The managerial power approach – A tautology revisited

Stefan Winter[*]

Philip Michels[†]

November 2012

[*] Stefan Winter, University Professor, Chair of Human Resource Management, University of Bochum
Universitätsstr. 150, GC 3/160, 44780 Bochum, Germany, Tel.: +49 234 32 28337, e-mail: stefan.winter@rub.de

[†] Philip Michels, Ph.D. Student, Chair of Human Resource Management, University of Bochum
Universitätsstr. 150, GC 3/157, 44780 Bochum, Germany, e-mail: philip.michels@rub.de

The managerial power approach – A tautology revisited[1]

ABSTRACT

CEO compensation is the subject of an ongoing and heated debate. Over the last decade this debate was spurred by the so called managerial power approach. This approach holds that actual compensation of managers is excessive and not consistent with basic principles of optimal contracting theory. Compensation, it suggests, is a result of managerial power. In this view, executives have power and are able to use their power to generate compensation arrangements which are favorable to them. To substantiate their claims, proponents of the managerial power approach refer to empirical evidence that seemingly establishes the existence of a positive association between power and compensation. However, we will demonstrate that there is not a single piece of empirical evidence of a positive link between power and compensation. This is because the existence of a positive association between power and compensation already and only follows from the very definition of "power" and therefore cannot be empirically tested. The core statement of the managerial power approach is nothing more than a tautology; as a result, the managerial power approach as such has no empirical foundation. Evidence seemingly corroborating the managerial power approach is simply misinterpreted by its proponents.

Keywords: Managerial power approach, Executive compensation, Corporate Governance, Pay for performance

[1] A preliminary German draft of this paper has been published in Winter/Michels (2011).

Introduction

CEO compensation is one of the most intensely discussed topics among economic and legal scholars. In this debate, two opposing views have emerged. One is now labeled "optimal contracting" and argues that actual compensation contracts are acceptable from a transaction cost perspective and from an agency theoretic point of view. The other is labeled "managerial power" and holds that CEOs receive excessive compensation through exercising power over captive boards. The latter has been heavily advocated by Lucian Ayre Bebchuk and his co-authors. In fact, the 2002 paper (Bebchuk, Fried, and Walker, 2002) and the 2004 book (Bebchuk and Fried, 2004) are now among the most heavily cited works in the field of economics and law (see figure 1).

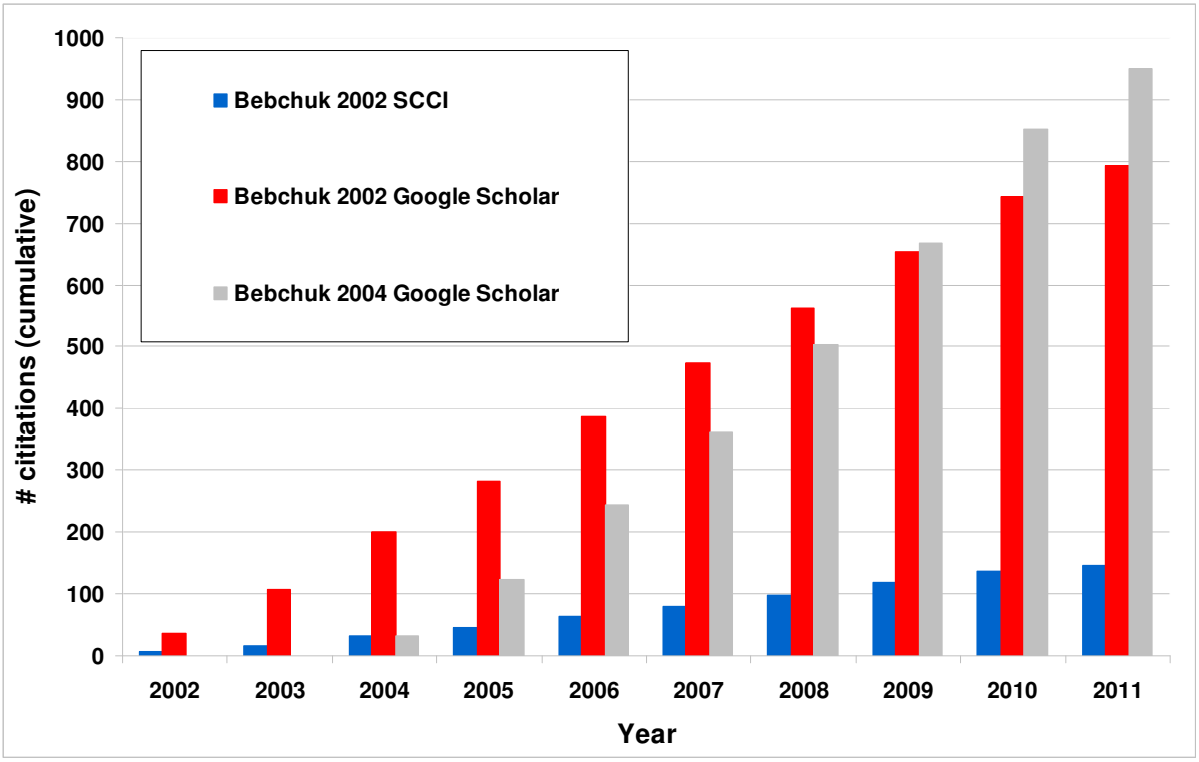

Figure 1: Number of Citations cumulative

The aim of this paper is to demonstrate that the relation between power and compensation deviates substantially from what is assumed by proponents of the managerial power approach. We will argue that the existence of a relation between power and pay has not and cannot be established empirically. This implies that the managerial power approach has no empirical foundation at all. It follows that the dispute over the question of whether executive compensation is driven by power or not is mainly a mock battle.

The outline of our paper is as follows. First, we sketch the basic arguments of the managerial power approach and review the debate about this approach. We then go on to discuss the definition of power and the implications derived from this definition for the interpretation of the relation between power and compensation. Based on this definition, we develop a consistent alternative specification of the relation between power and pay. We then evaluate and reinterpret existing empirical evidence on the power-pay relationship. The last section concludes.

Survey of the literature

Before reviewing the literature, we will briefly sketch the basic arguments of the managerial power approach as depicted in Figure 2. The approach starts by assuming that CEOs have power (1.) (Bebchuk and Fried, 2004: 80). It then goes on to argue that managerial power is not offset by countervailing powers (2.). It is argued that neither boards, shareholders nor the market for corporate control have relevant means to severely restrict managerial power (Bebchuk and Fried, 2004: 23). Therefore, the power of CEOs remains effective after controlling for the influence of boards, shareholders or the capital market.

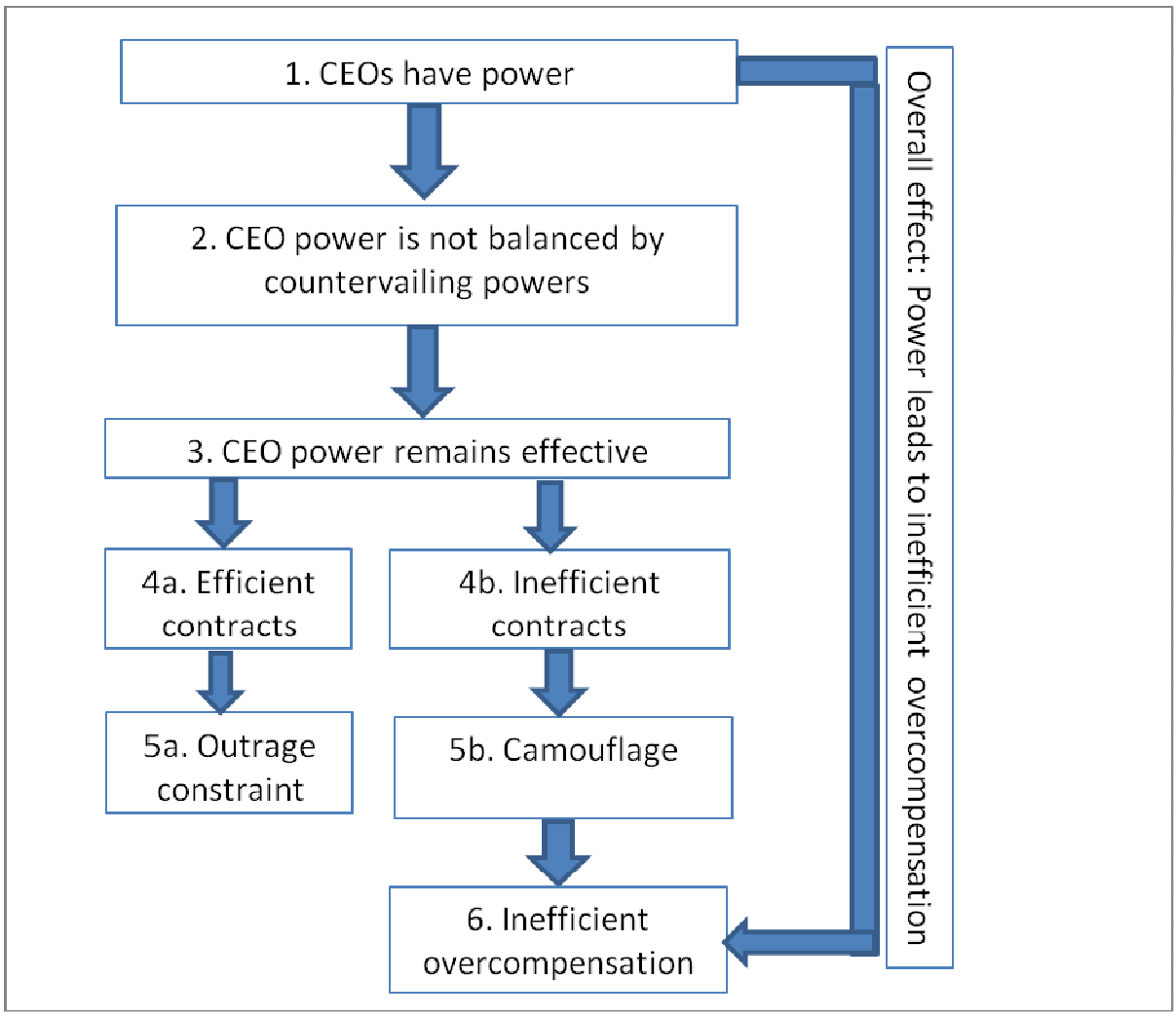

Figure 2: The Managerial Power Approach

In employing their power, CEOs now have two distinct paths they could follow. They could implement efficient contracts to extract rents (4a). If successful, overpayment of CEOs would be possible, but there would be no collateral damages due to inefficiencies. However, as proponents of the managerial power approach argue, efficient contracts leading to overcompensation would trigger outrage (5a.) (Bebchuk and Fried, 2004: 64), making overcompensation impossible. Thus, CEOs prefer inefficient contracts (4b.). These contracts, though inefficient, can be camouflaged (5b.) (Bebchuk and Fried, 2004: 67), thereby avoiding outrage. By choosing this path, CEOs can secure overpayment since there will be no public reactions. This approach implies that CEO overcompensation will be accompanied by residual losses for shareholders due to the inefficient contracts chosen (6.) (Bebchuk and Fried, 2004: 63). The overall effect is that CEO power leads to inefficient overcompensation. To avoid this effect, Bebchuk and Fried (2004: 200) have called for corporate governance reforms.

This line of reasoning has been heavily criticized at both a theoretical and empirical level. One of the most disputed theoretical arguments of the managerial power approach is the question of whether contracts are efficient or not. Proponents of the managerial power approach employed a simple metric for the assessment of efficiency. They argued that any component of compensation that is not performance related is inefficient (Bebchuk and Fried, 2004: 63). The authors discussed a whole set of different design characteristics of compensation contracts and argue that most components of compensation are in fact unrelated to performance. They concluded that there is too much inefficient pay because there is too much pay without performance. However, as Core, Guay, and Thomas (2005) pointed out, performance incentives for US CEOs are much higher than those acknowledged by Bebchuk and his coauthors. They refer to an example in which a 20 percent decrease in firm value would lead to an equity portfolio loss of 8.6 million $US for the median CEO in 1993, a figure that is higher than the median CEO pay even ten years later (Core, Guay, and Thomas, 2005: 1174). As the authors pointed out (Core, Guay, and Thomas, 2005: 1183), US CEOs - due to their stock and options portfolios - have very strong pay for performance equity incentives, stronger than in any other country of the world. If, then, the sheer existence of high performance incentives implies efficiency, US CEO compensation cannot be regarded as inefficient pay without performance.

Bebchuk and Fried (2004) also discussed other details of contract design. For example, they criticized the common design of executive stock options and argued that the typical stock option with a strike price equal to the market value of the stock at the grant date provides executives with unwarranted windfalls (Bebchuk and Fried, 2004: 137-146). The authors claim that there are numerous benefits to reduce these windfalls by redesigning stock options, e.g. through indexing. As the authors contended, windfalls favor executives and since executives are assumed to have power, they exercise their power to obtain such conventional windfall options. The authors therefore assumed a causal relation between managerial power and contract design. The problem with this kind of reasoning is formulated most clearly by Bainbridge (2005: 1629): “As such, the observation that the allegedly questionable compensation practices occur both in companies with dispersed ownership and those with concentrated ownership may suggest that those practices are attributable to phenomena other than managerial control.”

At an empirical level, the managerial power approach is most heavily criticized in the light of the development of CEO compensation during the 1990s. Critics of the managerial power

approach point out that over this decade CEO compensation increased heavily, while at the same time managerial power declined. During the 1990s boards became more independent and compensation disclosure rules tighter (Murphy, 2002: 852). Both regulatory measures should have limited managerial power, so compensation would have had to decline, according to the managerial power approach. Since compensation has risen, critics argued, this approach cannot be correct.

Proponents of the managerial power approach defended their position by arguing that other changes in the compensation scene might have more than offset these new limits to managerial power. For example, antitakeover defenses have been strengthened, easing the concern of managers and directors over the threat of a hostile takeover (Bebchuk and Fried, 2004: 72). What is more, the good performance of firms during the 1990s combined with the increased use of performance pay, especially stock options, led to favorable compensation arrangements for managers (Bebchuk and Fried, 2004: 72). Thus managers were able to use their power to obtain option plans that serve their interest and lead to a decoupling of pay and performance (Bebchuk and Fried, 2004: 137; 179). Clearly, the debate hinges on the question of whether managerial power increased or decreased over the 1990s. Since there is no clear cut measure of power, this question remains open.

A further empirical critique of the managerial power approach is based on a comparison between the development of shareholder wealth in the US on the one hand, and that of the return of shareholders abroad on the other, throughout the 1990s. As Holmstrom and Kaplan (2003) showed, shareholders of US firms have not fared worse than shareholders of firms outside the US. In fact, the authors argue, US shareholders fared much better than most shareholders of non-US firms. The interpretation of this finding is that the good performance of US stock portfolios indicates that there can be no serious problem with the processes and outcomes of US corporate governance.

Whether or not there have been serious problems with US corporate governance several reforms were nevertheless enacted, for instance the 2002 Sarbanes-Oxley Act and the new NYSE listing standards (Bainbridge, 2005). Proponents of the managerial power approach supported these reforms because they felt these reforms were likely to be beneficial. At the same time, they called for further reforms, because various factors that give directors incentives to favor executives had still not been eliminated (Bebchuk and Fried, 2004: 202). On the

other hand, critics contended that it was too soon to call for more reforms because those recently enacted need time to take effect. In fact, there is evidence that the reforms and changes already implemented can be expected to have salubrious effects (Bainbridge, 2005: 1638). However, there may also be problems related to tighter regulation. For example, Bainbridge (2006: 1736) queried why directors should be more dependent on shareholders. He asked why shareholder empowerment in the marketplace is not observed, if it is as beneficial as the proponents of the managerial power approach like to claim. Free markets usually produce the goods people actually want to purchase, and corporate governance terms are no exception. If such terms are unfavorable, investors will discount the price they are willing to pay for the terms of governance and operations. As a consequence of bad governance structures firms' cost of capital would rise, which inter alia would lead to a higher likelihood of a hostile takeover or bankruptcy. Bainbridge concluded that professional managers have incentives to provide governance terms that investors favor. So there should be no reason to legally enforce governance structures which give more power to shareholders because the greater part of the latter does not make use of powers already held. Rather, shareholders behave apathetically and this strategy is in fact rational for an average shareholder, because the investment of time and effort that is necessary to make informed voting decisions simply is not profitable (Bainbridge, 2005: 1655).

In addition to the central lines of critique set out above, the validity of the managerial power approach has been contested for various other reasons concerning largely the details of this approach. For example, as Core, Guay and Thomas (2005) argued, the benchmark of arm's length bargaining used as a model of optimal contracting by its proponents is not relevant as it refers to a world without frictions, a world that simply does not exist. In a real world setting, the best one can achieve is a contract that maximizes shareholder value net of contracting costs. Hence, Core, Guay and Thomas (2005: 1160) defined "optimal contracts" as a synonym for "efficient contracts"; the best contract that can be achieved given the contracting costs in a given situation. In other words, "optimal" does not mean perfect. The negotiated contract is the platform on which the board and the management can collaborate in the best interest of the corporation (Longstreth, 2005: 767). Thus, in settings where managerial power exists, there can be optimal contracts, if managerial power is anticipated and contracts try to minimize its costs. So the existence of power does not imply that contracts are suboptimal. As a consequence, optimal contracts consider managerial power, which in turn implies that manag-

ers with more power receive more pay. But it does not mean that the pay structure is not optimized for shareholders, nor does it imply that reforms are needed.

On the contrary, proponents of the managerial power approach have taken the view that further corporate governance reforms are necessary, because past reforms did not go far enough. They postulated that CEOs should not be able to reward directors and that directors should be more dependent on shareholders (Bebchuk and Fried, 2004: 202). For critics this is a logical fallacy. Holmstrom (2005: 705) affirmed that Bebchuk and Fried's discussion of the functioning and motives of boards appeared to be too simplistic. Accordingly, contracting with executives is not the primary task of a board - rather it is just one in a number of complex and difficult tasks. Core, Guay and Thomas (2005: 1162) agreed and noted that it may not be optimal for the board to be completely independent. The tasks and responsibilities besides contracting with executives are often best fulfilled by non-independent directors and boards. For example, a board that is optimized for investment planning and investment decisions should include insiders which may not be independent of the CEO. Thus, boards which are optimized for compensation decisions may destroy value by making bad decisions on other more essential tasks. In this case the board structure that maximizes shareholder value will not be comprised entirely of independent directors.

In what follows, we will develop an even more fundamental critique of the managerial power approach than those discussed above. The punch line of the managerial power approach as stated by Bebchuk and Fried (2004: 85) is: "The evidence indicates that there is a link between managerial power and pay. The more power managers have, the more favorable their compensation arrangements are". We will demonstrate that this conclusion is based on a massive misinterpretation of empirical evidence. The positive association between power and pay follows already and only from the very definition of "power" and therefore cannot be empirically tested. This leads to the conclusion that the core statement of the managerial power approach is nothing more than a tautology. What is more, this tautological reasoning is in itself seriously flawed since the relation between power and pay is moderated by other variables that have not been considered at all so far. These variables have important implications for empirical research as will be shown in the next sections.

Definition of Power

The correct treatment and analysis of the relation between power and pay must start with a precise definition of power. The aim of this section is to clarify this definition.

The German sociologist Max Weber (1964: 152) defined "power" as the opportunity of individual A to exert his will on individual B to carry out A's own will despite resistance, regardless upon what this opportunity is based. Weber argued that power is an outcome of a social relationship and that it can only develop within a relationship. The phrase "opportunity" indicates that power is just a means to influence the behaviors of others. As Robert Dahl (1957: 202) put it:"A has power over B to the extent that he can get B to do something that B would not otherwise do." Like Weber, Dahl also argued that power can only occur within a social relationship. In addition, Dahl worked out the constituents of power: its bases, means, scope, amount and extension (Dahl, 1957: 203; Harsanyi, 1964: 191).

The base of power consists of all resources that an agent can employ in order to affect the behavior of others. Resources to affect behavior can be all kinds of material and immaterial goods or individual skills and abilities (Dahl, 1957: 203). French and Raven (1968: 259) defined five different bases of power: power to reward, coercive power, legitimate power, referent power and expert power.

Power to reward means that agent A can promise to reward or can threaten to punish agent B. In these cases B actively decides to follow the wishes of the power holder or not, taking into account the consequences of A's reaction to B's behavior. Legitimate power stems from, for instance, intellectual capacity, age, or physical characteristics. In this case, power holder A influences B's behavior by means of persuasion. The basis of referent power is the identification of an agent with the power holder. The power holder is a role model for other agents which the latter seek to imitate. The last base is expert power: The power holder has knowledge which is important for other agents. Power in this case rests on the power holder's superior knowledge. This latter basis of power could be described as subconscious, because the agent does not decide actively to obey the will of the power holder; rather, he follows automatically or is persuaded to believe that what he does is what he wants to do anyway.

To summarize, the bases of power describe the resources that A can employ to influence B. Means of power are specific actions by which A can make use of these resources to influence

the behavior of B. The scope of power is the set of specific actions of B, that power holder A can actually induce B to perform. The amount of power is the net increase in the probability that B does what A wants him to do. It can only be specified in conjunction with means and scope. The set of individuals over whom an agent has power is called the extension of power (Dahl, 1957: 203; Harsanyi, 1964: 184).

Like French and Raven, Oppenheim (1978: 595) also mentioned the terms "reward" and "punishment". From his point of view, power held by an individual is nothing more than the ability to make other people do what the individual wishes by means of promised rewards or threats of punishment. Lambert and his co-authors suggested a definition of managerial power within the managerial compensation context. For Lambert, Larcker, and Weigelt (1993: 441) "managerial power" is "… the ability of managers to influence or exert their will or desires on the remuneration decisions made by the board of directors, or perhaps the compensation committee of the board".

All of the definitions outlined above suggest that power is understood as the ability or opportunity of an agent to influence the behavior of others. What is more, power can only exist within a social relationship. An agent can only have power if he can exert influence on others.

In addition, all definitions agree on one important point: Power is merely an ability or opportunity. Whether this opportunity is actually exploited or not is therefore an individual decision on the part of the power holder. This implies that power will affect outcomes only if it is utilized. The above definitions of power imply that if you wish to obtain more money and you have power, you can make other people give you more money. In that sense, power is an economic good, a valuable resource that can be exchanged for money. However, the redistributive effects of power are necessarily limited. You can make other people give you only the amount of money they actually have. This argument refers to the scope of power. The scope will always be limited. A CEO of a company with assets worth 1 million will not be able to make the board give him compensation worth 1 billion. There is always a cake with a specified size and those with power will not be able to get more than the whole cake, however large their power is. Without a cake, power will be economically worthless. What is more, power in the compensation context is, by definition, an opportunity to take redistributive actions. But if there is no cake, there is nothing to redistribute and therefore no opportunity for

redistributive actions. In the absence of a cake, redistributive power cannot, by definition, exist.

A model of power and pay

We can thus state that power in the compensation context is merely an opportunity to take redistributive actions. Power will have no effect when it is not employed. Therefore, power usage is a decision variable. The impact of power on pay can only be understood in combination with the degree of power usage. If the degree of power usage is ignored in empirical research, a first wrong conclusion impends. If well armored people from Mars land on earth and then decide not to steal our economic goods because they feel sorry for us, their power would not have any redistributive effects. So even absolute power may not lead to redistribution. This has an important implication for empirical research because if the degree of power usage is not constant across executives or across time, an estimation of the functional relation between power and pay could yield biased estimates even if power could be measured with absolute accurateness. In an extreme scenario, all agents with high power do not employ it while all those with low power employ their power to the maximum. Since those with high power do not employ it, they will receive no power based pay. Those with low power employ it and they will therefore receive at least a small amount of power based pay. Thus, one would find a negative correlation between power and pay.

Without loss of generality assume that the power variable P is defined as a percentage measure, with $P=1$ indicating absolute power, while $P=0$ indicates absence of any power. Again, without loss of generality, assume that the variable power usage U is also defined as a percentage measure. $U=1$ indicates that an agent employs all power he has, while $U=0$ implies that the agent does not use any of his power at all.

However, controlling for power usage is still not sufficient to estimate the relation between power and pay. Even if it were to be assumed that power is always fully put to use, the redistributive effects of power will also depend on the size of the cake that can be distributed.
Let us come back to the people from Mars. If they invade earth and employ all of their absolute power, they steal everything there is. The economic value of their power is the value of earth. While flying back, they make a short stop to rob the man in the moon. They have absolute power over this poor guy too, so they steal the value of the moon. In both cases, the folks

from mars have absolute power. But their power was much more valuable on earth than it was on the moon. Empirically, one would find that the degree of power is constant while the redistributive effects are not. Therefore one would conclude that the booties are independent of power. To push this example a little further, one could assume that the people from Mars have no absolute power on earth, because we have weapons to defend ourselves, while the man in the moon has nothing. So let us say the Martians have the power of $P=0.5$ here on earth, while they have absolute power $P=1$ on the moon. Since the earthcake is much bigger than the mooncake, the Martians will be able to steal more from us than they will steal from the man in the moon. Empirically one would find a negative correlation between power and pay. Of course, the conclusion from such a finding, namely that diminishing power tends to increase pay, is obviously wrong.

To summarize, the relation between power and pay is moderated by the degree of power usage and the size of the cake C. Any attempt to estimate a functional relation between power P and power based pay Y alone, e.g. $Y = f(P)$, is misleading. It is paramount to control for the degree of power usage and for the size of the cake. Thus, empirical research must specify the relation as $Y = f(P,U,C)$. Fortunately, the definition of power and the conclusions drawn from that definition allow us to derive the specification of the functional form of *f*. This is true since the definition provides for some initial conditions for *f*. First of all, if any of the variables *P, U*, and *C* has a value of zero, then Y must be zero: If there is no power, if power is not utilized, or there is no Cake, then there can be no power based compensation Y. Since power based compensation is zero if any of the variables *P, U*, or *C* is zero, these variables must be multiplicatively connected. On the other hand, if power is absolute, e.g. $P=1$, and is fully employed, e.g. $U=1$, the whole cake must go to the power holder. All these conditions are met by the following specification:

$$Y = P^a U^b C$$

with a, b > 0. Since a and b are scaling variables only, they can be eliminated by an appropriate adjustment of the P and U measures. So our final specification becomes:

$$Y = P \times U \times C$$

It is important to note that the equation $Y = P \times U \times C$ is just a mathematical representation of the definition of power and the implications of that definition. This implies that if *U* and *C* are held constant, power based pay Y must increase when power P increases by definition. To see this, assume that agent A has power of *P=0.2*, uses all his power, e.g. *U=1*, and the size of the cake is 10. Given the above specification, this agent receives power based compensation of *0.2x1x10 = 2*. If now his power increases to *0.4*, holding constant *U* and *C*, her power based compensation must increase. Because if power increases, meaning that the opportunity to take redistributive actions improves, the agent must earn more power based pay. Otherwise the definition of power would not make sense. If you have brighter opportunities than before and you make full use of these opportunities, then your situation must improve. To summarize, if *U* and *C* are held constant, power based pay *Y* must increase in power *P*. This follows directly from the definition of power. It is therefore neither possible nor reasonable to try to establish a functional relationship between power and pay empirically. One simply cannot empirically test the correctness of definitions. There are only two possible reasons why an empirical test would fail to find a positive relation between power and pay:

1. The empirical model is misspecified. This could be due to inadequate controls for the degree of power usage *U* and/or for the size of the cake *C*.

2. Power based pay *Y* or power *P* itself is not measured correctly. Since power is only an opportunity, it may be hard to observe directly. So a negative relation (or independence) between power based pay and power could be due to a wrong measure of power or a wrong measure of pay.

Both problems shall be illustrated by looking at one artificial and two real empirical studies. First of all, have a look at the following artificial data set. Since it is artificial, we can simply rule out measurement problems.

# of manager	*Power based pay Y*	*Power P*	*Power usage U*	*Size of cake C*	*P x U x C*
1	**2**	0.1	0.9	22.22	**2**
2	**11**	0.2	0.4	137.50	**11**
3	**16**	0.4	0.3	133.33	**16**
4	**11**	1.0	0.1	110.00	**11**
5	**5**	0.8	0.6	10.42	**5**
6	**7**	0.3	0.7	33.33	**7**
7	**30**	0.2	0.2	750.00	**30**
8	**53**	0.1	0.6	883.33	**53**
9	**11**	0.4	0.5	55.00	**11**
10	**1**	0.6	0.7	2.38	**1**
11	**8**	0.7	0.6	19.05	**8**
12	**23**	0.8	0.6	47.92	**23**
13	**20**	0.5	0.3	133.33	**20**
14	**27**	0.1	0.9	300.00	**27**
15	**8**	0.2	0.1	400.00	**8**
total	**233**			3037.81	**233**

Table 1: An artificial sample

By definition, the entries in the Y column must equal the respective entries in the $P \times U \times C$ column. However, if one now looks only at the relation between power and power based pay, the following scatter plot is obtained (see Figure 1).

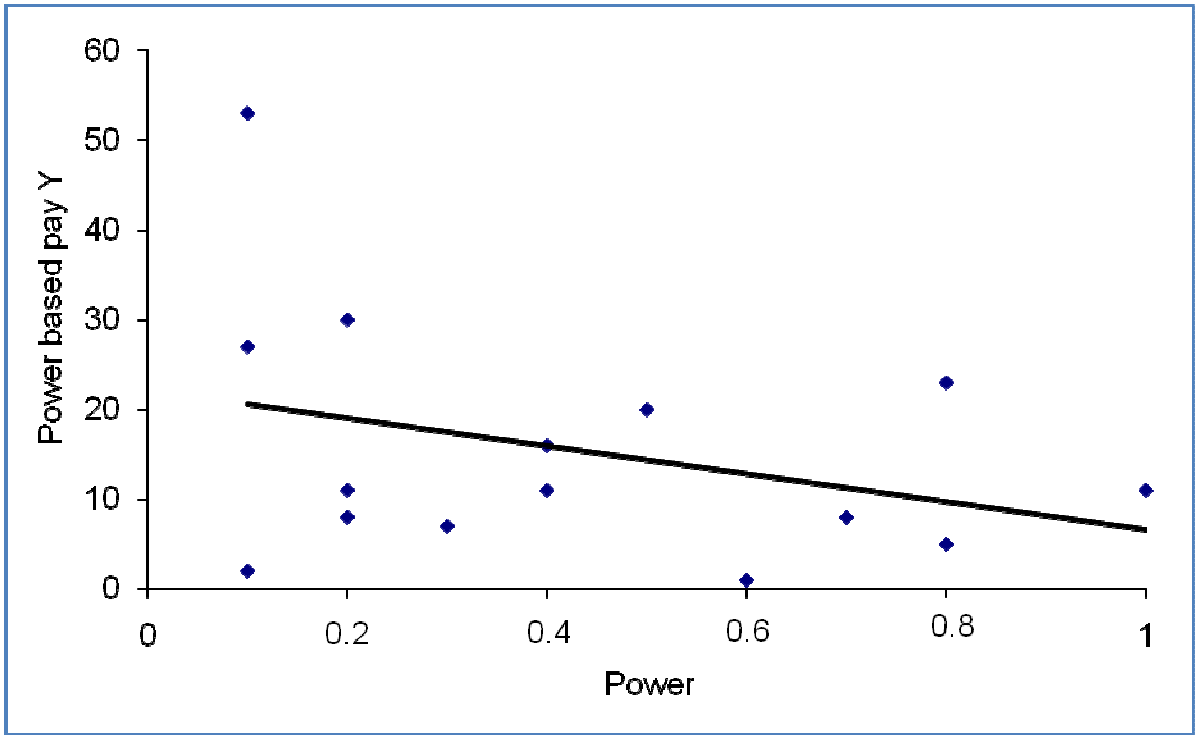

Figure 3: Power and Pay

Given the data, a regression analysis would thus find a negative relation between power and pay. The conclusion would be that higher power leads to lower pay, a conclusion that is obviously wrong.

However, it is more than questionable that such a result would ever be published. Authors would not believe their own eyes. A good example is the study of Lambert, Larcker, and Weigelt (1993: 441). Their empirical hypothesis under scrutiny was: "The level of an executive's compensation will be an increasing function of the level of managerial power" (Lambert, Larcker, and Weigelt, 1993: 442). As outlined above, this hypothesis cannot be tested empirically, since the relation between power and pay already and only exists by definition. The authors then go on to define a set of possible empirical measures for power. Most of their measures showed the expected positive correlation with pay. For example, it was found that pay is lower if there is a single shareholder owning at least five percent of the firm. This result was readily accepted as proof that power has a positive impact on pay, since less managerial power, indicated by the existence of a blockholder, leads to lower pay. Much more interesting though is the treatment of those empirical power surrogates that did not show the expected effect on pay. One empirical power measure under test was the ownership share of the CEO and his family. It was expected that higher ownership shares indicate higher power and there-

fore higher pay. However, the opposite was found. The authors gave the following comment: "One potential explanation for this result is that the corporate CEO's compensation is a benchmark for lower-level managers' compensation. Specifically, if CEO compensation is decreased, this will produce large decreases in total organizational compensation and an increase in the equity value of the firm. Thus, it can be optimal for a CEO with a high equity ownership to have a low level of compensation because this decrease is more than offset by an increase in the value of equity owned by the CEO" (Lambert, Larcker, and Weigelt, 1993: 455).

As discussed above, a finding that higher ownership leads to lower compensation has actually only two possible explanations. Either the empirical model was misspecified, for instance there were no adequate controls for the degree of power usage U or the size of the cake C, or power is not measured correctly by the ownership share. In any case the authors avoid the conclusion that higher power leads to lower pay. But if any variable that does not show the expected sign is immediately reinterpreted, the whole empirical procedure is obviously superfluous, since only affirmative results are accepted anyway. If only those power measures that produce the expected sign are accepted as power measures, it makes no sense anymore to correlate power and pay afterwards. The whole procedure is one of circular reasoning. The fact that the authors reinterpret precisely those measures that did not show the expected relation indicates that they implicitly assume that power cannot be negatively associated with pay. This assumption is of course correct, since pay must increase in power by definition.

Another empirical study is an experiment conducted by Michael Dorff (2005). The advantage of an experiment over a field study is the opportunity to hold constant all but the relevant variables under test. In Dorff's experiment the power of students playing the roles of CEOs was varied over time. In the experiment there were four different types of agents, namely CEOs, directors, shareholders and so called runners. Shareholders played no active role at all, runners had the task of delivering contract forms between CEOs and directors. Directors had the task of hiring CEOs and setting their pay. In the first round of the experiment directors were also allowed to set their own pay within a given range. The role of CEOs in the first round was simply to accept or decline a contract that was offered to them. Runners just delivered contract forms. In the second round of the experiment runners could eventually become directors and directors could become runners. Incentives were set so that runners would want to become directors and directors would want to stay directors. In this second round, CEOs

were given more power over directors. This was accomplished by giving CEOs the opportunity to set directors pay or even to fire them and thereby make them runners. This variation in power fits neatly with the definition of power suggested above. CEOs were given the power to reward and the power to punish. It can therefore readily be accepted that the variation of power was implemented correctly. In fact, compensation of CEOs in the second round was significantly higher as compared to first round. Dorff (2005: 290) concluded "…power over directors dramatically impacted executive compensation."

If we now return to the mathematical representation of our definition, e.g. $Y = P \times U \times C$, it is obvious that power based pay Y must increase if one or more of the variables P, U, and C increase while the others remain constant or at least did not decrease so much as to offset the effect of those variable or variables that increase. Since the size of the cake was held constant over time, the increase in pay could only be due to an increase in power P or an increase in power usage U. Since power was in fact increased, Dorff's finding implies that the degree of power usage at least did not decrease enough to offset the effect of rising power. This is unsurprising, since the CEOs of round one were also the CEOs of round two. It can be assumed that the degree of power usage is something of a personal characteristic and constant at least over the short term. A high degree of power usage indicates an egoistic agent, a low degree indicates an altruistic one.

If there had been a decline in compensation from round one to round two, the only explanation would have been that the degree of power usage had declined. But if the degree of power usage is a personal characteristic, this can hardly be expected. So if U is also held constant, compensation must increase from round one to round two by definition. In fact, the only result of Dorff's experiment is that the participating students had not been altruists. Dorff (2005: 289) had seen this altruism problem himself. He noted: "Although the risk of excessive altruism existed, it did not appear to manifest. In both phases, most directors and executives acted to maximize their own income, necessarily at shareholders' expense. If altruistic impulses toward fellow student shareholders blunted participants' self interest, the effect is not apparent from the data." By this, Dorff admitted that the positive correlation between power and pay is at risk only in a population of altruists. But then, the reverse is also true: A positive correlation only proves that the participants had not been altruists. In his summary Dorff (2005: 290) concluded that his results substantiate calls for reforms of US corporate governance, that is, reforms that should limit executive power. It remains unclear to us how the find-

ing that a class of students is made up of egoists rather than altruist can substantiate a call for corporate governance reforms.

Empirical conclusions

As demonstrated, a positive association between power and pay cannot be empirically established. The punch line of the managerial power approach, suggesting that exactly this has been done, is merely a tautology based on a massive misinterpretation of empirical research. However, this does not imply at all that any empirical research in this field is futile. In fact, there are still highly relevant avenues of empirical enquiry that remain open.

As a matter of fact, the overwhelming majority of papers in this field have in no way tried to establish a relation between power and pay. Hambrick and Finkelstein (1995: 175) made this point especially clear: "Namely, to observe CEO pay is to observe in an indirect but very tangible way the fundamental governance process in large corporations. Who has power? What are the bases of power?" The aim of this type of empirical research is not to establish a relation between power and pay. Rather, it is to show that this relation is simply assumed to exist and then to find out who has power and where it stems from. This is only possible because it is clear that power must have a positive impact on pay. If there are adequate controls for U and C, then it is possible to identify those variables that are correlated with pay. These correlations can then be used to identify possible measures of power. If one variable is highly correlated with pay and another is not, then the former is a likely candidate for power measurement, while the latter is not. This stream of research has therefore done nothing more and nothing less than to identify possible power measures. There are numerous interesting papers in this tradition. To name only a few, it was found that compensation is rather low or otherwise less advantageous if there was a majority shareholder (Lambert, Larcker, and Weigelt, 1993; Hambrick and Finkelstein 1995; Core, Holthausen, and Larcker, 1999; Cyert, Kang, and Kumar, 2002; Fahlenbrach, 2009; Kim, 2010; Fong et. al., 2010; Becker, Cronqvist, and Fahlenbrach, 2011), if higher ownership was held by pressure resistant institutional investors (David, Kochar, and Levitas, 1998), if there was a higher institutional ownership concentration (Hartzell and Starks 2003; Almazan, Hartzell, and Starks, 2005; Chhaochharia and Grinstein, 2009), if members of the board held larger shares of the firm (Bertrand and Mullainathan 2001; Cyert, Kang, and Kumar, 2002; Chhaochharia and Grinstein, 2009), if there were no antitakeover amendments (Borokhovich, Brunarski, and Parrino, 1997), if CEOs were not

protected by antitakeover legislation (Bertrand and Mullainathan, 2000; Cheng and Indjejikian, 2009), if the CEO was not at the same time chairman of the board (Core, Holthausen, and Larcker, 1999; Fahlenbrach, 2009; O'Reilly and Main, 2010), if members of the board were younger (Core, Holthausen, and Larcker, 1999), if members of the board served on only one board (Core, Holthausen, and Larcker, 1999), if the board is composed of outside directors (Core, Holthausen, and Larcker, 1999; Newman and Mozes, 1999), if there was a large outside blockholder on the compensation committee (Bebchuk, Grinstein, and Peyer, 2010); if the CEO was in office for a shorter time as compared to board members (Wade, O'Reilly, and Chandratat, 1990), if CEO tenure was shorter (Brookman and Thistle, 2007), if the CEO had no celebrity status (Wade et al., 2006; Malmendier and Tate, 2009), or if boards were small (Yermack, 1996). With respect to different outcomes of larger versus smaller boards, Cheng (2008) argued that it takes more compromises for a larger board to reach consensus and therefore decisions of larger boards are less extreme. Chhaochharia, Kumar, and Niessen (2011) found that high local ownership leads to increased CEO turnover and to better internal governance. Core, Guay and Larcker (2008) examined the press' role in influencing CEO compensation and found evidence that companies reacted to negative press coverage by decreasing CEO compensation. Less clear was the effect of interlocking directorates (Hallock, 1997).

It can therefore be said that there is a rich set of empirical evidence that allows for the identification of useful power measures. But none of these studies can be interpreted in the way proponents of the managerial power approach have taken to. It remains to be noted that the studies cited above did not control for power usage U or the size of the cake C. Wrong conclusions due to an omitted variable bias are therefore still possible.

Summary and outlook

As demonstrated above, the central hypothesis of the managerial power approach, i.e. that there is an empirically established relation between power and pay, is unsustainable. There is not a single piece of empirical evidence that power impacts pay. This impact follows already and only from the very definition of power. Empirical studies in this field have done nothing more and nothing less than to identify possible empirical measures of power. Even this conclusion is subject to the reservation that power usage and the size of the cake may not have been adequately controlled for. It would therefore be worthwhile to develop empirical proce-

dures that allow to control for *U* and *C*. When this is done appropriately, it is possible to identify viable empirical measures of power.

Based on the arguments developed here it is possible to characterize parts of the dispute between proponents and opponents of the managerial power approach as a mock battle. This is because important aspects of the power-pay relation are ignored.

Murphy (2002) presented findings according to which CEOs that are hired from outside a company receive higher pay than those hired from within. Since those hired from the outside cannot already have power over the board, Murphy suggested that this finding contradicts the managerial power approach directly. Over the 1990s, CEO compensation in the US has risen markedly. Median compensation of S&P 500 CEOs climbed from 2.3 million in 1992 to 6.5 million in 2000 alone (Murphy, 2002: 848). Over the same period there have been tighter disclosure requirements with respect to executive pay. This also should have limited CEO power. According to Murphy, rising compensation over this decade can thus not be explained by the managerial power approach. In the same vein, Kaplan (2008) argued that executive compensation is driven by market forces and not by a failure of corporate Governance.

Bebchuk and Fried (2004) contrasted these arguments with their own interpretation. They criticized that the new regulations enacted over the 1990s had not been sufficient to limit managerial power effectively. In fact, the authors argued that there had been more than offsetting changes in corporate governance that actually had increased managerial power. For example, the mechanisms to defend against takeovers had been strengthened (Bebchuk and Fried, 2004: 72).

In the light of the specification of the relation between power and pay derived above, this debate may be totally misleading. Since power based pay depends not only on power alone, but also on power usage and the size of the cake, the most important factors may have been ignored in this debate. Irrespective of whether managerial power over the 1990s has increased or not, power based pay could have risen anyway. This could be due to bigger cakes in the 1990s or due to a higher degree of power usage.

One possible, though perhaps simplistic, way to measure the change in cake sizes could be to look at stock market performance. Over the 1990s, the DJIA climbed from 2,677 on January

2, 1990 to 11,003 on January 2, 2000.[2] This increase by more than 400 percent may well indicate that the cakes have grown much bigger. So even if managerial power has declined during this decade, power based pay may still have increased.

Finally, the degree of power usage may have risen. Bowles (2008) stated that the emphasis of individual incentives may crowd out pro social behaviors. Managers over the 1990s may just have changed their attitude towards power usage.

Which of these conjectures has the highest explanatory power is an empirical question - and it is also an open one. What is needed are measures of power, power usage and cake sizes. Without these measures, it is impossible to draw conclusions about the "success" of corporate governance reforms aimed at limiting managerial power.

The arguments developed here may also be valuable for international comparisons. As Hofstede suggested, Western societies place a higher emphasis on individualism while Eastern societies emphasize collectivism. In a society of individualist people are expected to focus on themselves and perhaps their immediate family and friends. Collectivism in contrast stands for a society in which people are integrated into strong, cohesive ingroups. Hofstede ascertained that Western countries all scored above average on individualism, with the USA as the most individualistic country. Asian countries all scored below average on individualism, and scored high on collectivism. Furthermore he pointed out that the in-group in most cases is the extended family, but in Japan the employer can also fulfill part of this in-group role (Hofstede, 2007: 415; Hofstede, Hofstede, and Minkov, 2010: 94).

That CEOs earn much more than workers further down in the hierarchy may therefore be more acceptable in Western societies than it is in Eastern ones. In 2003 the average pay of a CEO in Japan was $456,937 while his U.S. counterpart earned $2,249,080. The ratio between CEO and worker pay was 9:1 in Japan and 45:1 in the US. These figures may in fact be conservative; with a broader definition of compensation the U.S. pay ratio climbs up to 240:1 (Burton and Weller, 2005). The gap between CEO pay in Japan and the US has grown slightly over the last years. In 2009 the average Japanese CEO compensation climbed up to $580,000 while US CEO compensation rose up to $3,500,000 (BusinessWeek, 2010).

[2] See: http://finance.yahoo.com/echarts?s=%5EDJI+Interactive#chart4:symbol=^dji;range=19900102,20000101;indicator=volume;charttype=line;crosshair=on;ohlcvalues=0;logscale=on;source=undefined

CEOs in Western societies, then, may have a higher inclination to use their power than those in Eastern societies. Thus, it may be that Japanese managers earn less than their US counterparts not because they have different jobs or less power, but because they use their power less.

References

Almazan A., J. C. Hartzell, and L. T. Starks
2005 "Active institutional shareholders and costs of monitoring: Evidence from executive compensation." Financial Management, 34: 5-34.

Bainbridge, S. M.
2005 "Executive Compensation: Who Decides?" Review of Pay without Performance: The Unfulfilled Promise of Executive Compensation, by Lucian Bebchuk and Jesse Fried. Texas Law Review, 83: 1615-1662.

Bainbridge, S. M.
2006 "Responses – Director Primacy and Shareholder Disempowerment." Harvard Law Review, 119: 1735-1758.

Bebchuk L. A., Y. Grinstein, and U. Peyer
2010 "Lucky CEOs and Lucky Directors." Journal of Finance, 65: 2363-2401.

Bebchuk, L. A., and J. M. Fried
2004 Pay without Performance – The Unfulfilled Promise of Executive Compensation. Boston: Harvard University Press

Bebchuk, L. A., J. M. Fried, and D. I. Walker
2002 "Managerial Power and Rent Extraction in the Design of Executive Compensation." University of Chicago Law Review, 69: 751-846.

Becker, B., H. Cronqvist, and R. Fahlenbrach
2011 "Estimating the Effects of Large Shareholders Using a Geographic Instrument." Journal of Financial and Quantitative Analysis, 46: 907-942.

Bertrand, M., and S. Mullainathan
2000 "Agents With and Without Principals." American Economic Review, 90: 203-208.

Bertrand, M., and S. Mullainathan
2001 “Are CEOs Rewarded for Luck? The Ones Without Principals are.” Quarterly Journal of Economics, 116: 901-932.

Borokhovic, K. A., K. R. Brunarski, and R. Parrino
1997 “CEO Contracting and Anti-Takeover Amendments.” Journal of Finance, 52: 1495-1517.

Bowles, S.
2008 “Policies Designed for Self-Interested Citizens may Undermine „the Moral Sentiments“: Evidence from Economic Experiments.” Science, 320: 1605 – 1609.

Brookman J., P. D. Thistle
2009 “CEO tenure, the risk of termination and firm value.” Journal of Corporate Finance, 15: 331-344.

Burton, J., and C. Weller
2005 “Supersize This: How CEO pay took off while Americas middle class struggled.”, Center for American Progress, 2005.
BusinessWeek
2010 “In Japan, Underpaid – and Loving It.”
http://www.businessweek.com/magazine/content/10_28/b4186014341924.htm

Cheng, S. J.
2008 “Board size and the variability of corporate performance.” Journal of Financial Economics, 87: 157-176.

Cheng S. J., and R. J. Indjejikian
2009 “The Market for Corporate Control and CEO Compensation: Complements or Substitutes?” Contemporary Accounting Research, 26: 701-728.

Chhaochharia V., and Y. Grinstein
2009 “CEO Compensation and Board Structure.” Journal of Finance, 64: 231-261.

Chhaochharia V., A. Kumar, and A. Niessen
2011 “Local Investors and Corporate Governance.” Working Paper, University of Miami – School of Business Administration.

Core J.E., W. Guay, and D. F. Larcker
2008 “The power of the pen and executive compensation.” Journal of Financial Economics, 88: 1-25.

Core, J. E., W. Guay, and R. Thomas
2005 "Is U.S. CEO compensation inefficient pay without performance?" Review of Pay without Performance: The Unfulfilled Promise of Executive Compensation, by Lucian Bebchuk and Jesse Fried. Michigan Law Review, 103: 1142-1185.

Core, J. E., R. W. Holthausen, and D. F. Larcker
1999 “Corporate Governance, Chief Executive Officer Compensation, and Firm Performance.” Journal of Financial Economics, 51: 371-406.

Cyert, R. M., S.-H. Kang, P. Kumar
2002 “Corporate Governance, Takeovers, and Top-Management Compensation: Theory and Evidence.” Management Science, 48: 453-469.

Dahl, R.A.
1957 “The Concept Of Power.” Behavioral Science, 2: 201-215.

David, P., R. Kochar, and E. Levitas
1998 “The Effect of Institutional Investors on the Level and Mix of CEO Compensation.” Academy of Management Journal, 41: 200-208.

Dorff, M. B.
2005 “Does one Hand Wash the Other? Testing the Managerial Power and Optimal Contracting Theories of Executive Compensation.” Journal of Corporation Law, 30: 255-307.

Fahlenbrach, R.
2009 “Shareholder Rights, Boards, and CEO Compensation.” Review of Finance, 13: 81-113.

Fong, E. A., V. F. Misangyi, and H. L. Tosi
2010 “The effect of CEO pay deviations on CEO withdrawal, firm size, and firm profits.” Strategic Management Journal, 31: 629-651.

French, J. R. P., and B. Raven
1968 “The Bases of Social Power.” In D. Cartwright and A. Zander (eds.), Group Dynamics: Research and Theory, 3: 259–269. New York: Harper & Row.

Hallock, K.
1997 “Reciprocally Interlocking Boards of Directors and Executive Compensation.” Journal of Financial and Quantitative Analysis, 32: 331-344.

Hambrick, D. C., and S. Finkelstein
1995 “The Effects of Ownership Structure on Conditions at the Top: the Case of CEO Pay Raises.” Strategic Management Journal, 16: 175-193.

Harsanyi, J. C.
1964 “Measurement of Social Power.” In M. Shubik (ed.), Game Theory and Related Approaches to Social Behavior: 183-206. New York: Wiley.

Hartzell, J., and L. T. Starks
2003 “Institutional Investors and Executive Compensation.” Journal of Finance, 58: 2351-2374.

Hofstede, G.
2007 “Asian management in the 21st century.” Asia Pacific Journal of Management, 24: 411-420.

Hofstede, G., G. J. Hofstede, and M. Minkov
2010 Cultures and Organizations: Software of the Mind. New York: McGraw-Hill.

Holmstrom, B.
2005 “Pay without Performance and the Managerial Power Hypothesis: A Comment.” Journal of Corporation Law, 30: 703-715.

Holmstrom, B., and S. N. Kaplan
2003 “The State Of Corporate Governance: What’s Right And What’s Wrong?” Journal of Applied Corporate Finance, 15: 8-20.

Kaplan, S. N.
2008 “Are U.S. CEOs Overpaid?” Academy of Management Perspectives, 22: 5-20.

Kim, K.
2010 “Blockholder monitoring and the efficiency of pay-performance benchmarking.” Journal of Corporate Finance, 16: 748-766.

Lambert, R. A., D. F. Larcker, and K. Weigelt
1993 “The Structure of Organizational Incentives” Administrative Science Quarterly, 38: 438-461.

Longstreth, B.
2005 “A Real World Critique of Pay without Performance.” Journal of Corporation Law, 30: 767-772.

Malmendier, U., and G. Tate
2009 “Superstar CEOs.” Quarterly Journal of Economics, 124: 1593-1638.

Murphy, K. J.
2002 “Explaining Executive Compensation: Managerial Power versus the Perceived Cost of Stock Options.” University of Chicago Law Review, 69: 847-869.

Newman, H. A., and H. A. Mozes
1999 “Does the Composition of the Compensation Committee Influence CEO Compensation Practices?” Financial Management, 28: 41-53.

Oppenheim, F. E.
1978 “‘Power’ revisited.” Journal of Politics, 40: 589-608.

O'Reilly C. A., and B. G. M. Main
2009 “Economic and psychological perspectives on CEO compensation: a review and synthesis.” Industrial and Corporate Change, 19: 675-712.

Wade J. B., J. F. Porac, T. G. Pollock, and S. D. Graffin
2006 “The burden of celebrity: The impact of CEO certification contests on CEO pay and performance.” Academy of Management Journal, 49: 643-660.

Wade, J. B., C.A. O’Reilly, and I. Chandratat
1990 “Golden Parachutes, CEOs, and the Exercise of Social Influence.” Administrative Science Quarterly, 35: 587-603.

Weber, M.
1964 The Theory Of Social And Economic Organization. Glencoe, Ill: Free Press.

Winter, S. and P. Michels
2011 „Vorstandsvergütung und Macht – eine Kritik des Managerial Power Approach.“ Die Unternehmung, Special Issue 1/2011: 120-132.

Yermack, D.
1996 “Higher Market Valuation of Companies with a Small Board of Directors.” Journal of Financial Economics, 40: 185-211.