (change in) mean negativity of all newspaper articles on executive compensation is again captured by $Negativity_{t-1}$ ($\Delta Negativity_{t-1}$). We use the same control variables, $X_{i,t}$, as in the previous regressions (see Equation 2). As instruments, $Z_{i,t}$, we use lags of order 4 to 5.[14] The validity of our instruments is analyzed

[14]The exact STATA command reads: xi: xtabond2 CEOComp$_{i,t}$ l.CEOComp l2.CEOComp l3.CEOComp l4.CEOComp Negativity_National$_{i,t-1}$ Firm-IndustryRet$_{i,t-1}$ Firm-IndustryROA$_{i,t-1}$ Firm-IndustrySalGr$_{i,t-1}$ Sales$_{i,t-1}$ MktVal$_{i,t-1}$ S&P500$_{t-1}$ Gindex$_{i,t-1}$ isUnder60$_{i,t}$ Year i.Industry, gmm(CEOComp$_{i,t}$ Negativity_National$_{i,t-1}$ Firm-IndustryRet$_{i,t-1}$ Firm-IndustryROA$_{i,t-1}$ Firm-

with serial correlation tests as well as the Hansen test of over-identification (Arellano and Bond (1991)).[15]

Results of the system GMM in column (4) also show that high negativity of media coverage regarding CEO compensation leads to significantly lower total compensation (Panel A) and option-based compensation (Panel B) in the subsequent year, while we observe an increase of salary and bonus (Panel C). We find no significant effect of negativity on other pay (Panel D).

The validity of our instruments is shown by the test statistics in Table 4. The results of the serial correlation tests show that the assumptions of our specifications are valid: the residuals in first differences(*AR(1)*) are significantly correlated, but there is no serial correlation in second differences (*AR(2)*). Furthermore, the Hansen test reveals insignificant p-values in all specifications. This means that the null hypothesis that our instruments are valid can not be rejected. Finally, the difference-in-Hansen test reveals that the subset of instruments used in the levels equations is also exogenous for all specifications.

The coefficients on our control variables have the expected sign. CEOs get paid more after higher industry-adjusted stock returns, ROA and sales growth, and if the company has higher sales or market value or if stock market returns were high in the previous year. They also get paid more in firms with weaker corporate governance as measured by the Gompers, Ishii, and Metrick (2003) index. In addition, we observe that CEOs younger than 60 years get significantly more stock option based pay in exchange for less salary, bonus and other pay as compared to CEOs above that age threshold, as previously documented in Kuhnen and Zwiebel (2007). Also, consistent with earlier research (Frydman and Saks (2005)), we find a strong positive time trend in all types of compensation, with total compensation growing by about \$0.22 million per year, options pay growing by \$0.07 million per year, and salary and bonus, and other pay growing by \$0.03 million and \$0.12 million, respectively.

Results using local press coverage and using the negativity measure based on the dictionary in Loughran and McDonald (2009) are presented in Tables 5 and 6, respectively. They also show that transient shocks to public opinion on CEO pay lead to significant changes in CEO compensation. As the effects are very similar to the results in Table 4,

IndustrySalGr$_{i,t-1}$ Sales$_{i,t-1}$ MktVal$_{i,t-1}$, lag(4 5) collapse) iv(isUnder60$_{i,t}$ Year S&P500$_{i,t-1}$ Gindex$_{i,t-1}$ i.Industry) twostep robust small.

[15]For a more detailed description of the system GMM model as well as the STATA commands please refer to Wintoki, Linck, and Netter (2009).

we will not discuss them here in detail.[16]

— Please insert Tables 5 and 6 approximately here —

Overall, our results suggest that firms react to negative public attitudes regarding CEO compensation by changing the level and composition of CEO pay. Firms seem to adjust CEO pay by lowering the type of compensation that is highly contentious, i.e. stock options, while at the same time increasing CEO pay through other channels such as salary and bonus (less contentious[17]) or deferred compensation and personal benefits (possibly less observable by the public).

Table 7 contains double sorts of changes in CEO pay and changes in public opinion, and the results confirm our multivariate findings. Specifically, a strong decrease of negativity (e.g. Panel A bottom 5% or Panel B lowest quartile) is associated with an increase in total compensation and option grants while a strong increase of negativity (e.g. Panel A top 95% or Panel B highest quartile) is associated with a strong decrease in total compensation and option grants.

— Please insert Table 7 approximately here —

To further investigate whether the strategic firm behavior of catering to the public's demands is the driver of our results, we now investigate differences in the reaction of various types of firms to negative public opinion about executive compensation. Specifically, firms that are more dependent on public opinion should react stronger to negative attitudes towards CEO pay, since these firms face higher reputational costs if they ignore public attitudes. To test this conjecture, we make the assumption that public outrage as expressed in the news media is more likely to affect the behavior of retail clients as compared to business clients. Previous research suggests that this might be the case: while household clients have used withhold strategies such as consumer boycotts to influence firms quite often (Davidson, Worrell, and El-Jelly (1995)), business clients are less likely to do so (Bratford (2005)). Following Bratford (2005), we therefore expect that large

[16] As another robustness check, we estimated the regression in Table 4 allowing the effect of press negativity on CEO pay to differ before and after 2000 (the mid-point in our data set). The results (not reported) are also very similar.

[17] Typically in our sample the negative press coverage of CEO pay targets more the option grant component of compensation, and less so salaries. This is also reflected by a simple word count: While only 34% of all neutral articles on CEO pay contain the word "options", 42% of all negative articles on CEO pay contain the word "options". In contrast, 65% of all neutral articles contain the word "salary", while only 59% of all negative articles contain the word "salary".

(visible) firms and firms that sell primarily to consumers (as opposed to selling to other firms) face higher reputation costs after public outrage on CEO pay, and therefore are more likely to change executive compensation to appease the public.

We interact our negativity measure with a dummy variable equal to one if the firm is larger than the median firm in our sample, and zero otherwise. Furthermore, we interact our negativity measure with a dummy variable equal to one if the firm operates in SIC codes indicating a retail industry[18]. Results are presented in Table 8.

— Please insert Table 8 approximately here —

The results show that the effect of public opinion on executive compensation is indeed stronger for companies that are closer to public scrutiny, i.e. larger companies, or companies in industries characterized by direct contact with retail consumers. For large firms, there is a stronger shift from stock option based pay to other compensation when public attitudes towards CEO compensation become more negative. For firms in retail industries, the decrease in stock option based pay is also significantly stronger but there is no significant increase in other forms of compensation.

Finally, we look for an alternative identification strategy to address endogeneity concerns regarding our negativity measure and CEO compensation. Specifically, we use strikes and work stoppages relaed to worker pay as a natural experiment to establish causality between negativity and CEO compensation. We expect strikes to lead to, or reflect, a more negative attitude of the public towards CEO compensation while it is very unlikely that the reason for a strike is excessive CEO pay. Rather, these strikes occur because of failed negotiations between labor unions and the board of a firm. Anecdotal evidence from the newspaper articles we use to classify the reason for a strike suggests that this is indeed the case. For example, failed negotiations between US Airways and the Association of Flight Attendants (AFA) led to a strike of flight attendants in 2000. During the strike, a New York Times article[19] included the following statement of a union member: "It's outrageous that [...] when the airline continues to prosper in a strong economy, they expect us to take a pay cut and accept concessions." Furthermore, strikes are more likely to happen in economic expansions (Vroman (1989), Card (1990)) which alleviates concerns that public outrage and changes in CEO compensation are simultaneously driven by economic downturns. Therefore, we think that worker compensation-related

[18]The two-digit SIC codes that we classify as referring to the retail industry are: 20-25, 52-59, 70-79.
[19]"US Airways and Union Talking as Strike Deadline Passes", New York Times, March 25, 2000.

strikes are an appropriate instrument to test the causal link between public attitudes and CEO pay.

To investigate whether strikes lead to changes in CEO pay that are similar to changes after public outcry measured by negativity in newspaper articles on executive compensation, we estimate the following regression:

$$CEOComp_{i,t} = \alpha + \beta_1 \cdot Strike_{t-1} + \delta \cdot Y_{i,t-1} + \epsilon_{i,t}. \quad (5)$$

We relate executive compensation in firm i to a dummy variable, $Strike_{t-1}$, which is one if during year $t-1$ there was at least one worker compensation-related strike in the state where the firm is headquartered. We exclude observations belonging to the firms where the pay-related strikes took place to avoid any mechanical relationship between strikes and subsequent CEO pay at those firms. The vector $Y_{i,t-1}$ contains the same control variables as $X_{i,t-1}$ in equation 2 and in addition includes the previous year's value for the negativity of CEO pay in national newspapers, as well as the per capita income and the population of the state. As these state-level characteristics do not vary much over time, we can no longer include state fixed effects in the regression. The results are presented in Table 9. Comparing the fit of the models in Tables 4 and 9, it can be seen that most of the variance in CEO pay captured by state fixed effects is accounted for by the per capita income and population variables.

— Please insert Table 9 approximately here —

The results indicate that local strikes have a similar effect on CEO pay as the negativity measure derived from newspaper articles. All else equal, in states where at least one company experiences a worker compensation-related strike in year $t-1$, CEOs get \$0.14 million less in overall pay, \$0.15 million less in option based pay, and \$0.07 million less in salary in year t. At the same time, these CEOs get \$0.09 million more in other pay. All results are significant at the 1% level.

With respect to our control variables, the results show that CEOs earn more in states with higher per capita income and a higher population. This is not surprising since the cost of living is higher in these states.[20] The negativity measure based on national newspaper articles remains significant and the magnitude of the effects is as in Table 4.

[20]If we run our regression models using the consumer price index instead of the per capita personal income, the results are virtually identical.

Table 10 contains several robustness checks. In Panel A, we exclude the year 2006 due to new reporting standards and a different valuation of total compensation and option grants in the Execucomp database (Hodder, Mayew, McAnall, and Weaver (2006)). Results in Panel B are obtained using log values instead of dollar values of executive compensation as the dependent variable. We include the NBER recession indicator as an additional control variable in Panel C to eliminate business cycle effects. Finally, in Panel D we include the top 1% observations in terms of CEO pay and firm size that we excluded in the analysis so far. These oulier observations – although likely to be data entry errors – are potentially strongly affected by public outrage. Our results remain stable across all of the robustness checks.

Taken together, the results suggest that firms react to temporary public outcry regarding excessive CEO pay by decreasing contentious pay while at the same time increasing other types of compensation. Therefore, public opinion as reflected in the press could serve as an alternative corporate governance mechanism. Prior work provides mixed evidence for the role of the media as a mechanism for disciplining managers. Joe, Louis, and Robinson (forthcoming) find evidence consistent with the idea that media exposure of board ineffectiveness at specific companies is followed by corrective actions by these companies. At the same time, Core, Guay, and Larcker (2007) find that the amount of negative media coverage regarding the compensation of a specific CEO in a particular year does not have any effect on that CEO's compensation in the following year.

Our paper takes on a broader view. We do not focus on media coverage with respect to one specific CEO or firm, but focus on the impact of general public attitudes on executive compensation. While public opinion may be driven by news regarding the few most egregious CEO pay packages, it also causes other firms to change their compensation policies, and not necessarily just those that were the root of the negative press coverage. This potential aggregate-level governance role of the media was suggested by Dyck and Zingales (2002) who find that the more diffuse the press in a country is, the more responsive companies are to environmental issues and to minority shareholders concerns.

In the next section, we will examine whether persistent social norms that differ geographically also influence executive compensation.

3.2 Persistent social norms

We now turn to an examination of the impact of persistent levels of public opinion on executive compensation. We argue that persistent attitudes towards income inequality across states could generate cross-sectional differences in executive compensation. Specifically, CEOs in states where people have a strong aversion towards income inequality might earn less than CEOs in states where people are not concerned about income inequality. Alesina and La Ferrara (2000) and Lambert, Millimet, and Slottje (2003) provide evidence that social participation is significantly higher in states with high income inequality aversion. Therefore, we expect that states with high social participation have a stronger aversion against income inequality which might create a barrier for CEOs to earn large amounts of money.

We measure social participation in a state first as the share of people who work voluntarily in community organizations. Voluntary work has been shown to be a good proxy for social participation (see, e.g., Wilson and Musick (1997)). Alternatively, we use as additional proxies for social participation the state's voter turnout, the share of people engaged in neighborhood activities and the Putnam (1995) social capital index. We also compute an index of social participation which is defined as the principal component of our individual proxies for social participation. Table 11 provides correlations between our proxies for social participation and several state characteristics.

— Please insert Table 11 approximately here —

Results in Table 11 show that our proxies for social participation are highly correlated. The correlations range from 0.66 (voter turnout and voluntary work) to 0.89 (voluntary work and neighborhood activities). Each individual proxy of social participation is by construction highly correlated with the principal component, PCA.

Moreover, as can be seen in Table 11, there tends to be less local negativity in the media towards CEO compensation in states with high social participation and therefore high income inequality aversion. It is possible that these states have different compensation contracts for CEOs to begin with, so that transient public outrage about CEO pay is less likely to occur. Also, as expected, there is more negativity towards CEO pay in states with more worker compensation-related strike activity.

To see whether compensation contracts adapt to these local norms about income

inequality, we estimate the following regression:

$$CEOComp_{i,t} \quad = \quad \alpha + \beta_1 \cdot SocialParticipation_{t-1} + \delta \cdot Y_{i,t-1} + \epsilon_{i,t}. \tag{6}$$

We relate CEO compensation in firm i in year t to our proxies for social participation during year $t-1$, $SocialParticipation_{t-1}$, in the state where the firm is headquartered, where the vector of control variables $Y_{i,t-1}$ is as in eq. (5). We control for the state-level per capita personal income and population since our earlier results (see Table 9) showed that CEOs will earn more in states where these variables have higher values, and for the negativity measure calculated using national newspaper articles. We do not include state fixed effects in this regression because our measures of state-level social participation, population and per capita income are persistent over time. Thus, the effects of the social participation variables shown in Table 12 are mainly driven by cross-sectional variation in social norms across U.S. states.

— Please insert Table 12 approximately here —

The results show that CEOs earn significantly less in states with high social participation. If social participation increases by one standard deviation (see Table 2 for summary statistics), CEOs get about \$0.30 million less in total compensation, \$0.10 million less in salary and bonus, and \$0.15 million less in other pay, respectively. The coefficient for option-based compensation is also negative but not statistically significant. The effects of the national press negativity measure replicate those in Table 4. The results are similar if we use any of the other proxies for social participation (the Putnam index, neighborhood activities participation, voter turnout, or the principal component of all these measures, PCA_{t-1}), as can be seen in the regression results in Table 13.

Therefore, our results suggest that firms tend to react differently to transient public outcry versus persistent social norms towards executive compensation. We observe a shift in CEO compensation from option grants to salary and other pay after transient negative shocks on public opinion. In contrast, we observe that CEO compensation is lower across all types of pay in states with high social participation and thus high income inequality aversion.

4 Alternative explanations

It is important to further discuss alternative explanations for the two main relationships that we document in the paper, namely, that negative press coverage of CEO pay is followed by lower pay and a shift away from options, and that in states with higher income inequality aversion all components of CEO pay are lower.

A potential alternative explanation for the relationship between negative media coverage and CEO pay is that press negativity may be more prevalent in bad economic times, which are the same times when CEO pay may also be lower. To test this hypothesis, we estimate the same regression model as in Table 4 and include as an additional control the NBER recession indicator. The effects of $Negativity\_National_{t-1}$ on all types of CEO pay in year t stay virtually unchanged, as shown in Panel C of Table 10.

In our analysis we use worker pay-related strikes in a particular state and year as another proxy for temporary shocks to public opinion regarding CEO pay, and found that strikes lead to compensation changes similar to those driven by the negativity of press coverage, as shown in Table 9. Since worker pay-related strikes are pro-cyclical, and not counter-cyclical (Vroman (1989), Card (1990)), the robustness of our results using this alternative measure of public opinion should alleviate concerns that both public opinion and CEO pay are simply driven by the underlying economic situation.

We also use a system GMM model to address the causality issue. While we always use lagged measures of public attitudes to predict future CEO pay, this approach per se does not allow us to make any strong causal statements regarding the observed links between these variables. It is of course possible and likely that public outrage about CEO pay not only changes future CEO compensation but is also a result of excessive CEO pay in prior years. This mutual dependence is better captured in a system GMM model where both CEO pay and public attitudes are treated as endogenous. The dynamic GMM results in Table 4 continue to show that negativity of CEO pay coverage in the press leads to lower executive pay and to a shift away from options and toward other types of compensation.

Regarding our findings on the influence of persistent social norms on CEO pay, the result that CEOs get paid less in states characterized by high income inequality aversion may in fact be driven by differences across states in the productivity of capital stock, the availability of growth opportunities, or the ability of CEOs who choose to work in particular locations. These three variables change the marginal product of the CEO and therefore should impact compensation. We address this concern by including firm

controls and industry fixed effects in all of our compensation regression models, to account for cross-sectional differences in capital productivity and growth opportunities. While we can not account in the empirical analysis for the possible effect that CEOs choose strategically what state to work in, we find it difficult to understand why low ability CEOs might prefer to locate in states with high income inequality aversion. Such a preference would lead to the relationships we document between pay and social norms. We think it is more plausible that these observed relationships are the result of companies adapting compensation to prevailing norms, instead of being driven by low productivity firms or managers selecting where to locate based on the area's attitudes towards income inequality.

Another potential explanation for the relatively low pay of CEOs in states with high income inequality aversion is that these states happen to be those where the labor market for top executives is less competitive. For instance, New York State is characterized by low income inequality aversion and high CEO pay, while Iowa is characterized by high income inequality aversion and low CEO pay. The difference in pay between these two states could be driven by the difference in the managerial talent pools and labor market competition in these locations: if the individuals who win CEO jobs in New York are more talented than those who win jobs in Iowa, executive pay will be higher in New York. While we do not have a direct measure of the quality of the managerial talent competing for jobs in various states, arguably this measure is positively correlated with the personal income per capita and size of the population in the state. These two control variables are included in our empirical analysis (Tables 12 and 13) and hopefully capture these labor market effects. Moreover, when we exclude states such as New York or California from the analysis, the results are similar to those reported here.

A solution to this identification problem is to find instances where the social norms in the state where a firm is located change for a reason exogenous to the firm. While we have not been able to identify such events, we found instances where firms moved their headquarters from one state to another, thus changing the social norms regarding pay faced by their CEOs. We have identified 24 firms that moved their headquarters to a different state during our sample, and where the same CEO was in place a year before and after the move. In 16 cases, the move was from a high income inequality aversion state to a low income inequality aversion one. In all of these events, CEO compensation increased after the move. In five of the eight cases where the headquarters moved from a low income inequality aversion state to a high income inequality aversion one, the CEOs

received a lower pay after the move. While this sample of across-state moves is very small, in most cases CEO pay seems to have adapted to the social norms of the new location, as our other results would suggest.

5 Conclusion

This paper investigates whether public opinion and social norms influence executive compensation. We find that the level and composition of CEO pay change after widespread public outrage about executive compensation, and also adapt to local norms about fair pay and income inequality. Our results underline the importance of public opinion as a corporate governance mechanism. If CEO compensation increases to levels which seem excessive, this may lead to public outrage. Since such an event is associated with large reputational costs and also increases the chance of more regulatory restrictions on executive pay, it can act as a disciplining mechanism and induce firms to change the CEOs' compensation contracts.

Therefore, by changing the incentives faced by managers, public attitudes may influence executive decisions about project or financing choice, and ultimately can impact company value. For instance, if CEOs get fewer stock option grants because options are perceived negatively by the public, or because of strong income inequality aversion among the general population, firms may be less likely to engage in risky investment projects. One interesting question that is outside the scope of this paper is why public attitudes regarding compensation vary geographically and over time. Here we focus on finding whether corporations adapt CEO pay to public opinion and suggest reasons for this behavior, and leave it to future work to better understand the sources of variation in these attitudes.

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Appendix

Words with negative connotation in newspaper articles covering executive pay.

abuse	cry	handsome	outcried	shock
acrimonious	curb	hard	outcry	sizeable
aggressive	cut	heftier	outlandish	skyrocket
aggrieve	cynicism	hide	outpace	slash
alarm	debate	high	outrage	slashing
anger	defend	huge	outsize	snag
angry	demand	hurt	overhead	soar
arrogant	dent	illegal	overpaid	sock
astounding	deserve	improper	pamper	spiral
attack	destroy	indecent	pay-cutting	stagger
avarice	devastate	indefensible	payday	stupefying
backdate	disconnect	inept	penalize	suffer
balloon	discontent	inflationary	perk	suit
battle	disgruntle	infuriate	perquisite	super-size
bestow	dispute	irate	phony	surge
betrayal	disregard	irksome	pocket	swell
big	dizzy	irresponsible	porker	tenuous
bigbucks	dole	issue	pressure	threat
bigmoney	doubt	justifiable	probe	too
bigpackages	dubious	lag	problem	trial
bigpay	egregious	lavish	protest	trouble
bigpaychecks	embarrass	lawsuit	pull	turn
bigsalary	enjoy	layoff	pump	turndown
bloat	enrich	legal	question	unconscionable
bonanza	entitle	lie	rage	undeserve
boom	entrench	litigation	record	uneven
boost	equitable	loath	reduce	unfair
breathing	escalate	loot	reform	unhappy
camouflage	ethical	loss-ridden	refuse	unjustifiable
chide	exaggerate	lucrative	repulsive	unthinkable
colossal	excess	lying	resist	unusual
compensation-inflation	extravagance	mad	restrain	uproar
complain	failure	manipulate	revolution	vocal
concern	fair	massive	rich	weaken
conflict	fat	me-first	robber	whack
controversial	fat-cat	mercenarily	rock	whopper
cost	fire	mislead	rubber	windfall
court	flunk	moral	run	wring
cried	fodder	murky	sacrifice	wrong
criminal	generous	negative	scandal	
crises	gigantic	nervous	scrutiny	
crisis	greed	odious	shame	
criticism	gross	opposition	sharp	

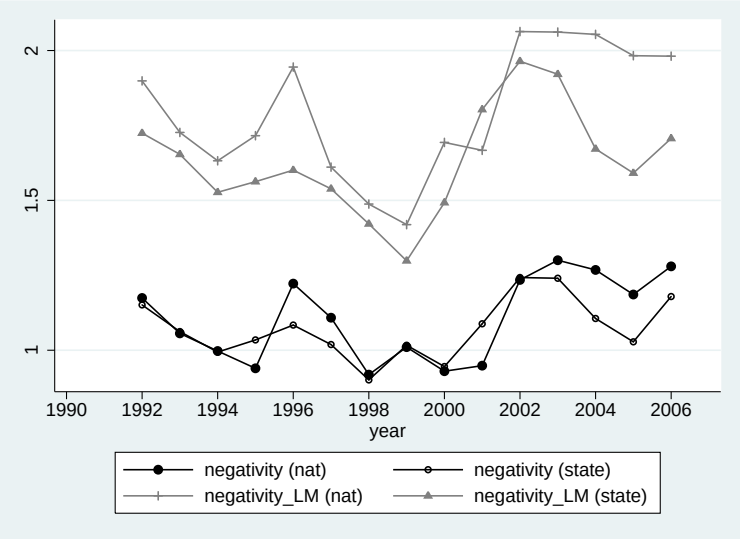

Figure 1: Public criticism of CEO pay measured by negativity in newspaper articles. $negativity(nat)$ ($negativity(state)$) denotes mean negativity in national (local) newspaper articles per year measured using our own negative word list (see Appendix). $negativity\_LM(nat)$ ($negativity\_LM(state)$) denotes mean negativity in national (local) newspaper articles per year measured using the negative word list in Loughran and McDonald (2009).

Table 1: Description of Variables

Variable	Definition
$\#CEOComp\_Articles\_National_t$	Number of articles in year t in national newspapers that cover CEO pay. Source: Factiva/LexisNexis
$\#CEOComp\_Articles\_State_t$	Number of articles in local newspapers that cover CEO pay. Source: Factiva/LexisNexis
$CEOIsUnder60_t$	Dummy variable equal to one if CEO's age < 60 years and zero otherwise. Sources: Execucomp, Factiva.
$Firm - IndustryReturn_t$	Industry-adjusted stock return. Source: CRSP/Compustat Value-weighted industry return is calculated using the Fama French 48 industry classification codes
$Firm - IndustryROA_t$	Industry-adjusted return on assets. Source: CRSP/Compustat Value-weighted industry ROA is calculated using the Fama French 48 industry classification codes
$Firm - Industry SalesGrowth_t$	Industry-adjusted sales growth. Source: CRSP/Compustat Value-weighted industry sales growth is calculated using the Fama French 48 industry classification codes
$Gindex_t$	Gompers, Ishii, and Metrick (2003) corporate governance index based on 24 shareholder rights measures. High values indicate weak governance.
$MarketValue_t$	Market value of firm in $millions. Source: CRSP/Compustat
$Neighborhood_t$	Share of people in a state who have participated in a neighborhood association. Source: Current Population Survey (CPS).
$Negativity\_LM_t$	Average negativity in year t of coverage in national newspapers of CEO pay. Source: Factiva/LexisNexis, processed with LIWC 2007 and Loughran and McDonald (2009) word list.
$Negativity\_National_t$	Average negativity in year t of coverage in national newspapers of CEO pay. Source: Factiva/LexisNexis, processed with LIWC 2007 and our word list.
$Negativity\_State_t$	Average negativity in year t of coverage in local newspapers of CEO pay. Source: Factiva/LexisNexis, processed with LIWC 2007 and our word list
$OptionsValue_t$	Black Scholes value of stock options granted in year t thousand $'s) Source: Execucomp (item *blk_valu*)
$OtherPay_t$	Equal to $TotalCompensation_t$ - ($Salary + Bonus_t$) - $OptionsValue_t$
$PerCapitaIncome_t$	Per capita personal income in state. Source: Bureau of Economic Analysis (BEA).
$Population_t$	Population in state (millions). Source: BEA.
$PutnamIndex_t$	Social capital index in state as defined in Putnam (1995), based on 14 measures of social capital. Source: http://www.bowlingalone.com.
$Salary + Bonus_t$	Salary and bonus in year t (thousand $'s). Source: Execucomp (items *salary* and *bonus*).
$Sales_t$	$-value of firm sales in millions. Source: CRSP/Compustat
$Strike_t$	Equals one for states with compensation-related strikes in year t and zero otherwise. Source: BLS.
$TotalCompensation_t$	Total pay in year t (thousand $'s). Source: Execucomp (item *tdc*1)
$VoluntaryWork_t$	Share of people in a state who have volunteered. Source: CPS.
$VoterTurnout_t$	Voter turnout in state in presidential elections. Source: CPS.

Table 2: Summary Statistics

Variable	Mean	St. Deviation	Median	Observations
$TotalCompensation_t$	4299.59	5535.99	2402.99	16548
$OptionsValue_t$	1868.14	3737.20	603.52	16548
$Salary + Bonus_t$	1390.24	1485.73	1000	16548
$OtherPay_t$	1041.21	2526.19	162.74	16548
$Firm - IndustryReturn_t$	.03	.45	-.004	16548
$Firm - IndustryROA_t$	.05	.11	.04	16548
$Firm - IndustrySalesGrowth_t$	-.01	.23	-.04	16548
$Sales_t$	4237.49	9916.74	1358.25	16548
$MarketValue_t$	5120.17	10622.29	1590.84	16548
$GIndex_t$	9.27	2.67	9.00	16548
$CEOIsUnder60_t$	.62	.49	1.00	16548
$Negativity\_National_t$	1.09	0.14	1.11	16548
$Negativity\_State_t$	1.06	0.32	1.11	16548
$Negativity\_LM_t$	1.53	0.19	1.46	16548
$\#CEOComp\_Articles\_National_t$	267.38	177.53	141	16548
$\#CEOComp\_Articles\_State_t$	42.70	38.60	32	16548
$Strike_t$	.25	.43	0.00	16548
$PerCapitaIncome_t$	28.91	5.64	28.58	16548
$Population_t$	13.24	9.95	11.20	16548
$PutnamIndex_t$	-.17	.52	-.19	16406
$VoluntaryWork_t$	26.34	4.49	25.56	16548
$VoterTurnout_t$	53.21	10.00	54.10	16548
$Neighborhood_t$	4.42	1.28	3.90	16548

Table 3: Persistence of Social Norms by State

The Table presents annual rankings of U.S. states regarding the share of people who have volunteered for an organization (captured by variable $VolunteerWork_t$). Rank 1 refers to the highest share, rank 51 to the lowest.

Level of voluntary work from 1 (highest) to 51 (lowest)						
State	2002	2003	2004	2005	2006	2007
UT	1	1	1	1	1	1
IA	2	3	6	5	7	7
MN	3	4	3	3	4	2
NE	4	2	2	2	2	5
SD	5	6	7	6	11	6
MT	6	12	12	8	5	3
ID	7	10	9	14	10	16
WY	8	7	5	10	14	15
KS	9	11	4	12	8	8
ND	10	5	15	11	6	11
AK	11	9	10	9	3	4
WI	12	14	13	7	12	13
VT	13	8	11	4	9	9
WA	14	13	8	13	13	10
MD	15	25	25	27	32	28
OR	16	15	16	15	15	12
ME	17	17	19	19	16	14
MO	18	22	14	26	23	25
MI	19	27	20	21	22	21
NH	20	20	17	23	18	17
CO	21	16	22	16	20	19
OH	22	19	26	25	24	20
AR	23	30	46	46	37	37
PA	24	21	18	32	31	26
IN	25	18	31	29	17	18
AL	26	36	37	22	44	41
CT	27	23	23	24	21	24
KY	28	29	29	20	27	29
SC	29	34	35	37	30	27
DE	30	41	38	36	42	36
OK	31	31	30	18	25	22
IL	32	26	28	28	29	33
VA	33	24	33	30	26	30
HI	34	45	36	45	40	43
DC	35	28	27	17	19	23
TX	36	33	34	34	33	34
NM	37	40	24	35	39	32
NJ	38	35	42	40	45	48
WV	39	47	48	43	35	38
NC	40	43	21	31	36	31
CA	41	42	39	39	43	44
MS	42	32	40	49	47	49
AZ	43	46	43	41	38	45
MA	44	38	32	38	28	35
RI	45	48	41	33	41	40
GA	46	37	44	44	46	42
FL	47	44	45	47	48	47
LA	48	49	49	48	50	46
NY	49	50	50	50	49	50
TN	50	39	47	42	34	39
NV	51	51	51	51	51	51

Table 4: CEO compensation and national attitudes

The Table presents the estimated effects on executive compensation of the negativity of national press coverage of CEO pay. Fama French 48 industry codes fixed effects and state fixed effects are included in the first two specifications. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

		Static Models		Dynamic Model
Panel A	Pooled	Firm and year	Firm Fixed	System
TotalCompensation	OLS	cluster	Effects	GMM
$Negativity\_National_{t-1}$	–1929.69	–1929.69	–1360.93	–7625.60
	(–6.47)***	(–2.38)**	(–5.30)***	(–2.41)**
$Firm - IndustryReturn_{t-1}$	738.10	738.10	450.31	8510.72
	(6.66)***	(4.85)***	(4.53)***	(1.80)*
$Firm - IndustryROA_{t-1}$	1049.96	1049.96	1882.93	3236.20
	(1.98)**	(2.23)**	(4.10)***	(0.48)
$Firm - IndustrySalesGrowth_{t-1}$	1201.33	1201.33	192.32	6377.95
	(5.04)***	(4.87)***	(1.05)	(1.61)
$Sales_{t-1}$	0.07	0.07	0.08	–0.10
	(3.77)***	(3.68)***	(3.16)***	(–0.54)
$MarketValue_{t-1}$	0.19	0.19	0.16	0.19
	(13.15)***	(12.23)***	(11.45)***	(1.66)*
$S\&P500Return_{t-1}$	878.06	878.06	770.29	3368.17
	(4.72)***	(1.77)*	(4.20)***	(2.16)**
$GIndex_{t-1}$	153.37	153.37	–14.86	69.05
	(6.31)***	(5.92)***	(–0.29)	(0.93)
$CEOIsUnder60_t$	28.05	28.05	–36.15	–79.19
	(0.24)	(0.25)	(–0.44)	(–0.31)
$Year_t$	221.25	221.25	287.23	58.64
	(16.55)***	(8.45)***	(20.93)***	(0.41)
$Total\_Comp_{t-1}$				0.31
				(1.69)*
$Total\_Comp_{t-2}$				0.25
				(1.39)
$Total\_Comp_{t-3}$				0.27
				(1.27)
$Adj.R^2$	0.305	0.305	0.170	
Observations	16548	16548	16548	13287
AR(1) test (p-value)				(0.00)
AR(2) test (p-value)				(0.86)
Hansen test of over-identification (p-value)				(0.40)
Diff-in-Hansen test of exogeneity (p-value)				(0.13)

Table 4 continued

		Static Model		Dynamic Model
Panel B	Pooled	Firm and year	Firm Fixed	System
Options Value	OLS	cluster	Effects	GMM
$Negativity\_National_{t-1}$	–2935.13	–2935.13	–2481.70	–6131.27
	(–12.02)***	(–3.33)***	(–12.44)***	(–2.32)**
$Firm - IndustryReturn_{t-1}$	537.37	537.37	294.31	7622.17
	(5.30)***	(2.96)***	(3.45)***	(2.07)**
$Firm - IndustryROA_{t-1}$	1069.74	1069.74	1286.48	2109.03
	(2.45)**	(2.85)***	(3.24)***	(0.40)
$Firm - IndustrySalesGrowth_{t-1}$	1066.06	1066.06	276.70	6750.41
	(5.22)***	(4.52)***	(1.87)*	(2.44)**
$Sales_{t-1}$	0.01	0.01	–0.02	–0.17
	(0.68)	(0.72)	(–1.91)*	(–1.75)*
$MarketValue_{t-1}$	0.11	0.11	0.12	0.23
	(11.13)***	(8.15)***	(10.07)***	(3.16)***
$S\&P500Return_{t-1}$	490.72	490.72	388.36	2592.02
	(3.58)***	(0.84)	(2.81)***	(2.38)**
$GIndex_{t-1}$	43.62	43.62	–0.51	22.13
	(2.67)***	(2.69)***	(–0.01)	(0.61)
$CEOIsUnder60_t$	320.39	320.39	211.87	104.52
	(4.46)***	(3.86)***	(3.48)***	(0.60)
$Year_t$	72.84	72.84	87.33	–56.03
	(8.65)***	(1.84)*	(9.50)***	(–1.06)
$Options\_Value_{t-1}$				0.30
				(2.14)**
$Options\_Value_{t-2}$				0.27
				(1.87)*
$Options\_Value_{t-3}$				0.25
				(1.74)*
$Adj.R^2$	0.185	0.185	0.082	
Observations	16548	16548	16548	13287
AR(1) test (p-value)				(0.00)
AR(2) test (p-value)				(0.43)
Hansen test of over-identification (p-value)				(0.77)
Diff-in-Hansen test of exogeneity (p-value)				(0.15)

Table 4 continued

		Static Model		Dynamic Model
Panel C	Pooled	Firm and year	Firm Fixed	System
Salary and Bonus	OLS	cluster	Effects	GMM
$Negativity\_National_{t-1}$	449.86	449.86	477.36	3739.40
	(6.47)***	(1.95)*	(7.45)***	(8.06)***
$Firm-IndustryReturn_{t-1}$	147.03	147.03	108.56	1880.26
	(7.35)***	(5.30)***	(6.47)***	(3.59)***
$Firm-IndustryROA_{t-1}$	200.85	200.85	80.24	–487.08
	(1.67)*	(1.45)	(0.96)	(–0.34)
$Firm-IndustrySalesGrowth_{t-1}$	137.00	137.00	32.20	–3880.26
	(2.58)***	(1.88)*	(0.78)	(–2.25)**
$Sales_{t-1}$	0.03	0.03	0.02	–0.01
	(4.11)***	(4.25)***	(2.91)***	(–0.55)
$MarketValue_{t-1}$	0.03	0.03	0.02	0.05
	(8.12)***	(6.42)***	(5.03)***	(1.99)**
$S\&P500Return_{t-1}$	150.02	150.02	152.61	27.20
	(3.51)***	(0.92)	(3.45)***	(0.18)
$GIndex_{t-1}$	39.80	39.80	35.51	2.47
	(5.33)***	(4.57)***	(2.60)***	(0.17)
$CEOIsUnder60_t$	–180.34	–180.34	–121.35	–64.64
	(–4.43)***	(–4.24)***	(–5.33)***	(–1.18)
$Year_t$	27.10	27.10	50.20	–99.42
	(6.91)***	(1.53)	(13.98)***	(–5.41)***
$Salbonus_{t-1}$				-0.26
				(0.58)
$Salbonus_{t-2}$				0.44
				(0.76)
$Salbonus_{t-3}$				0.17
				(1.18)
$Salbonus_{t-4}$				0.13
				(2.07)**
$Adj.R^2$	0.286	0.286	0.110	
Observations	16548	16548	16548	11723
AR(1) test (p-value)				(0.05)
AR(2) test (p-value)				(0.41)
Hansen test of over-identification (p-value)				(0.33)
Diff-in-Hansen test of exogeneity (p-value)				(0.26)

Table 4 continued

		Static Model		Dynamic Model
Panel D	Pooled	Firm and year	Firm Fixed	System
Other Pay	OLS	cluster	Effects	GMM
$Negativity\_National_{t-1}$	555.59	555.59	643.41	167.46
	(4.25)***	(1.20)	(4.93)***	(0.14)
$Firm - IndustryReturn_{t-1}$	53.69	53.69	47.45	627.43
	(1.60)	(1.06)	(1.16)	(0.42)
$Firm - IndustryROA_{t-1}$	–220.62	–220.62	516.21	168.62
	(–1.05)	(–1.08)	(2.42)**	(0.05)
$Firm - IndustrySalesGrowth_{t-1}$	–1.73	–1.73	–116.57	–3872.87
	(–0.02)	(–0.02)	(–1.24)	(–1.55)
$Sales_{t-1}$	0.04	0.04	0.09	–0.02
	(3.35)***	(3.27)***	(5.04)***	(–0.05)
$MarketValue_{t-1}$	0.04	0.04	0.03	0.36
	(5.24)***	(3.65)***	(3.34)***	(1.34)
$S\&P500Return_{t-1}$	237.32	237.32	229.32	–2085.25
	(2.47)**	(0.64)	(2.34)**	(–1.96)**
$GIndex_{t-1}$	69.96	69.96	–49.86	24.67
	(6.43)***	(4.35)***	(–1.74)*	(0.56)
$CEOIsUnder60_t$	–112.00	–112.00	–126.67	5.65
	(–2.00)**	(–2.03)**	(–2.59)***	(0.06)
$Year_t$	121.32	121.32	149.70	42.98
	(18.15)***	(3.35)***	(18.67)***	(0.90)
$Adj.R^2$	0.177	0.177	0.124	
Observations	16548	16548	16548	16548
AR(1) test (p-value)				(0.00)
AR(2) test (p-value)				(0.37)
Hansen test of over-identification (p-value)				(0.85)
Diff-in-Hansen test of exogeneity (p-value)				(0.84)

Fama French 48 Industry Codes included, State FEs included in Columns 1 and 2, $^{*}p < .10$,$^{**}p < .05$,$^{***}p < .01$

Notes:

1. AR(1) and AR(2) are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null of no serial correlation.

2. Hansen test of over-identification is under the null that all instruments are valid.

3. Diff-in-Hansen test of exogeneity is under the null that instruments used for the equations in levels are exogenous.

Table 5: CEO compensation and local press coverage

The Table presents the estimated effects on executive compensation of the negativity of local press coverage of CEO pay. Fama French 48 industry codes fixed effects and state fixed effects are included. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

	$Total\ Compensation_t$	$Options\ Value_t$	$Salary+ +Bonus_t$	$Other\ Pay_t$
$Negativity\_State_{t-1}$	–333.42	–368.30	124.37	–89.49
	(–2.20)**	(–3.93)***	(3.92)***	(–1.04)
$Firm - IndustryReturn_{t-1}$	722.22	511.75	150.24	60.23
	(6.53)***	(5.04)***	(7.45)***	(1.79)*
$Firm - IndustryROA_{t-1}$	1194.69	1295.93	169.14	–270.38
	(2.25)**	(2.97)***	(1.41)	(–1.28)
$Firm - IndustrySalesGrowth_{t-1}$	1195.82	1057.91	138.36	–0.46
	(5.00)***	(5.14)***	(2.60)***	(–0.01)
$Sales_{t-1}$	0.07	0.00	0.03	0.04
	(3.75)***	(0.55)	(4.12)***	(3.36)***
$MarketValue_{t-1}$	0.19	0.11	0.03	0.04
	(13.19)***	(11.17)***	(8.09)***	(5.21)***
$S\&P500Return_{t-1}$	613.21	94.62	214.03	304.56
	(3.37)***	(0.69)	(5.16)***	(3.28)***
$GIndex_{t-1}$	151.76	41.00	40.12	70.63
	(6.24)***	(2.49)**	(5.38)***	(6.47)***
$CEOIsUnder60_t$	38.38	337.95	–182.13	–117.44
	(0.33)	(4.65)***	(–4.46)***	(–2.10)**
$Year_t$	188.78	22.30	34.28	132.19
	(14.93)***	(2.90)***	(8.55)***	(19.75)***
$Adj.R^2$	0.303	0.177	0.285	0.177
Observations	16548	16548	16548	16548

$^{*}p < .10,^{**}p < .05,^{***}p < .01$

Table 6: CEO compensation and national attitudes – alternate measure
The Table presents the estimated effects on executive compensation of the negativity of national press coverage of CEO pay measured using the negative word list of Loughran and McDonald (2009). Fama French 48 industry codes fixed effects and state fixed effects are included. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

	$Total\ Compensation_t$	$Options\ Value_t$	$Salary+ +Bonus_t$	$Other\ Pay_t$
$Negativity\_LM_{t-1}$	–1521.56	–2162.58	201.77	439.25
	(–6.96)***	(–12.05)***	(4.03)***	(4.74)***
$Firm - IndustryReturn_{t-1}$	751.89	555.05	147.15	49.69
	(6.80)***	(5.51)***	(7.34)***	(1.48)
$Firm - IndustryROA_{t-1}$	995.42	1008.11	192.07	–204.76
	(1.87)*	(2.31)**	(1.59)	(–0.97)
$Firm - IndustrySalesGrowth_{t-1}$	1205.46	1071.44	136.94	–2.92
	(5.07)***	(5.27)***	(2.58)***	(–0.03)
$Sales_{t-1}$	0.07	0.01	0.03	0.04
	(3.78)***	(0.76)	(4.11)***	(3.35)***
$MarketValue_{t-1}$	0.19	0.11	0.03	0.04
	(13.12)***	(11.11)***	(8.11)***	(5.25)***
$S\&P500Return_{t-1}$	442.47	–153.18	232.78	362.88
	(2.41)**	(–1.11)	(5.59)***	(3.87)***
$GIndex_{t-1}$	155.65	46.66	39.70	69.30
	(6.40)***	(2.86)***	(5.30)***	(6.37)***
$CEOIsUnder60_t$	22.22	313.58	–181.05	–110.31
	(0.19)	(4.38)***	(–4.44)***	(–1.97)**
$Year_t$	228.51	79.65	29.67	119.19
	(16.41)***	(9.03)***	(7.37)***	(17.52)***
$Adj.R^2$	0.306	0.188	0.285	0.178
Observations	16548	16548	16548	16548

Fama French 48 Industry Codes, State FEs included
$^{*}p < .10,^{**}p < .05,^{***}p < .01$

Table 7: Double sorts of change in CEO compensation and negativity
The Table presents double sorts of the change in executive compensation (measured in thousand $'s) from year $t-1$ to year t and the change in the negativity of press coverage of CEO pay from year $t-2$ to year $t-1$. Panel A contains the mean change in compensation for the top and bottom percentiles of negativity. Panel B contains the mean change in compensation for each quartile of the distribution of negativity. All variables are described in Table 1.

Panel A: Top/Bottom	$\Delta Negativity_{t-1,t-2}$	$\Delta Total\ Compensation_{t,t-1}$	$\Delta Options\ Value_{t,t-1}$	$\Delta Salary+\ Bonus_{t,t-1}$	$\Delta Other\ Pay_{t,t-1}$
*Bottom*5%	($neg. < -0.43$)	434.70	293.04	–34.09	176.70
*Bottom*10%	($neg. < -0.31$)	230.12	100.27	–9.10	139.51
*Top*90%	($neg. > 0.32$)	–92.75	–252.83	81.11	79.28
*Top*95%	($neg. > 0.42$)	–300.51	-334.17	46.80	–12.46
Panel B: Quartiles	$\Delta Negativity_{t-1,t-2}$	$\Delta Total\ Compensation_{t,t-1}$	$\Delta Options\ Value_{t,t-1}$	$\Delta Salary+\ Bonus_{t,t-1}$	$\Delta Other\ Pay_{t,t-1}$
Q1	(mean: -0.34)	172.35	139.40	31.55	1.86
Q2	(mean: -0.08)	3.52	-218.77	-5.66	229.17
Q3	(mean: 0.06)	–0.97	-274.28	34.02	240.44
Q4	(mean: 0.37)	–26.26	-200.36	82.61	89.50

Table 8: CEO compensation and national attitudes, by public scrutiny level
The Table presents the different effect on executive compensation of negativity in the press regarding CEO pay on firms with different exposure to public scrutiny. Fama French 48 industry code fixed effects and state fixed effects are included. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

	$Total\ Compensation_t$	$Options\ Value_t$	$Salary+ +Bonus_t$	$Other\ Pay_t$
$Negativity\_National_{t-1}$	–2215.94	–1342.06	–16.19	–857.70
	(–6.28)***	(–4.96)***	(–0.19)	(–5.35)***
$Negativity\_National_{t-1} * LargeFirm_t$	1036.08	–2256.65	822.45	2470.28
	(1.98)**	(–5.70)***	(5.38)***	(9.30)***
$LargeFirm_t$	1131.51	3665.89	–341.15	–2193.22
	(1.95)*	(8.13)***	(–2.17)**	(–7.67)***
$Negativity\_National_{t-1} * ConsumerIndustry_t$	–1041.53	–1323.82	73.56	208.73
	(–1.53)	(–2.36)**	(0.53)	(0.72)
$ConsumerIndustry_t$	1789.61	1956.17	21.94	–188.51
	(2.07)**	(2.72)***	(0.13)	(–0.60)
$Firm - IndustryReturn_{t-1}$	731.71	525.78	146.42	59.51
	(6.80)***	(5.25)***	(7.56)***	(1.79)*
$Firm - IndustryROA_{t-1}$	878.10	1022.55	154.12	–298.57
	(1.73)*	(2.37)**	(1.33)	(–1.46)
$Firm - IndustrySalesGrowth_{t-1}$	1114.41	1001.31	118.79	–5.69
	(4.79)***	(4.96)***	(2.28)**	(–0.07)
$Sales_{t-1}$	0.05	–0.00	0.02	0.04
	(3.43)***	(–0.42)	(4.09)***	(3.22)***
$MarketValue_{t-1}$	0.17	0.10	0.03	0.04
	(12.39)***	(10.03)***	(7.17)***	(4.63)***
$S\&P500Return_{t-1}$	930.08	489.01	168.32	272.75
	(5.04)***	(3.56)***	(3.99)***	(2.85)***
$GIndex_{t-1}$	81.65	5.87	21.98	53.79
	(3.41)***	(0.36)	(2.83)***	(4.89)***
$CEOIsUnder60_t$	78.98	356.62	–169.59	–108.06
	(0.71)	(5.09)***	(–4.28)***	(–1.97)**
$Year_t$	250.64	88.12	34.45	128.08
	(18.54)***	(10.30)***	(8.80)***	(18.83)***
$Adj.R^2$	0.333	0.204	0.311	0.188
Observations	16548	16548	16548	16548

$^{*}p < .10,^{**} p < .05,^{***} p < .01$

Table 9: CEO compensation and strikes

The Table presents the estimated effects of state-level worker compensation-related strike activity ($Strike_{t-1}$) on executive pay. Fama French 48 industry codes fixed effects are included. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

	$Total$ $Compensation_t$	$Options$ $Value_t$	$Salary+$ $+Bonus_t$	$Other$ Pay_t
$Strike_{t-1}$	–314.72	–344.19	–169.41	198.88
	(–3.19)***	(–4.64)***	(–7.24)***	(4.19)***
$PerCapitaIncome_{t-1}$	108.74	53.11	25.82	29.81
	(5.70)***	(4.42)***	(5.02)***	(3.37)***
$Population_{t-1}$	44.17	35.53	9.54	–0.90
	(5.40)***	(6.24)***	(3.94)***	(–0.27)
$Negativity\_National_{t-1}$	–1593.43	–2729.88	559.47	576.98
	(–5.42)***	(–11.46)***	(7.87)***	(4.35)***
$Firm - IndustryReturn_{t-1}$	735.43	546.37	141.26	47.81
	(6.66)***	(5.40)***	(7.04)***	(1.43)
$Firm - IndustryROA_{t-1}$	1026.16	985.11	217.49	–176.44
	(1.94)*	(2.27)**	(1.80)*	(–0.86)
$Firm - IndustrySalesGrowth_{t-1}$	1220.44	1101.03	131.26	–11.85
	(5.05)***	(5.39)***	(2.47)**	(–0.14)
$Sales_{t-1}$	0.07	0.01	0.03	0.04
	(3.71)***	(0.83)	(3.92)***	(3.20)***
$MarketValue_{t-1}$	0.19	0.11	0.03	0.04
	(12.63)***	(10.85)***	(7.80)***	(5.12)***
$S\&P500Return_{t-1}$	1037.23	603.37	195.15	238.72
	(5.50)***	(4.34)***	(4.41)***	(2.49)**
$GIndex_{t-1}$	150.79	40.33	40.51	69.95
	(6.30)***	(2.50)**	(5.59)***	(6.64)***
$CEOIsUnder60_t$	10.89	320.22	–192.36	–116.97
	(0.09)	(4.45)***	(–4.67)***	(–2.05)**
$Year_t$	85.32	3.87	–5.97	87.42
	(3.58)***	(0.25)	(–0.90)	(7.80)***
$Adj.R^2$	0.298	0.182	0.273	0.172
Observations	16535	16535	16535	16535

$^*p < .10$,$^{**}p < .05$,$^{***}p < .01$

Table 10: Robustness: CEO compensation and national attitudes
The Table presents robustness checks for the estimated effects on executive compensation of the negativity of national press coverage of CEO pay. All regression models include Fama French 48 industry codes fixed effects, state fixed effects and firm characteristics as in Table 4. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

	$Total\ Compensation_t$	$Options\ Value_t$	$Salary+ +Bonus_t$	$Other\ Pay_t$
Panel A	Excluding the year 2006			
$Negativity\_National_{t-1}$	–1936.75	–2982.30	421.35	624.20
	(–6.46)***	(–12.13)***	(6.08)***	(4.83)***
$Adj.R^2$	0.296	0.194	0.308	0.146
Observations	15301	15301	15301	15301
Panel B	Using log(pay) as dependent variables			
$Negativity\_National_{t-1}$	–0.21	–1.05	0.29	0.98
	(–3.95)***	(–13.19)***	(5.87)***	(6.34)***
$Adj.R^2$	0.268	0.295	0.200	0.192
Observations	16505	11981	16438	15934
Panel C	Including NBER recession indicator			
$Negativity\_National_{t-1}$	–2496.23	–3157.55	493.68	167.63
	(–7.21)***	(–10.94)***	(6.47)***	(1.21)
$Adj.R^2$	0.306	0.185	0.286	0.179
Observations	16548	16548	16548	16548
Panel D	Including top 1% observations (outliers)			
$Negativity\_National_{t-1}$	–3797.89	–4007.32	407.19	–198.63
	(–4.97)***	(–7.77)***	(4.03)***	(–0.39)
$Adj.R^2$	0.032	0.068	0.193	0.003
Observations	16606	16606	16693	16606

$^{*}p < .10,^{**}p < .05,^{***}p < .01$

Table 11: Pairwise correlations of state characteristics

Variable	*Strike*	*PerCapita Income*	*Popu− lation*	*Negativity State*	*Voter Turnout*	*Voluntary Work*	*Neighbor− hood*	*Putnam Index*	*PCA*
Strike	1.00								
PerCapitaIncome	0.32*	1.00							
Population	0.70*	0.20	1.00						
Negativity_State	0.28*	0.23	0.46*	1.00					
VoterTurnout	-0.07	0.09	-0.37*	-0.21	1.00				
VoluntaryWork	-0.21	-0.14	-0.37*	-0.24	0.66*	1.00			
Neighborhood	-0.24	-0.15	-0.39*	-0.29*	0.72*	0.89*	1.00		
PutnamIndex	-0.07	0.12	-0.29*	-0.35*	0.80*	0.77*	0.78*	1.00	
PCA	-0.16	-0.06	-0.39*	-0.33*	0.82*	0.94*	0.95*	0.92*	1.00

$*$ indicates correlation coefficients significant at the 5% level or better

Table 12: CEO compensation and social capital

The Table presents the estimated effects of one measure of state-level social capital (proxy for income inequality aversion), $VoluntaryWork_{t-1}$, on executive pay. Fama French 48 industry codes fixed-effects are included. Standard errors are corrected for heteroskedasticity and clustered at the firm level. All variables are described in Table 1.

	$Total$ $Compensation_t$	$Options$ $Value_t$	$Salary+$ $+Bonus_t$	$Other$ Pay_t
$Voluntarywork_{t-1}$	–67.75	–12.81	–22.53	–32.41
	(–4.00)***	(–1.21)	(–4.40)***	(–4.27)***
$PerCapitaIncome_{t-1}$	93.13	46.02	19.70	27.41
	(5.05)***	(3.94)***	(4.03)***	(3.18)***
$Population_{t-1}$	24.70	26.90	2.02	–4.23
	(2.71)***	(4.29)***	(0.75)	(–1.17)
$Negativity\_National_{t-1}$	–1717.48	–2841.06	497.10	626.48
	(–5.79)***	(–11.73)***	(7.08)***	(4.78)***
$Firm - IndustryReturn_{t-1}$	743.94	551.49	145.57	46.88
	(6.71)***	(5.42)***	(7.25)***	(1.40)
$Firm - IndustryROA_{t-1}$	1103.07	1017.57	248.83	–163.33
	(2.11)**	(2.34)**	(2.09)**	(–0.80)
$Firm - IndustrySalesGrowth_{t-1}$	1229.72	1106.88	135.52	–12.68
	(5.10)***	(5.42)***	(2.56)**	(–0.15)
$Sales_{t-1}$	0.07	0.01	0.03	0.04
	(3.71)***	(0.76)	(3.93)***	(3.22)***
$MarketValue_{t-1}$	0.19	0.11	0.03	0.04
	(12.76)***	(10.88)***	(7.83)***	(5.17)***
$S\&P500Return_{t-1}$	988.30	550.24	170.75	267.31
	(5.28)***	(4.00)***	(3.87)***	(2.79)***
$GIndex_{t-1}$	154.21	39.99	41.62	72.60
	(6.47)***	(2.49)**	(5.73)***	(6.90)***
$CEOIsUnder60_t$	34.13	325.27	–184.74	–106.39
	(0.29)	(4.53)***	(–4.49)***	(–1.88)*
$Year_t$	109.29	16.33	3.56	89.39
	(4.71)***	(1.10)	(0.56)	(8.13)***
$Adj.R^2$	0.300	0.181	0.274	0.174
Observations	16548	16548	16548	16548

$^{*}p < .10,^{**}p < .05,^{***}p < .01$

Table 13: CEO compensation and other social capital variables
The Table presents the estimated effects of alternative measures of state-level income inequality aversion on executive pay. The four regression models include all the controls in Table 12.All variables are described in Table 1.

	$Total\ Compensation_t$	$Options\ Value_t$	$Salary+ +Bonus_t$	$Other\ Pay_t$
$Neighborhood_{t-1}$	–160.99	–31.72	–38.98	–90.30
	(–2.96)***	(–0.89)	(–2.35)**	(–3.91)***
$Adj.R^2$	0.299	0.181	0.272	0.173
Observations	16548	16548	16548	16548
$PutnamIndex_{t-1}$	–338.94	–40.08	–90.98	–207.89
	(–2.76)***	(–0.47)	(–2.46)**	(–4.28)***
$Adj.R^2$	0.300	0.183	0.272	0.173
Observations	16406	16406	16406	16406
$VoterTurnout_{t-1}$	–18.52	–11.47	–9.32	2.27
	(–4.28)***	(–3.71)***	(–8.11)***	(1.04)
$Adj.R^2$	0.299	0.182	0.274	0.171
Observations	16548	16548	16548	16548
PCA_{t-1}	–181.22	–29.39	–50.16	–101.67
	(–3.44)***	(–0.82)	(–3.24)***	(–4.54)***
$Adj.R^2$	0.301	0.183	0.273	0.174
Observations	16406	16406	16406	16406

$^{*}p < .10,^{**} p < .05,^{***} p < .01$