CEO Utility Pay Literature Review / Part II

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General Executive Compensation

Executive Incomes, Profits and Revenues: A Comment on Functional Specification


- data from 1962-1965
- Main findings:
  - semi-log function relating sales, profit, and compensation works best.
  - Profits have influence on compensation
  - Sales have influence on compensation

Managerial Pay and Corporate Performance


- This paper is trying to examine the question of whether the financial rewards reaped by high level corporate executives are more strongly influenced by company performance as measured by total corporate revenues or as measured by either of two standards of shareholder welfare.
- trying to include all relevant pay packages; cash salary and bonus, indirect, deferred, and contingent compensation
- data from 1942-1963, 3 year intervals
- basic model relates compensation to corporate sales and profits
- p715 defines all variables in a nice table
- Strong support for "top management's remuneration is heavily dependent upon the generation of profits"
- reported profits have a strong and regular influence on executive rewards, sales have little influence on rewards
- profits and equity market values are more important in the determination of compensation than sales
This paper concludes that large companies today can still be modeled by profit maximization models rather than a sales maximization model.

Managerial Incentives and the Specification of Functional Forms


- Generalized Box-Cox approach
- used firms from 1976
- linear-log model worked best
- profit and sales both affect compensation
- Profit is less important than sales though

The Determinants of Executive Salaries: An Econometric Survey


- Estimates show both a neoclassical and managerialist interpretation
- execs are paid for increasing profits.
- executives salaries are influenced by corporate performance.
- Base salary is determined through supply and demand interactions
- 3 influences on executive pay:
  1. market for CEO talent (shortage or excess)
  2. external performance
  3. internal efficiency of production

Regulatory and Life Cycle Influences on Managerial Incentives


- Need to look up Baker, Boyes and Schagenhauf, and Ciscel and Carroll's sources
- Sampled 680 firms from data from 1977. 3 groups; industry, banking, and utilities
- Industrial firms have least regulation and Utility firms have the most
- Significant profit AND sales incentives found in industry and banking firms. no significant incentives found in utilities.
  - More of a dis-incentive was found for utilities
  - Traditional profit maximization models might have no relevance to utility companies because of regulations.
  - Found that larger firms try to maximize profit while smaller firms try to maximize sales (growth), for industrial firms
  - This differentiation of goals for firm size is not found in banking and utility sectors.
  - Clear incentives for sales maximization only are present in utilities
  - Current utility regulation could result in undercapitalization
An Empirical Investigation of the Relative Performance Evaluation of Corporate Executives


- Analyzes if compensation is adjusted to relative performance.  
- Analyzed 3 industries from 1947-1977; Chemical Firms, Aerospace firms, and electronics firms  
- 2 issues:  
  1. if compensation reacts to a difference in systematic vs. unsystematic components or treats them as one  
  2. if common business risk is filtered out of executives evaluation  
- Results are mixed. Some show relative performance evaluation is applicable, some do not.

Compensation and Incentives: Practice vs. Theory


- Source: Katz, Lang, Summers 1987  
  - "economic analysis can only go so far; at some point we must defer to political pressure or to behavioral notions of fairness, social responsibility, trust, or culture."

- Not only CEO compensation, it focuses on compensation and incentives for all employees.  
- Discusses how to motivate and if money is a good motivator.  
- Discusses many different choices a CEO might have to make.

Performance Pay and Top-Management Incentives


- Additionally to the more common incentives added to CEOs compensation, this paper included "Threat of Dismissal."  
- This shows the CEOs general incentive to not be fired also plays a factor in the way they behave  
- Discussion on the feasibility of pay to performance sensitive contracts:  
  - May not be feasible  
  - Executives with limited resources will not commit to a contract with a high performance based pay, for fear of low pay  
  - Shareholder might not want to commit to a high performance based pay for fear of too high a pay

- Measure of CEO performance other than shareholder wealth; CEO activity, accounting measures of performance, relative performance  
- The relationship between CEO compensation and shareholder earnings is small and has fallen over the last 50 years  
- Results:
1. CEO wealth changes by 30 cents to $1000 of shareholder wealth, stocks change by 15 cents to $1000 of shareholder wealth.

2. The average estimate of CEO dismissal consequences is 30 cents to $1000 of shareholder wealth. Total pay-performance sensitivity is 75 cents to $1000 of shareholder wealth.

3. Largest CEO incentive comes from ownership of their own stock, $3.25 to $1000 of shareholder wealth.


5. Bonuses (50% of salary) do not affect sensitivity.


7. Median CEO stockholding fell from .3% (1938) to 0.03% (1984).

8. Average standard deviation of pay changes for CEOs fell during 1934 to 1974-86 (almost $100,000).

9. Pay performance sensitivity fell during the same years.

10. Average salary plus bonus fell.

- Pay-performance of CEOs fell a lot between 1934 and 1986.
- Political interference is probable. Was regulation passed during these years?

**Interindustry Differences in the Relation between Compensation and Firm Performance Variables**


- Executive performance is measured by:
  1. stock returns
  2. accounting returns
  3. sales revenue
  4. net interest income

- Industries examined:
  1. banks
  2. electric utilities
  3. oil and gas firms

- Data from 1978-1982
- The 4 variables show significant differences between industries for compensation.
- Compensation vs accounting based performance measures are different.
- Section 3 details all differences.

**Accounting income, stock price, and managerial compensation**


- Look up Antle and Smith 1986, Jensen and Murphy 1990
- It's not very useful
Stock-based incentive compensation and investment behavior


- firms with regular informational asymmetry between managers and shareholders will favor contracts with long run stock returns rather than short run stock returns alone.
- estimates of CEO pay sensitivity to stock price from Jensen and Murphy 1990
- Use of salary/bonus incentives declines with growth opportunities
- Use of all incentives declines with growth opportunities
- Total incentives are lower for regulated or large firms
- high growth firms have a lower value and proportion of salary/bonus incentives. They also have a lower value total incentives
- contrary to the expected: overall compensation of CEOs in high growth firms is less sensitive to shareholder wealth
- no relationship between age of hire and growth opportunities or between tenure and growth opportunities
- Large firms hire older CEOs, regulated firms hire younger CEOs
- too much focus on current stock price can lead to over/under investment
- a balance of focus on future and current stock price will lead to good investment

Board Control and CEO Compensation


- Hypothesis: CEO compensation will be inversely related to levels of board control
  - Supported
  - more insiders (on the board for the CEO) lowered CEO pay
  - The board members who want to be the next CEO could be scared of trying to please the CEO too much

Bank CEO Pay-Performance Relations and the Effects of Deregulation


- Deregulation of banks helps to understand the possible direction of the deregulation of utilities
- Data from Forbes 1976 to 1988
- 37 commercial banks
- All parts of compensation show increased pay-performance sensitivity after deregulation
- Results:
  - pay-performance sensitivity increases post deregulation
  - before deregulation there is no relation between CEO salary & bonus or CEO option wealth and firm performance.
  - CEO salary & bonus and CEO option holdings are more dependent on performance after deregulation.
  - insider stock holdings increase post deregulation.
The Choice of Performance Measures in Annual Bonus Contracts


- non-financial measures for CEO performance increase with:
  - regulation
  - the firm follows "innovation-oriented" strategy
  - strategic quality initiatives
  - noise in financial measures

- no evidence that the financial distress of the value of CEO equity holdings relative to salary and bonus are not associated with measures of bonus contracts
- powerful CEOs have less weight on non financial performance
- CEOs with greater influence over board members are not more likely to be compensated based on non-financial measures.
- Non financial measures:
  - Market share
  - efficiency/productivity
  - product quality
  - customer satisfaction
  - employee satisfaction

- how they measured non financial performance is summarized

How Much Does the CEO Matter? The Role of Managerial Discretion in the Setting of CEO Compensation


- firm performance increases when CEO pay and discretion are aligned
- Managerial discretion is the amount of options CEOs have when making strategic decisions
- Focusing on how this affects CEO pay
- increased discretion leads to increased potential impact of CEO on firm leads to increased CEO potential marginal product
- Figure 1 really helps show discretion at play

Things that affect discretion:

- Regulation - decreased discretion
- investment opportunities - increased discretion
- product differentiation
- industry structure
- demand instability
• capital intensity

• Hypothesis:
  1. The greater the level of managerial discretion, the greater the CEO compensation. Supported
  2. The relationship between CEO discretion and CEO compensation will be stronger in firms with high performance than in those with low performance. supported.

• Data from 1987 Fortune 1,000
• Figures 2-4 show all the factors for hypotheses

Deregulation and the adaptation of governance structure: the case of the U.S. airline industry


• The airline industry is relevant because it was a regulated industry like electric utilities, but was deregulated in 1978, so it shows a before and after picture of regulation. By comparing the industries more can be learned about the effects of regulation on an industry
• after deregulation:
  • equity ownership has a higher concentration
  • CEO compensation increases
  • CEOs stock option grants increase
  • boards grow smaller
  • CEO turnover increases
  • insider holdings and cash compensation do not change
  • gradual changes in governance structure

• data from 1971-1992
• the deregulation act removed all price and entry restrictions to the industry
• Surviving firms of deregulation were found to have adapted compensation policies quicker than the failing firms
• New firms entering the industry after deregulation had smaller board size, greater representation from outsiders, and more equity based pay
• Table 1 shows data from before and after the act. Airlines has a significant increase in delisted firms after.
• the amount of firms that were taken over or went bankrupt were much higher in the airline industry than the electric utility industry during this time frame.
• the average levels of CEO ownership vary a lot over the three different industries (unregulated, airline, regulated or electric utilities) but very little within each industry
• ownership amounts:
  • Unregulated - 20%
  • Airline - 14%
  • Regulated or electric utilities - 1%

• Fig 2 shows graphs on compensation for each industry over a time period
How Much Does Performance Matter? A Meta-Analysis of CEO Pay Studies


- States that firm size gives 40% of variance in total CEO pay and firm performance gives 5% of variance.
- In classical firm layouts, the CEO also owns the firm, so there is no conflict of interests
- nowadays, a corporation can be owned by thousands (stockholders), leading to conflict of interests
- executives can be more interested in increasing firm size. This gives more pay, power, prestige, etc.
- CEOs have more influence over size than performance. If they can correlate their bonus packages with size rather than company performance, they can benefit easier and more.
- increased size can justify increased pay easier as well:
  - greater organizational complexity
  - more human capital required
  - a bigger hierarchy (more pay at top of layers)

- executives are risk adverse, meaning that they will try to reduce their personal risk by decoupling their pay from the firms performance, and hopefully linking it to a more stable factor (firm size)
- board members, who chose a compensation package for CEOs, may also benefit from a decoupled pay. Higher paid CEOs have higher paid board members
- CEOs are in a position that allows them to more easily pursue their goals than the shareholders
- H1: Firm performance is an important determinant of CEO compensation
- H2: CEO compensation is largely insensitive to firm performance and primarily determined by firm size
- Meta-analysis has strengths such as scientific rigor, little bias in the choice of studies included, objective weighting of studies, allowing moderating variables, allowing estimations of relationship stability, and more. Performed using the Schmidt-Hunter Method
- Dependent Variable: CEO Pay
  - methods of evaluation are Black-Scholes method, heuristic valuation, and measuring only actual stock gains.
  - Simple measures of cash comp. are a good substitute for total pay for CEOs

- Independent Variables: Firm performance and Firm Size
  - size can be measured by sales, number of employees, total assets, etc.
  - Performance can be measured by market value relative to book value of assets, ROE, ROI, changes in market value of firm, etc.

- 16 measures of size and 30 measures of performance were considered (table 1).
- 4 industries were analyzed: Pharmaceutical Preparations, Semiconductors and related devices, electro-medical equipment, and food/beverage.
- Size factors:
  - Absolute firm size (market value, assets, equity, etc.)
  - Change in size (sales)
  - Transferred Firm Size (log of market value, change in assets, etc.)

- Performance Factors:
Absolute Financial Performance (total profits, etc.)
Changes in financial performance (change in income)
stock performance (earnings per share)
Return on equity, short and long term
Return on assets
Market Returns
Internal Performance Indicators

- Aggregate firm size variable accounts for more than 40% of variance in pay. It is important to note this is not only size factors but performance factors as well.
- Changes in firm performance account for 4% of variance in pay
- Changes in firm size account for 5% of the variance in CEO pay. These results are the actual factors that should be looked at
- The paper discusses how only objective measurements can be bad and that CEO comp. should also be based on subjective qualities. This might reduce noise in the data.
- The paper cannot explain the large variance and discusses possible solutions

Incentive Pay and the Market for CEOs: An Analysis of Pay-For-Performance Sensitivity


CEO Stock-Based Compensation: An Empirical Analysis of Incentive-Intensity, Relative Mix, and Economic Determinants


- Good summary of stock types and how to evaluate them
- 1992-97 period
- provide strong support for the predictions of formal theories of optimal CEO stick option and restricted stock awards
- change in agency costs and financial constraints affect the amount of incentives and mix of stock options to cash compensation
- the amount of incentives and mix of restricted stock decrease at firms with high growth possibilities

The managerial rents model: Theory and empirical analysis


- Same guys wrote a previous paper in 1992
managers have potential to "generate rents," or generate increases in company value/pay, using their human capital, they must put in the effort and ensure it is focused in the right place for this to occur however.

- Propositions:

1. Managers with superior human capital generate above average firm performance
2. Differences in managerial skills lead to differences in the variability of firm performance
3. Industry specific human capital commands a premium in industries in the early stages of the product-life cycle, relative to industry specific capital in more mature industries
4. Following changes in industry and technological conditions, the composition of managerial human capital changes within firms and industries, as companies alter the types of managers that they hire, fire, promote, and compensate highly.
5. Firms in regulated industries more frequently hire and promote managers with industry specific human capital than do firms in unregulated industries
6. Following industry deregulation, the amount and quality of generic managerial human capital in the industry increases.
7. Industries with characteristics that allow greater managerial discretion attract managers with higher quality human capital on average than do industries with less latitude for managerial discretion.
8. Superior managerial human capital in industries that allow for greater managerial discretion leads to better firm performance than in other industries.
9. Following changes in economic conditions, the composition of managerial human capital changes within firms, as companies alter the types of managers that they hire, fire, promote, and compensate highly.
10. Managers with superior skills receive above-average compensation
11. Managers that take firms private are more likely to have greater firm-specificity of skills than managers in other firms
12. Differences between firms in the human capital of boards of directors are related to differences in strategic actions and performance.

- Selection/training of CEOs depends on variables like: Age, Changing market conditions, degree of regulation, degree of homogeneity in industry, managerial discretion amount, competitive conditions, size/complexity of firm, economy-wide changes in business conditions.
- Managers in more regulated industries might need more industry-specific experience.
- Regulated electric utilities in CA have a slow-changing environment.
- Managers must work a lot with Utility commission and with the state legislature.
- Utilities may be more likely to hire managers from within the firm.
- In electric utilities, a generic financial skill background has become more useful after deregulation.
- Regulated industries have less managerial discretion.
- Managerial social capital has value to firms (social network).
- Contingency Factors include:
  - attitude towards risk
  - information available when hiring manager
  - stage of industry life cycle
  - changing firm
  - industry
  - economy-wide conditions
  - amount of regulation for industry
  - amount of homogeneity for industry
• extent of managerial discretion
• competitive conditions
• size/complexity of firm

• for corporate governance, the skills and abilities of managers must be taken into account.

Pay for performance? Government regulation and the structure of compensation contracts


• in 1992/93 the SEC and congress increased regulation and visibility on CEO compensation of large firms. They are now given less tax breaks on non performance based pay and are required to report more information
• Propositions investigated:

  1. CEO compensation levels decrease following the adoption of 162(m) (the regulations) and the SEC disclosure changes
    • All compensation components increased over the period, showing that the regulations did not change overall CEO pay levels
    • The regulations may have put pressure to slow growth or decrease salary of larger firms

  1. Salaries above or nearing the million-dollar range are less likely to increase than salaries below the million-dollar mark.
    • only suggestive results that this may be the case. nothing conclusive

  1. Firms reduce salaries above 1 million dollars because of the regulations
    • The findings show that the regulations did not significantly cut salaries (some did get cut citing the regulations, but many went up)

  1. Salaries nearing the million-dollar range increase less than salaries below the million-dollar range.
    • Salaries close to the mark have lower growth rates

  1. Performance sensitive components of compensation, such as bonus and stock-based compensation, have become more important after 1993
    • Trends seem to be consistent, no quantitative values

  1. Increased shareholder scrutiny through enhanced disclosure and 162(m) will lead to an increase in the sensitivity of pay to performance after 1993, especially for firms subject to 162(m)
    • CEO tenure is unrelated to bonus and total comp. Firm size (ln of total assets) is proportional to total comp but not bonus
    • sensitivity does increase

  1. After the regulations, the change in CEO wealth per dollar change in shareholder wealth increases, especially for million-dollar firms
Calculate with Jenson-Murphey statistic
This is true
Tax paying firms should be more sensitive than non tax paying firms

- CEO performance is measured by firms in ways including:
  - net income
  - net profit
  - Profit minus nonreoccurring events
  - Earnings per share
  - sales
  - return on equity (ROE)
  - shareholder returns
  - cash flows
  - Return on assets (ROA)
  - Profit Margin
  - dividends

- The regulations did not affect CEO comp growth, but did affect the structure. CEO comp is more sensitive to shareholders wealth now

The Fit between CEO Compensation Design and Firm Risk


- Sources: Jensen and Meckling 1976 for agency theory
- Unsystematic Risk is firm risk
- Systematic Risk is general risk
- CEOs will demand more compensation for increased risk
- Hypothesis:
  1. Reliance of performance-contingent pay for CEOs will be greater under conditions of moderate firm risk than under conditions of either low or high firm risk
  2. The relationship between CEO compensation level and firm risk is curvilinear, with CEO compensation higher under conditions of moderate firm risk than under either low or high firm risk
  3. The curvilinear relationship between the proportion of CEO pay that is contingent and firm risk is stronger in the case of unsystematic risk than in the case of systematic risk.

- Results:
  1. supported for unsystematic risk
  2. Supported for unsystematic risk
  3. Strongly supported

- CEO pay design changes with the amount of risk for a firm. This is stronger for firm risk.
- Variable pay is highest for a medium amount of firm specific risk
- past a certain level of firm risk, the amount of incentive pay falls
- total compensation could increase with general risk (job security, reputation, future pay at risk)
- "a reward can only induce desired behaviors if the individual can exert some influence on the criteria used to trigger the reward."

**CEO compensation, diversification, and incentives**


- Examines the CEOs incentives and the firm's associated risks
- Risk is important because it will be low in regulated industries. This ties together the differences in compensation between two industries with a quantifiable variable
- Assumptions:
  - Both shareholders and CEOs are risk averse
  - CEOs have large stakes in their firm
  - Shareholders have diversified portfolios
  - Assume firm-specific risk to be beyond CEOs control
- It is more costly for CEOs than for shareholders to have firm-specific risk
- Model 1: CEO cannot trade market portfolio, result implications:
  1. Pay performance sensitivity decreases with firm-specific risk
  2. The relationship between market risk and pay performance sensitivity is ambiguous
  3. Positive relationship exists between the productivity of a CEO and pay performance sensitivity
- Model 2: CEO can trade market portfolio, result implications:
  1. Pay performance sensitivity decreases with firm-specific risk
  2. Market risk does not affect pay performance sensitivity
  3. Productivity of effort and pay performance sensitivity are proportional
- The standard measure of CEO incentives is pay-performance sensitivity
- Risk is measured in dollars, by measuring the variance of percentage returns and multiplying by the square of the beginning of period firm value
- Testing to determine if firm-specific risk and systematic risk have the same effect on pay performance sensitivity
- The connection between CEO incentives and Risk:
  1. When CEOs cannot trade on market, incentive is ambiguously related to systematic risk
  2. When CEOs can trade on market, systematic risk does not effect incentive level
- There is a relationship between firm-specific risk and incentive, but not between systematic risk and inventives.

**Pay Without Performance: The Unfulfilled Promise of Executive Compensation**


- Only the first few pages of a book
Discusses the importance of addressing executive pay shortfalls
Pay needs to be associated to shareholder wealth & not too excessive.
Only paper to bring up moral standpoint of high CEO pay. "paying executives hundreds of times what other employees get is inherently unfair and unacceptable."
From 1998 to 2002, The top five executives in the ExecuComp database earned a combined salary over $100 billion

**Economic consequences of the Sarbanes–Oxley Act of 2002**


- Sources: Norris 2004, Ribstein 2002
- The act requires more oversight, increases penalties for manager misconduct, and addresses conflicts of interest.
- Tries to reduce/prevent accounting and managerial misbehavior
- Hypothesis:
  1. If SOX (the act) imposed net costs on the U.S. firms, firms' cumulative returns adjusted for the impact of contemporaneous economic news around the SOX rule making events would be negative.
  2. If the restriction on auditor's provision of non-audit services imposed net costs on firms, firms purchasing more non-audit services prior to SOX would incur greater costs and experience more negative cumulative abnormal returns around the SOX rule making events.
  3. If the governance provisions of SOX imposed net costs on firms, firms with corporate governance structure weaker than optimum would incur more costs and experience more negative cumulative abnormal returns around the SOX rulemaking events.
  4. If section 404 imposed net costs on firms, firms with more complex business would incur greater costs and experience more negative cumulative abnormal returns around the SOX rulemaking events.
  5. If deferment of section 404 compliance was beneficial, firms that obtained a longer extension period would experience more positive abnormal returns than firms that were required to comply with section 404 earlier around the announcement of postponing the compliance dates.
  6. If the provisions on incentive pay and insider trading imposed net costs on firms, firms that use incentive-based compensation excessively would incur greater costs and experience more negative cumulative abnormal returns around the SOX rulemaking events.

- The total abnormal returns of firms following SOX are negative
- Does not show SOX being "costly" but blames insignificant events to lowering significance.
- SOX appears to have a negative return but the results are inconclusive.

**A Lobbying Approach to Evaluating the Sarbanes-Oxley Act of 2002**


- Sarbanes-Oxley Act of 2002 Lobbying:
  - investors in favor of strict implementation
  - corporate insiders and business groups against strict implementation
- firms lobbying against were most affected by the law
• The act improved disclosure, transparency, and corporate governance
• This prevented misconduct, mismanagement by insiders, perquisite consumption.
• 3 sets of rules:
  1. provisions related to enhanced financial disclosure
  2. provisions related to corporate responsibility
  3. provisions related to auditor independence

• Firms most likely to lobby have:
  • low forecasted earnings growth
  • high profitability
  • poor governance
  • in mature industries

• Page 527 has a summary of the 10 titles in the act.
• individuals and investor groups are in high favor of the act
• average costs of compliance increase with firm size
• total estimated annual compliance costs for US public firms is ~$13.9 billion
• annual total benefit for firms is ~$92 billion
• many reasons sox can help firms/investors (p 573)
• results show SOX act is good

A Multiplicative Model of Optimal CEO Incentives in Market Equilibrium


• Neoclassical model
  • Assume that effort has a multiplicative, not linear, effect on firm value.
  • competitive assignment model
  • Implications:
    1. dollar-dollar incentives decline with firm size
    2. wealth performance sensitivity is invariant to firm size
    3. current (observed) percent-percent incentives are enough to stop destructive CEO actions
    4. firm and wealth volatility are proportional. Firm volatility does not affect incentive pay.
    5. incentive pay is usually enough to stop destructive CEO actions.

Inside the black box: The role and composition of compensation peer groups


• Firms select highly paid CEOs of other companies to justify their own CEO compensation package.
• This is more prevalent when:
  • there are less similar firms
  • The CEO is the chairman of the board of directors
The CEO has longer tenure 
directors are serving on multiple boards

most firms will choose to compare themselves to a firm with a 5.6% higher CEO salary to their best matched, not reported firm.

Generally, for public firms, the compensation contract is set as follows:

1. The firms human resources department make initial pay recommendations
2. The recommendations are reviewed and revised by the compensation committee of the BOD, who usually work with outside consultants.
3. The committee may "benchmark" the pay against other rival firms
4. The full board reviews and approves the contract

In 2006 the SEC issued a disclosure requirement. (SEC final rules 33-8732a, item 402(b)(2)(xiv))

Executive Compensation and the Role for Corporate Governance Regulation


- Sarbanes-Oxley Act of 2002 - protects shareholders from "managerial misbehavior"
- Governance is regulation over the executive like above. either internal or external regulation
- increase in governance = decrease in compensation
- Each firm must have the optimal amount of compensation/incentives and governance to control managers
  - Small firms tend to increase incentives
  - Large firms tend to increase governance
- Executive compensation increases with firm size
- Pay performance sensitivity(incentives) goes down with firm size
- Governance and incentive pay are substitutes
- Under regulation, CEO pay falls
- Under governance, large firm's value increases and small firm's value decreases
- More firms with talented managers take voluntary governance
- If governance costs go up, governance decreases.
- Because managers are a "product", if one firm has poor governance, and therefore high compensation costs, all other firms in the industry are pressured to increase incentive pay and therefore decrease governance.
- The conclusion is a very good summary of everything

Peer choice in CEO compensation


- Investigating that firms will report peer compensation values higher than their own CEOs. most research shows this is because they want to justify their CEOs salary. this article claims it is because it represents a reward for "unobserved CEO talent."
- Fiscal year 2006
• 3 measures of CEO talent:
  1. past abnormal performance
  2. size of past firms managed
  3. media coverage
• CEO talent can also be measured with CEO fixed-effects
• the peer pay effect mostly shows the need to pay CEOs more for their talent.
• some evidence of self-serving behavior in play
• CEO pay is more in line with tighter labor markets than with managerial entrenchment or weak corporate governance.

Performance Terms in CEO Compensation Contracts


• Data from fiscal year 2007
• 90% of sample firms have some performance based awards
• of the value of performance based awards:
  • 79% is accounting performance measures
  • 13% is stock performance measures
  • 8% is non financial measures
• larger firms (size or growth opportunities) rely heavily on market based measures
• mature firms rely heavily on accounting based measures
• performance awards: given for achieving a predetermined performance goal
• Discretionary Awards: given at the discretion of the board
• Figure 1 shows average CEO contract
• Figure 2 shows average performance measures:
  • utilities are 37% market measure, 51% accounting measure, 12% non-financial measure. In accounting they are 0% sales, 78% income, 8% accounting return, 14% other
• CEOs with long tenure and/or stable firm strategy will get more accounting-based measures
• a lot of CEO awards are discretionary

A comparison of CEO pay-performance sensitivity in privately-held and public firms


• Studies CEO contracts on private and public firms over the years 1999-2011.
• This source is mostly focused on private firms. It does not give reasons for its findings. Minimally applies to electric utility compensation
• Conclusions:
- CEOs in public firms are paid 30% more than CEOs in (comparable) private firms.
- CEO pay in both firm types is proportional to firm accounting performance.
- Pay performance link is stronger in public than in private firms.

Hypotheses:

\[ H_1: \text{The shareholder monitoring hypothesis: CEO pay performance sensitivity is weaker in privately held firms than in public firms.} \]

\[ H_2: \text{The CEO power hypothesis: CEO pay performance sensitivity is stronger in privately held firms than in public firms.} \]

- CEO total compensation is given as the total of salaries, bonuses, grant date value of restricted stock awards, and grand date Black-Scholes value of granted options, and other pay (premiums for insurance policies and medical expenses).
- Results support the view "that concentrated ownership structure substitutes for CEO performance-based compensation contracts."

**CO2 Emissions**

**Trends '93: A Compendium of Data on Global Change**


- Total CO2 emissions in the US have been on a generally increasing trend since the 1950s (until 1993 in the study).

**CO2 emissions**

"CO2 emissions (metric tons per capita)." Oak Ridge National Laboratory, Tennessee, United States.

- CO2 emissions per person increased until the 1990s.
- They have remained relatively stable until 2007 and even dropped 2 metric tons per capita since 2007.
- The United States is the 11th highest producer of CO2 per capita.

**Database of State Incentives for Renewables & Efficiency**


- 28 National incentives
- 2633 total incentives
- Mix of personal, business, etc.

**Emerging carbon constraints for corporate risk management**

Energy consumption, income, and carbon emissions in the United States


- The statistically main cause of CO2 emissions in the US is energy use
- Suggests that policies that promote alternatives can help
- Reducing growth of energy use is the most effective immediate solution to the problem.

Future CO2 Emissions and Climate Change from Existing Energy Infrastructure


- CO2 emitting infrastructure will keep being built unless developing alternatives becomes priority
- The US produces one of the highest (>30) Gt Co2/year in the world as well as a significant amount of (~225) t CO2/person/year in the world.
- When normalized to GDP is is moderately low
- If no new CO2 emitting infrastructure is built, warming levels will peak at 0.7 degrees C.
- 30TW of alternative energy sources are needed by 2050 to not produce CO2 emissions

A Review of Hybrid Renewable/Alternative Energy Systems for Electric Power Generation: Configurations, Control, and Applications


- Renewable energy production is predicted to more than double by 2035.
- Renewable percentage of total power production is predicted to increase as well

Analysis of renewable energy development to power generation in the United States


- 11% of electricity generated was from renewable in 2009
- Diversification of energy sources is important
- Development of renewables is very dependent on utilization costs and government policy
- Has graphs of predicted costs of all different renewables over time
- Has maps of the utilization available for the US for each renewable
- Has a prediction for total electricity generated by renewables
Industry Sector Emissions


- in 2013, electricity generation accounted for 31% of all greenhouse gas emissions in the US

Power Generation


- The cost of many renewables has dropped significantly from 2010 to 2014, moving them into the cost range of fossil fuel generation.

US EPA


- lists renewable policies
- discusses importance of renewable energy
  - reduction in pollution