CEO labor markets, incentives and the shape of managerial contracts

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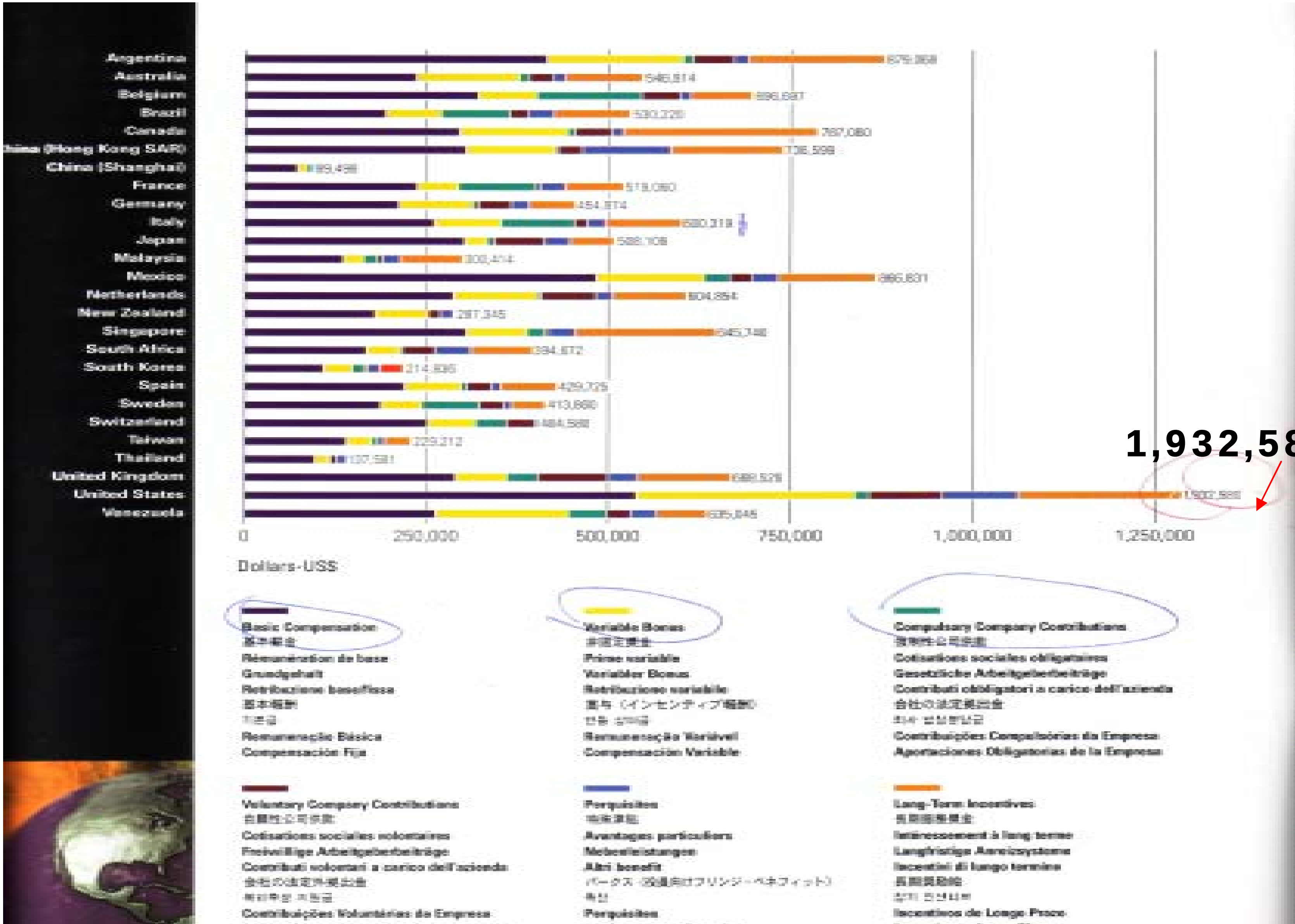
CEO compensation

- U.S. CEOs earn much more than (and differently from) CEOs in other countries
  - High level of performance-based compensation and especially stock options
  - Short vs. long-term compensation
    - More than half of their remuneration comes from **long-term incentives**.
      - Source: Towers Perrin Worldwide Total Remuneration 2001-2002.
      - Abowd and Bognanno (1995)
    - In Europe, the U.K. is the most similar to the U.S., but with lower compensation and long-term incentives.
      - Conyon and Schwalbach (1999)


Argentina
Australia
Belgium
Brazil
Canada
China (Hong Kong SAR)
China (Shanghai)
France
Germany
Italy
Japan
Malaysia
Mexico
Netherlands
New Zealand
Singapore
South Africa
South Korea
Spain
Sweden
Switzerland
Taiwan
Thailand
United Kingdom
United States
Venezuela
0
250,000
500,000
750,000
1,000,000
1,250,000
Dollars-US$
Basic Compensation
Variable Bonus
Compulsory Company Contributions
Voluntary Company Contributions
Perquisites
Long-Term Incentives

1,932,580

What can explain differences in CEO contracts?

- The literature on CEO compensation has “dissected” U.S. CEO contracts
  - Separation of ownership and control: Monetary compensation substitutes extraction of private benefits
    - But then why long-term incentives?
  - Power Theory of Managerial Compensation (Bebchuk and Fried, 2004)
    - Managers have more power when there are no controlling shareholders
    - Long-term incentive plans would cause less public outrage than cash payments

What can explain differences in CEO contracts? (II)

- Optimal contracts?
  - Holmström and Kaplan (2003)

  "The fact that the shareholders of U.S. companies earned higher returns even after payments to management does not support the claim that the U.S. system of executive pay is defined inefficiently; if anything, shareholders appear to be better off with the U.S. system of executive pay than with the systems that prevail in other countries."
  - Recent papers do not find evidence in favor of the CEO capture view
    - Lowry and Murphy (2005)
    - Rajgopal, Shevlin, and Zamora (2005)

Objective

- Can differences in managerial labor market account for differences in managerial contracts?
  - Retention and incentive problems more severe in some companies and/or in some countries
  - Relevant factors
    - Demand for professional managers
    - Potential visibility of the CEO's actions
    - Firm size

Related literature

- Outside options and CEO compensation (Oyer, 2004; Himmelberg and Hubbard, 2000)
  - While previous studies emphasize the participation constraint, I focus on the incentive-compatibility constraint
- Massive literature on short-termism
  - More long-term compensation (restricted stocks) when career concerns are stronger
    - Narayanan (1985 and 1996); Stein (1988 and 1989); Holmström and Ricart i Costa (1986)

This paper

- An optimal contract explanation for the cross-sectional differences in CEO compensation
  - Can short-term contracts (salary+bonus) be optimal when managers have career concerns?
  - Why to award non restricted stocks?
    - When are they optimal and when are they not?
  - The effect of equity overvaluation on optimal contracts

The model's intuition

- The manager faces a trade off between undertaking an efficient **long-term investment** (if available) or taking actions that provide to the market **early signals of managerial ability/the probability of an outside offer**
  - If investment is not observable and non-contractible, the optimal contract should affect how the strategy is chosen.
- How this trade off is resolved depends on:
  - Growth opportunities (availability of high return long-term projects)
  - How costly is for managerial turnover for the firm
  - Reputation concerns
    - Depth of the managerial labor market
    - How easily the market can observe signals of managerial ability (visibility)

The model's intuition (2)

- Long-term incentives are mostly needed for the long-term project to be undertaken when the benefits of signaling managerial ability are stronger
  - Long-term contracts
- However, the optimal outcome can be reached also with the following types of contracts:
  - Short-term contracts
  - Restricted and unrestricted rights to future output

The time-line

t=0	t=1	t=2
•Contract is signed •The manager observes whether a long-term project is available, and chooses investment.	•The output is realized •The manager receives first period compensation •The manager sells unrestricted rights to second period output if she owns any •With some probability that depend on managerial activities in the first period the manager receive an outside offer •The manager may renegotiate the contract with the firm.	The output is realized and the manager receives her second period compensation

The model

- Managers are the only ones to observe whether a long-term project is available at *t=0:*
  - Long-term project advantages
    - The long-term project has higher returns than the short-term project in the long run
  - Long-term project drawbacks
    - A manager employed in the short-term project spends more time building marketable skills and is more likely to receive an outside “great” offer, W.
    - In the second period, the long-term project can be continued only in the initial firm (and needs the original manager), while a short-term project can be restarted in any other firm.
- Sort of “Career concern” model

Short-term contracts

- At t=1, the compensation offered by an **outside firm** depends on the outside options of the manager
- The outside options in turn depend on the choice of first period investment

Short-term contracts (II)

- At t=1, the first period employer has an incentive to share with the manager the difference in return between the long-term and the short term project only if
  - There are costs due to managerial turnover
    - Entrenchment; sunk investment
  - The long-term project is available with low probability
- The manager actually undertakes the long-term project if available at t=0 if the probability of getting a great offer is relatively low;
  - The reputation gain is lower in countries with thinner labor market.
  - If the manager works for a large company

Short-term contracts (III)

- The efficient project is undertaken if the manager is offered fixed compensation and a bonus only if:
  - Turnover costs are sufficiently high
    - Incentives to make irreversible investment at t=0
  - **Managerial labor market** is thin or reputation is unimportant (eg, managers of large firms)
  - **Growth opportunities** are low
- Project choice with short-term contracts may vary with business cycles and across sectors

Long-term contract

- At t=0 the firm commits to second period compensation
  - Restricted rights to second period output
- The manager however can quit if at t=1 she receives an outside offer providing higher expected remuneration

Long-term contract (III)

- Main results:
  - In the optimal contract, the deferred compensation is increasing in the level of transparency and the depth of the labor market
    - The optimal deferred compensation is disjoint from actual performance in the first period
    - Optimal contract can account for positive correlation between long-term incentives and level of compensation in the first period driven by growth opportunities
  - The long-term contract is feasible only if growth opportunities are high or the returns of short and long-term projects sufficiently different
    - The long-term contract causes an inefficiency if there is no long-term project as the firm commits to overpay the manager respect to the market
    - The long-term contract is not optimal if growth opportunities are low.

Long-term contract (IV)

- Model with shared surplus
  - If a long-term contract is needed to give the manager incentives to invest for the long-term, it may be optimal that the manager is no longer on the participation constraint
  - Consistent with surge in executive compensation accompanied by increase in long-term performance sensitivity

Unrestricted stocks

- Optimal to grant both restricted and unrestricted rights to second period output if growth opportunities are expected to be relatively low
  - Necessary condition:
    - The manager must have incentives to keep long-term stocks if he has a long term project
    - A minimum of restricted rights to second period output must be granted
  - Incentives do not work any longer if stocks are overvalued (and expected to be so)

Empirical implications consistent with existing empirical studies

- CEOs characteristics and compensation
  - Individuals with **stronger career concerns** should get **stronger incentives**
    - In contrast to standard career concerns models; see Fama (1980), Holmstrom (1999) or Gibson and Murphy (1992)
    - More long-term incentives as the market becomes deeper because there are more external hires of CEOs
  - Consistent with the empirical evidence
    - Bryan, Hwang and Lilien (2000) show that **younger** CEOs receive **more deferred** compensation

Empirical implications consistent with existing empirical studies (II)

- Firm characteristics and compensation
  - Innovative firms grant more deferred compensation (Kole, 1997)
  - Firms with more growth options have higher executive compensation and more stock option plans (Smith and Watts, 1992)
  - Highly visible firms are the ones that abandon long-term incentives when growth opportunities decrease (Banerjee, Gatchev and Noe, 2004)
  - Small firms should grant more long-term compensation and restricted stocks

Conclusions

- Cross-country differences in managerial contracts are large and may help to shed light on the determinants of managerial compensation
- Visibility and growth opportunities affect agency problems and ultimately the structure of managerial contracts