Management Fashion Pay-for-Performance

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Summary

Management fashions promise solutions for allegedly urgent problems. Pay-for-Performance appears to be such a fashion. It seems to guarantee a more effective monitoring of the management considering the failure of the board of directors. We show theoretically and empirically that Pay-for-Performance, like many fashions, did not reach the intended task, but leads to the contrary. The example Pay-for-Performance shows that many fashions rather aggravate problems that they pretend to solve. Nethertheless they are able to persist until a new fashion takes over.

Key words: Pay-for-Performance, Management fashion, Crowding-out
1 THE RISE OF THE FASHION PAY-FOR-PERFORMANCE

Management fashions promise solutions for problems that are considered urgent. "A management fashion (...) is a relatively transitory collective belief, disseminated by management fashion setters, that a management technique leads rational management progress." (Abrahamson, 1996: 257). Examples for management fashions of the last years are Business Process Reengineering, ISO 9000 ff., Lean Management, Downsizing, Shareholder Value, Empowerment, Excellence, Core Competences, Corporate Culture and Open Innovation (Kieser, 2000, 2002; Teichert & Talaulicar, 2002). Object of management fashions are management concepts (Kieser, 1996; Kieser, 1997). These concepts are supposed to structure and settle problems that are considered urgent and worth to be solved at a certain time. History shows that management fashions occur in ever quicker succession (see Figure 1).

**FIGURE 1.** Development of management fashions (Ghemawat, 2000: 25)

Many management fashions develop and survive, even if there are doubts concerning their effectiveness, or the latter has turned out to be dysfunctional. At times, they penetrate into domains, for which they have not been designed; that is where they unfold their detrimental
effect. A particularly dramatic example for this development is Pay-for-Performance.

Pay-for-Performance wants to compensate the staff according to their individual and specific performance in order to motivate them for further efforts. The concept follows the idea of the piece rate paid for piecework. The company „Safelite Glass“ is a prominent example. After the change from fixed pay rates per hour to piece rates, measured according to assembled glass units per laborer and day, productivity rose by astonishing 36% (incentive-effect 20% and self-selection-effect 16%), while salary cost only rose by 9% (Backes-Gellner, Lazear & Wolff, 2001: 295-304; Besanko, Dranove, Shanley & Schaefer, 2004; Lazear, 1999; Wolff & Lazear, 2001). This concept was transferred to managers. Pay-for-Performance intends to link the interest of the owner (firm performance) with the interest of the CEOs (income) (Jensen & Meckling, 1976). It is aimed to motivate the CEO to act like the owner of a firm even in situations which cannot be monitored, e.g. during negotiations (Core, Holthausen & Larcker, 1999; Eccles, 1985; Eisenhardt, 1985; Eisenhardt, 1989; Fernie & Metcalf, 1996; Gomez-Mejia & Balkin, 1992; Henderson & Fredrickson, 1996; Jensen & Murphy, 1990b; Tosi, Katz & Gomez-Mejia, 1997; Welbourne, Balkin & Gomez-Mejia, 1995).

Pay-for-Performance features nearly all components of a management fashion (Benders & van Veen, 2001; Kieser, 1996):

- It is perceived new, progressive, innovative, rational and functional (Carson, Lanier, Carson & Guidry, 2000).

- It promises the solution of an acute problem, i.e. the incompetence of the board of directors (Allen, 1974; Galbraith, 1967; Herman, 1981; Mace, 1971). At the beginning of the sixties the effectiveness of monitoring of the board started to be questioned. It was claimed that their influence on the decisions of the management is marginal.¹

- A key factor is heavily promoted and an easy transposition is suggested. This is the linking of the different interests of shareholders and management by means of monetary compensation dependent on performance (Jensen & Murphy, 1990a).

¹ The introduction of Pay-for-Performance actually is a demonstration of distrust for the controlling body respectively the board, whereby the management should be monitored directly by the shareholders.
• Fashion setters like gurus, mass media or business schools interact as suppliers with the demanding enterprises (Abrahamson, 1996).

• Consultants grasp the concept and promise an enormous improvement of efficiency (Schiltknecht, 2004; Schütz, 2005).

The fashion Pay-for-Performance soon became popular in practice as well as in literature. **Stock corporations** replaced the prevailing fixed salaries of CEOs more and more with variable performance components such as bonus-, option- or share-programs. American corporations were the pioneers. The variable part of a CEO’s salary in 1993 was already 37% and rose in 2003 to 57% (Bebchuk & Grinstein, 2005). In 2005 the variable part of a CEO’s salary in Switzerland was 59 %, in Germany 57 %, in Austria 50 % and in the United States 81 % (Piazza, 2006). In science, the number of the published articles in the „Web of Science“ regarding the topic Pay-for-Performance have been increasing breathtakingly since 2002 (see Figure 2).

**Figure 2.** Increase of publications regarding Pay-for-Performance

![Graph showing the increase of publications regarding Pay-for-Performance](image)

In this article we show that the fashion Pay-for-Performance – like many management fashions – not only disappoints the anticipated expectations, but also turns out to be dysfunctional.

In the second paragraph we display the theoretical points for the counterproductive effect of Pay-for-Performance. In the third paragraph we show methods and results of an own meta-analysis. It
leads to an unambiguous conclusion: Pay-for-Performance nowadays is negatively correlated with firm performance. We question why the Pay-for-Performance fashion can persist and even penetrate into domains, in which even fashion setters did not intend them to occur.

2 THEORETICAL REFLECTIONS ABOUT THE EFFECTIVENESS OF PAY-FOR-PERFORMANCE

Despite the ongoing popularity of Pay-for-Performance there are increasingly critical votes from firm owners (Minder, 2007), representatives of science (Backes-Gellner & Geil, 1997; Bebchuk & Fried, 2003; Bebchuk & Grinstein, 2005; Benz & Stutzer, 2003; Bertrand & Mullainathan, 2001; Frey & Osterloh, 2005; Rost & Osterloh, 2007a; Schiltknecht, 2004; Tosi, Werner, Katz & Gomez-Mejia, 2000; Weibel & Bernard, 2006), publishers (Schwarz, 2006) and board members (Amstutz, 2007; Krauer, 2004; Maucher, 2007). In their opinion, many CEOs take a much too high salary for insufficient performance. Pay-for-Performance is said to have turned into „Pay-without-Performance“ (Bebchuk & Fried, 2004). Their opinion is based on the following points (Ettore, 1997):


- No market conformity in terms of salaries. In the United States the average salary of a CEO rose between 1990 and 2005 by 298,2 % (Anderson, Cavanagh, Collins, Benjamin & Pizzigati, 2006). In Switzerland CEO income has risen since 2002 by 60 %. It is highly questionable whether this development is market-conform (Rost & Osterloh, 2007a).².

- Pay-for-Performance as an additional income. Companies do not replace part of a CEO’s fixed income with variable performance components, but instead pay the variable share in addition. (see Figure 3)

² The authors show, that the manager salaries in Switzerland are at least 30 % above the market-related income.
**Figure 3.** Pay-for-Performance and increase of salaries of CEOs in S&P 500 enterprises (USA: figure above Jensen, Murphy & Wruck (2004: 31)) and in 200 SPI enterprises (Switzerland figure below; Rost & Osterloh (2007a))

- **Increasing salary gap.** The salary gap between normal employees and CEOs opens ever wider. In 1990 the highest-paid managers in the United States earned 25 times more than an average employee. In 2005 their income was 500 times higher (Anderson et al., 2006; Bebchuk & Grinstein, 2005). In Switzerland this ratio was 1:54 in 2002 and rose to 1:64 in 2006 (Rost & Osterloh, 2007b).
As a consequence, Pay-for-Performance has not reached its target. It does not align the interests of shareholders and management (Berle & Means, 1932). The explosion of the management salaries and the string of financial scandals in big enterprises, e.g. Enron, WorldCom, Xerox und Tyco, support this view.

Some managers and compensation consultants oppose that the „war for talents“ demands high compensation packages (Martin & Moldoveanu, 2003). In their view, recruitment of highly talented leaders in a global economy needs to pay high salaries (Wuffli, 2006).

In contrast, we reason that the incentive effect of Pay-for-Performance is not positive, but negative. It worsens the conflicts between shareholders, staff and management. Numerous experiments, field studies and meta-analyses show that external incentives, particularly money, under certain circumstances have a negative effect on the performance.3 In psychology this has been discussed under the term corruption effect or „hidden costs of rewards“ (Lepper & Greene, 1978), (Osterloh & Weibel, 2006). In psychological economics it has been introduced as „crowding-out-effect“ (Frey, 1997). The crowding-out-effect basically consists of four sub-effects, the over-justification-, the spill-over-, the multi-tasking- and the self-selection-effect. All four effects are based on the distinction between extrinsic and intrinsic motivation.4

• Over-justification-effect. If intrinsic-motivated persons are caused to act according to external control, they reduce their intrinsic motivation (Deci, 1975; Deci, Koestner & Ryan, 1999; Frey & Oberholzer-Gee, 1997; Weibel et al., 2007). Their internal locus of causality is replaced by an external locus of causality (De Charms, 1968). They tend to enjoy their work

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3 The crowding-out effect is documented empirically well. (Frey & Jegen, 2001): Deci and his group of researchers were able to show in numerous laboratory experiments, that monetary rewards for intrinsically motivated tasks lead to a decline in future intrinsic motivation (Rumel & Feinberg, 1988; Tang & Hall, 1995; Weibel, Rost & Osterloh, 2007; Wiersma, 1992). All these meta-analyses indicate, that intrinsic motivation is eliminated by external incentives displaying controlling character. Furthermore, the crowding-out effect was confirmed by field research (Frey & Jegen, 2001; Weibel et al., 2007).

4 An action is intrinsically motivated, if it is done for its own sake, i.e. out of interest or joy for the matter or in order to maintain an internalized norm. An action is extrinsically motivated, if it is done instrumentally for the purpose of reaching a result beyond the action itself. The differentiation between intrinsic and extrinsic motivation dates back to Atkinson, De Charms and Deci (Atkinson, 1964; De Charms, 1968; Deci, 1975).
less because their autonomy is reduced. If the reduced intrinsic motivation is not compensated by external incentives, e.g. money, the performance decreases (Weibel et al., 2007).

- **Spill-over-effect.** If originally intrinsic-motivated persons are rewarded monetarily for a certain task, the intrinsic motivation is not only reduced for the task in question, but is also transferred to other domains. A child who is rewarded for clearing the table, will also ask to be rewarded for disposing of the garbage (Frey & Osterloh, ???????). Hier das Buch Frey /osterloh management by Motivation einsetzen

- **Multi-tasking-effect.** Pay-for-Performance promotes strategic behavior of people, because they only concentrate on tasks with monetary rewards and neglect anything else (Backes-Gellner et al., 2001; Holmström & Milgrom, 1991; Pfaff, Kunz & Pfeiffer, 2000; Pfaff & Stefani, 2003). For example, transactions that cannot be monitored easily, such as organizational citizenship behavior, are ignored (Rost, Weibel & Osterloh, 2007). Furthermore, manipulations (Denis, Hanouna & Sarin, 2005; Efendi, Srivastava & Swanson, 2006; Erickson, Hanlon & Maydew, 2006; Johnson, Ryan Jr. & Tian, 2006; Marciukaityte, Szewczyk, Uzun & Varma, 2006; O’Connor, Priem, Coombs & Gilley, 2006; Osterloh & Frey, 2004) or even fraud (Denis et al., 2005; Efendi et al., 2006; Erickson et al., 2006; Johnson et al., 2006; Marciukaityte et al., 2006; O’Connor et al., 2006; Osterloh & Frey, 2004; Staffelbach, 2001) are promoted. Examples are „creative accounting“ and “cooking the books” (Aboody & Kasznik, 2000; Baker, Collins & Reitenga, 2003; Chauvin & Shenoy, 2001; Yermack, 1997). The multi-tasking-effect has caused stock options to become more and more „heroin for managers“ (Jensen et al., 2004).

- **Self-selection-effect.** Pay for performance attracts extrinsic-motivated persons more than intrinsic-motivated ones (Backes-Gellner & Wolff, 2001; Bohnet & Oberholzer-Gee, 2000; Osterloh & Frey, 2005). On one hand, extrinsic-motivated employees reinforce the necessity for external control measures (control-paradox) (Lepper & Greene, 1978); on the other hand, intrinsic-motivated persons, who are often particularly willing to perform, feel treated unfairly and watch out for a different activity (Osterloh, Frey & Homberg, 2007).

These four negative effects of external incentives on working performance lead us to the following hypothesis:
Pay-for-Performance reduces performance in the course of the time, i.e. a high pay-for-performance compensation for CEOs reduces firm performance.

3 EMPIRIC EVIDENCE

3.1 Sample

Our research is based on previous empirical studies that examined the relationship between variable executive pay and firm performance at different dates. The procedure of meta-analysis allows a statistic analysis of this primary examinations (Hunt, 1997).

We take all previous studies, which have been published up to today, into consideration. (1) The data bases Business Source Premier, Elsevier, Emerald and Jstor were scrutinized by using the following key terms: “executive compensation”, “CEO compensation”, CEO remuneration”, “top management compensation”, “tangible rewards”, “equity based compensation”, “high incentives”, “variable compensation”, “pay for performance”, “performance based compensation”, “subsequent performance”. (2) The cited and citing literature of identified surveys were scanned for further studies. (3) We include all surveys identified by previous meta-analyses (Dalton et al., 2003; Tosi et al., 2000).

We included studies which meet the following requirements: (1) The study measures either the CEO’s salary or the salary of the top management. (2) The survey takes performance-dependent salary components into consideration (we regard this as: Total compensation = fixed salary + bonus plans + shares and option plans, or cash compensation = fixed salary + bonus plans, or bonus plans and/or shares and option plans). (3) The survey measures the firm performance according to the market value of a firm or according to accountings-based measurements such as

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The empirical design has the following advantages: (1) Quantification of surveys and results, (2) Meta-analyses can also be understood by persons not involved in science, (3) Replicability and impartiality. The empirical design has the following disadvantages: (1) Comparability of the surveys, (2) Integration of surveys of differing quality, (3) „Publication Bias” in favour of published, significant results (4) „Nonindependent Effects“ in case a survey documents several correlations (Eisend, 2004)). These disadvantages can be minimized by systematical sampling and by properly applied methods of analysis.
ROA, ROE or operating results.\(^6\) (4) The survey measures the relationship between salary and firm performance.

The final sample comprises 75 empirical studies (n= 123,797 firms). These studies document 259 statistic correlations between CEO-pay and firm performance (n= 486,422 observations).

Most surveys do not report bivariate correlation coefficients, but only indicate the t-values of the regression coefficients. The latter are not supposed to be used in meta-analyses. We consider these studies in the analyses and check subsequently for systematic biases. First, there is the danger of systematically biasing the results against economic authors, especially when such researches are exempted. Economic journals most unlikely demand, that the correlation coefficients should be documented. Second, authors often consider analog control variables in regressions, because the correlation between CEO salary and performance is one of the most frequently analyzed phenomena. Third, a “controlled”-correlation measures the extent of a correlation more accurately.

3.2 Measurements

Year. We coded the studies in terms of the time period, in which the relationship between pay and performance were measured. For panel studies we determine the average year of the investigated time period.

Pay-for-Performance-link. In order to examine the effect of Pay-for-Performance of the CEO on firm performance, we distinguish between two frequently applied measures of the link between pay and performance. (1) Shares- and option-plans are meant to increase the long-term, market-based firm value. (2) Bonus compensations are meant to increase the short-term, accounting-based firm value. In our models we investigate how Pay-for-Performance affects the market-based value of a firm, respectively the accounting-based value of a firm. On top of that we determine the overall correlation between Pay-for-Performance and average performance.

\(^6\) We allotted the different performance evalautitons according to the survey of (Tosi et al., 2000) to the market value respectively to the enterprise profit in the books.
**Moderation effects.** We check whether the form in which the results are documented (1 = correlation coefficient, 2 = t-value of the regression coefficient) biases the investigation results systematically.

### 3.3 Method

Computations for the meta-analysis were performed by using the Comprehensive Meta Analysis (Borenstein, 2000). This software package transforms correlation values into Fisher’s Z, uses the approach of Hunter and Schmidt (2004) and allows to search for sampling error, measurement error and range restriction. Before running the analyses, we plotted a study’s effect size against its standard error. The studies were distributed symmetrically about the combined effect size and point out the absence of publication bias.

For each single study we determine a total effect \( d \).\(^7\) This effect is calculated with the indication of the correlation coefficient \( r \) respectively with the indication of the \( t \)-value of the regression coefficient as follows:

\[
(1) \quad d_i = \frac{2 \cdot r_i}{\sqrt{1 - r_i^2}} \quad \text{or} \quad (2) \quad d_i = \frac{t_i \sqrt{N_i}}{\sqrt{N_i}}
\]

Subsequently we calculate an average effect \( \bar{d} \) for the total sample respectively for each period of investigation.\(^8\) This effect was corrected by means of sampling errors. We are using „Fixed-Effect“-models as integration models, i.e. the correlations are weighted by the sample size of a study. This assumption is based on an overall population parameter of all surveys, whereby the effects of a single study randomly differ from the error in the overall sample. The total effect is calculated from the study-specific weights \( w \), as follows:

\[
(2) \quad \bar{d} = \frac{\sum (w_i \cdot d_i)}{\sum w_i}
\]

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7 To ensure an acceptable level of independence among studies with multiple subgroups, our unit of analysis is the study. If a study documents more than one statistic correlation (subgroups), we summarize these effects first on the level of the single study.

8 An effect of 0.8 is assumed a large effect, an effect of 0.5 an average one and an effect factor of 0.2 a small one (Rustenbach, 2003).
In order to estimate the development of the incentive-effect of Pay-for-Performance over the time period, we run a fixed-effect meta-regression analysis.

The results are furthermore checked for their internal homogeneity. A significant Q-value is evidence for not considered moderator variables, i.e. the dissimilarity between the effects in different studies results from sampling errors.

\[(3)\quad Q = \sum_{i=1}^{k} w_i (d_i - \bar{d})^2\]

For the descriptive information of all surveys refer to Table 3 in the appendix.

### 3.4 Results

*Cross-sectional models.* In a first step we examine the incentive effect of Pay-for-Performance without considering the year of investigation. Our analyses determine a correlation between CEO salary and performance of \(\bar{d} = .11^{***}\) (refer to Table 1) According to this the variable CEO income contributes at 1.20 % to the increase of the firm performance, i.e. in fact not at all. Previous investigations have shown the same results (Aoki, 1984; Bebchuk & Grinstein, 2005; Bertrand & Mullainathan, 2001; Dalton et al., 2003; Deckop, 1988; Dyl, 1985; Herman, 1981; Lawler, 1971; Marris, 1964; McGuire et al., 2003; Redling, 1981; Rich & Larson, 1984; Tosi, 2005; Tosi & Gomez-Mejia, 1989; Tosi et al., 2000). Here the market value of an enterprise is increased by \(\bar{d} = .11^{***}\) by shares- and option plans, while bonus compensations increase the accounting value of a firm by \(\bar{d} = .12^{***}\). The incentive effect of both types of Pay-for-Performance appears therefore, despite marginal differences (\(z = 5.92^{**}\)), equally ineffective. However, a differentiation of both types reduces the heterogeneity in the sample (\(Q_{\text{Total}} = 4357.17^{***}\/ Q_{\text{Bonus-pay}} = 1248.19^{***}\/ Q_{\text{Equity-pay}} = 2070.59^{***}\)). This indicates moderator variables, such as the time factor.

A systematic bias of our results due to the way they have been documented during the survey is considered minor. The heterogeneity is reduced only marginally in a differentiated analysis (\(Q_{\text{Total}} = 4357.17^{***}\/ Q_{\text{Correlation}} = 700.81^{***}\/ Q_{\text{value}} = 3632.98^{***}\)). Studies documenting bivariate correlations determine, as expected, a significantly higher incentive effect of Pay-for-
Performance ($\bar{d} = .14^{***}$) than studies displaying correlations that are controlled regression-analytically ($\bar{d} = .07^{***}$). This difference is significant ($z = 92.17^{***}$).

**Table 1.** Results of the meta-analysis (Fixed-effect-Model)

<table>
<thead>
<tr>
<th>Model</th>
<th># Surveys (# Sub groups)</th>
<th>Est.</th>
<th>Surv. Err.</th>
<th>Z-Value</th>
<th>Heterogeneity (Q-Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total effect</td>
<td>87 (259)</td>
<td>.08***</td>
<td>.001</td>
<td>52.39</td>
<td>4357.17^{***}</td>
</tr>
<tr>
<td>Method of documenting results:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>27 (93)</td>
<td>.14***</td>
<td>.012</td>
<td>21.08</td>
<td>700.81^{***}</td>
</tr>
<tr>
<td>t-Value of the regression coefficient</td>
<td>60 (166)</td>
<td>.07***</td>
<td>.000</td>
<td>49.11</td>
<td>3632.98^{***}</td>
</tr>
<tr>
<td>Group difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>92.17^{***}</td>
</tr>
<tr>
<td>Pay-for-Performance-Link:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus-based effect: Linking of the CEO salary to accounting performance</td>
<td>48 (134)</td>
<td>.07***</td>
<td>.004</td>
<td>24.81</td>
<td>1248.19^{***}</td>
</tr>
<tr>
<td>Equity-based effect: Linking of the CEO salary to market performance</td>
<td>39 (125)</td>
<td>.08***</td>
<td>.003</td>
<td>34.72</td>
<td>2070.59^{***}</td>
</tr>
<tr>
<td>Group difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.92^{**}</td>
</tr>
</tbody>
</table>

Caption: "^{*}p < 0.05, ^{**}p < 0.01

**Longitudinal models.** Figure 4 and Table 2 display the development of the incentive effect of Pay-for-Performance in the course of time. The development of the general correlation between variable CEO salaries and firm performance suggests the following interpretation: Pay-for-Performance was not always ineffective. It is rather that the effectiveness decreases over the years ($\beta = -.003^{***}$). In 1950, a variable CEO income increased the firm performance – according to regression results - after all at $\bar{d} = .21$. This is a statistically moderate correlation. Nowadays, salary and performance are only linked to each other at $\bar{d} = .05$, i.e. close to a non-existing link. Carrying on with these results into the future means that in 2025, according to this estimation, a variable CEO salary and firm performance will not be linked at all anymore ($\bar{d} = .00$).
**FIGURE 4.** Graphic clarification of the regression results

- Over the years Pay-for-Performance has a constant incentive effect of $\bar{d} = .11$ on the long-term, market-based value of a firm ($\beta = .000$). The result documentation in the surveys does not change this finding (for the t-value: $\beta = -.000$). Therefore it was and is irrelevant for the firm performance, whether and how many options and shares firms give to their CEOs. This tautological „correlation“ between Pay-for-Performance and the market-based value of a firm is substantiated by Jensen et al. (2004). The authors show that the variable salary of CEOs consisting of shares and options fluctuates in line with the S & P-500 index.

- Pay-for-Performance reduces the short-term, accounting-based value of a firm over the years ($\beta = -.007***$). The result documentation in the surveys does not change this finding (for the t-value: $\beta = -.007***$, for correlations: $\beta = -.011***$). In 1950, a CEO-bonus caused indeed an impressive increase of the firm profit of $\bar{d} = .34$. In 2007, however, a higher CEO-bonus causes a slight decline of the enterprise profit ($\bar{d} = -.04$). If this result is extrapolated, the negative correlation will surface clearly in the year 2020 ($\bar{d} = -.12$). According to this, the probability of a downturn of the accounting-based value of a firm will rise in the future when a bonus is granted! This finding about the effect of Pay-for-Performance on firm profit confirms our hypothesis tentatively.

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9 For surveys documenting the correlation coefficient, there are insufficient cases for reliable regression estimations.
TABLE 2. Regression results (Fixed-effect-Model)

<table>
<thead>
<tr>
<th>Model</th>
<th>Regression coefficient</th>
<th>Constant</th>
<th>Heterogeneity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Est.</td>
<td>Std. Z-Err. value</td>
<td>Est.</td>
</tr>
<tr>
<td>Total effect</td>
<td>-.003 ***</td>
<td>.000</td>
<td>-18.45</td>
</tr>
<tr>
<td>Pay-for-Performance-Link:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus-based effect: Linking of the CEO salary to accounting performance</td>
<td>-.007 *** .000</td>
<td>-21.72 ***</td>
<td>.61</td>
</tr>
<tr>
<td>Equity-based effect: Linking of the CEO salary to market performance</td>
<td>.000 .000</td>
<td>.70 -.41</td>
<td>.63</td>
</tr>
<tr>
<td>Method of documenting results:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>-.005 *** .001</td>
<td>-7.40 10.93 ***</td>
<td>1.46</td>
</tr>
<tr>
<td>t-value of the regression coefficient</td>
<td>-.002 *** .000</td>
<td>10.39 4.91 ***</td>
<td>.46</td>
</tr>
<tr>
<td>Only correlations:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus-based effect: Linking of the CEO salary to accounting performance</td>
<td>-.011 *** .000</td>
<td>-13.09 21.20 ***</td>
<td>1.61</td>
</tr>
<tr>
<td>Equity-based effect: Linking of the CEO salary to market performance</td>
<td>-- -- -- -- -- --</td>
<td>-- -- --</td>
<td>-- --</td>
</tr>
<tr>
<td>Only t-values regression coefficient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus-based effect: Linking of the CEO salary to accounting performance</td>
<td>-.007 *** .000</td>
<td>-17.21 12.16 ***</td>
<td>.70</td>
</tr>
<tr>
<td>Equity-based effect: Linking of the CEO salary to market performance</td>
<td>-.000 .000</td>
<td>.18 .20</td>
<td>.64</td>
</tr>
</tbody>
</table>

Caption: **p <0.05, ***p <0.01

4 WHY DOES PAY-FOR-PERFORMANCE NOT GET OUT OF FASHION?

We have shown that Pay-for-Performance not only lacks of a positive incentive effect in the meantime, but also has a negative one. There are three questions left, which can only be answered after further investigation. For the time being we can only deliver some preliminary explanations.

- Why did bonus payments, which are linked to the accounting-based value of a firm, initially operate positively?

All fashions – as obviously Pay-for-Performance too – cause a kind of optimistic excitement in their initial stage, .....managers apply them successfully in order to flatter, inspire and demand or
to induce actions...“ (Kieser & Hegele (1998: 40); referring to Eccles & Nohria (1992: 29 f.)). Fashion motivates to test new solutions.

- **Why did the effect of bonus payments turn out to be negative in the course of the time?**

Bonuses in enterprise practice are mostly designed nonlinear but granted within an “incentive zone” (Jensen et al., 2004). First, the values of a profit interval are determined arbitrarily and definitely not by the market (Becker & Kramarsch, 2006). Often they are estimated very low by the CEOs and the subsequent leaders, because a manager is judged according to the target achievement of his employees. Second, the nonlinear design shows misleading effects: Once employees realize that the maximal bonus has been reached, they shift their efforts into the following year. If they realize that they are not able to reach what has been targeted, they stop their efforts. On a long term, bonus plans therefore cause a circle of manipulations that keep multiplying. This could be an explanation for the declining incentive effect of bonus payments according to Figure 4.

- **Why is Pay-for-Performance still applied by enterprises, despite these negative effects and recently even transferred to organizations that are not profit-oriented?**

Numerous firms are aware of the questionable effects of Pay-for-Performance. Nevertheless they do not abolish the once introduced systems. One reason might be that nobody believes anymore, fixed salaries can be adjusted to the performance accurately. On top of that, many authorities have adapted Pay-for-Performance on the occasion of „New Public Management“, even for physicians and judges. Lately, it is said, Pay-for-Performance should even be introduced for researchers at universities, e.g. by means of periodical evaluations, in which publications and citations are counted. The effects are exactly as counterproductive as with CEOs: In the case of physicians, the treatment of seriously ill patients becomes unattractive (Osterloh & Rost, 2005). Judges react with less thorough verdicts (Schneider, 2007). Also scientists react strategically: They increase the number of their publications (at times with the help of close editors) at the cost of the quality of their research (Frey, 2003; Frey & Osterloh, 2006). An explanation for this development can be deduced from the neo-institutional organization theory (Meyer & Rowan, 1977; Walgenbach & Beck, 2003). According to this firms noncritical adapt measurements,

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10 On the crowding-out effect of intrinsic motivation with dentists compare (Bøgh Andersen, 2007).
which may initially improve the performance of some organizations. In the meantime
conceivabilities of rational organizational design are developed; these are taken for granted and
are not questioned anymore. Disregarding these elements is considered as a lack of modern
thinking - at least as long as no new fashion has come up.

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