

Franz Waldenberger

# “Company heroes” versus “superstars”: executive pay in Japan in comparative perspective

**Abstract:** In international comparison, the level and the performance sensitivity of executive pay in Japan are low. Both characteristics can be related to the prevalence of internal labor markets. These not only select the ones who will be promoted to the top, but also strongly influence the way by which the level of executive pay is determined. Last but not least, life-long company careers provide for forms of control that can function as a substitute for explicit incentives built into remuneration packages.

**Keywords:** executive compensation, corporate governance, internal labor markets

---

**Franz Waldenberger:** Ludwig-Maximilians University Munich, e-mail: waldenberger@lmu.de

“企業のヒーロー”対“スーパースター”：国際比較における日本企業の役員報酬

フランツ・ヴァルデンベルガー

日本企業の役員報酬は国際比較から見ると、そのレベルは低く、業績との連動性も高くない。いずれの特徴も内部労働市場の普及に起因する。内部労働市場はトップに昇進すべき人材を選択するだけでなく、役員報酬レベルの決定方法にも著しく関与する。さらに、日本企業では役員が社内で育成されるために企業との結束が強く、これが業績連動型報酬の代替となる統制機能を果たしている。

## 1 Motivation

The remuneration of top management in listed stock companies has received much public attention in the United States and Europe over the last two decades as manifested for example by the “say on pay” movement in the United States and the European Union (Pagnattaro and Greene 2011). The general per-

ception is that executive pay has skyrocketed, is unreasonably high, not justifiable in terms of performance, and may set wrong and even harmful incentives (Bebchuk and Fried 2004; Kaplan 2012). In Japan, public concerns about executive compensation have been less pronounced. The most prominent occasions for executive pay to be mentioned in the business press have not been excesses, but reports on executive pay cuts during business downturns and restructuring.<sup>1</sup> The general impression is that Japanese managers earn much less than their US and European counterparts (*Businessweek*, 1 July 2010; *Economist*, 30 June 2010).

As in Europe, lack of access to reliable data has hampered research on how executives of listed companies are compensated (Nakazato et al. 2011). Nevertheless, there are a number of studies that – indirectly and often cumbersome – found ways to circumvent the lack of disclosure. The majority focuses on the link between pay and performance and on how governance and ownership structures affect executive compensation. The most recent ones include Kubo (2005), Abe et al. (2005), Kato and Kubo (2006), Basu et al. (2007), Kubo and Saito (2008), Colpan and Yoshikawa (2012) and Sakawa et al. (2012). Only a few studies undertake international comparisons. Here researchers confront not only the problem of data availability for each country, but also the challenge of comparability. Exceptions are Kato and Rockel (1992), Kaplan (1994), Kubo (2001), and Nakazato et al. (2011).

Our theoretical understanding of the determinants of the level of executive pay is still fragmented (Frydman and Jenter 2010: 23; Murphy 2012: 156). Yet, there have been some advances based on Rosen's (1981, 1982) theory explaining the income of "superstars" (Murphy and Zabochnik 2007; Gabaix and Landier 2008; Tervio 2008; Edmans et al. 2009). While such models can to some extent rationalize the evolution of CEO pay in the United States between 1980 and the mid-2000s, they perform badly when it comes to international comparisons (Gabaix and Landier 2008: 80). Given the lack of a generally accepted theory of executive compensation, some researchers have tried to explain international pay gaps by adjusting for differences in firm size, in the composition of pay packages, and in governance structures (Conyon et al. 2011; Fernandes et al. 2012). However, Japan has not been included in these studies.

Executive pay does not feature prominently in corporate governance related research by scholars of Japanese studies. Although being a standard

---

<sup>1</sup> Based on keyword search on NIKKEI online, 29 March 2013, over the last 12 months. The keyword *yakuin hōshū* 'executive compensation' resulted in 224 hits. Eight articles mentioned *hihan* 'criticism', out of which four related to non-Japanese companies, two to regional electric power companies in connection with planned tariff hikes, and two to criticism raised at the shareholder meetings of Itochu and Panasonic.

theme in corporate governance textbooks (e.g., Monks and Minow 2011), it is rarely taken up in discussions on Japan. For example, neither Learmount (2002) nor any of the contributions in Aoki et al. (2007) or Whittaker and Deakin (2009) consider the issue of compensation. The numerous studies analyzing wage systems in Japan and the related discussion about the shift from seniority to performance-based remuneration have typically focused on employees below the top executive level (e.g., Holzhausen 2000; Conrad 2010).

The purpose of this paper is to summarize the empirical evidence on executive pay in Japan provided by Japanese and international studies and to offer an explanation of the two major differences: the low level of remuneration and the low performance sensitivity observed for Japan. It will be shown that both characteristics can be related to the prevalence of internal labor markets. These not only select the ones who will be promoted to the top, but also strongly influence the way by which the level of executive pay is determined. Last but not least, life-long company careers provide for forms of control that can function as a substitute for explicit incentives built into remuneration packages.

The next section provides an account of the available empirical evidence on executive pay in Japan including international comparisons to distill major differences in the level, structure, and performance sensitivity. The third section then discusses how these differences can be related to “the logic” of Japan’s internal labor markets for managerial talent. The concluding part summarizes the main findings and points to promising venues for future research.

## 2 What do we know about the level and structure of executive pay in Japan?

### 2.1 Background

Executives occupy the highest rank in the corporate hierarchy. In the Japanese context they normally constitute the board of directors (*torishimariyaku-kai*), as Japanese boards have few non-executive and even fewer outside directors (Ahmadjian and Yoshikawa 2013).<sup>2</sup> Being a board member means they successfully survived a 30-year-long multi-stage tournament competition typical of Japanese in-house careers (Sato 1997; Xu 1997: 320). They will thus not experience the decline in pay that other employees usually face beyond the age of 55

---

<sup>2</sup> For this reason executive compensation and director compensation will be used interchangeably for the rest of the paper when referring to Japan.

(JIL 2012: Table 13-2). Their remuneration is no longer determined by human resource departments, but by processes that involve the beneficiaries themselves in their function as board members, now sometimes supported by a compensation committee, and the annual shareholders meeting (Kubo 2001; Basu et al. 2007). Their income is separately accounted for in profit–loss statements and not included in official wage and salary statistics.<sup>3</sup>

In the reports that listed companies file with stock exchange authorities in Japan (*yūkashōken hōkoku-sho*), only the aggregate fixed and variable cash compensation for the whole board of directors is disclosed. Stock option grants are reported separately in sum. Since 2010, the remuneration of board members with a total consolidated income of 100 million yen or more has to be disclosed individually including fixed and variable cash payments, severance pay and non-cash compensation like stock option grants or stock awards. However, other items such as accrued pension benefits, health insurance, special allowances, or non-monetary benefits are not reported.<sup>4</sup>

Faced with the lack of disclosure, researchers applied basically five strategies to obtain information on executive pay in Japan:

- work with disclosed aggregate cash compensation data averaged by the number of board members (Kaplan 1994; Ang and Constand 1997; Abe et al. 2005; Kubo 2005; Murase 1998);
- deduce individual pay levels of the CEO or other executive board members based on information of the composition of boards and typical pay gaps between board positions (Kubo and Saito 2008; Sakawa and Watanabe 2008);
- use publicly available personal income tax data to arrive at individual pay levels (Kato and Rockel 1992; Kato 1997; Basu et al. 2007; Nakazato et al. 2011);<sup>5</sup>
- use data from private surveys (Kato and Kubo 2006);
- focus on top earners whose compensation packages are reported individually since 2010 (Sakawa et al. 2012).

In the following, existing research will be screened for information on the level, structure, and performance sensitivity of executive pay in Japan. International

---

<sup>3</sup> The basic survey on wage structure (*chingin kōzō kihon chōsa*) covers only data up to the department head (*buchō*) level.

<sup>4</sup> On the difficulties of measuring executive compensation in a comprehensive and systematic way, see Murphy (2012: 5–24). For the Japanese situation, see Sakawa et al. (2012).

<sup>5</sup> Until 2005, the government had disclosed the identity and total tax bill of persons paying more than 10 million yen in income tax (Nakazato et al. 2011: 848).

data will be drawn from available comparative surveys or with reference to other national studies.

## 2.2 Japan's level of pay in international perspective

Estimates by the international consultancy Towers Perrin (now Towers Watson) published in their “Worldwide total remuneration 2003–2004” report indicate that a “typical” director for human resources at a large international company headquartered in the United States would receive a total annual remuneration of 514,000 US dollars, while her or his counterpart in Japan would have to be content with 233,000 US dollars (Towers Perrin 2003: 21). The survey confirms the general impression that Japanese executive pay is modest by international standards.

Earlier comparative studies by Kato and Rockel (1992) and Kaplan (1994), while not focusing their analysis on differences in compensation levels, do present comparative data in their summary statistics. Here the differences are even more pronounced than in the Towers Perrin report. Converting the Japanese figures given by Kato and Rockel (1992: 34) into US dollars<sup>6</sup> shows that an US executive earned on average 3.1 times as much as her or his Japanese colleague. In the Kaplan (1994) study, the average US executive earned 5.4 times more.

The ratios are however overstating the differences because the income data are not adjusted for firm size. The Japanese companies were on average much smaller both in the Kato and Rockel (1992) and in the Kaplan (1994) study. The pay–size relationship is the most commonly shared result among empirical studies on executive pay worldwide (Conyon et al. 2011: 44) and it has also been confirmed by Japanese research. Kato and Rockel (1992) present pay–size elasticities of 17%–18% for Japan and 25% for the United States, firm size being measured by the number of employees.<sup>7</sup> The elasticity estimate for Japan by Nakazato et al. (2011) based on asset size varies between 18% and 30% depending on the regression specification. Their US estimates range from 80% to 91%, indicating a much stronger size effect. Conyon et al. (2011) report pay–size elasticities with regard to sales for the United States and Europe in the range of 21% to 45%.

---

<sup>6</sup> Taking the end of year yen/dollar exchange rate of 1985, 200 yen/dollar, from Historical Statistics of Japan, Chapter 18, <http://www.stat.go.jp/english/data/chouki/index.htm> (accessed 13 February 2013).

<sup>7</sup> An elasticity of 20% means that for a 100% increase in size, pay 20%. The relationship does not depend on absolute firm size.

Abowd and Kaplan (1999: 146) give comparative data for total CEO compensation compiled from “various sources.” After adjusting for firm size, a Japanese CEO would earn about 37% of his US counterpart’s total remuneration. Nakazato et al. (2011) undertake an explicit Japan–US comparison. They use income tax statistics for the year 2004 to estimate the CEO pay at 1,568 companies listed on the first section of the Tokyo stock exchange. Comparing the median CEO income for the top 500 Japanese and US companies and adjusting for size and non-job related income, they arrive at a Japanese pay level of about one-fifth of that earned by a CEO in the United States (2011: 854).

The generally low pay level of Japanese executives is confirmed by the recent disclosure of top earners. A study screening all 3,618 listed Japanese companies for executives with total compensation surmounting the disclosure threshold of 100 million yen (1.2 million US dollars) in 2011, finds only 226 firms with 367 “top earners” (TSR 2012). The disclosed figures include not only severance pay provisions, but also one-time payouts and therefore overestimate purely grant date data. On the other hand, accrued pension benefits and welfare-related expenses are not included.

The average income of the 367 “top earners” was 170 million yen (1.8 million US dollars). The “winner” was Carlos Ghosn from Nissan with 982 million yen (10.9 million US dollars), a little more than the median pay of an S&P500 CEO in the same year (Murphy 2012: 10). The top ten received on average 648 million yen (7.2 million US dollars). The top two and a total three out of the top ten were foreigners, which highly overstates the otherwise negligible presence of foreigners on Japanese boards. The companies with the largest number of “top earners” were large and internationalized firms, including Nissan, Canon, Sony, Funac, Toyota, Mitsubishi Corporation, Nomura Holdings, Mitsui Corporation, and Softbank.

### 2.3 Compensation structure and incentives

Research on Japan has looked into the structure of compensation, the degree of performance sensitivity of executive income, whether performance is based on stock market returns, sales, or accounting profit, and whether such incentives actually lead to better performance.

For a long time, the annual compensation of Japanese directors only comprised monthly fixed salaries and annually decided variable cash payments. Stock options started to be introduced in 1997 following a reform of the Commercial Code (Shishido 2007). In 2002, the use of performance-based remuneration was further deregulated, giving companies more possibilities for condition-

ing compensation on performance. Until 2005, bonuses and stock options had not been treated as expenses, but had instead been seen as instruments by which executives could participate in the profit of the company. From 2006 onwards these performance-based components had to be accounted for as company expenses (Yasuda et al. 2012: 47).

### 2.3.1 Compensation structure

Studies before 1997 report bonus ratios<sup>8</sup> between 78 % and 3 % with a mean value of 22 % (Ang and Constand 1997, data from 1980–1992) and between 0 % and 54 % with a mean value of 13.5 % (Sakawa and Watanabe 2009, data from 1991 to 1995).

Stock options soon became widely used. Kato et al. (2005) show that between 1997 and 2001, 350 listed firms adopted option plans. According to a study by Daiwa Securities 1,391 firms or 38 % of all listed companies had introduced stock options by March 2005 (Uchida 2006: 252). In 2010, 31.4 % of the companies listed on the Tokyo Stock Exchange used stock options to remunerate their directors (TSE 2011).

According to Yasuda et al. (2012), analyzing stock option plans of 1,836 non-financial companies listed on the Tokyo Stock Exchange and on JASDAQ, the grant date value amounted to only 13 % of a director's total compensation. In the sample of Kato et al. (2005) covering 644 option plans introduced between 1997 and 2001, stock option grants had a share of 33 % in total compensation (Yasuda et al. 2012: 48). The steep decline might be due to the above-mentioned change in accounting standards that took effect in 2006 and defined stock option grants as company expenses. But it could also be the result of a selection bias, as the early adopters covered by Kato et al. (2005) are likely to have made more intensive use of the new remuneration tool.

The introduction of stock options had little impact on the share of bonuses in cash compensation. Average bonus ratios varied between 24 % and 28 % over the period from 1997 to 2005 according to a study conducted by Hongo (2010).

Sakawa et al. (2012) analyze the pay structure based on individual compensation data of 312 directors from 200 listed stock companies that had been reported under the new disclosure rules. Each director had earned more than 100 million yen in the fiscal year 2010. The authors report variations in the

---

<sup>8</sup> Bonus ratio is defined as the percentage share of bonuses in total compensation.

total incentive ratio<sup>9</sup> between 0% and 79%. The average incentive ratio of 22% was made up of 16% bonuses and 7% stock option grants. The result suggests that stock options partly replaced bonus payments, but did not increase the total share of incentive pay found by the older studies referred to above even for the highest paid executives.

Compared to the United States and Europe, the incentive share in Japan's compensation structure as well as the share of equity grants appears very low. According to the Towers Perrin report of 2003–2004, a CEO in the United States would receive 63% of her or his remuneration as variable pay compared to just 19% in Japan (Towers Perrin 2003: 24). Data from 1,426 US companies and 892 European for the year 2008 analyzed by Conyon et al. (2011) reveal that CEOs in the United States received only 29% of their total compensation in fixed pay and 46% as stock or option grants (2011: 42). For the European executives the fixed remuneration amounted to 50%, the share of equity-based pay being 19% (2011: 60).

### 2.3.2 Performance sensitivity of compensation packages

Starting with the comparative analysis by Kato and Rockel (1992), most studies confirm that Japanese executive remuneration hardly responds to stock price movements, but is strongly related to accounting income. According to the statistical analysis by Kato and Kubo (2006) based on data from a private consultancy covering 51 companies, 18 of them listed, over the period from 1986 to 1996, directors' total cash compensation would increase by 1.3%–1.4% for a one percentage point increase in the return on assets (RoA). The performance sensitivity was mainly transmitted via the bonus component. This is confirmed by the study of Hongo (2010) already referred to above. He reports a 5% increase in bonuses for a one percentage point growth in RoA. As bonuses made up about 25% of total compensation in his sample, this translates to a 1.25% increase for total cash payments, perfectly in line with Kato and Kubo (2006). The author also finds that total remuneration reacted to previous year results with a one percentage point increase in RoA, resulting in a 0.4% growth in total cash payments.

The more recent study of Nakazato et al. (2011) referred to above finds an even stronger sensitivity of 3.0%–4.7% given a one percentage point change in RoA. Again, the authors detect no significant impact from stock price move-

---

<sup>9</sup> The incentive ratio is defined as the percentage share of bonus plus stock option grants in total compensation, the latter comprising fixed salary plus bonus plus stock option grants.



ments. This is in contrast to the results they gain from their regression using data from a matched sample of US companies. In the fully specified regression, the degree of RoA sensitivity is equal to the Japanese coefficient, but stock price movements, too, show a significant positive correlation with CEO income.

### 2.3.3 Shareholder wealth effects and dismissals

The performance sensitivity of compensation is not the only channel by which executives may be rewarded for good or punished for bad results. There are two other important possibilities of tying income interests to changes in shareholder wealth. One is through the amount of company stock already held by executives. The other is the probability of dismissal and the thereby implied loss of income over the remaining working life.

In an early study, Kaplan (1994) analyzed how executive compensation and turnover are affected by various measures of bad performance. Comparing 119 Japanese and 146 US companies over the period from 1980 to 1988, he concludes that the extent by which the likelihood of being dismissed increases and executive pay is cut as a result of bad performance does not significantly differ between the two countries. He nevertheless attests that accounting measures like negative earnings have a stronger impact in Japan.

Kubo and Saito (2008) study the impact of changes in shareholder wealth for all three channels, i.e., cash compensation, dismissals, and equity ownership. Their data set comprises 115 firms included in the NIKKEI 225 in the year 1996 covering the period from 1977 to 2000. They show that over the whole period the strongest incentives stemmed from share ownership not included in studies focusing on cash compensation. In fact, entering the 1990s, cash compensation became the weakest link between changes in shareholder wealth and total executive income. Over the whole period, incentives strongly declined.<sup>10</sup> For the median company, a one million yen change in shareholder wealth in 1977 implied an 850 yen gain or loss for a CEO, 667 yen being attrib-

---

<sup>10</sup> The authors do not estimate the size-independent performance elasticity. Their sample covering the boom and bust of the stock market bubble exhibits an almost eightfold increase in the value of listed shares between 1977 and 1988, followed by a decline to one-fourth by the year 2000. The strong reduction in overall incentives might partly be influenced by the share price inflation during the bubble. However, the same argument applies vice versa for the steep decline in market capitalization after 1990, which would mean that the moderate decline in absolute incentives underestimates the changes in relative effects. For a discussion of what incentive measure is more adequate, see Murphy (2012: 27–28) and Frydman and Jenter (2010: 12–13).

utable to shareholdings. In 2000, the same absolute change in market value would only cause a 333 yen change, 147 yen due to changes in the value of stock and options held, 104 yen attributable to an increased risk of dismissal, and only 82 yen reflected in changes in cash compensation.

Applying the same measure of median pay–performance sensitivity, a CEO’s income in the United States would change by an amount of 2.5 US dollars for every 1,000 US dollar change in shareholder wealth during the period between 1974 and 1986. By the end of 2003, the effect had almost tripled mainly because of the intensive use of stock options, before declining to about half the peak level in 2011 (Murphy 2012: 27). The US measures for the period covering 1974–1986 and for the year 2003 are three times and 23 times (!) as strong as the results obtained by Kubo and Saito (2008) for 1977 and 2000, respectively.

### 2.3.4 Does performance pay improve performance?

The use of performance-based incentive schemes is theoretically justified by the argument that their use will actually result in better performance. Whether the assumption holds empirically has been a central question for research on executive pay (Frydman and Jenter 2010: 23). It also inspired studies on Japan.

Ang and Constand (1997: 290–291) analyzing 364 listed companies over the period from 1980 to 1992 find that compensation packages that are less sensitive to changes in stock prices go along with a better stock market performance, which is the opposite of what theoretical models would predict. Looking at a sample of 210 listed companies for the years 1994 and 1995, Kubo (2005) finds no significant relationship between changes in performance pay and compensation policies and consequent performance.

Studies focusing on the performance effect related to the use of stock options draw a more optimistic picture. Kato et al. (2005), who look at the first adopters of stock option plans between 1997 and 2001, find a significantly positive impact on consequent performance. Hanazaki and Matsushita (2008), covering all companies listed on the Tokyo stock exchange over the period from 1997 to 2006, conclude that companies with stock option plans show significantly higher returns on assets and equity. The result however only holds for stock options granted to directors.

The international evidence cited by Frydman and Jenter (2010: 23–24) is equally mixed. Whereas some research discovered a positive relationship between incentive pay and performance, many studies failed to do so. Part of this inconclusiveness could be due to unresolved methodological problems related to the measurement of performance sensitivity or the control for endo-

geneity. Another reason could be that the focus on pecuniary incentives is too narrow as top management is also controlled by other governance mechanisms including direct monitoring, reputational effects, or peer pressure.

## 2.4 Summing up

The evidence on the level and structure of executive pay in Japan accumulated over twenty years of quantitative research covering thirty years of data may be summarized as follows:

- The overall compensation level is low by international standards even when controlling for firm size.
- Compensation packages include a large share of fixed cash income of about 70%–80%.
- The introduction of stock option plans has not fundamentally changed the compensation structure. The share of equity-based remuneration remains low.
- Given the compensation structure, performance sensitivity is low and more focused on short-term, accounting-based measures.
- The link between executive income and shareholder wealth has become significantly weaker when compared to thirty or twenty years ago and is much lower than in the United States due to the comparatively small amount of company shares held by Japanese executives.
- The evidence on whether performance pay improves performance is mixed.

# 3 In-house careers and the community model of Japanese corporate governance

## 3.1 Limits of quantitative research

The only Japan-related study explicitly analyzing international differences in compensation levels statistically is due to Nakazato et al. (2011). Their Japan–US comparison introduced in the previous section not only provides a size-adjusted measure for the gap between US and Japanese CEO income levels, it also presents results about how income levels within countries vary in response to variations in independent variables (2011: 869). Comparing the country-specific regressions shows a similar constant term, but some significant differences with regard to the sign and size of coefficients as for example for stock returns

(significant and strongly positive in the United States, but not significant in the case of Japan) or board tenure (significantly positive for Japan, but significantly negative in the United States).

Judging from their results, a potential candidate for “explaining” the US–Japan pay differential would be the firm size coefficient. The firm size elasticity reported for the United States of 0.91 was 3.8 times larger than the Japanese estimate of 0.24. Other things being equal, this means that a doubling of total assets results in a 90 % increase in US CEO compensation, but causes only a 24 % change in Japanese CEO income. US managers would therefore earn more even after controlling for firm size. Surely even these insights do not answer the question as to why these differences in firm size elasticities and other coefficients exist.

Fernandes et al. (2012) apply a quantitative statistical analysis to explain the gap in CEO compensation between the United States and several European countries (see also Conyon et al. 2011 and Murphy 2012: 118–124). Their approach is to systematically reduce the gap by adjusting for country differences in industry composition, size and other firm characteristics, ownership structure, board composition, and risk premiums implied by the performance sensitivity of compensation packages. With these adjustments they are able to eliminate the US pay premium.

The “adjustment-for-differences” approach chosen by the authors hinges on the strong assumption that executive pay is determined on the basis of the “same model,” meaning that the variables chosen as adjustment factors influence executive pay in the same way and to the same extent in each country. Or in other words, that the respective coefficients in country-specific regressions have the same sign and are of similar size. As the study by Nakazato et al. (2011) showed, this is not the case. The strong differences in the sign and size of coefficients clearly tell us that we face two different models of executive compensation determination. To make progress in understanding, we will have to take a closer look at the mechanisms determining executive compensation. As it turns out, these are closely related to the selection processes by which executives are appointed.

### **3.2 Prevalence and significance of internal labor markets in Japan**

Internal labor markets form a core element of the Japanese employment system that became fully established during the high-growth period between 1955 and 1973 (Conrad 2010: 116–119). They are closely associated with the three pillars

of “life-time employment,” “seniority-based wages,” and “company unions” (Sako 1997). The entry into the internal labor market is characterized by an intensive competition for new grads taking place within a nationwide coordinated, year-long recruitment process (Firkola 2011). The ensuing in-house careers, traditionally reserved for men, offer each accepted candidate the chance to reach the top. The actual outcome is determined in a 30-year-long, multi-stage competitive selection process (Sato 1997).

Since the mid-1970s and even more so entering the 1990s, slow growth and demographic change have put the Japanese employment system under a growing adjustment pressure. As a result, the seniority wage curve has flattened and the number of core employees has been steadily reduced, accompanied by a corresponding increase in the share of non-regular employees (Waldenberger 2004). However, for the remaining, smaller group of core employees, in-house careers have prevailed.

In-house careers are also common in other countries (Zabojnik 2012). To appreciate the significance of internal labor markets in the case of Japan, three aspects are to be noted. First, in-house careers are lifetime careers, especially for those reaching the top. A study by Sato (1998) showed that 82% of senior managers in larger Japanese companies had never worked for another employer, compared to 28% in Germany and 19% in the United States. Comparing career patterns of male employees in Japan, France, and Germany – all countries with comparatively long average tenure – Waldenberger (1999) shows that French and German employees tend to change employers in the middle of their careers, whereas Japanese employees move at the end, after it has become clear that they will not make it to the top.

Second, although Japanese statistics report annual turnover rates of 3%–4% for male employees over the period from 1990 to 2011 (JIL 2012: 106), they discern no upward trend and also indicate that changing one’s employer still implies a loss in income. For 2010, a mid-term hire earned on average about 30% less than a “life-time” employee (JIL 2012: 202), suggesting that the majority of transitions had not been career enhancing.

Third, and most relevant for our topic, top management positions continue to be filled internally. Data compiled by private consultancies show that even today external appointments to CEO positions remain the exception in Japan. Over the period from 2000 to 2009, only 4% of CEOs appointed in Japan had been outsiders, compared to 20% in North America and more than 25% in Europe and the rest of Asia (Favaro et al. 2010: 5). A study by Tanoos (2012) reveals that whereas eight of the fifty largest US companies were managed by CEOs that had been hired from outside, in Japan this had been only the case for one company, the still government-controlled Japan Post Holdings.

### 3.3 Implications for executive compensation

Given the importance of internal promotions, executive pay in Japan can be interpreted as the prize to be won when working one's way up to the top. Xu (1997) analyzes the compensation of Japanese board members of 82 listed machinery manufacturers over the period from 1983 to 1992. The central proposition derived from his tournament model states that the reward of being promoted should increase when the probability of promotion decreases in order to keep incentives up. The reward is measured by the ratio of the fixed compensation component to average male employee income, which varies between 1.88 and 12.64 in his sample, the mean being 5.25. The promotion probability is approximated by the ratio of directors to male employees. The statistical analysis reveals that a 10% decrease in the promotion probability goes along with a 4.3%–5.3% increase in the ratio of fixed director compensation to average employee wages.

Xu (1997) also shows that whereas directors' fixed compensation and male employees' average salaries were vertically related to preserve promotion incentives, there was no such relation with regard to bonuses. Director bonuses were determined together with the distribution of profits, whereas employee bonuses had been agreed upon in advance. As a consequence, director bonuses showed a much stronger responsiveness to annual earnings.

The vertical link between director and employee income was confirmed by Kubo (2001), who compared 210 listed companies included in the NIKKEI 225 with a matched sample of 210 UK companies for 1995 and 1996. Director compensation showed a strong positive correlation with employee wages in the case of Japan, but not in the UK data. Abe et al. (2005) refine the model of Xu (1997) but basically obtain similar results with their sample of 55 electronics firms over the period from 1989 to 1999. Accordingly, executive compensation in Japan serves two purposes. The first is to define the reward for those who compete for positions on the board. The second is to set incentives for those on the board by relating part of their income to performance, where performance is based on accounting income rather than stock price movements.

The above results gained from statistical analyses are in line with what seems to have been common practice in Japanese companies. A survey conducted in the mid-1990s and cited by Basu et al. (2007: 61) revealed that the fixed component of executive pay was generally determined as a multiple of non-director managers' salaries, a chairman receiving on average 4.2 times and the president 3.6 times of a non-director manager's salary. The majority of the companies surveyed also stated they adjusted the fixed compensation annually to reflect changes in performance, industry conditions, and increases in

employee salaries. In contrast, director bonuses would be decided annually based on accounting income and approved by the general shareholders meeting as part of the appropriation of profits.

The link between executive and employee wages implies that executive pay increases with firm size (Xu 1997: 329–330). As already noted in the previous section, the pay–size relationship is the most commonly shared result among empirical studies on executive pay. In the Japanese context it is driven by the logic of in-house tournaments. In the United States and Europe, the same relationship is supposedly the outcome of competition for managerial talent. The argument will be further explored in the following.

### 3.4 No “superstars” (yet) in Japan

The distribution of CEO compensation is not symmetric, but strongly skewed to the right (Rosen 1982: 311). This is surprising because one would expect managerial talent to be normally distributed as in the case of IQ scores. Rosen’s “theory of superstars” offers an explanation for the seeming contradiction between normally distributed talent and a strongly skewed distribution of executive pay (Rosen 1981, 1982). The basic thrust of the argument can be summarized as follows:

- Executives differ in their decision-making and leadership skills.
- They are indirectly productive in the sense that their decision-making and leadership skills increase the productivity of the resources under their control.
- The productivity gains of hiring a slightly more gifted CEO will therefore be larger the larger the organization.
- As a consequence, the largest organizations, meaning those with the largest pool of productive resources, will attract the most talented CEOs, because they benefit most from having a slightly more skilled CEO.
- The CEO’s share in the organizational rent created by her slightly higher talent is determined by her outside opportunity cost, i.e., the rent she would be able to generate in the next best organization. If there is free entry and firms are otherwise identical, a CEO will be able to appropriate the whole rent.
- Workers cannot participate in the rent, because their opportunity costs are not affected by having a more talented CEO.

The chain of reasoning leads to the conclusion that the distribution of top management compensation will resemble the income distribution of “super-

stars” in sports or other forms of mass entertainment. The total value created by the performance of a F1 racer is not just determined by talent and effort, but also a result of the size of the audience reached. Adding one million more TV spectators to a F1 race increases the value added without changing the quality or effort levels of the racers. When selling to a global audience, only the best racers will be invited to participate. They will be the “winners who take it all.” In the same way, the value created by the talent and effort that a CEO brings to work will be higher the larger the pool of resources that benefit from her decision-making and leadership skills. The largest companies will try to hire the best managers and pay them the highest income no matter how much more talent they actually get as long as it is the highest available.

Rosen’s argument has been further developed by Gabaix and Landier (2008), who derive and test empirical implications for the United States; Tervio (2008), who adds heterogeneity on the employer side; and Edmans et al. (2009), who enrich the market model by including agency cost considerations to simultaneously determine pay levels and incentive schemes in equilibrium. The “superstar” model performs well in explaining three generally observed phenomena, namely the skewed distribution of firm size and CEO compensation and the strong correlation between firm size and executive pay. According to Gabaix and Landier (2008: 72) the 500 % increase in the size of the largest 500 US firms measured by the market value of total assets fully explains the equally 500 % increase in CEO pay. However, their model is less powerful with regard to cross-country differences. For example, they cannot reconcile the observation that while the largest Japanese firms strongly grew in size, CEO pay increased only moderately. They conclude that “[a] large amount of the variation in CEO compensation across countries remains unexplained and country specificities may sometimes dominate the mechanism highlighted in our paper” (2008: 80).

The reason why the “superstar” model does not apply in the case of Japan is easily explained with reference to the before mentioned predominance of in-house promotions. Two aspects are relevant. First, executive pay in Japan is “vertically” determined in relation to employee income levels, whereas the “superstar” mechanism implies a “horizontal” or competitive price formation based on outside opportunities of CEOs. As shown by Xu (1997), the ratio of executive pay to employee salaries should grow with the size of the company in order to compensate for the decline in promotion probability. Given the size of the company, the ratio can be thought of as being constrained by two concerns. A too high ratio will (i) intensify competition among potential candidates, impairing their willingness to cooperate (Lazear 1989), and (ii) conflict with notions of fairness, with equally harmful effects on employee motivation



(Fehr et al. 2009). Both concerns should be less relevant in the “superstar” model. Here CEO pay is decoupled from the income levels of lower layer employees. Given the link to external labor markets at all hierarchic levels, “unfair” wage structures are less likely to be blamed on company pay practices, but rather seen as the outcome of general economic and social conditions.

Second, in contrast to a “superstar,” a Japanese CEO having no outside opportunities is not in a bargaining position that would allow him to appropriate a major portion of the “managerial rent,” i.e., of the value that he generates for the company. The lack of outside opportunities is due to the practical non-existence of outside hires as explained above. Whether this is due to social convention, the result of strong social bonding caused by financial barriers in the form of tenure-based severance pay, or because of company-specific human capital does not need to be further explored here. The answer will not change the conclusion that within the context of internal markets for managerial labor, top executives in Japan will not be able to extract managerial rents as assumed by the “superstar” model.

Both the vertical determination of executive pay and the inability to appropriate rents suggest that Japanese executives will earn less than executives who can freely move between companies. We cannot attach a precise figure to the difference, but we can guess as to where the difference should show up in a comparative statistical analysis. Both the Japanese model and the market model of CEO compensation postulate a positive firm size elasticity, albeit for different reasons. In the Japanese context the number of employees is the relevant size measure (Xu 1997). In the “superstar model” it is the market value of total assets (Gabaix and Landier 2008). Larger companies are known to be more capital intensive, or in other words, the larger the number of employees the higher the ratio of total assets to employees. This suggests that the pay–asset size elasticities estimated by Nakazato et al. (2011) should be lower in Japan compared to the United States, which is confirmed by their results.

It may be noted that the “superstar” model has been criticized, not so much for its empirical predictions, but for its assumptions (Elson and Ferrere 2013). The critics claim that the assumed well-functioning external market does not exist, pointing out that even in the United States, most CEO positions are still filled with in-house candidates and internally promoted CEOs tend to perform better than outsiders. They further argue that the predictions of the “superstar” model are artificially produced by compensation consultants and compensation committees who benchmark pay levels as if a fully competitive managerial labor market existed. Such benchmarking may even cause an excessive growth in pay known as the “ratchet effect” – if for status or other reasons boards

follow the policy of paying their executives average compensation, the average will constantly be pushed up.

The above critique does not change our conclusion. In fact, it underlines the empirical relevance of the “superstar” model for the United States be it not on economic, but on ideological or political grounds. The arguments bear, however, relevance for Japan for another reason. If the critics are right, the “superstar” model could be imported to Japan even if internal promotions prevailed. It would suffice that compensation committees already established in some listed companies start to simulate a market environment in their pay recommendations.

### 3.5 Performance sensitivity

The relatively weak performance sensitivity estimated for executive pay in Japan leaves room for two interpretations. It could indicate an insufficient level of incentives or it could be the result of a substitution effect, whereby other control mechanisms compensate for the lack of incentives created by compensation packages. The relevance of the first interpretation can be checked by testing whether higher powered incentives go along with better performance. As reported in the previous section, such studies have been inconclusive in that they only found a positive impact in the case of stock option grants, but not for performance sensitivity broadly defined. Again, this is in line with results produced by international research and partly attributable to methodological problems of measuring performance sensitivity and controlling for endogeneity. The substitution hypothesis has been tested by a number of studies trying to explain variations in the pay–performance sensitivity within Japan. They show that:

- *Keiretsu* and main bank affiliation seem to recently have lost their once attested monitoring function. Whereas Abe et al. (2005), Uchida (2006), and Sakawa and Watanabe (2009) still found a positive impact in their data sets covering periods from 1989 to 2000, Sakawa et al. (2012) no longer detected such an effect in their 2010 sample.
- A higher debt–equity ratio interpreted as an indication of stronger debt holder monitoring reduced the likelihood of the use of stock option plans (Uchida 2006).
- Corporate and institutional ownership induced higher levels of incentive pay (Murase 1998). The same has been attested for foreign ownership (Hongo 2010; Colpan and Yoshikawa 2012; Sakawa et al. 2012). Whether

such investors thereby improve governance or whether they substitute for their lack of effective monitoring remains to be answered.

While the results confirm the possibility of a substitution effect in the intra-Japan variation of performance sensitivity, they cannot answer the observed cross-country discrepancies. Here an explanation would again have to look for institutions that are specific to Japan and are likely to compensate for lower pay incentives.

Traditionally, such an institution would have been the main bank at least for those companies that were members of a horizontal *keiretsu*. The main bank was seen as the central monitoring agent within Japan's system of "relational contingent governance" (Aoki 2007). With the declining reliance on bank credit starting in the 1980s, the banking crisis in the 1990s and consequent restructuring of the banking sector, the monitoring ability of banks in large listed companies diminished.<sup>11</sup> As noted above, in the most recent study by Sakawa et al. (2012) main bank monitoring no longer substituted for performance pay.

What survived the transitions of Japan's corporate governance system are the in-house careers of top management and the in-house appointment of board members as described above. The incentive effects incorporated in Japan's system of lifetime employment have long been explored (Aoki 1988). The analysis however does not explicitly cover directors at the top of the corporate hierarchy. Some promotion incentives remain even for them as Japanese boards contain a number of ranks from managing director to senior managing director, president and chairman. Also, as noted by Dore (2007), directors that earned respect for their contribution to the company can expect an attractive after-retirement job as advisors.

The most important though difficult to measure factor may however be the loyalty to the company developed over thirty years of service and supported by a dense network of long personal relations with superiors, peers, and subordinates as stressed by proponents of the "community model" of corporate governance (see Sako 1997; Learmount 2002; or Deakin and Whittaker 2009). Dore (2007) argues that the loyalty and social ties developed during the course of in-house careers provide for mutual insider controls that do substitute for outside monitoring. In fact, he even expresses concerns that the intrusion of outside directors may in the end prove dysfunctional to the Japanese insider system. His argument can equally be applied to the performance sensitivity of executive compensation.

---

<sup>11</sup> See Schaede (2008) and the contributions in Aoki et al. (2007) and in Whittaker and Deakin (2009) for description and evaluation of the changes.

This is not to say that the “insider model” is free of problems. It has its strengths and weaknesses, as do the systems that evolved in other economies.<sup>12</sup> However this would be a topic for yet another paper.

## 4 Concluding remarks

Japanese executives earn far less than their US counterparts and, if we trust the evidence provided by Abowd and Kaplan (1999) and Conyon et al. (2011), also significantly less than many of their European colleagues. The compensation package of a Japanese top manager does not include the “high-powered” incentives found elsewhere. Less than one-third of the listed companies offer stock option grants. Their use seems to be promoted by institutional, especially foreign investors, but their share in total remuneration remains modest by international standards. The traditional bonus still seems to be the main channel of performance sensitivity. It is not tuned toward long-term stock market returns, but responds mainly to variations in accounting income.

The aim of the paper was not to judge whether such differences are good or bad, but to analyze why they are observed. A major structural cause was found to exist in the prevailing dominance of in-house careers for executives. These careers are specific to Japan with regard to their depth and exclusive character. They imply that the logic along which executive pay levels are determined in Japan differs fundamentally from the demand and supply driven price mechanism of an external market. The “superstar” phenomenon visible in the development of CEO pay in the United States and Europe and attributable to an increasingly active external market for managerial talent has yet to appear in Japan, where top management positions continue to be filled with in-house bred “company heroes.”

In-house careers form an essential element of the institutional setup that constitutes the “community-like” corporate cultures described by researchers of Japanese corporate governance. Communities offer means of social control that substitute for outside monitoring. They are founded on long-term membership and commitment and need therefore not rely as much on explicit long-term incentives in executive pay packages.

The explanations for the low level and low performance sensitivity of Japanese executive compensation presented in this paper are conjectures that have

---

<sup>12</sup> Dore (2007: 373) quotes a witty remark by Hugh Patrick pinpointing the US–Japan differences: “In America managers steal from the firm, in Japan managers steal for the firm.”

been derived by combining findings from statistical and comparative institutional research. They are preliminary and need to be further explored and tested. Two venues seem promising. The first one relates to international comparative research on executive compensation. To better understand observed differences, quantitative statistical studies need to be supplemented by investigations of the actual structures and processes involved in determining executive pay. This would include the analysis of legal regulations, taxation and accounting rules, board practices, compensation policies, and the roles of external consultants.

Our knowledge about executive pay in Japan will also be improved by incorporating it into the research on the state and changes of Japan's system of corporate governance. The benefit would be mutual. For example, the findings presented here support the general impression shared by many observers that – despite various legal reforms, the shift toward a more market-oriented financial system and changes in ownership structure – the fundamental principles by which Japanese corporations are governed have remained intact. In-house careers and in-house appointments of the top executives are essential manifestations of the community model. Their stability is decisive not only for the future of executive pay in Japan, but for the system of Japanese corporate governance as a whole.

## References

- Abe, Naohito, Noel Gaston & Katsuyuki Kubo. 2005. Executive pay in Japan: The role of bank-appointed monitors and the Main Bank relationship. *Japan and the World Economy* 17. 371–394.
- Abowd, John M. & David S. Kaplan. 1999. Executive compensation: Six questions that need answering. *Journal of Economic Perspectives* 13(4). 145–168.
- Ahmadjian, Christina & Toru Yoshikawa. 2013. Killing two birds with one stone: Board reforms in the Japanese electronics industry. Columbia Business School, Working Paper Series No. 315. <http://academiccommons.columbia.edu/item/ac:158326> (accessed 12 April 2013).
- Ang, James S. & Richard L. Constand. 1997. Compensation and performance: The case of Japanese managers and directors. *Journal of Multinational Financial Management* 7. 275–304.
- Aoki, Masahiko. 1988. *Information, incentives and bargaining in the Japanese economy*. Cambridge: Cambridge University Press.
- Aoki, Masahiko. 2007. Conclusion: Whither Japan's corporate governance? In Masahiko Aoki, Gregory Jackson & Hideaki Miyajima (eds.), *Corporate governance in Japan: Institutional change and organizational diversity*, 427–448. Oxford: Oxford University Press.

- Aoki, Masahiko, Gregory Jackson & Hideaki Miyajima (eds.). 2007. *Corporate governance in Japan: Institutional change and organizational diversity*. Oxford: Oxford University Press.
- Basu, Sudipta, Lee-Seok Hwang, Toshiaki Mitsudome & Joseph Weitrop. 2007. Corporate governance, top executive compensation and firm performance in Japan. *Pacific-Basin Finance Journal* 15. 56–79.
- Bebchuk, Lucian & Jesse Fried. 2004. *Pay without performance: The unfulfilled promise of executive compensation*. Cambridge, MA: Harvard University Press.
- Businessweek*. 1 July 2010. In Japan, underpaid – And loving it. [http://www.businessweek.com/magazine/content/10\\_28/b4186014341924.htm](http://www.businessweek.com/magazine/content/10_28/b4186014341924.htm) (accessed 12 April 2013).
- Colpan, Asli M. & Toru Yoshikawa. 2012. Performance sensitivity of executive pay: The role of foreign investors and affiliated directors in Japan. *Corporate Governance: An International Review* 20(6). 547–561.
- Conrad, Harald. 2010. From seniority to performance principle: The evolution of pay practices in Japanese firms since the 1990s. *Social Science Japan Journal* 13(1). 115–135.
- Conyon, Martin J., Nuno Fernandes, Miguel A. Ferreira, Pedro Matos & Kevin J. Murphy. 2011. *The executive compensation controversy: A transatlantic analysis*. Milan: Fondazione Rodolfo De Benedetti.
- Deakin, Simon & D. Hugh Whittaker. 2009. On a different path? The managerial reshaping of Japanese corporate governance. In D. Hugh Whittaker & Simon Deakin (eds.), *Corporate governance and managerial reform in Japan*, 1–27. Oxford: Oxford University Press.
- Dore, Ronald. 2007. Insider management and board reform. For whose benefit? In Masahiko Aoki, Gregory Jackson & Hideaki Miyajima (eds.), *Corporate governance in Japan: Institutional change and organizational diversity*, 370–398. Oxford: Oxford University Press.
- Economist*. 30 June 2010. Japanese executive pay – Spartan salarymen. [http://www.economist.com/blogs/newsbook/2010/06/japanese\\_executive\\_pay](http://www.economist.com/blogs/newsbook/2010/06/japanese_executive_pay) (accessed 12 April 2013).
- Edmans, Alex, Xavier Gabaix & Augustin Landier. 2009. A multiplicative model of optimal CEO incentives in market equilibrium. *Review of Financial Studies* 22(12). 4881–4917.
- Elson, Charles M. & Craig K. Ferrere. 2013. Executive superstars, peer groups and over-compensation: Cause, effect and solution. *Journal of Corporation Law* 38(3). 487–531.
- Favaro, Ken, Per-Ola Karlsson & Gary L. Neilson. 2010. CEO succession 2000–2009: A decade of convergence and compression. *strategy+business* 59. [http://www.booz.com/media/file/CEO\\_Succession\\_2009.pdf](http://www.booz.com/media/file/CEO_Succession_2009.pdf) (accessed 12 April 2013).
- Fehr, Ernst, Lorenz Goette & Christian Zehnder. 2009. A behavioral account of the labor market: The role of fairness concerns. *Annual Review of Economics* 2009(1). 355–384.
- Fernandes, Nuno, Miguel A. Ferreira, Pedro Matos & Kevin J. Murphy. 2012. Are US CEOs paid more? New international evidence. EFA 2009 Bergen Meetings Paper; AFA 2011 Denver Meetings Paper; ECGI Finance Working Paper No. 255/2009. Available at <http://ssrn.com/abstract=1341639> (accessed 12 April 2013).
- Firkola, Peter. 2011. Japanese recruitment practices: Before and after the global financial crisis. *Economic Journal of Hokkaido University* 40. 59–71.
- Frydman, Carola & Dirk Jenter. 2010. CEO compensation. NBER Working Paper 16585. <http://www.nber.org/papers/w16585> (accessed 12 April 2013).
- Gabaix, Xavier & Augustin Landier. 2008. Why has CEO pay increased so much? *The Quarterly Journal of Economics*. 49–100.

- Hanazaki, Masaharu & Kanako Matsushita. 2008. Sutokku opushon to kigyō pafōmansu [Stock options and firm performance]. DBJ Discussion Paper Series, No. 0803. [http://www.dbj.jp/ricf/pdf/research/DBJ\\_DP\\_0803.pdf](http://www.dbj.jp/ricf/pdf/research/DBJ_DP_0803.pdf) (accessed 12 April 2013).
- Holzhausen, Arne. 2000. Japanese employment practices in transition: Promotion policy and compensation systems in the 1990s. *Social Science Japan Journal* 3(2). 221–235.
- Hongo, Akashi. 2010. Kōporēto gabanansu ni gaikokujin kabunushi ga ataeru eikyō [Influence of foreign shareholders on corporate governance]. *Japanese Journal of Administrative Science* 23(2). 93–106.
- JIL (Japan Institute for Labour Policy and Training). 2012. Yūsufuru rōdō tōkei 2012 [Useful labor statistics 2012]. <http://www.jil.go.jp/kokunai/statistics/kako/index.html> (accessed 12 April 2013).
- Kaplan, Steven N. 1994. Top executive rewards and firm performance: A comparison of Japan and the United States. *Journal of Political Economy* 102(3). 510–546.
- Kaplan, Steven N. 2012. Executive compensation and corporate governance in the US: Perceptions, facts and challenges. NBER Working Paper 18395.
- Kato, Hideaki K., Michael Lemmon, Mi Luo & James Schallheim. 2005. An empirical examination of the costs and benefits of executive stock options: Evidence from Japan. *Journal of Financial Economics* 78. 435–461.
- Kato, Takao. 1997. Chief executive compensation and corporate groups in Japan: New evidence from micro data. *International Journal of Industrial Organization* 15. 455–467.
- Kato, Takao & Katsuyuki Kubo. 2006. CEO compensation and firm performance in Japan: Evidence from new panel data on individual CEO pay. *Journal of the Japanese and International Economies* 20. 1–19.
- Kato, Takao & Mark Rockel. 1992. Experiences, credentials, and compensation in the Japanese and US managerial labor markets: Evidence from new micro data. *Journal of the Japanese and International Economies* 6. 30–51.
- Kubo, Katsuyuki. 2001. The determinants of executive compensation in Japan and the UK: Agency hypothesis or joint determination hypothesis? CEI Working Paper, No. 2001-2. <http://hermes-ir.lib.hit-u.ac.jp/rs/bitstream/10086/13959/1/wp2001-2a.pdf> (accessed 12 April 2013).
- Kubo, Katsuyuki. 2005. Executive compensation policy and company performance in Japan. *Corporate Governance* 13(3). 429–436.
- Kubo, Katsuyuki & Takuji Saito. 2008. The relationship between financial incentives for company presidents and firm performance in Japan. *The Japanese Economic Review* 59(4). 401–418.
- Lazear, Edward P. 1989. Pay equality and industrial politics. *Journal of Political Economy* 97(3). 561–580.
- Learmount, Simon. 2002. *Corporate governance: What can be learned from Japan?* Oxford: Oxford University Press.
- Monks, Robert A. G. & Nell Minow. 2011. *Corporate governance*, 5<sup>th</sup> edn. Chichester: John Wiley & Sons.
- Murase, Hideki. 1998. Equity ownership and the determination of managers' bonuses in Japanese firms. *Japan and the World Economy* 10. 321–331.
- Murphy, Kevin J. 2012. Executive compensation: Where we are, and how we got there. Marshall School of Business Working Paper No. FBE 07.12. <http://ssrn.com/abstract=2041679> (accessed 12 April 2013).
- Murphy, Kevin J. & Jan Zabožnjik. 2007. Managerial capital and the market for CEOs. Available at <http://ssrn.com/abstract=984376> (accessed 12 April 2013).

- Nakazato, Minoru, J. Mark Ramseyer & Eric B. Rasmusen. 2011. Executive compensation in Japan: Estimating levels and determinants from tax records. *Journal of Economics and Management Strategy* 20(3). 843–885.
- Pagnattaro, Marisa Anne & Stephanie Greene. 2011. “Say on pay”: The movement to reform executive compensation in the United States and Europe. *Northwestern Journal of International Law & Business* 31. <http://ssrn.com/abstract=1933243> (accessed 12 April 2013).
- Rosen, Sherwin. 1981. The economics of superstars. *American Economic Review* 71(5). 845–858.
- Rosen, Sherwin. 1982. Authority, control, and the distribution of earnings. *The Bell Journal of Economics* 13(2). 311–323.
- Sakawa, Hideaki & Naoki Watanabe. 2008. Relationship between managerial compensation and business performance in Japan: New evidence using micro data. *Asian Economic Journal* 22(4). 431–455.
- Sakawa, Hideaki & Naoki Watanabe. 2009. Keieisha hōshū to torishimariyaku-kai no keiei kanshi kinō ni tsuite no kenshō [Investigation about the management compensation and the management monitoring function of the board]. *Kin'yū Keizai Kenkyū* 29. 66–83.
- Sakawa, Hideaki, Keisuke Moriyama & Naoki Watanabe. 2012. Relation between top executive compensation structure and corporate governance: Evidence from Japanese public disclosed data. *Corporate Governance: An International Review* 20(6). 593–608.
- Sako, Mari. 1997. Introduction: Forces of homogeneity and diversity in the Japanese industrial relations system. In Mari Sako & Hiroki Sato (eds.), *Japanese labour management in transition*, 1–24. London: Routledge.
- Sato, Hiroki. 1997. Human resource management systems in large firms: The case of white-collar graduate employees. In Mari Sako & Hiroki Sato (eds.), *Japanese labour management in transition*, 104–130. London: Routledge.
- Sato, Hiroki. 1998. Career formation and development of white-collar workers’ individual capabilities: An international comparison of Japan, Germany, and the United States. In The Japan Institute of Labour (ed.), *Human resource development of professional and managerial workers in industry: An international comparison* (JIL Report Series 7), 14–30. Tokyo: The Japan Institute of Labour.
- Schaede, Ulrike. 2008. *Choose and focus: Japanese business strategies for the 21<sup>st</sup> century*. Ithaca: Cornell University.
- Shishido, Zenichi. 2007. The turnaround of 1997: Changes in Japanese corporate law and governance. In Masahiko Aoki, Gregory Jackson & Hideaki Miyajima (eds.), *Corporate governance in Japan: Institutional change and organizational diversity*, 310–329. Oxford: Oxford University Press.
- Tanoos, Jim. 2012. Human resource management leadership succession in multinationals: Are Japanese CEOs still more likely to be hired from within company ranks than US CEOs? *International Journal of Human Resource Studies* 2(3). 128–138.
- Tervio, Marko. 2008. The difference that CEOs make: An assignment model approach. *American Economic Review* 98(3). 642–668.
- Towers Perrin. 2003. *Worldwide total remuneration 2003–2004*.
- TSE (Tokyo Stock Exchange). 2011. *TSE-listed companies white paper on corporate governance 2011*. Tokyo: Tokyo Stock Exchange.
- TSR (Tokyo Shōkō Risāchi). 2012. 2011nen 1-12gatsu-ki kessan jōjōkigyō “yakuin hōshū 1oku en kaiji kigyō” chōsa [Investigation about “companies disclosing 100 million yen



- executive compensation” for listed companies 2011 accounting period]. [http://www.tsr-net.co.jp/news/analysis/2012/1218727\\_2004.html](http://www.tsr-net.co.jp/news/analysis/2012/1218727_2004.html) (accessed 12 April 2013).
- Uchida, Konari. 2006. Determinants of stock option use by Japanese companies. *Review of Financial Economics* 15. 251–269.
- Waldenberger, Franz. 1999. *Organisation und Evolution arbeitsteiliger Systeme: Erkenntnisse aus der japanischen Wirtschaftsentwicklung*. Munich: iudicium.
- Waldenberger, Franz. 2004. Changes in the Japanese employment system: Facts and speculations. In Gesine Foljanti-Jost (ed.), *Japan in the 1990s: Crisis as an impetus for change*, 77–101. Münster: LIT-Verlag.
- Whittaker, Hugh D. & Simon Deakin (eds.). 2009. *Corporate governance and managerial reform in Japan*. Oxford: Oxford University Press.
- Xu, Peng. 1997. Executive salaries as tournament prizes and executive bonuses as managerial incentives in Japan. *Journal of the Japanese and International Economies* 11. 319–346.
- Yasuda, Yukihiro, Hyonok Kim & Nobuhisa Hasegawa. 2012. Kinnen ni okeru Nihon no gyōseki rendō gata hōshū no jōkyō ni tsuite no kōsatsu [Reflections about the situation performance-related remuneration recently occurring in Japan]. *Tōkyō Keidai Gakkai-shi* 276. 45–63.
- Zabojnik, Jan. 2012. Promotion tournaments in market equilibrium. *Journal of Economic Theory* 51. 213–240.