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Change and Continuity in Japanese Compensation Practices: The Case of Occupational Pensions since the Early 2000s

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Abstract This article analyses changes in the provision of Japanese occupational pensions since the early 2000s. It shows how Japanese companies have followed strategies of cost and risk reduction by creating multi-layered benefit systems that offer a combination of defined benefit and defined contribution plans whose benefits are becoming increasingly performance-oriented. Analyzing the reasons behind the resilience of defined benefit schemes in Japan, the article concludes that enterprise union behaviour has had less influence than regulatory issues and continued corporate commitment to long-standing employment practices for regular workers. These findings highlight the embeddedness of Japanese employment practices in their institutional context.

Keywords Occupational pensions; performance-related pay; seniority; labour unions; government regulation; convergence; varieties of capitalism; Japan.

Introduction

One of the central debates in the management literature centres on the issue of convergence or non-convergence of business and management practices across countries (Degg and Jackson 2007). According to the proponents of the convergence school, increasing global competition forces companies to adopt best practices that are universally valid and applicable. This development contributes to a cross-national convergence of practices, an erosion of institutional differences among different national economies, and a trend towards more market-oriented institutions (e.g. Lane 1995; Kerr *et al.* 1962). In contrast, proponents of the non-convergence school stress the embeddedness of national management practices in their cultural and institutional context, with the comparative capitalism (CC) literature elucidating the institutional foundations of diverse national ‘varieties’ of business organization. According to this school, existing complementarities among institutional elements of national economies tend to thwart international convergence (e.g. Degg and Jackson 2007; Hall and Soskice 2001; Whitley 1999; Hollingsworth and Boyer 1997).

Against the backdrop of this debate, the case of Japan offers interesting insights. A large body of literature has highlighted the special nature and embeddedness of Japan’s business and employment practices (‘The Japanese Model’), characterizing the country as a coordinated market economy as opposed to liberal market economies such as the US and UK (e.g. Vogel 2006; Hall and Soskice 2001;

Dore 2000). However, recent research has established that Japanese firms have changed rapidly since the 1990s (e.g. Aoki, Jackson and Miyajima 2007; Vogel 2006; Inagami and Whittaker 2005). For example, main bank relationships, corporate finance and governance patterns as well as inter-firm relationships have undergone considerable transformations. These changes have raised the question whether Japanese firms are adopting practices that are predominant in liberal market economies or whether new models may be emerging.

The purpose of this article is to contribute to this debate through an analysis of changes in occupational pension provision in medium- and large-sized Japanese firms since the early 2000s. Japanese occupational pensions are for two reasons a fruitful subject of research in this debate: first, occupational pensions are an important part of Japanese compensation systems and have been closely linked to seniority-oriented pay practices as an important feature of the Japanese employment system; second, Japanese occupational pensions are, as in many other countries, highly regulated by the state and have been institutionally integrated with the public pension system. Changes in these arrangements are thus significant for our understanding of the nature of evolving interdependencies and reconfigured relationships of Japanese firms with institutions inside and outside the firm.

The key argument this article develops is that in the field of Japanese occupational pensions we cannot witness changes that point to a convergence towards approaches that characterize the provision of occupational pensions in liberal market economies, with the US and the UK as the two major representatives. Defined benefit-type pensions have rapidly declined in the US and the UK and have also lost some of their importance in Japan in recent years. However, while this might indicate a somewhat similar trend, there is strong evidence that Japanese occupational pensions are evolving very differently than those in the US and UK. In Japan, defined benefit schemes are now frequently becoming part of newly evolving multi-layered retirement benefit systems that reflect increasingly employee performance indicators. Furthermore, we find a growing diversity of benefit systems, highlighting a growing heterogeneity across firms within the economy.

To examine these issues, this article proceeds as follows. Following a short overview of the study design, the article reviews first the literature on the “Japanese Model” and recent changes in Japanese compensation practices. This is followed by an overview of the literature regarding employers’ interest in paying occupational

pensions, highlighting recent trends in pension provision in the US and UK. The next section discusses shortly the Japanese retirement benefit systems before they underwent the changes that are the focus of this article. At the heart of the article, the findings section analyzes the nature of and the reasons behind the newly evolving retirement benefit systems, before it finishes with a short overall assessment.

Study design

Besides Japanese secondary statistical, ministerial and academic sources, this article is primarily based on an analysis of semi-structured interviews with human resource managers of medium- and large-sized Japanese companies, labor union officials, experts in governmental and semi-governmental institutions, actuaries, as well as pension and human resource management experts from research and academic institutions. To avoid a sector bias, specialists were chosen from both manufacturing (automobile, electronics) and servicing industries (transport, utilities). Whenever possible, statements and assessments were crosschecked against those of other informants and secondary sources. The one to two hour-long interviews were, with one exception, conducted in Japanese with 22 informants at 15 locations in April 2009. Two of the informants are members of the official eight-member ‘Occupational Pension Research Group’ (Kigyō Nenkin Kenkyūkai), established by the director-general of the Pension Bureau of the Ministry of Health, Labor and Welfare to discuss and advise the government on issues of occupational pension reform (see the appendix for the anonymous list of informants).

Literature review

The “Japanese model” and changes in compensation practices

Japanese firms have long been noted for institutional features that set them apart from their counterparts in western industrialized countries (Abegglen 1958). These unique features have been found in inter-firm relationships, finance and corporate governance patterns and employment practices (e.g. Vogel 2006). The Comparative Capitalism (CC) literature has elucidated how interaction effects and complementarities among such institutional features shape the behavior of firms and create diverse national

‘varieties’ of business organizations (Deeg and Jackson 2007). In this literature, Japan has been characterized as a coordinated market economy as opposed to liberal market economies such as the US and UK (e.g. Vogel 2006; Hall and Soskice 2001; Dore 2000). In particular, the so-called ‘three pillars of the Japanese employment system’, namely seniority-oriented pay, (life-time) long-term employment and enterprise-based unions have been identified as important characteristics of the ‘Japanese Model’ (e.g. Debroux 2003). It has been shown how seniority-oriented pay and long-term employment practices have been highly complementary with dominant work practices such as frequent job rotations, broad job descriptions, teamwork and on-the-job training. The long-term nature of these employment practices has had a natural equivalent in long-term inter-firm relationships and companies have been in a position to follow such practices because shareholders have traditionally not pursued short-term profit maximization strategies (Aoki 1988).

While the CC literature has strong merits explaining such interactions at the national level, it has been criticized for its rather static nature and failure to explain changes within national models (Deeg and Jackson 2007). In particular, it has been challenged by proponents of a convergence thesis who predicate an erosion of institutional differences among different countries and a trend towards more market-oriented institutions due to rapid internationalization of economic activity and the resulting cost pressures (e.g. Lane 1995; Kerr *et al.* 1962).

With regard to Japanese compensation practices one author has explicitly subscribed to the convergence thesis. Comparing changes in pay systems in Japan and the UK since the mid-1990s, Suda concludes that Japanese systems have converged towards UK market-based practices (2007). The key features of this change are a stronger reliance on performance-related pay, the introduction of job factors to establish more concrete and objective standards to judge grade and pay levels, and the introduction of market factors to increase the objectivity of pay determination.

Within Suda’s theoretical framework about fundamental differences between pay systems, her conclusions about convergent developments are credible. However, her approach highlights some important theoretical aspects of the convergence debate that are easily overlooked. First, similar trends are not identical with convergence. Convergence in the strictest sense requires that the developments of a variable in different countries point towards a common end point so that we can witness a consistent diminution of variance over time (Wood *et al.* 2009; Mayrhofer and

Brewster 2005). Second, the interpretation of whether a development is convergent depends heavily on the choice, definition and degree of aggregation of the researched variables. For example, Jacoby (2005) has argued that while employment and pay policies in Japan and the US are moving towards a market-orientated model, their differences are actually widening since the US is transforming at a quicker speed than Japan. Furthermore, there is substantial evidence that *within*-country variation in employment practices is growing in many industrialized countries, including Japan, the US and UK (Jacoby 2005; Katz and Darbishire 2000).

With regard to changes in Japanese compensation practices, most authors (Conrad 2010; Keizer 2009; Nakamura 2006; Jacoby 2005; NRSKKK 2006; Shibata 2000), while agreeing with Suda's (2007) basic findings about a shift towards stronger performance-based pay in Japan, tend to stress important continuities and, most importantly, find a growing diversity of methods such as MBO forms, job-based pay and competence pay that contradict the convergence thesis for developments *within* Japan. Moreover, they conclude that the adoption of performance-oriented pay remains modest and that most firms have limited performance-related pay to more senior employees, while ability and age continue to be important criteria for pay determination of younger workers so as to maintain existing complementarities with practices such as job rotations, teamwork and on-the-job training. What we are witnessing since the 1990s is therefore not a growing uniformity of pay practices towards one (liberal-market) model, but rather a growing diversity and hybridization of practices where a performance-related pay component is often added as yet another layer to already highly complex pay determination systems. Following Jacoby (2005) we can describe this hybridization as a result of path-dependent developments, according to which national economies adapt to common environmental challenges in similar ways but will fashion any adaptations to fit pre-existing institutions.

Factors influencing the provision of occupational pensions

Before we can assess the role of occupational pensions in the changing Japanese compensation systems, we first need to consider the factors that influence firms to provide such benefits.

First, a major motive to pay occupational pensions is to influence the recruitment, retention as well as retirement of workers (Bridgen and Meyer 2005).

According to Logue and Rader (1998) there is no definitive theory or robust empirical research that would indicate why certain types of pension plans are favoured over others, but a common assumption is that the choice is influenced by considerations of employer-specific human capital. Firms that rely heavily on company-specific knowledge are likely to adopt defined benefit (DB) plans with back-loaded *final-pay formulas* where workers have an incentive to sustain their efforts over the entire career so that they can achieve high career-end salaries. In a DB plan, employees receive a promise of an eventual pension benefit that is determined by a pre-specified pension formula that typically reflects a worker's age, pay, and/or service levels. The formula is usually one of three general types (EBRI 2009):

- a) a *flat-benefit formula* pays a flat amount for each year of service;
- b) a *career-average formula* pays a benefit that equals a percentage of the career-average pay multiplied with a certain number of years of service;
- c) a *final-pay formula* pays benefits based on average earnings during a specified number of years at the end of a worker's career with the benefit equalling a percentage of the worker's final average earnings multiplied by the number of service years.

The major advantage of DB plans from an employee's perspective is that they provide a stable replacement rate of final income. As real wages change, employers have to adjust their funding rates and bear thus the investment risks in these plans.

In contrast, companies that rely stronger on workers with specialist knowledge from the external labor market are more likely to prefer defined contribution (DC) plans that are not as heavily back-loaded and easier portable if an employee changes jobs (Bodie *et al.* 1988). In a DC plan, employers make provision for periodic contribution payments into an account that is established for each participating employee. Depending on underlying regulations, contributions can be made either by the employer, the employee or both parties. The final benefits are a reflection of the total of all contributions and any investment gains or losses. Benefits are thus not specified in advance and the employer does not shoulder any investment risk.

A third plan type are cash balance (CB) plans, which are legally DB plans but are designed to look like a DC plan with individual 'hypothetical' accounts. These members' accounts grow by annual pay credits and an interest credit at either a fixed rate or a variable rate linked to an index such as the government bond rate. Employer contributions can be credited in several ways, for example as a fixed amount, a fixed

percentage of earnings or, as is now frequently the case in Japan, through a point system that links factors like “job grade”, “abilities”, “number of years of employment” or “performance” to specific pay credits. Just like in a DB plan, the investment risks and rewards on CB plan assets are borne solely by the employer. However, if the plan has a variable rate, the employer’s risk is more limited.

Second, government regulation has a major influence on employers’ motivation to provide retirement benefit schemes (Logue and Rader 1998). Certain kind of policies can make such schemes attractive to both sponsors and employees by providing a favourable tax treatment that result in deferred or even permanently reduced taxes.

Third, an important factor influencing the likelihood of employer provision of occupational pensions is the size of a business establishment. This argument assumes that because of economies of scale larger companies have more resources available for occupational benefits (Bridgen and Meyer 2005; Rein 1996).

Forth, employers might use pension schemes as a means to preserve industrial peace vis-à-vis the trade unions (Esping-Andersen 1996; Bridgen and Meyer 2005).

And finally, the macro-economic and ideological environment plays an important role to the effect that economic ‘boom’ periods have been associated with the growth of occupational pension provision, whereas economic slumps accompanied with ideological turns toward neo-liberalism and shareholder value ideology have been associated with cost-cutting measures (Bridgen and Meyer 2005; Cutler and Waine 2001).

In the US and the UK, as two major representatives of liberal market economies, the varying influence of these factors has led to considerable changes in occupational pension provision over the last 20 years. In both countries DB plans have steadily lost in importance as the preferred plan type. In the US, the number of DC participants outstripped the number of DB plan participants in 1984 (U.S. Department of Labor 2008). In 2005, the ratio of participants among those workers who were covered by occupational pensions stood at 10% in DB plans, 63% in DC plans, and 27% in combined DB and DC plans (EBRI 2007). In the UK, the number of active members in open private sector DB plans has also fallen dramatically from 4.1 million in 2000 to 1.3 million in 2007, while the membership in DC plans remained constant at 0.8 million over the same period (Office for National Statistics 2008). Those DB plans that still operate in the US and UK use predominantly *final-*

pay or career-average formulas (Office for National Statistics 2008; U.S. Bureau of Labor Statistics 2006).

As explanations for the retrenchment of DB plans in the US and UK the literature confirms the importance of the above listed factors: Government regulation has raised the administrative costs of DB plans absolutely and relatively in comparison with DC plans, especially for smaller employers (Hustead 1998), while the attractiveness of DB plans as tax shelters has decreased (Warshawsky 1995). Employers have found that DC plans (where contributions are often linked to profits) are a better reflection of their organizational philosophy (Campbell 1996), and employees, against the backdrop of frequent job changes, show a stronger desire for direct ownership of their retirement accounts in DC plans (Ostaszewski 2001). Finally, increased cost pressures and a trend towards leaner organizations (VanDerhei and Copeland 2001) as well as the volatility of financial markets have increased the relative attractiveness of DC plans versus DB plans for employers (Ostaszewski 2001).

How these factors have played out in Japan will be examined in the remainder of this article.

Overview of pre-reform retirement benefit systems and pressures for reform

Prior to new legislation which was enacted in 2001/2002, Japanese occupational retirement benefit systems were largely of the defined-benefit type: internally managed lump-sum payments through Book-Reserve Plans (BRPs) and externally managed annuities or lump-sum payments from Tax-Qualified Pension Plans (TQPP) or Employee Pension Funds (EPF). DC plans were not tax-advantaged and companies split their retirement benefits frequently between BRPs (which were attractive as a source for internal capital for reinvestments) and TQPPs or EPFs (which were comparatively more attractive in terms of their tax treatment) (Estévez-Abe 2008; informants # 14, # 15, #16). EPFs have a semi-public character as they are closely linked with the public Employees' Pension System by substituting a part of the public pension in return for lower social security contributions with the rebate rate.

The depressed stock market and declining interest rates following the burst of the bubble economy in the early 1990s contributed to a rapid increase in underfunding of the prevailing DB plans. Data from the Pension Fund Association show that in the period 1989-2003, the average return on assets managed by EPFs was just 2% in

nominal terms, while the government set guaranteed rate was 5.5% (Kigyō Nenkin Rengōkai 2003). Furthermore, new accounting standards that were introduced in April 2000 made these unfunded pension liabilities for the first time visible on companies' balance sheets (Kigyō Nenkin Kenkyūkai 2007; Shiniapurān Kaihatsu Kikō 2004; informants #1, #4, #14, #15, #16).

In response to these problems, firms lobbied for new benefit options and options to leave the EPFs, which were finally granted by the 2001/2002 pension reform laws that introduced the following options (Kigyō Nenkin Kenkyūkai 2007; informants #1, #6, #16):

- return of assets of the EPFs related to the contracted-out portion of the public Employees' Pension Insurance back to the government (put-back);
- establishment and benefit transfer to new types of DC, CB, and DB plans that are not intertwined with the public pension system;
- scheduled elimination of TQPPs until 2012.

Findings

General trend in occupational pension provision

The mix of retirement benefits offered by companies has changed significantly since the 2001/2002 reforms, while overall employee coverage has declined. In 1997, 99.5% of firms with more than 1,000 employees paid retirement benefits, while this percentage decreased slightly to 95.2% in 2008. Today, 84% of Japanese companies with more than 30 employees pay retirement benefits (Kōseirōdōshō 2008), which make up 6.8% of total labour costs in manufacturing (JILPT 2008). The number of active participants has declined from 20.1 million in 2001 to 17 million in 2007. Despite lower employee coverage in absolute terms, DB benefits remain, in relative terms, the dominant form of retirement benefit (Figure 1).

Figure 1 here

While the number of EPFs and TQPPS has declined substantially since the early 2000s, these plans were to a large extent compensated for by newly introduced DB and DC plans (Table 1).

Table 1 here

From the 1,737 EPFs with 10.87 million participants in 2001, only 620 plans with 4.8 million members remained in 2008. About 50% of former EPFs were converted into new DB plans, a process during which the companies returned their obligations for the contracted-out portion of the public Employees' Pension Insurance back to the government (Kōseirōdōshō Nenkin'yoku 2009). This has had the effect to remove large pension liabilities from corporate balance sheets (Sato 2005) and has fundamentally altered the state-enterprise welfare mix since almost all large companies have now left the semi-public EPFs, with only smaller companies remaining.

Given the scheduled elimination of TQPPs until 2012, it is not surprising that these plans, which are most dominant among smaller firms, have also experienced a significant decline since the 2001/2002 reforms. Both in terms of the number of plans and participants, TQPPs have declined by over 50%. However, just like in the case of the EPFs, many of these schemes were transferred into the newly available types of DB or DC plans.

The most significant development with regards to medium and large-sized companies, which are the focus of this article, is that they have largely left the semi-public EPFs and have replaced those plans with multi-layered retirement benefit systems that offer a combination of DB (usually 75-90% of total benefits) and DC benefits (usually 10-25% of total benefits). In contrast, over 50% of companies with less than 300 employees offer now only DC plans (Table 2).

Table 2 here

As will be discussed in more detail below, the newly emerging multi-layered retirement benefit systems in many medium and large-sized companies show a growing diversity in terms of their benefit mix (with different percentages of DB and/or DC and/or CB benefits) and in their use of benefit formulas.

Assessing the changes over the last decade

To understand the recent changes, the importance of the historical legacy of Japanese occupational pensions can hardly be overestimated. All of the informants agreed that current developments could only be understood with explicit reference to the system of lump-sum retirement payments (BRPs) and underlying entrenched views that retirement benefits, regardless of their financing mode as BRPs, TQPPS or EPFs, have so far been considered a form of deferred wage. This social consensus has functioned as a departure point for management and labour and is one important explanatory factor for the resilience of DB benefits. It is also for this reason that the overall contribution levels in the new retirement systems are commonly not lower than in the old ones. As will be analysed below, companies have succeeded in shifting some of the investment risks to employees by increasing the DC portions of retirement packages and they have also succeeded in linking benefits stronger to performance indicators. However, survey results indicate that companies' contribution levels for those participants that continue to be covered have remained unchanged (Shiniapuran Kaihatsu Kikō 2004).

Role of the labour unions

Although the Japanese labour unions did not involve themselves deeply in the discussions leading up to the 2001/2002 reforms (informants #1, #4), the resulting legal framework supports strongly their position since any transfers from the old DB to the new DC systems have to be agreed by a high proportion of the participants and the enterprise unions. Depending on the extent of such transfers between two-thirds and three-quarters of the participants as well as the labour unions representing more than one third of the participants have to agree (NRKS and KNMKN 2008). These stringent standards have certainly limited the possibilities of companies to conduct single-handedly far-reaching reforms. Furthermore, the Japanese Trade Union Federation, which consults individual enterprise unions, takes in principal a negative stance towards the introduction of DC plans (informants #1, #8, #9).

However, in some sectors like electric machines, represented by the Japanese Federation of Electric Machine Workers' Unions, the arrival of DC pensions was in fact welcomed as a positive development (informant #12). Overall, Japanese unions have not categorically blocked occupational pension reform at the company level. In many cases, they have cooperated with management and eventually agreed to the

(partial) introduction of DC pensions (informants #2, #4, #7, #8, #9, #11, #12, #13, #14, #15, #17, #19). None of my informants could recall cases in which company unions had fundamentally opposed such reforms. Several informants stated that the labour unions had usually compromised on the pension issue in return for, in the unions' view, more important issues such as job security or the maintenance of a corporate pension system as such (informants #1, #7, #8, #9, #13, #14). These findings confirm the overall trend of diminishing Japanese union power, as it has been confirmed by other studies (e.g. Jacoby 2005).

Roles of historic practices and government regulation

Some foreign observers have claimed that the resilience of Japanese DB plans is the result of low tax-advantaged contribution ceilings. According to Huh and McLellan (2007, p. 10), "the low contribution caps set forth in the DC legislation prevented many Japanese firms from fully converting their existing DB plans to DC plans, so some firms turned instead to Cash Balance (CB) plans." However, based on the available statistical material and the assessment of the informants, I would argue that this statement does not fully reflect the complexity of the issue.

It is true that the DC law is rather inflexible and prevents an unlimited transfer to DC plans because it does not allow companies to pay voluntarily taxable contributions beyond the tax-free amounts. Since contributions are in most cases paid as a percentage of wages, which increase still very much in line with tenure, it is usually the contributions of older workers that can reach the maximum contribution ceilings. Accordingly, many companies have adopted overall contribution rates that allow their highest wage earners to stay within these ceilings (informants #3, #4, #7, #10, #19).

In practice, however, only 29% (2007) of DC plans have chosen amounts that reach the legal maximum contributions (Kigyō Nenkin Rengōkai 2008). In other words, 70% of companies seem not be directly affected by the tax framework. According to several informants, this underlines that the corporate commitment to DB benefits is real and not solely a function of the tax framework. According to this view, DB pensions are widely regarded as a tax-advantaged way to manage externally what used to be internally managed lump sum benefits (BRP). Higher tax ceilings for DC pensions would not address the fundamental problem that DC pensions are not a

suitable vehicle to replace DB-type lump sum benefits (informants #2, #3, #6, #7, #12, #13, #15).

However, other informants voiced the opinion that the contribution ceilings are posing a problem and that many larger companies would in fact like to transfer more DB into DC benefits (informants #10, #11, #16, #17, #19; *Nihon Keizai Shinbun* 20 June 2008). The business community has been requesting higher contribution ceilings for some years now and a slight increase is scheduled for 2010. Any major increases or the adoption of a tax framework considering lifetime contributions like in the UK seem, however, unlikely (informants #4).

Another regulatory requirement of the DC law is that if a company wants to transfer not only future but also accrued past benefit obligations from DB plans to DC plans, it has to first fully fund those obligations. Given the difficult financial state of a large number of DB plans, many companies have therefore limited their transfers to future benefit obligations (informant #4).

Yet another regulatory factor contributing indirectly to the continued popularity of DB plans is the comparatively 'softer' protection of their benefits if compared to the US and UK. While in the US and UK companies must ultimately deliver on the retirement promise, companies in Japan may reduce DB benefits when the sponsor is in financial difficulties and labour and management agree to a benefit reduction (*Pensions & Investments* 2007; informants #4, #7). Compared to their Western counterparts, Japanese executives feel presumably less pressure to convert to DC plans. In addition, many Japanese companies have converted their retirement benefit systems fully or partially to CB plans, which allow for risk sharing between the employer and employee since pension obligations develop in line with interest rate developments so that sinking interest rates do not lead to rising pension obligations that have to be recognized on companies' balance sheets (informants #4, #7, #11, #12; *Shiniapurān Kaihatsu Kikō* 2004).

To sum up, the regulatory environment has undoubtedly had a considerable impact on the way companies have restructured their pension plans since 2001/2002 and explains to a certain extent the continued popularity of DB plans. However, many of the informants stated that these factors alone could not explain the resilience of DB plans. Instead, another key explanatory factor appears to be corporate commitment to established employment practices for the regular labour force, paternalistic employer-employee relations, and a strong believe in the equal treatment of regular workers

(informants #2, #3, #7, #15, #20, #21, #22). This becomes clearer when we consider next for whom and how companies have adopted the new DC plans.

Changes in employee coverage and benefit structure

In terms of pension coverage, US and UK companies distinguish frequently between groups of employees such as incumbent workers vs. new entrees, blue collar vs. white collar workers, or managerial vs. non-managerial workers. For example, in the UK it is now a frequent practice to offer new employees only DC plans, if at all, leaving the existing DB plans to be available solely to the incumbent employees. However, in Japan, all informants concurred that the single most important criterion for coverage continues to be the distinction between regular and non-regular workers.

In many cases where companies are now operating more than one occupational pension plan, and where they have adopted DC plans in addition to the existing DB plans (47% of large companies), they have usually done this by partially replacing former DB benefits by DC and/or CB benefits. In large companies the percentage of DC benefits within the total retirement benefit package varies usually between 10%-25% (informants #12, #13, #14, #19). The resulting combined schemes are uniformly applied to all regular workers while the growing ranks of non-regular workers, whose percentage in the Japanese labour force has increased substantially from 20.1% in 1994 to 33.2% in 2006 (JILPT 2009), are commonly not covered by any occupational pension scheme (informants #2, #3, #4, #1, #14, #15, #16, #18, #19, #20, #21, #22).¹

Through the restructuring of the overall benefit mix, Japanese companies have thus largely maintained comprehensive retirement benefit packages for their core workers. At the same time they have achieved risk and cost reductions by relying stronger on DC and CB benefits, by increasing the number of non-regular workers and, as will be discussed below, by linking retirement benefits closer to performance indicators.

Linkages between retirement benefits and employee performance

In 1981, 84.7% of Japanese companies with more than 30 employees used a *final-pay formula* for the calculation of their lump-sum benefits (DGHJKSKSK 2008). This

method reflected strongly the seniority orientation of Japanese pay systems but did not account for performance contributions and discriminated against mid-career entry (Sano 2007). Since then the *final-pay formula* has continuously lost importance. By 2008 only 58.5% of firms employed it, while 45.8% were using different methods such as ‘point systems’ (18.6%), ‘special table systems’ (13.2%), or ‘fixed amount systems’ (10.3%) (DGHJKSKSK 2008). One of the key functions of these systems is to weaken or extinguish the influence of regular pay rises on the calculation of retirement benefits (informants #1, #2, #3, #7, #18, #19).

The increasing use of point systems is particularly noteworthy with regard to the growing importance of performance-related pay practices as highlighted in the literature review. Although the available Japanese statistics focus on the calculation of lump-sum benefits, it is clear that point systems have also been widely adopted among pension plans, including the new CB plans (Sano 2007; informants #4, #12, #14, #15, #17, #18, #19). According to the 2008 General Survey of Employment Conditions, 55.2% of companies with more than 1000 employees are now using such point systems (Kōseirōdōshō 2008).

In these systems, employees accumulate a certain number of points which can reflect a combination of factors like “job grade”, “abilities”, “number of years of employment” and “performance”. These points are then multiplied with a certain cash value and the resulting amount is accumulated with a fixed (or in the case of CB plans flexible) interest until retirement (Sano 2007; informant #12).

It is important to note that the presence of a point system as such does not necessarily imply that performance factors are taken into account, but in so far as larger companies have been moving towards stronger performance-oriented pay practices in recent years, many large companies’ point systems tend to reflect at least partially performance indicators (informants #4, #6, #7, #12, #13; Ogoshi 2006; see also the example from Panasonic below).

Informants from a large automobile manufacturer stated that their company had totally abolished factors like “numbers of years of employment” in 2001 and is now using a competency-based approach linked to a point system for both wages and pensions. This company has also totally abolished its BRP and pays 25% of retirement benefits as DC and 75% as DB benefits (informants #12, #13). In the electronics industry the most common approaches are now point systems where the number of monthly accumulated points depends on the position in a grid of job grades

and point systems where a certain percentage of the bi-annual bonus, which partially reflects individual performance evaluations, is accumulated as a company pension (informant #15). A similar approach has been adopted by a medium-sized electronic components manufacturer with 200 regular workers. Just like many large companies, this firm operates since 2003 one of the commonly found multi-layered retirement benefits systems with externally managed CB and DC plans and an internally managed BRP. While the CB and DC benefits are linked to a point system reflecting the position in a grid of job grades, individual performance evaluations are reflected in retirement allowances build up through a BRP (informants #18, #19).

A good example how changes in retirement benefits are implemented, is the electronics giant Panasonic (formerly Matsushita). In 2002, immediately after this option became available, Panasonic left the semi-public EPF. Up until then retirement benefits (consisting of a lump-sum and an EPF pension) were primarily a reflection of age and length of service as part of a final salary system. Beginning in 2002, Panasonic started to operate a multi-layered retirement benefit system (Figure 2).

Figure 2

For the first tier it adopted a point system, which reflects both individual performance evaluations and the position of employees in a grid system of ‘work groups’, linking this point system to benefits paid through a DB plan. As a second tier it introduced a CB plan, whose benefits were linked to the development of employees’ base pay. As a third tier it maintained a lump-sum benefit for employees retiring between 50-60 years of age. Other large companies, adopting similar complex pension systems include, for example, Tokyo Electric Power Corporation and Daihatsu Motor Corporation (*Nihon Keizai Shinbun* 20 June 2008).

Concluding remarks

This article has discussed significant changes that occupational pension plans in Japan have undergone since the early 2000s. The most important factors driving these changes were underfunding problems caused by depressed stock markets and changes in accounting standards that made underfunding problems apparent. Utilizing new legal options, Japanese companies have achieved cost and risk reductions through the

partial replacement of DB benefits by CB and/or DC benefits and through an increase in the ratio of workers that are not covered by any retirement benefits. However, compared to recent developments in the US and UK, Japanese DB plans show a relatively strong resilience. After seven years since the introduction of DC plans, only 16% of occupational pension participants are covered by these schemes. A variety of factors contribute to this finding. While explicit and strong union pressure for the continued use of DB plans is lacking, government regulation and entrenched views among employees and employers about the nature and purpose of retirement benefits have been shown to be crucial explanatory factors. The evolving multi-layered structure of many companies' retirement benefit systems, comprising both DB and DC benefits, is mirrored by an increasing complexity in other parts of Japanese pay systems, where a performance-related pay component is often added as another layer to existing pay components. Accordingly, Japanese firms now have some of the most complex pay determination systems in the world (Morishima 2002). In the occupational pension field, this complexity can be explained as a result of regulatory constraints, on the one hand, and as a purposeful attempt to limit companies' risks and costs while maintaining at least partially the employers' responsibility for the social welfare of their core workforce, on the other hand. While companies have sustained pension benefits for these regular workers, they have at the same time increased the ratio of non-regular workers that are not eligible for these benefits.

With regard to the convergence/non-convergence debate these findings offer important insights. While DB plans have lost some of their importance in Japan, mirroring similar changes in the US and UK, this trend should not be mistaken as evidence for convergent developments. In contrast to the US and UK, where DB plans have decreased dramatically and where the remaining plans employ primarily career-average or final-pay formulas, DB benefits show a much stronger resilience in Japan where companies have controlled costs by employing benefit formulas that do no longer reflect automatic wage increases but employees' performance factors. These findings stress the important influence of regulatory systems and social constraints and confirm the argument of path-dependent developments that thwart international convergence. Furthermore, it can be argued that these constraints, whether real or perceived, have shaped the institutional innovation of the newly evolving multi-layered retirement systems in Japan.

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References

- Abegglen, J.C. (1958), *The Japanese Factory*, Glencoe, IL: Free Press.
- Aoki, M. 1988, *Information, Incentives and Bargaining in the Japanese Economy*, Cambridge: Cambridge University Press.
- Aoki, M., Jackson, G. and Miyajima, H. (2007), *Corporate Governance in Japan: Institutional Change and Organizational Diversity*, Oxford: Oxford University Press.
- Bodie, Z., Marcus, A.J., and Merton, R.C. (1988), 'Defined Benefit versus Defined Contribution Pension Plans: What are the Real Trade-offs?' in *Pensions in the U.S. Economy*, eds. Bodie, Z., Marcus, A.J., and Merton, R.C., Chicago: University of Chicago Press, pp. 139-162.
- Bridgen, P. and Meyer, T. (2005), 'When do Benevolent Capitalists Change Their Mind? Explaining the Retrenchment of Defined-benefit Pensions in Britain,' *Social Policy & Administration*, 39, 7, 764-785.
- Campbell, S. (1996), 'Hybrid Retirement Plans: The Retirement Income System Continues to Evolve,' *EBRI Issue Brief*, 171, March.
- 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.
- Cutler, T. and Waine, B. (2001), 'Social Insecurity and the Retreat from Social Democracy: Occupational Welfare in the Long Boom and Financialisation,' *Review of International Political Economy*, 18, 1, 96-118.
- Debroux, Philippe (2003), *Human Resource Management in Japan: Changes and Uncertainties*, Hampshire: Ashgate.
- Degg, R. and Jackson, G. (2007), 'The State of the Art – Towards a More Dynamic Theory of Capitalist Variety,' *Socio-Economic Review*, 5, 149-179.

- Dore, R. (2000), *Stock Market Capitalism – Welfare Capitalism: Japan and Germany versus the Anglo-Saxons*, Oxford: Oxford University Press.
- DGHJKSKSK (Dokuritsu Gyōsei Hōjin Jinkō Kōrei · Shōgaisha Koyō Shien Kikō) (2008), *Kōrei Shakai Tōkei Yōran* [Statistical Handbook on the Aging Society], Tokyo: DGHJKSKSK.
- EBRI (Employee Benefit Research Institute)(2007), *Facts from EBRI: Retirement trends in the United States over the past quarter-century* Online at: <http://www.ebri.org/pdf/publications/facts/0607fact.pdf>
- EBRI (Employee Benefit Research Institute)(2009), *Fundamentals of Employee Benefit Programs* Online at: <http://www.ebri.org/publications/books/index.cfm?fa=fundamentals>
- Esping-Andersen, G. (1996), ‘Conclusion: Occupational Welfare in the Social Policy Nexus,’ in *The Privatization of Social Policy? Occupational Welfare and the Welfare State in America, Scandinavia and Japan*, ed. M. Shalev, Basingstoke: Macmillan, pp. 327-338.
- Estévez-Abe, M. (2008), *Welfare and Capitalism in Postwar Japan*, Cambridge: Cambridge University Press.
- Fukuda, E. (2002), *Matsushita Denki Sangyō Kabushiki Gaisha - Taishokukin · Nenkin Seido no Kaite ni Tsuite* [On the Revision of the Retirement Benefit and Pension System at Matsushita], Online at: <http://www.ier.hit-u.ac.jp/jprc/soukai2002/fukuda-ppt.pdf>
- Hall, P.A. and Soskice, D. (2001), ‘An Introduction to Varieties of Capitalism,’ in *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, eds. Hall, P.A. and Soskice, D., Oxford: Oxford University Press, pp. 1-68.
- Hollingsworth, J.R. and Boyer, R. (1997), *Contemporary Capitalism: The Embeddedness of Institutions*, Cambridge: Cambridge University Press.
- Huh, E. and McLellan, S. (2007), ‘A Tale of Two Pension Reforms: A US-Japan Comparison,’ *Pension Research Council Working Paper 2007-01*.
- Husted, E.C. (1998), ‘Trends in Retirement Income Plan Administrative Expenses,’ in *Living with Defined Contribution Pensions*, eds. Mitchell, O.S. and Schieber, S.J., Philadelphia: University of Pennsylvania Press, pp.
- Inagami, T. and Whittaker, D.H (2005), *The New Community Firm*, Cambridge: Cambridge University Press.
- Jackson, G. and Miyajima, H. (2007), ‘Introduction: The Diversity and Change of Corporate Governance in Japan,’ in *Corporate Governance in Japan: Institutional Change and Organizational Diversity*, eds. Aoki, M., Jackson, G., and Miyajima, H., Oxford: Oxford University Press, pp. 1-47.

- Jacoby, S. M. (2005), *The Embedded Corporation: Corporate Governance and Employment Relations in Japan and the United States*, Princeton: Princeton University Press.
- JILPT (The Japan Institute for Labour Policy and Training) (2008), *Japanese Working Life Profile 2008/2009*, Tokyo: JILPT.
- JILPT (The Japan Institute for Labour Policy and Training) (2009), *Labor Situation in Japan and Analysis: Detailed Exposition 2009/2010*, Tokyo: JILPT.
- Katz, H.C. and Darbishire, O. (2000), *Converging Divergencies: Worldwide Changes in Employment Systems*, Ithaca, New York: Cornell University Press.
- Keizer, A.B. (2009), 'Transformations In- and Outside the Internal Labour Market: Institutional Change and Continuity in Japanese Employment Practices,' *International Journal of Human Resource Management*, 20, 7, 1521-1535.
- Kerr, C., Dunlop, J.T., Harbison, F.H. and Myers, C.A. (1962) *Industrialism and Industrial Man: The Problems of Labour and Management in Economic Growth*, London: Heinemann Education.
- Kigyō Nenkin Kenkyūkai (2007), *Kigyō Nenkin Seido no Shikō Jōkyō no Kenshō Kekka - An - Shiryō 1* [Results from a Review into the Enforcement of the Corporate Pension System - Proposal - Material no.1], Tokyo: Kōseirōdōshō. 10 July.
- Kigyō Nenkin Kenkyūkai (2008), *Tekikaku Taishoku Nenkin no Ikō no Genjō Oyobi Torikumi - Shiryō 2* [The Current Situation of the Transfer of the Tax-Qualified Pension Plans – Material no. 2], Tokyo: Kōseirōdōshō. 21 October.
- Kigyō Nenkin Rengōkai (2003, 2008), *Kigyō Nenkin ni kan suru Kiso Shiryō* [Basic Data about Corporate Pensions], Tokyo: Kigyō Nenkin Rengōkai.
- Kōseirōdōshō (1997, 2003, 2008), *Jurō Jōken Sōgō Chōsa* [1997, 2003, 2008 General Survey of Employment Conditions], Tokyo: Kōseirōdōshō.
- Kōseirōdōshō Nenkinryoku (2009), *Kigyō Nenkin Seido – Heisei 21-nen 4-gatsu, 13-nichi* [The Occupational Pension System 13 April 2009], Tokyo: Internal document.
- Lane, C. (1995), *Industry and Society in Europe: Stability and Change in Britain, Germany and France*, Aldershot: Edward Elgar.
- Life Design Kenkyūjo (2000), *Heisei 12-nenban Kigyō Nenkin Hakusho -* [Occupational Pension White Paper 2000], Tokyo: Life Design Kenkyūjo.
- Logue, D.E. and Rader, J.S. (1998), *Managing Pension Plans – A Comprehensive Guide to Improving Plan Performance*, Boston: Harvard Business School Press.

- Mayrhofer, W. and Brewster, C. (2005), 'European Human Resource Management: Researching Developments over Time,' *Management Revue*, 16, 1, 36-62.
- Morishima, M. (2002), 'Pay Practices in Japanese Organizations: Changes and Non-changes,' *Japan Labour Bulletin*, 41, 4, 8-13.
- Nakamura, K. (2006), *Seika Shugi no Jijitsu* [The Truth About Performance-based Pay], Tokyo: Tōyō Keizai Shinpōsha.
- Nihon Keizai Shinbun (20 June 2008), 'Firms Pursue More Affordable, Sustainable Pension Schemes.'
- Nomura Research Institute (2007), *Japan's Asset Management Business (Summary)*, Lakyara Vol. 28.
- NRKS and KNMKN (Nihon Rōdō Kumiai Sōrengōkai and Kinyū Nenkin Mondai Kyōiku Nettowaku) (2008), *Taishokukin · Kigyō Nenkin Seido Ikō Taiō Handobukku 2009-nenpan* [Handbook for the Response to Transfers of the Lump-sum Payment and the Occupational Pension System], Tokyo: Nihon Rōdō Kumiai Sōrengōkai.
- NRSKKK (Nihon Rōdō Seisaku Kenkyū Kenshū Kikō) (2006), 'Gendai Nihon Kigyō no Jinzai Manejimento,' [The contemporary management of Japanese companies], *Rōdō Seisaku Kenkyū Hokokusho No. 61*.
- Office for National Statistics (2008), *Occupational Pension Schemes Annual Report*, Newport: Office for National Statistics.
- Ogoshi, Y. (2006), 'Current Japanese Employment Practices and Industrial Relations: The Transformation of Permanent Employment and Seniority-Based Wage System,' *Asian Business and Management*, 5, 469-485.
- Ostaszewski, K. (2001), 'Macroeconomic Aspects of Private Retirement Programs,' *North American Actuarial Journal*, July, 52-64.
- Pensions & Investments (2007), 'Japan Could Avoid Path of Defined Contribution Shift.' 24 December 2007.
- Rein, M. (1996), 'Is America Exceptional? The Role of Occupational Welfare in the United States and the European Community,' in *The Privatization of Social Policy? Occupational Welfare and the Welfare State in America, Scandinavia and Japan*, ed. M. Shaley, Basingstoke: Macmillan, pp. 27-43.
- Sano, K. (2007), 'Kigyō Nenkin Seido de Wakaru Jinji Senryaku,' [Understanding the human resource strategy from the occupational pension system] in *Kigyō Nenkin no Gabanansu*, ed. H. Morito, H., Tokyo: Chūō Keizai, pp. 27-54.
- Sato, M. (2005), '2007 Problems Loom Large,' *Daily Yomiuri*. 30 July.

- Shibata, H. (2000), 'The Transformation of the Wage and Performance Appraisal System in a Japanese firm,' *International Journal of Human Resource Management*, 11, 2, 294-313.
- Shiniapuran Kaihatsu Kikō (2004), *Taishokukin – Kigyō Nenkin Seido Kaikaku no Shinchoku Jōkyō to Kongo no Hōkō ni Kan Suru Chōsa Kenkyū* [Research Report on the Progress and Future Direction of Retirement Benefits and Occupational Pensions], Tokyo: Shinapuran Kaihatsu Kikō.
- Suda, T. (2007), 'Converging or Still Diverging? A Comparison of Pay systems in the UK and Japan,' *International Journal of Human Resource Management*, 18, 4, 568-601.
- U.S. Bureau of Labor Statistics (2006), Defined Benefit Retirement Plans – Selected Features, Online at:
<http://www.census.gov/compendia/statab/tables/09s0534.xls>
- U.S. Department of Labor (2008), *Private Pension Plan Bulletin Historical Tables*, Online at:
<http://www.dol.gov/ebsa/pdf/privatepensionplanbulletinhistoricaltables.pdf>
- VanDerhei, J. and Copeland, C. (2001), 'The Changing Face of Private Retirement Plans,' *EBRI Issue Brief*, 232, April.
- Vogel, S.K. (2006), *Japan Remodeled*, Ithaca: Cornell University Press.
- Warshawsky, M.J. (1995), 'Determinants of Pension Plan Formations and Terminations,' *Benefits Quarterly*, 4, 71-80.
- Whitely, R. (1999), *Divergent Capitalisms – The Social Structuring and Change of Business Systems*, Oxford: Oxford University Press.
- Wood, G.; Brewster, C.; Johnson, P. and Brookes, M. (2009), 'The Antecedents of Comparative Differences in Collective Bargaining,' *Working Paper, School of Management, University of Sheffield*.

Appendix: Lists of informants

	Position	Affiliation
#1	Executive chief researcher	Research institute affiliated with a major labour union organization
#2	Actuary	Federation of Workers and Consumers Insurance Cooperatives
#3	Professor & pension expert	National university
#4	General manager, chief researcher & actuary	Pension research institute of a major financial institution
#5	Managing director & actuary	Pension consultancy
#6	High-ranking civil servant in pension department	Ministry of Health, Labour and Welfare
#7	Senior research fellow & actuary	Major think tank
#8	Section chief of welfare policy division	Labour union organization
#9	Executive director of welfare policy division	“
#10	Head of group HR planning department	“
#11	Professor & HR expert	Private university
#12	Expert leader of global pension management & actuary	Major automobile manufacturer
#13	Manager in compensation and benefit group	“
#14	Executive director of pension fund	Major transport company
#15	Executive director of pension fund	Major electronics manufacturer
#16	Chief advisor & pension expert	Major think tank
#17	Chief Researcher & pension expert	Government-affiliated pension research institute
#18	Representative director & president	Medium-sized electronics manufacturer
#19	Manager in general affairs/HR section	“
#20	Director of human resources planning group	Major regional utility company
#21	Vice-director of human resources planning group	“
#22	Vice-director of human resources planning group	“

Table 1: Indicators of Major Japanese Occupational Pension Plans (1998-2008)

Name of Plan	Nature of Plan	Year	Number of Plans	Number of Members (in million)	Amount of Assets (in trillion Yen)
Employees Pension Fund Plans (EPF)	DB	1998	1,858	12.00	53.3
		1999	1,832	11.69	62.2
		2000	1,801	11.39	58.0
		2001	1,737	10.87	57.0
		2002	1,656	10.38	51.2
		2003	1,357	8.35	48.6
		2004	838	6.15	26.9
		2005	687	5.31	24.7
		2006	658	5.25	23.9
		2007	626	5.25	20.6
		2008	620	4.80	...
Tax Qualified Pension Plans (TQPP)	DB	1998	88,312	10.29	20.0
		1999	85,047	10.01	21.2
		2000	81,533	9.68	22.4
		2001	78,148	9.16	22.6
		2002	73,582	8.58	21.4
		2003	66,741	7.77	20.7
		2004	59,162	6.54	17.1
		2005	52,761	5.68	17.2
		2006	45,090	5.06	15.6
		2007	38,885	4.43	11.7
Contract-Type DB Plan*	DB	2001	X	X	X
		2002	15	0.003	...
		2003	164	1.35	...
		2004	478	3.14	8.1
		2005	833	3.84	21.7
		2006	1,335	4.30	33.0
		2007	2,480	5.06	36.9
Fund-Type DB Plan*	DB	2001	X	X	X
		2002	0	0.003	...
		2003	152	1.35	...
		2004	514	3.14	8.1
		2005	597	3.84	21.7
		2006	605	4.30	33.0
		2007	619	5.06	36.9
Corporate DC Plan	DC	2001	70	0.088	...
		2002	361	0.325	1.4
		2003	845	0.708	5.6
		2004	1,402	1.255	12.0
		2005	1,866	1.733	22.8
		2006	2,313	2.187	31.1
		2007	2,710	2.711	36.5
		2008	2,566

Notes: X = not applicable; ... = not available; *Numbers for members and amount of assets do not distinguish between contract-type and fund-type plans.

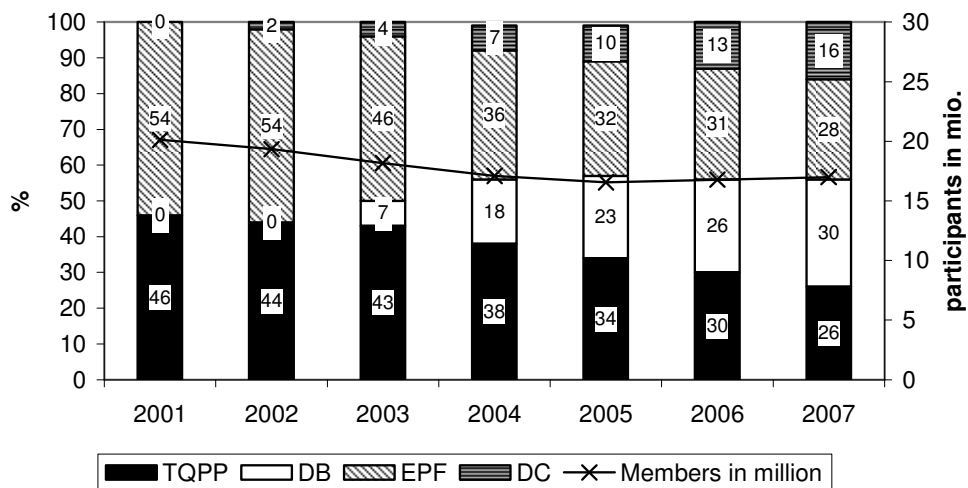
Sources: Life Design Kenkyūjo 2000; Nomura Research Institute 2007; Kigyō Nenkin Kenkyūkai 2008; Kigyō Nenkin Rengōkai 2008.

Table 2: Occupational Pension Plans Offered in Addition to DC Plans (in %)

	Less than 99 employees	100-299 employees	300-999 employees	Over 1000 employees
EPF	13.4	21.4	15.4	9.3
TQPP	2.5	4.5	8.2	7.3
DB-plan	8.2	15.4	25.1	47.0
EPF/DB-plan	0.2	0.6	2.1	2.6
EPF/TQPP	0.8	1.4	2.3	1.9
TQPP/DB-plan	0.2	0.2	0.5	0.9
Mutual Aid Ass. for School Teachers	0.04	0.05	0.2	0.0
NONE	74.7	56.3	46.3	31.0
Number of corporations with DC-plans	5,089	2,024	1,104	645

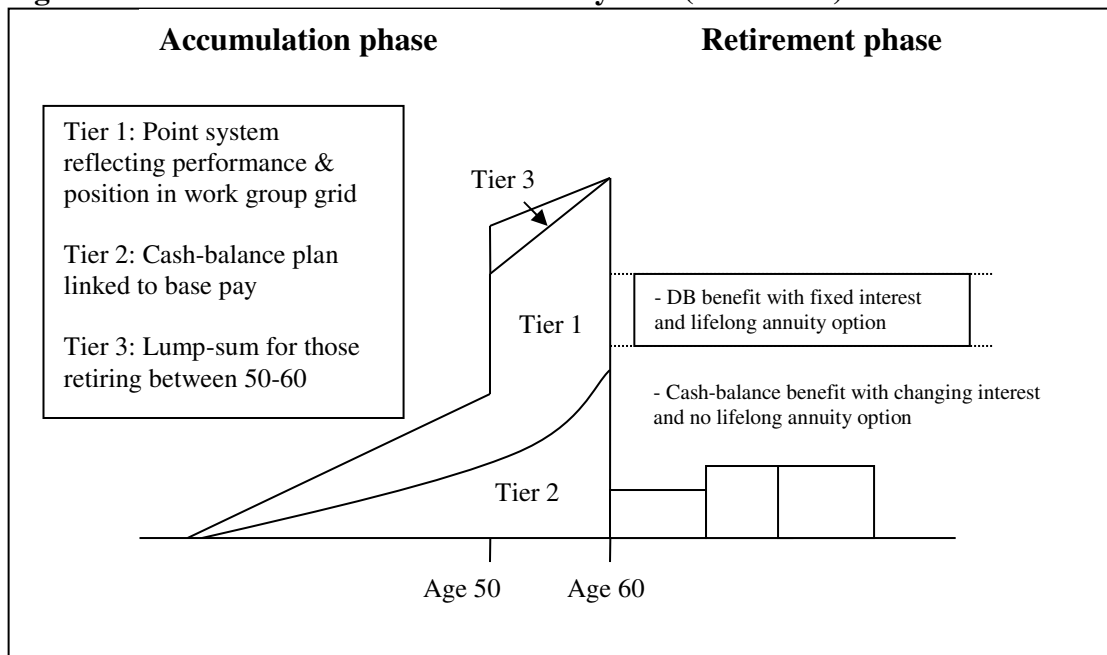
Source: Kigyō Nenkin Kenkyūkai 2008

Figure 1: Occupational Pension Plan Participants (Relative and Absolute Numbers)



Source: Kigyō Nenkin Kenkyūkai 2008

Figure 2: Panasonic's Retirement Benefit System (since 2002)



Source: based on Fukuda 2002

¹ It should be noted that there are large differences in occupational pension coverage of regular workers depending on company size. While 80.7% of companies with more than 1,000 employees offer occupational pensions to those workers, this ratio drops considerably in smaller establishments: 69.3% (300-999 employees), 58.9% (100-299 employees), 37.0% (30-99 employees) (Kōseirōdōshō 2008).