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Survey Research toward Establishment of a Sustainable
Retirement System for Colleges and Universities in Japan

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1. Introduction

As Japan's modern society faces declining birth rates, extended longevity, and rising divorce rates,¹ improvement of post-retirement financial security has become a growing concern for the ageing population with a conventional pay-as-you-go (PAYG) state pension system. Apprehension throughout the nation about a quickly depleting reserve in both private and public pension funds also poses a serious challenge for many employers and governments, particularly as the first wave of baby-boomers have begun to leave the active workforce with hefty retirement lump-sum payments and annuities. Moreover, since the Japanese government announced the termination of *Tekikaku Taishoku Nenkin* as of March 31, 2012, which had stood as one of the most popular privately-managed defined benefit pension programs, the issue of reinforcing post-retirement income sources has been raised as an important policy agenda in the domain of social debates for the nation. In addition, as career mobility in the Japanese workforce increases owing to voluntary and involuntary job changes, along with chronically high unemployment rates, the mobility risk associated with the loss of

¹ For instance, according to the Summary of Vital Statistics released by the Ministry of Health, Labour and Welfare of Japan, the number of newborns declined sharply in the last 60 years from 2,005,162 in 1952 to 1,033,000 in 2012, which represents a decrease of 48.5 percent. During the same period, the divorce rate acutely rose from 79,021 in 1952 to 237,000 in 2012, representing an increase of nearly 200 percent (<http://www.mhlw.go.jp/english/database/db-hw/populate/.html>; accessed January 30, 2013).

retirement benefits has become a non-negligible issue in planning a long term career for all employed individuals in the country.

In order to respond to the emerging social needs in providing new retirement savings vehicles, the Japanese government passed new pension laws in the early 2000s permitting employers to shift their services from a conventional defined benefit (DB) pension scheme to defined contribution (DC) and cash balance plans. However, not only did the recent financial crisis that originated with the market crash of 2008 shake harder than ever DB-providing employers' anxiety in regaining the financial health of their retirement funds, but it also highlighted the potential investment risks embedded in the DC pension scheme, which is largely borne by individual DC account holders.

Higher education institutions (HEIs) are not immune to this potential weakness of vulnerable retirement benefits and insolvent pension systems in today's highly interdependent organizational structures which heavily rely on external financial and asset management institutions. The recent global financial crisis has awakened the ivory towers of even the world's leading institutions to the potential danger of the current institutional investment strategy caused by unpredictable market volatility. For instance, Harvard University, which is the highest endowed institution of higher education in the U.S., lost 27.3 percent, lopping off \$10 billion and shrinking its total endowment down to \$26 billion, in the aftermath of the Lehman shock. Similarly, Yale University, another wealthy institution in the U.S., reported a loss of 30 percent in the same period, shrinking its endowment to \$16 billion.²

² "Harvard and Yale Report Losses in Endowment," an article published in The New York Times on September 10, 2009.

A number of private colleges and universities in Japan are considered to have suffered significant losses as well. According to *Nihon Shiritsu Gakkō Shinkō Kyōsai Jigyōdan* (The Promotion and Mutual Aid Corporation for Private Schools of Japan 2008), at least 75 private colleges and universities in the country held high-risk bearing derivatives as of March 2006, and one large private university located in the Tokyo metropolitan area was found with a loss of ¥15.4 billion by November 2008, through high-risk bearing derivative trading.³

The research presented in this report was motivated by these detrimental crises experienced by today's colleges and universities throughout the world. Numerous scholarly contributions have been made, particularly in the U.S., on faculty preferences for the choice of pension options as well as the associated retirement behaviors and productivity of university faculty (see, for example, Clark & Pitts 1999, Clark & Ghent 2009, Conley 2007, Kim 2003). However, the scholarly outputs in this research field are particularly lacking for Japan's higher education institutions as no previous studies are found for the industry in this respect although the domestic higher education industry employs more than 540 thousand individuals. This study, perhaps as the first effort in the academic community of higher education research in Japan, attempts to shed light on this critical aspect of HEI management, analyzing the perceptions and the level of relevant knowledge of individual employees with regard to their retirement savings and pension programs. The study also illustrates alternative schemes currently available in Japan, the United States and the United Kingdom and

³ "Komadai Shisan Unyō Sonshitsu 154-oku-yen: Campus Tanpo de Anaume," an article published in *The Asahi Shimbun* on November 19, 2008.

examines the potential strengths and weaknesses of these alternatives within the institutional contexts of each country. Descriptive findings are presented to demonstrate critical gaps existing in individual preferences among different age groups, genders, job types and ranks, as well as establishment types of institutions.

The report presents a rather descriptive picture of the contemporary issues faced by Japanese HEIs, based on our preliminary findings obtained from survey results, which was locally conducted in 2011-2012 academic years covering 27 colleges and universities in the prefecture of Hiroshima. The research is no doubt at the preliminary stage, and a more concrete analysis still remains as a future agenda. Further scrutiny of the data set with more rigorous and advanced methodologies is certainly required, but the main focus of this report is on timely delivery of the descriptive results on the current and emerging issues in Japan, in order to emphasize the urgency of the subject. The ultimate aim of this study, which is part of an ongoing research project, is to provide a means for all institutions of higher education to reconsider the importance of establishing sustainable retirement benefit systems.

2. Historical background: de facto

As Watanabe (2010a) describes, the employer-sponsored retirement savings programs for faculty and administrators in Japan's HEIs have been highly segmented by the establishment type of institutions. Typically, full-time employees of the national and municipal (*i.e.*, prefectural and city) colleges and universities are equipped with the national and local government-administered benefit programs,

respectively, while private colleges and universities normally provide their full-time employees with the retirement savings plans that are privately managed by *Nihon Shiritu Gakkō Shinkō Kyōsai Jigyōdan* (The Promotion and Mutual Aid Corporation for Private Schools of Japan).

One of the critical issues of the retirement allowance systems for Japan's HEIs is considered to be rooted in this highly segmented coverage of employees in the industry of higher education. For instance, full-time faculty and administrators of the national university corporations have been covered by the National Public Service Mutual Aid Association (*Kokka Kōmuin Kyōsai Kumiai*), which is designed "to issue a pension and/or other allowances to any public employee or their surviving family on the basis of the national government's special relationship with that public employee when that employee retires, after having served faithfully for a specified number of years, or when they have retired due to an injury or illness stemming from their service, or when they have died due to their service" (Ministry of International Affairs and Communications 2010).⁴ Similar retirement allowance benefits are also provided to employees of public institutions established by the local governments, *i.e.*, prefectural and city colleges and universities, through the Local Public Employees' Mutual Aid Association (*Chihō Kōmuin Kyōsai Kumiai*). Therefore, full-time professors and administrators in these two types of public institutions have typically been covered by the retirement savings programs, which have been independently administered by separate public

⁴ This pension program for public servants was founded in 1875 and is the oldest pension program in the country. For further information, please refer to the website of the Ministry of Internal Affairs and Communications of Japan (<http://www.soumu.go.jp/english/ppb/index.html>)

authorities.⁵

Parallel to these retirement allowance programs for employees in the public sector, the benefit coverage of the majority of academic and administrative staff members in private colleges and universities are administered by the Retirement Allowance Foundation of Private Colleges and Universities (*Zaidan Hōjin Shiritsu Daigaku Taishokukin Zaidan*). The Foundation which was established and began its functions in the early 1980s currently holds 599 institutional members as of March 31, 2012, covering about 90 percent of the overall private institutions of higher education in the country (The Retirement Allowance Foundation of Private Colleges and Universities 2012). The annual average of more than 137,000 full-time faculty and personnel of private colleges and universities are covered by the Foundation's premise in 2012.

Due to this clearly divided administration of the retirement benefit programs by establishment type of institutions, individuals in the industry of higher education in Japan have been exposed to mobility risk as they change their institutions. That is, Japanese faculty and administrators would be offered no options other than receiving a lump-sum payment every time they change employers across different establishment types. As a result, portability of retirement benefits has emerged as an important agenda for today's academic workforce as the employees in the industry become increasingly mobile.

The Japanese government then passed pension laws in 2002, which permitted

⁵ However, administrative support staff with a short-term contract or with a part-time status, in general, are not entitled to the retirement allowances at the termination of their employment contracts.

financially struggling employers to shift their services from a burdensome defined benefit (DB) retirement scheme to new defined contribution (DC) savings vehicles and cash balance plans.⁶ It is commonly understood that under the typical DB retirement scheme employers offer a guaranteed payout to retirees in the form of a lump-sum and/or annuity, calculating the final amount of receipts based on a pre-determined formula which normally takes into account a worker's number of service years in an organization and some of the highest salaries during his or her service. However, the Ministry of Health, Labour and Welfare raised, as the primary reason for introducing the new DC scheme, the fact that the conventional DB retirement plans have not been implemented by many small- to medium-sized firms, leaving workers at these firms at a disadvantage with no employer-sponsored retirement savings options.⁷ The second issue pointed out by the Ministry is the inability of DB benefits to be rolled over as workers change their jobs. It is claimed that these two issues have historically put female workers in Japan at a disadvantage because women tend to work for smaller firms with no corporate retirement benefits and experience career interruptions as they reach the childbearing stage of life. Moreover, from the employers' viewpoint the introduction of the DC pension scheme was imperative as the corporate-sponsored DB retirement programs have imposed an enormous financial burden on many insolvent employers in the past decade (Japan Business Federation 2006).

⁶ More precisely, the Defined Benefit Corporate Annuity Law and the Defined Contribution Corporate Annuity Law were enacted and became effective in October 2001 and April 2002, respectively.

⁷ Cited from the official website of the Ministry of Health, Labour and Welfare of Japan, <http://www.mhlw.go.jp/topics/bukyoku/nenkin/nenkin/kyoshutsu/gaiyou.html>, accessed January 9, 2009.

Nonetheless, most retirement savings programs currently available for employees in public services or of private organizations in the country are predominantly based on the traditional final-pay DB scheme. While many US firms have made a dramatic shift away from the DB pensions to the alternative DC scheme in the last 30 years, and many private European firms have followed this trend, the majority of Japanese employers continue to offer the DB plans as the backbone of their retirement savings programs. Therefore, the conventional DB plans are expected to play a continuously important role in securing post-retirement income sources for the country's private sector employees. In fact, only two incorporated educational institutions (*Gakkō Hōjin*), which operate private institutions of higher learning in Japan, offer the DC options to their employees as of December 31, 2012.⁸

In the following section, typical retirement savings programs provided for employees of colleges and universities in the U.S. and U.K. are briefly illustrated. The descriptions, despite their brevity, help us understand and highlight the strengths and weaknesses of the alternative models in a comparative manner with the current Japanese system.

3. Retirement savings programs in the U.S. and U.K.

3.1 United States

Teaching and administrative staff members of many US colleges and universities

⁸ Cited from the official website of the Ministry of Health, Labour and Welfare of Japan, <http://www.mhlw.go.jp/topics/bukyoku/nenkin/nenkin/kyoshutsu/company-list.html>, accessed January 31, 2013.

are typically covered by 401(k) or 403(b)-type tax sheltered DC plans, provided by Teachers Insurance and Annuity Association–College Retirement Equities Fund (TIAA-CREF). The organization, which has served the academic, research, medical, cultural and nonprofit fields for over 90 years, is a leading provider of retirement services for the community and one of the largest institutions in the financial services industry in the U.S. with \$487 billion in combined assets under management as of March 31, 2012. TIAA-CREF currently supports and meets the financial needs of approximately 3.7 million active and retired employees participating at more than 15,000 institutions.⁹

Conley (2007), using a sample of 567 public and private institutions of higher education in the U.S., finds that 42 percent offered DC pension plans through financial institutions such as TIAA-CREF. An additional 41 percent of institutions allowed faculty members to choose either a DC plan or a DB option such as a state plan which calculates final receipts of benefits based on the standard DB formula that might include years of service, final average salaries, and age. Conley's findings also show that, where faculty members were given such a choice, the majority (72 percent) of institutions required participation in the DB system as the default plan. Only 12 percent of responding institutions reported offering only a DB option, and 5 percent offered a combined plan that includes features of both types of pension programs.

In contrast to the guaranteed employer-sponsored DB scheme with certain final allowances, DC-providing employers and workers make a deposit of a proportion of his

⁹ Please refer to the TIAA-CREF website (<https://www.tiaa-cref.org/public/index.html>) for detailed information.

or her monthly salary into a tax-deferred retirement account. Individual workers are responsible for the management of their own account, and the amount of final receipts depends on the performance of the investment market as well as individual portfolios during their active career. Some US institutions provide a combination of these two types of plans, permitting faculty members to choose between the types of plans, or allow them to participate in both types (Conley 2007). Unlike the retirement savings programs for the Japanese higher education community, sponsoring colleges and universities may participate in TIAA-CREF's services regardless of the establishment type; that is, regardless of public or private institutions. Moreover, the participating institutions are not restricted to tertiary education, but include from primary and secondary schools to research and nonprofit organizations. As a result, portability of the pension benefits is guaranteed as a vested employee changes from a public university position to, say, a private university or a non-profit research organization, or vice versa.

3.2 United Kingdom

The Universities Superannuation Scheme (USS), established collectively by UK universities in 1974, is the principal pension scheme for 374 participating universities and other higher education and research institutions. Headquartered in Liverpool, it is one of the largest UK pension schemes with more than 287,000 individual members, mainly academics and senior administrators with total assets worth about £34.2 billion

as of March 31, 2012.¹⁰

Although the USS provides the final-pay DB pension benefits to the plan participants, vested employees are endowed with the flexible portability of the benefits since the majority of UK colleges and universities participate in the USS services as institutional members. Thus, employees of participating institutions are allowed to carry over their DB pension benefits as they change jobs among the member institutions, and individuals do not need to cash out the cumulative benefits at the time of retirement or separation from their employers. The USS programs also permit individuals to increase their benefits by paying Additional Voluntary Contributions (AVCs). The scheme critically differs from Japanese DB plans in that part-time employees may be eligible for the USS pension benefits. The scheme is also characterized by the flexible and continuous coverage of individuals during their maternity and paternity leaves. However, coverage by the USS benefits are restricted to only academic and higher-ranked senior administrative staff, and non-teaching non-professional staff members are normally covered by the locally sponsored plans, typically provided by their employers or local governments. As with the Japanese DB retirement schemes, the USS faces a serious challenge in its long-term sustainability as investment risk is solely borne by the benefit-sponsoring employers and their liabilities have been growing more quickly than assets in recent years.

Retirement schemes implemented for HEI employees in Japan, the U.S., and the

¹⁰ For more detailed information, please refer to the USS Report and Accounts 2012 which is downloadable from the official website, <http://www.uss.co.uk/Annual%20Reports/Report%20and%20Accounts%202012.pdf>

U.K. are briefly summarized in Table 1 below, with the associated conditions and requirements for each country’s typical employer-administered plans. It clearly highlights the differences of the systems among three countries, in terms of scheme type, coverage, and portability of the benefits.

Table 1. Retirement savings schemes of higher educational institutions in Japan, U.S. and U.K

	Japan			U.S.	U.K.	
Primary fund	NPSMAA	LPEMAA	RAFPCU	TIAA-CREF	USS	Local plans
Member institutions	Public (national)	Public (local)	Private	All types	All types	
Primary scheme	Defined benefit			Defined contribution	Defined benefit	
Staff coverage	Teaching & administrative			Teaching & administrative	Teaching & senior administrative	Lower grade administrative
Part-time coverage	No			No	Yes	
Portability	No			Yes	Yes	

NPSMAA: National Public Service Mutual Aid Association (*Kokka Kōmuin Kyōsai Kumiai*); LPEMAA: Local Public Employees’ Mutual Aid Association (*Chihō Kōmuin Kyōsai Kumiai*); RAFPCU: Retirement Allowance Foundation of Private Colleges and Universities (*Zaidan Hōjin Shiritsu Daigaku Taishokukin Zaidan*); TIAA-CREF: Teachers Insurance and Annuity Association–College Retirement Equities Fund; USS: Universities Superannuation Scheme Limited.

4. Related literature on retirement benefits and pensions

It is perhaps noteworthy, particularly for non-Japanese readers, that mandatory retirement is legitimately practiced throughout the industries, both public and private, in Japan.¹¹ An important scholarly contribution on the interpretation of the

¹¹ In many other developed countries such as Germany and France, mandatory retirement is allowed for most workers including university faculty. In Canada, mandatory retirement of university faculty was found constitutional in a 1990 Supreme Court decision. However, setting mandatory retirement age is generally unlawful in the U.S. Australia and New Zealand also abolished compulsory retirement for most workers including university faculty.

mandatory retirement system in DB-sponsoring organizations dates back to Lazear's (1979) seminal work. According to Lazear's model, the design of the "back-loaded" DB feature along with a tilted compensation profile over one's career enhances employee morale and commitment in the form of reduced shirking, increased effort, and long tenure with the organization (Lazear 1979, 1982, 1990). Despite its advantageous features, however, the conventional DB pension scheme has imposed tremendous financial liabilities on the benefit-sponsoring employers, particularly since the fiscal collapse attributed to the "Lehman Shock" of 2008. For many Japanese employers, the prolonging economic slump has also posed an enormous financial challenge since the country's infamous bubble economy ended in the early 1990s. Muto and Ishizuka (2002) report that *Kosei Nenkin Kikin* and *Tekikaku Taishoku Nenkin*, Japan's two most popular privately-managed DB pension programs, have been undergoing insufficient reserves due to weak performance of faltering financial markets since the burst of the bubble economy.

The industry of higher education is not immune to this financial volatility as its retirement systems typically depend on private annuity and investment markets. As a result, many colleges and universities are facing unprecedentedly challenging financial situations in maintaining the health of their retirement funds. Based on the published data released from the annual reports of the Retirement Allowance Foundation of Private Colleges and Universities (*Zaidan Hōjin Shiritsu Daigaku Taishokukin Zaidan*), which is the largest retirement fund for Japan's private colleges and universities, Watanabe (2010a) warns of the structural unrest of privately-

administered retirement funds for academic and administrative staff employees in the Japanese HEIs. In fact, the Foundation has seen heavy losses in its institutional membership from a peak of 612 institutions in 2001 to 599 in 2012.

In order to supplement the deteriorating DB environments as well as to rescue the underfunded DB-providing employers in serious deficits, the Japanese government passed pension laws in 2002, permitting employers to offer the DC pension scheme in addition to the traditional DB benefits. The new DC scheme provides notably advantageous features for individual account holders. Firstly, portability of an individual-based DC retirement account offers remarkable benefits to the Japanese workforce with increasing mobility. In the conventional DB programs, workers with higher job turnovers are likely to suffer disadvantageously lower receipts of final retirement allowances due to the back-loaded feature of the DB scheme, relative to the their colleagues who spend their career with the same employer (Pesand 1992). Secondly, a DC plan is typically characterized by front-loaded tax incentives; that is, the contributions are deductible from income, and the accrued investment return generates no tax liability until withdrawn. Under the DC pension scheme, however, investment risk is passed onto individual account holders from benefit-sponsoring employers, leaving the workers with uncertain final receipts of cumulative retirement allowances.

Since the passage of the related DC laws in Japan, the choice between the conventional DB pensions and a portable DC plan has drawn serious attention of individual workers as well as employers in Japan (Kubo 2001). According to the

economic model by Ippolito (1997), the preferred type of pension coverage would depend on whether one finds the “indenture premium” associated with DB pensions sufficient to overcome the inherent cost of less mobility. If a woman faces a smaller prospect of finding an equivalently well-compensated job outside the current firm than a man, then she might find the cost of less mobility low, leaving the relative value of her current DB indenture premium sufficiently high. Thus, a significantly high indenture premium faced by women would reduce the efficacy of their choosing a DC plan in response to the portability benefit. Watanabe (2009), using a sample of Japanese full-time employees, obtains a result which supports this argument. The finding shows that corporate-pension covered female employees are significantly less likely than their male counterparts to choose a DC plan in response to the portability benefit. Watanabe (2010b) also provides evidence that Japanese female full-time workers are less likely than their male counterparts to choose a DC plan over DB pensions due to the associated investment risk as well as the unpredictable nature of the financial markets. The non-popularity of the new DC scheme among Japanese female workers is found in a survey result which reports that only 32% of corporate DC pension eligible female workers were enrolled in a DC plan in 2004, while 75% of DC eligible men chose the plan in the same year (Ministry of Health, Labour and Welfare 2005).

While Ippolito and Thompson (2000) found that the complete termination of the DB scheme in favor of DC alternatives was a rare event and that the vast majority of these plans might survive in the U.S., Butrica et al. (2009) report that the US retirement market has seen a significant shift away from the traditional DB pension

programs to DC plans in recent years. Butrica et al. also predict that the shift may even accelerate as an increasing number of financially solvent companies cease to provide their conventional DB benefits by replacing them with new DC pension plans. In contrast to the U.S., in the U.K., although the DC scheme remains a small segment of the market (Clark 2006), there has been a gradual trend away from DB plans with employers setting up new retirement programs which tend to opt for DC schemes (Mayhew 2001).

5. Survey questionnaire and data

The survey was conducted in 2011-2012 with the financial support from the Japan Society for the Promotion of Science (JSPS) in the form of Grant-in-Aid for Scientific Research (Category C), with the full-time faculty and administrative staff members employed in Hiroshima prefecture as the sample target of the study. There are 27 colleges and universities in the prefecture, which include one national university, four municipal (one prefectural and three city) universities, and 22 private institutions of higher education.¹² The survey questionnaires were mailed to each institution, which were then distributed among their full-time employees within each institution. More than seven thousand questionnaires were mailed to all the 27 institutions, and 1,628 full-time teaching and administrative staff members returned their forms.

Summary characteristics of the sample respondents are provided in Table 2. The

¹² Based on the Official Site of the Prefectural Government of Hiroshima. The list of 27 institutions (in Japanese) may be viewed at <http://www.pref.hiroshima.lg.jp/soshiki/44/hiroshima-univ-guide.html>.

Table 2. Summary characteristics of the sample respondents

	N	%
<i>Type of establishment:</i>		
National	967	60.3
Municipal	184	11.5
Private	452	28.2
<i>Gender:</i>		
Male	1,113	68.5
Female	512	31.5
<i>Age:</i>		
20 – 29 years old	121	7.7
30 – 39 years old	447	28.6
40 – 49 years old	418	26.8
50 – 59 years old	368	23.6
60 + years old	208	13.3
<i>Job category/rank:</i>		
Executive officer	13	0.8
Dean/chairperson	48	3.0
Full professor/associate professor	621	38.4
Assistant professor (including <i>Jokyō</i> , <i>Kōshi</i> , and <i>Joshu</i>)	319	19.7
Research associate (<i>kenkyūin</i>)/postdoctoral	55	3.4
Senior administrative staff	92	5.7
Junior administrative staff	469	29.0

largest proportion of the sample came from the national university employees (60.3%), followed by private (28.2%) and municipal (11.5%) colleges and universities. Approximately two-thirds of the respondents are male employees (68.5%) with the rest of the sample identified as female employees (31.5%). The average age is 44.9 years old, with the sample being relatively evenly distributed among age groups 30s through 50s (28.6%, 26.8%, and 23.6%, respectively). The largest proportion of the sample was obtained from full and associate professors (38.4%), followed by junior administrative staff members (29.0%), as well as assistant professors (19.7%) who may be on a

tenure-track but typically have not attained a tenure status yet. Further detailed statistics on all the questions included in the survey questionnaire are provided in the appendix table at the end of the report.

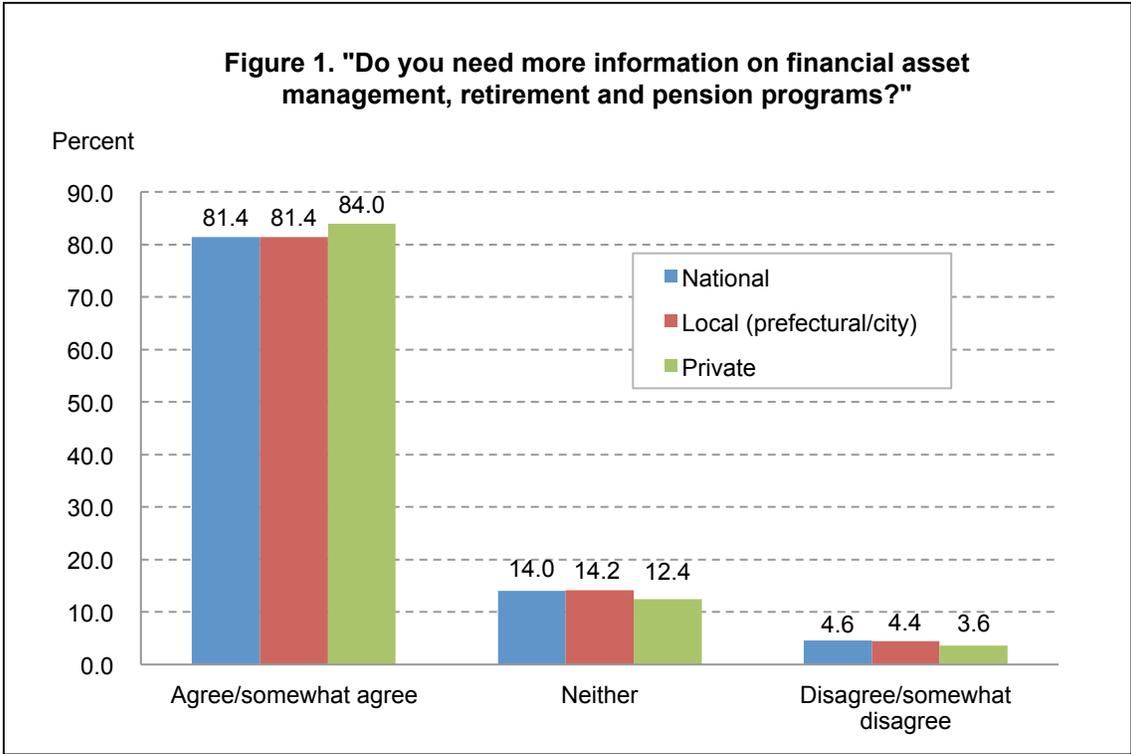
6. Preliminary and descriptive findings

In this section, some preliminary findings obtained from the descriptive analysis with raw data are discussed in detail. A particular emphasis is given to the research interests deriving from the original aims of the survey, *i.e.*, (a) the level of understanding or employee knowledge with regard to their retirement and pension benefits and (b) individual preferences for different benefit schemes. The categorical results are presented by (6.1) establishment type of institutions, (6.2) gender, (6.3) age group, and (6.4) job category and rank of the respondents.

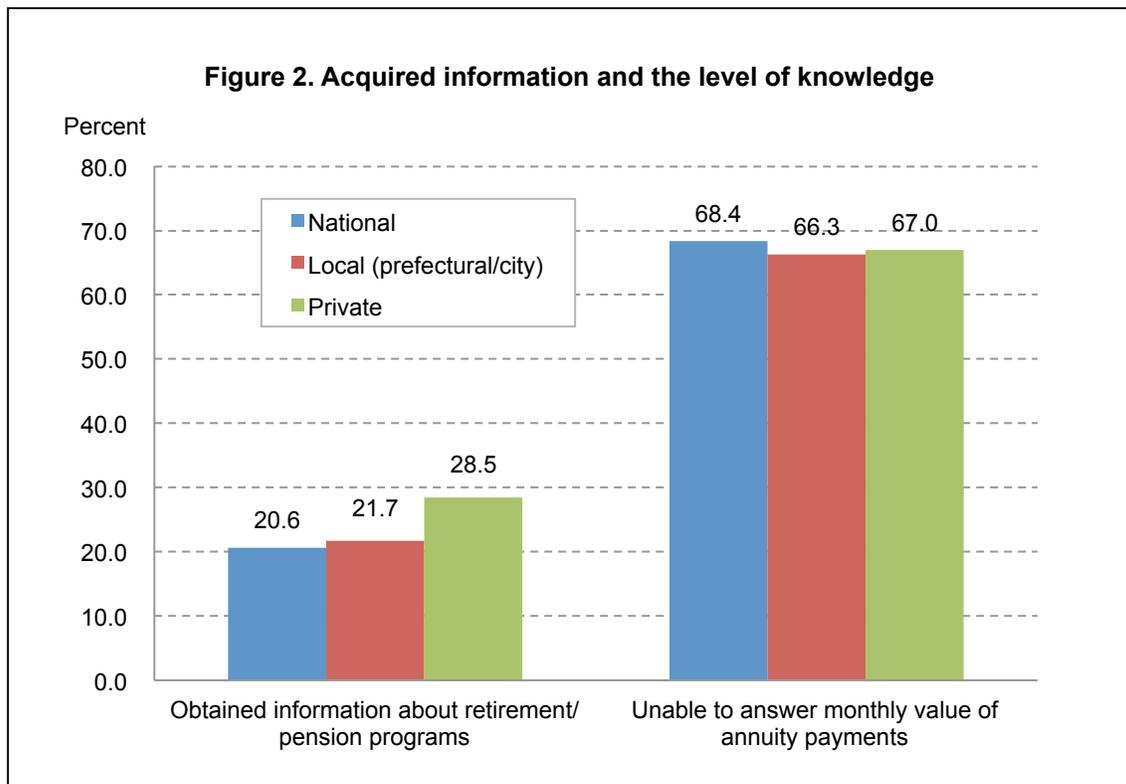
6.1 Descriptive findings by establishment type

Firstly, the survey questionnaire directly asked individual respondents their current perceptions about the necessity for increased information on financial asset management, available retirement and pension programs, as well as ongoing systems for the purpose of planning post-retirement savings. Figure 1 below shows that no significant differences exist among faculty and administrative staff members of national, municipal (prefectural and city), and private colleges and universities located in Hiroshima prefecture, in terms of their urgent needs for improved financial knowledge or related information. It is noteworthy, however, that over 80 percent of

the employees at all types of institutions revealed the necessity of the retirement and pension related information in planning their retirement savings. Only less than five percent in each type required no further information.



Despite the high proportions of university faculty and administrators revealing the necessity of improved relevant knowledge, only less than 30 percent of the employees in each type of institutions actually sought and obtained information on retirement and pension programs from their employers (Figure 2 below). As a result, 68 percent of national university employees were unable to answer the question on the approximate amount of monthly annuity payments that they expect to receive after retirement, and a similar two-thirds of faculty and staff at municipal and private institutions were able to do so.



The questionnaire also asked the respondents a basic question as to their eligibility status for the employer-sponsored retirement savings programs. Surprisingly, nearly half of the national university employees (47.7%) as well as municipal university employees (47.8%) were unable to answer to this simple question (Figure 3 below). In contrast, two-thirds of employees at private institutions were able to give a definite answer to the same question. Nevertheless, our result shows that only less than one-half of the sampled employees in each type of institution positively identified themselves as eligible for employer-sponsored retirement plans. Table 3 also shows that six to eight percent of full-time employees self-identified as ineligible although the benefits are available from their employers.

Figure 3. Eligibility for and availability of retirement benefits

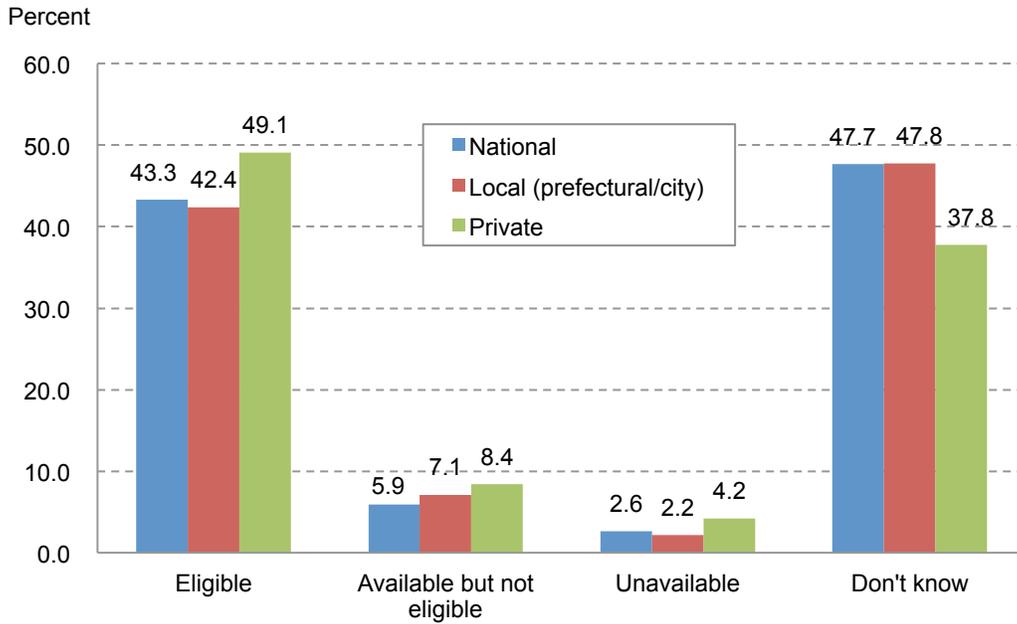
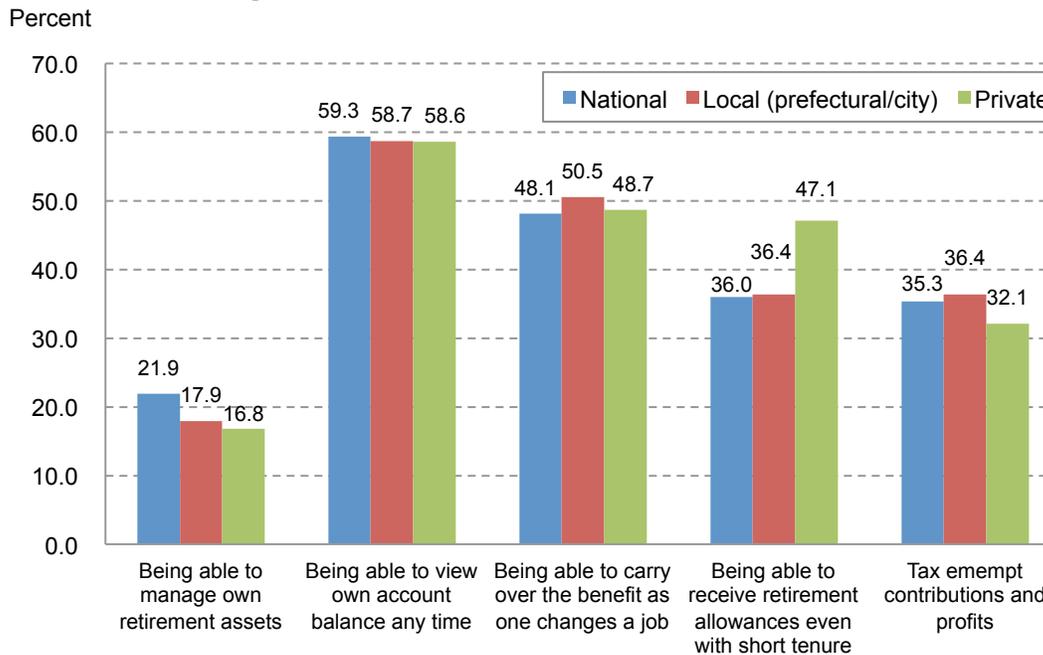


Figure 4. Desirable attributes of retirement benefits

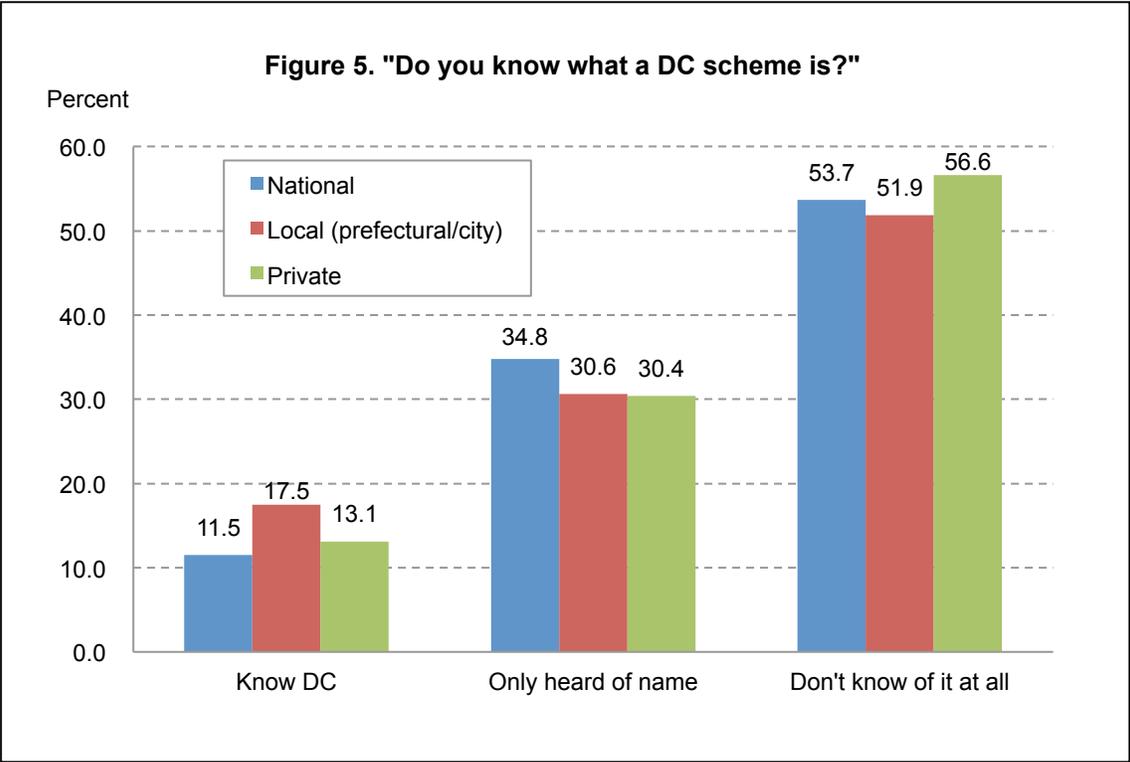


The questionnaire then asked what attributes each respondent would desire if their employers introduced new retirement benefit programs or expanded the current programs. Figure 4 (above) shows that the highest proportions (59%) of the sample at all institution types identified “being able to view own account balance any time” as a desired attribute, which a traditional DB scheme would not offer. Approximately half of the sample of each establishment type also revealed “being able to carry over the benefit as one changes a job” as a desirable attribute, reflecting their higher inclination of career mobility.

A significantly higher proportion (47.1%) of private university employees, in particular, listed “being able to receive retirement allowances even with short tenure” as a preferable characteristic for their retirement benefits, in comparison with lower proportions of their counterparts employed at the national (36.0%) and municipal (36.4%) universities identified it as a favorable attribute. The different perceptions on the concern for the length of service or tenure is perhaps due to a larger proportion of staff being employed on a definite-term contract in private institutions than their counterparts in public colleges and universities. The least favored attribute by all employees regardless of the establishment type was “being able to manage own retirement assets”, reflecting the reluctance to individually manage risk-bearing investment portfolios.

In fact, all the benefit characteristics discussed in Figure 4 are inherently carried by the newly introduced DC scheme, and none of the attributes are generally equipped with the conventional DB retirement plans. In response to a question inquiring about

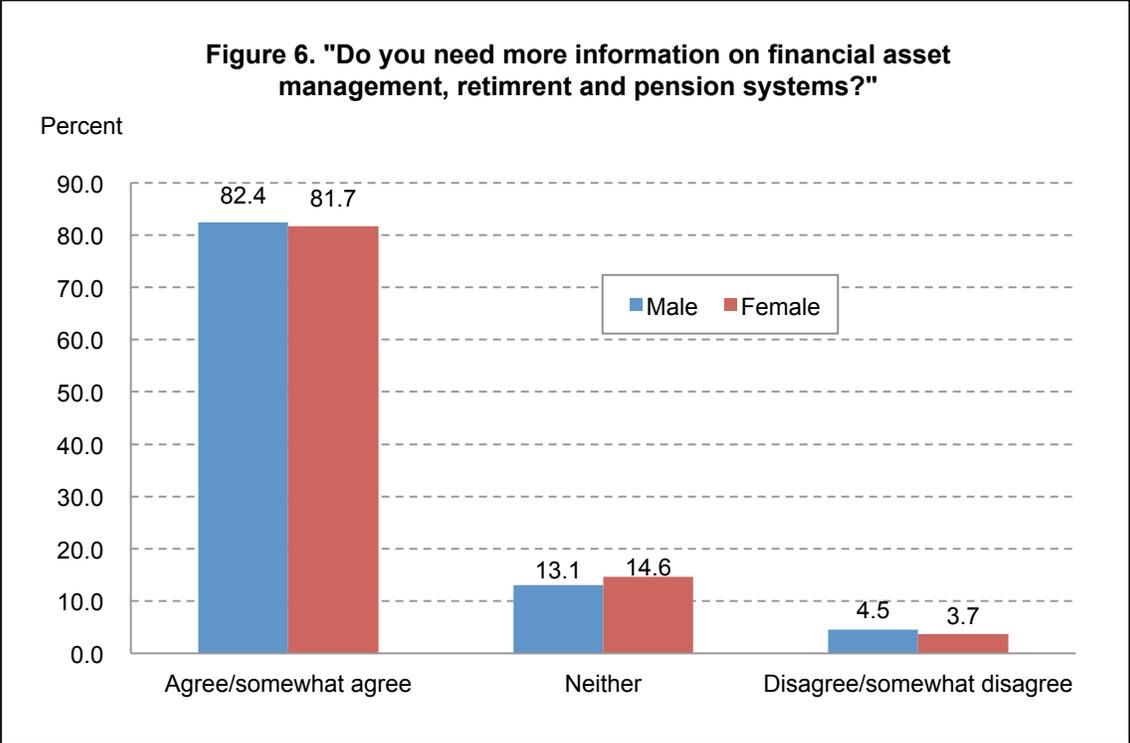
the familiarity with this new DC scheme, however, only limited proportions of employees at all types of institutions (*i.e.*, 11.5%, 17.5%, and 13.1% at national, municipal, and private institutions, respectively) were positively familiar with the DC scheme, and nearly 30 percent possessed very limited knowledge about the new scheme (Figure 5). More than a half of the sample of each institution type did not know at all what a DC scheme was.



6.2 Descriptive findings by gender

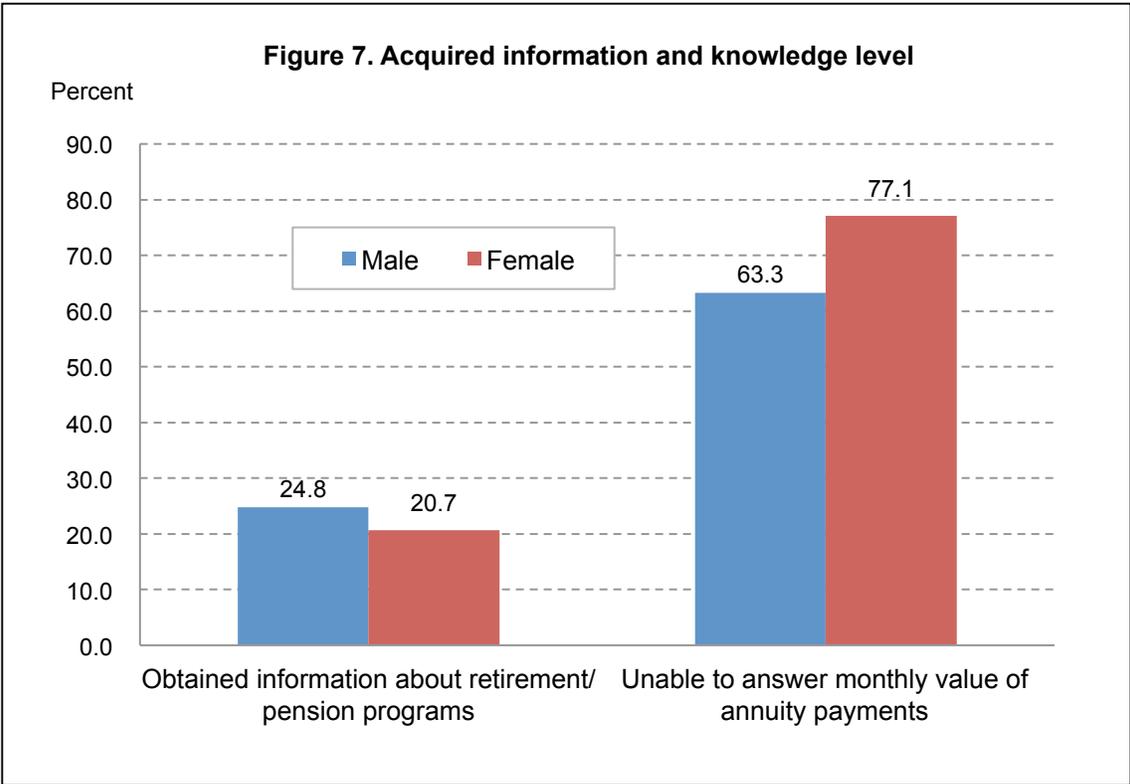
Our preliminary and descriptive findings suggest that no significant male-female differential exists in terms of their perceptions on necessity for financial information in preparation for their retirement savings. Figure 6 demonstrates that high

proportions of both male (82.4%) and female (81.7%) full-time faculty and administrators responded positively to the question inquiring on the necessity for the related information. In contrast, very few respondents in the sample, *i.e.*, 4.5 percent of male and 3.7 percent of female employees, were satisfied with their knowledge of financial asset management as well as retirement and pension-related information currently held.



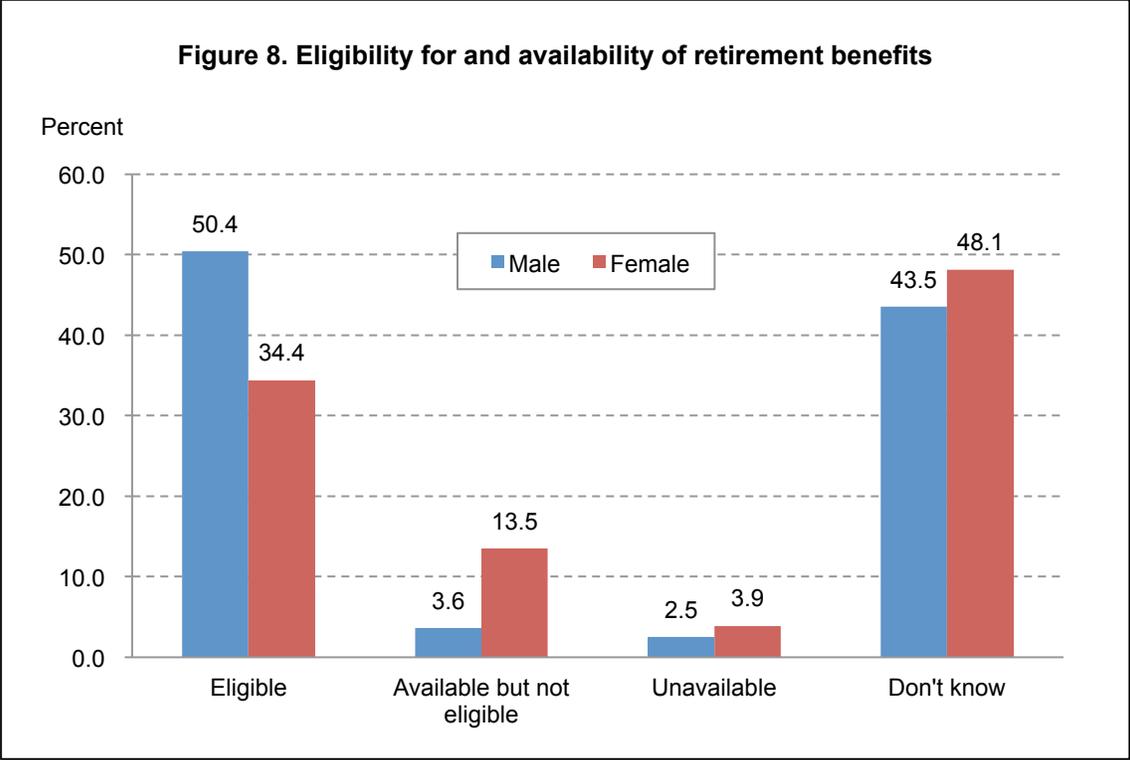
Despite the similar perceptions found for both genders, however, our data suggest a significant gender gap as to their understandings on expected receipts of monthly annuity payments. Figure 7 (below) shows that 77 percent of female full-time faculty and administrative staff members failed to respond with their clear expectation to a question inquiring the monthly value of annuity payments, while 63 percent of male

counterparts failed to do so. The figure also shows that a slightly smaller proportion of female employees obtained from their employers information with regard to their retirement and pension programs.



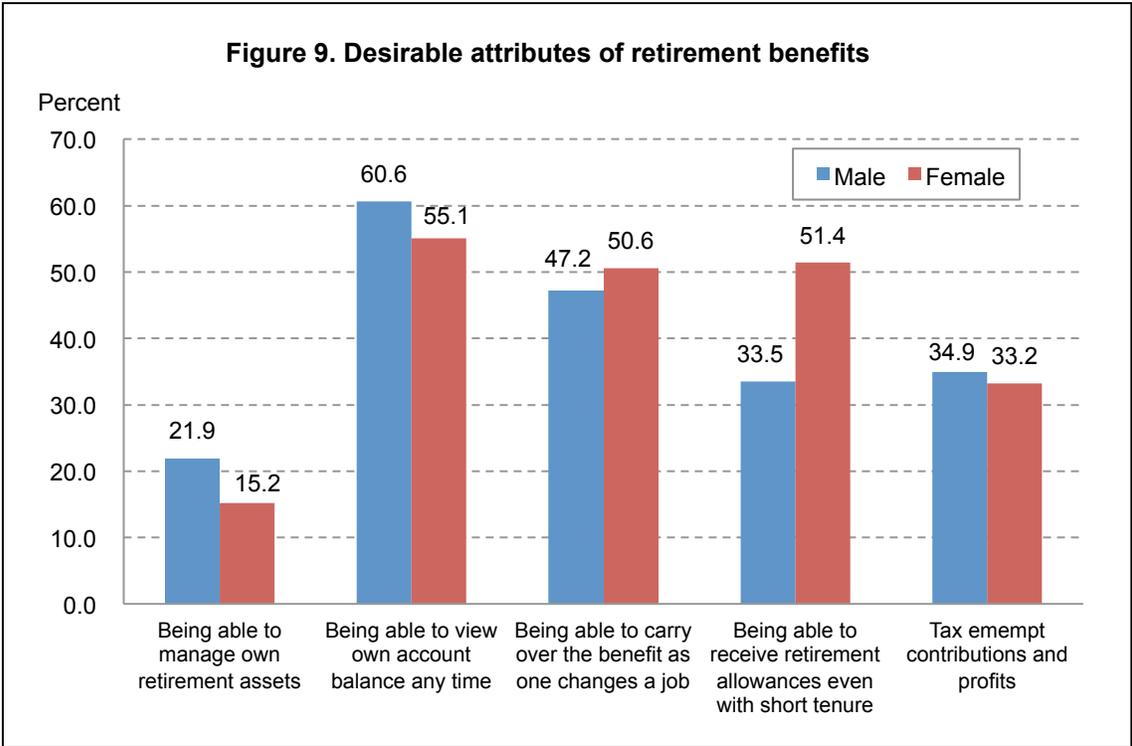
Perhaps more importantly, a significant gender differential was found in the status of eligibility for employer-administered retirement benefits which provide lump-sum retirement allowances and annuitized payments after retirement. As shown in Figure 8 below, although one-half of our male respondents are eligible employees, only a third of the female counterparts identified themselves as eligible for employer-sponsored retirement benefits. Furthermore, over 13 percent of the female sample self-identified as non-eligible employees albeit the retirement benefits are available at their

institutions, whereas four percent of their male colleagues identified themselves with such a limited contract. The result also demonstrates that a critically large proportion (48.1%) of female employees did not know whether they are eligible for the benefits or not, while 44 percent of males responded similarly.



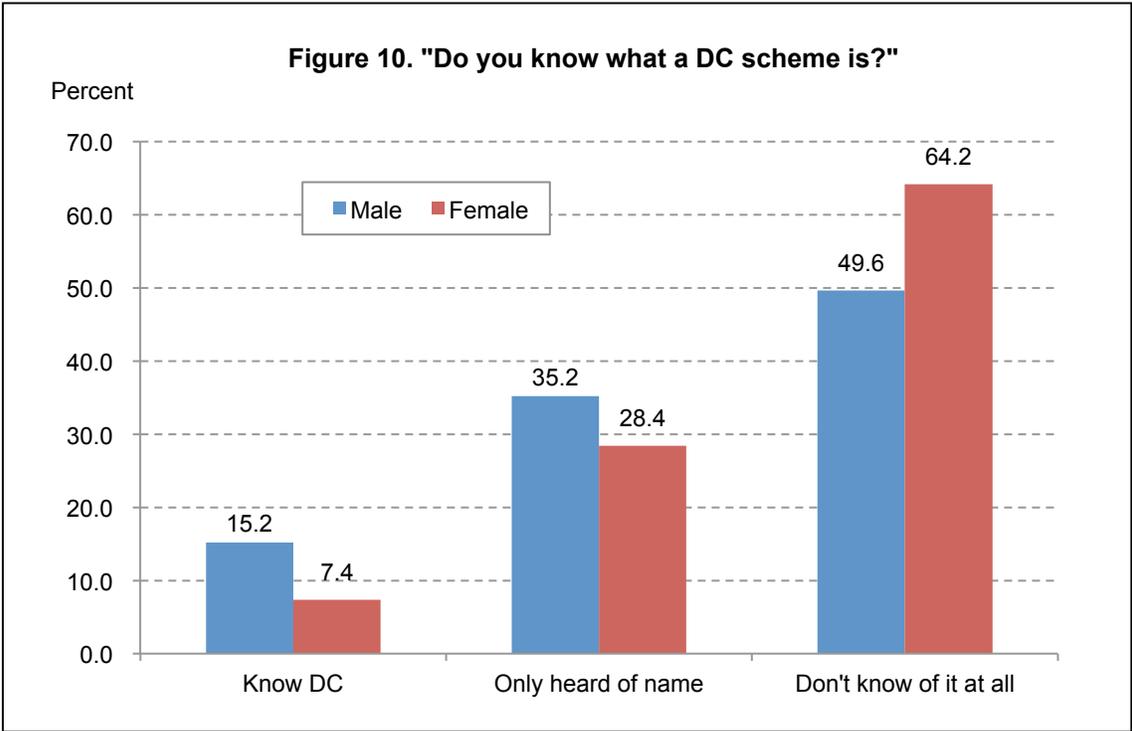
Our descriptive finding presented in Figure 9 (below) suggests that female faculty and administrative staff members particularly favor benefit attributes such as “being able to receive retirement allowances even with short tenure” over their male counterparts (51.4% of female and 33.5% of male samples) and “being able to carry over the benefit as one changes a job” (50.6% female and 47.2% male). A relatively larger proportion of male employees in contrast tend to favor such attributes as “being able to manage own retirement assets” than female counterparts (21.9% versus 15.2%) and

“being able to view own account balance anytime” (60.6% versus 55.1%). These results are consistent with the findings by Watanabe (2010b) which analyzed the Japanese workers employed at small- to medium-sized private firms and identified different tendencies between genders in their preferences for various characteristics carried by DC pension schemes.



In response to the question which inquired whether the respondents are familiar with the DC scheme, nearly two-thirds (64.2%) of female respondents did not know exactly what a DC scheme was, whereas only a half (49.6%) of male counterparts fell in the same category (see Figure 10 below). Only limited proportions of male (15.2%) and female (7.4%) samples responded with definite familiarity with the scheme. Mitchell (1988) points out the possibility that the lack of information impedes

individuals from making optimal decisions on their annuity choice. Therefore, the male-female difference in relevant knowledge has important policy implications for future income distribution and poverty among the coming generations of elderly Japanese.



6.3 Descriptive findings by age group

Figure 11 (below) shows no significant differences existing among different age groups, in terms of the perceived necessity for information directly related to financial asset management, retirement and pension programs. However, similar to the descriptive findings presented for the establishment type and gender, more than 80 percent of all age groups revealed that they need more information in this respect in preparation for their retirement savings.

Figure 11. "Do you need more information on financial asset management, retirement and pension programs?"

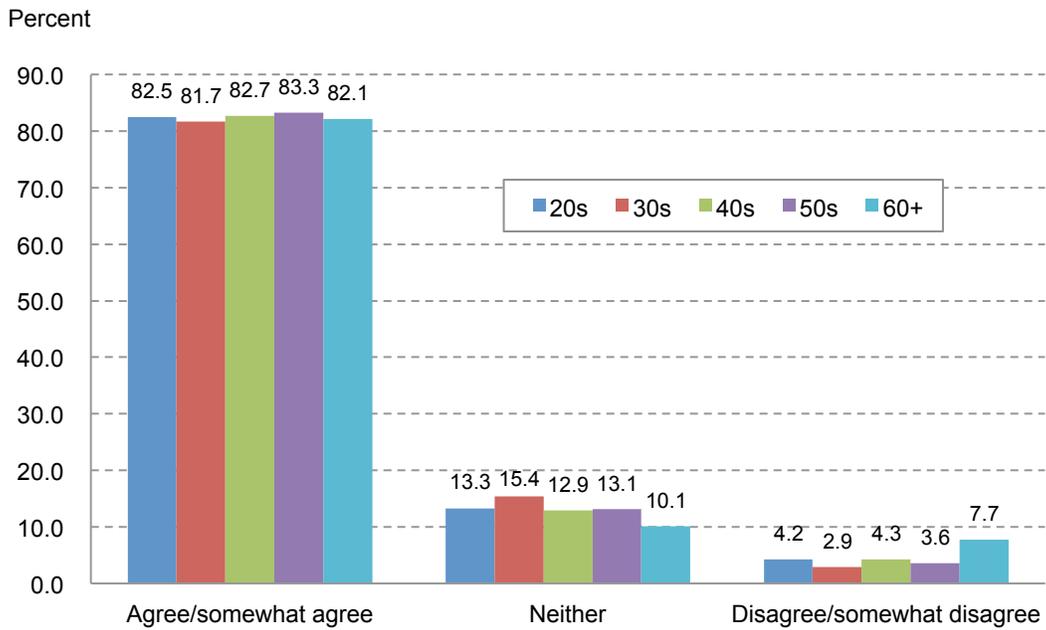
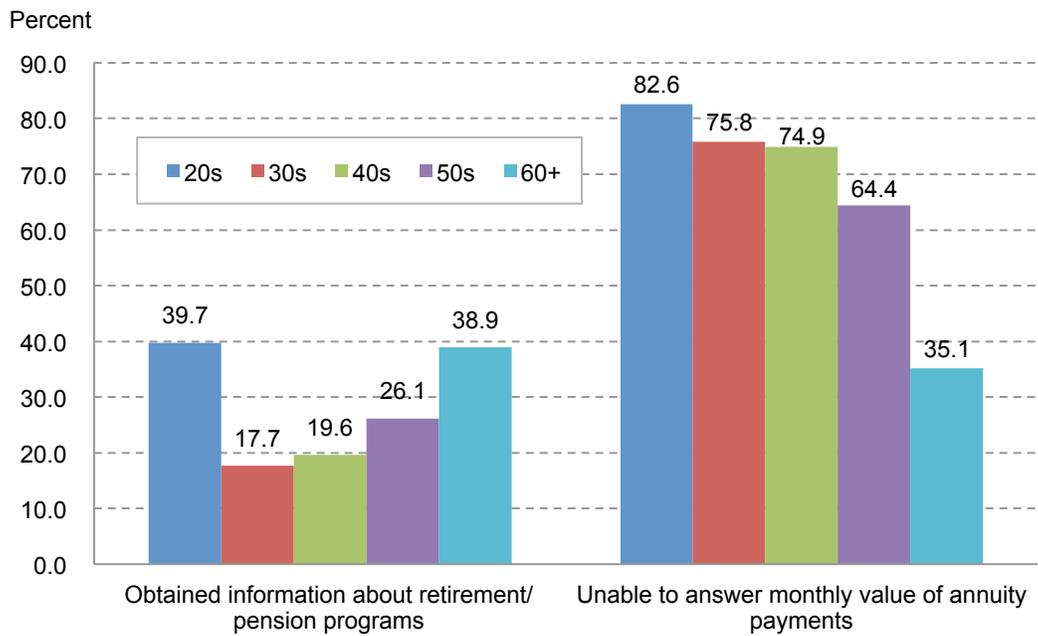
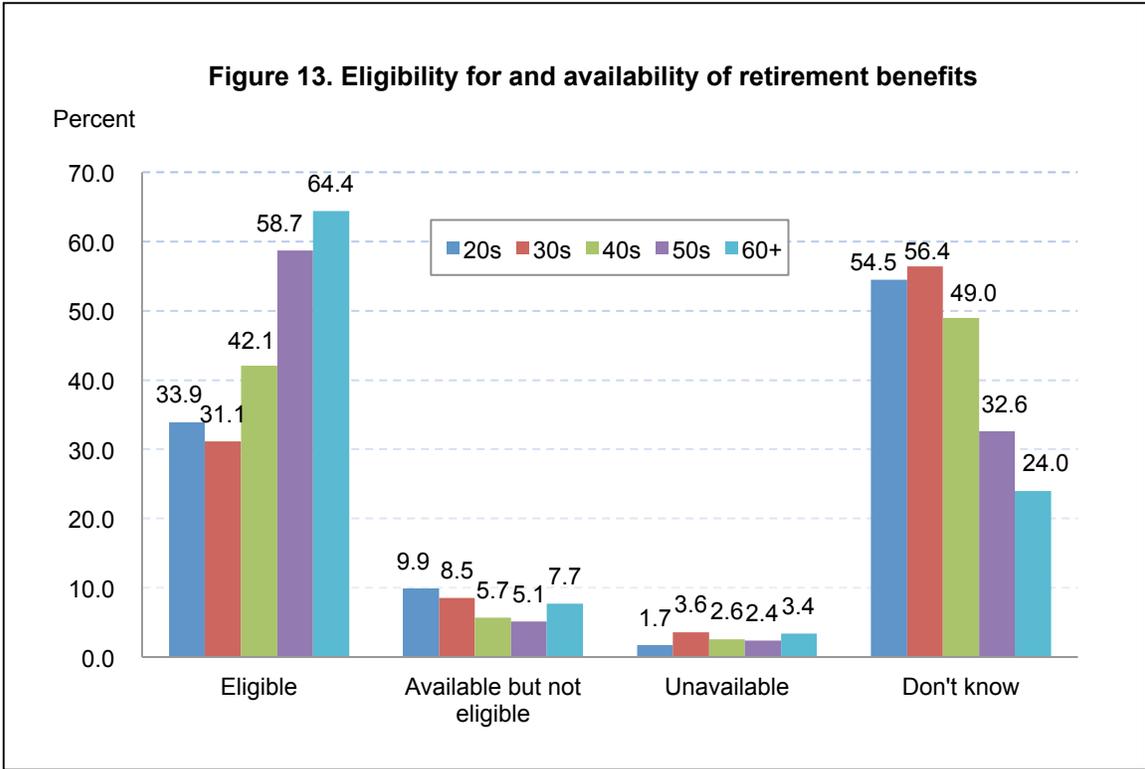


Figure 12. Acquired information and the level of knowledge

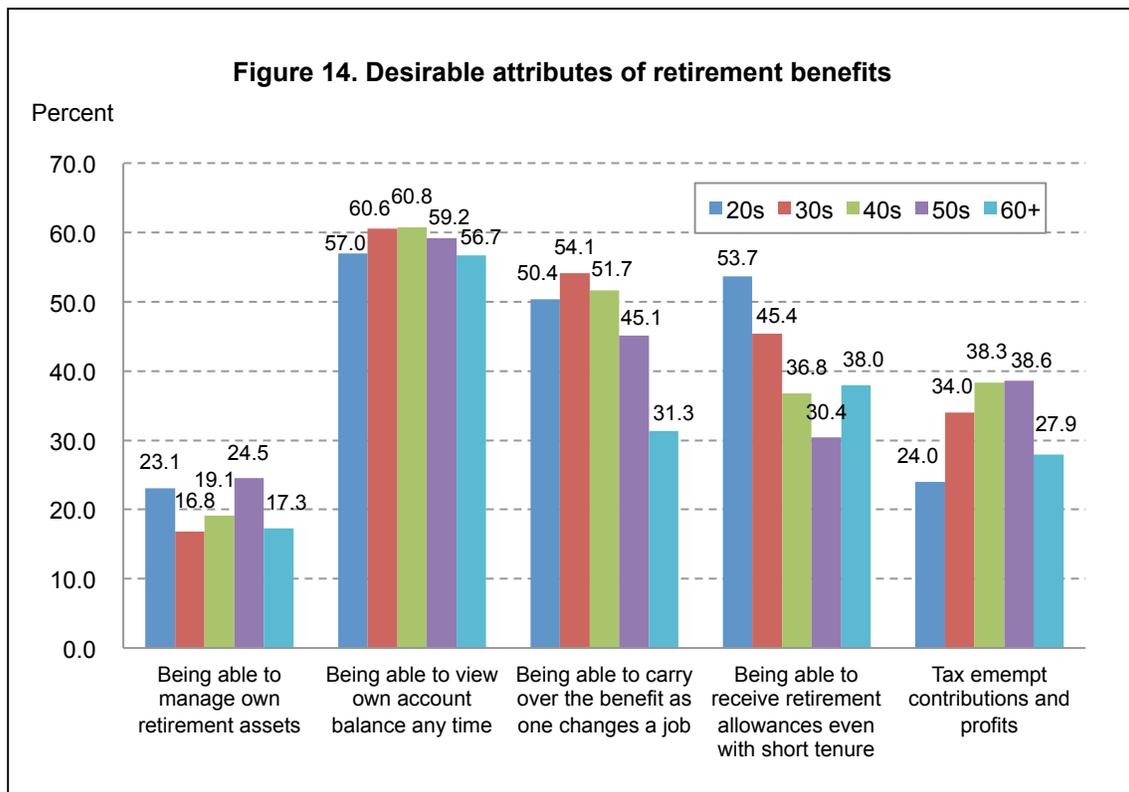


In Figure 12 above, a decreasing trend is identified among different age groups in the proportions of respondents being unable to answer the expected approximate value of monthly annuity payments. The result clearly indicates that the older cohorts are better informed and knowledgeable about their future benefits than the younger cohorts. Although more than one-third (39.7%) of the youngest cohort obtained information related to their retirement benefits and pension systems, the highest proportion (82.6%) of the cohort was still unable to give the approximate value of future monthly pension receipt. The result implies that there exists a gap between the contents of information they obtained and how precisely the knowledge is related to their future needs. In Figure 12, full-time faculty and administrators in their 30s were identified as the most passive or unmotivated cohort with only 18 percent having

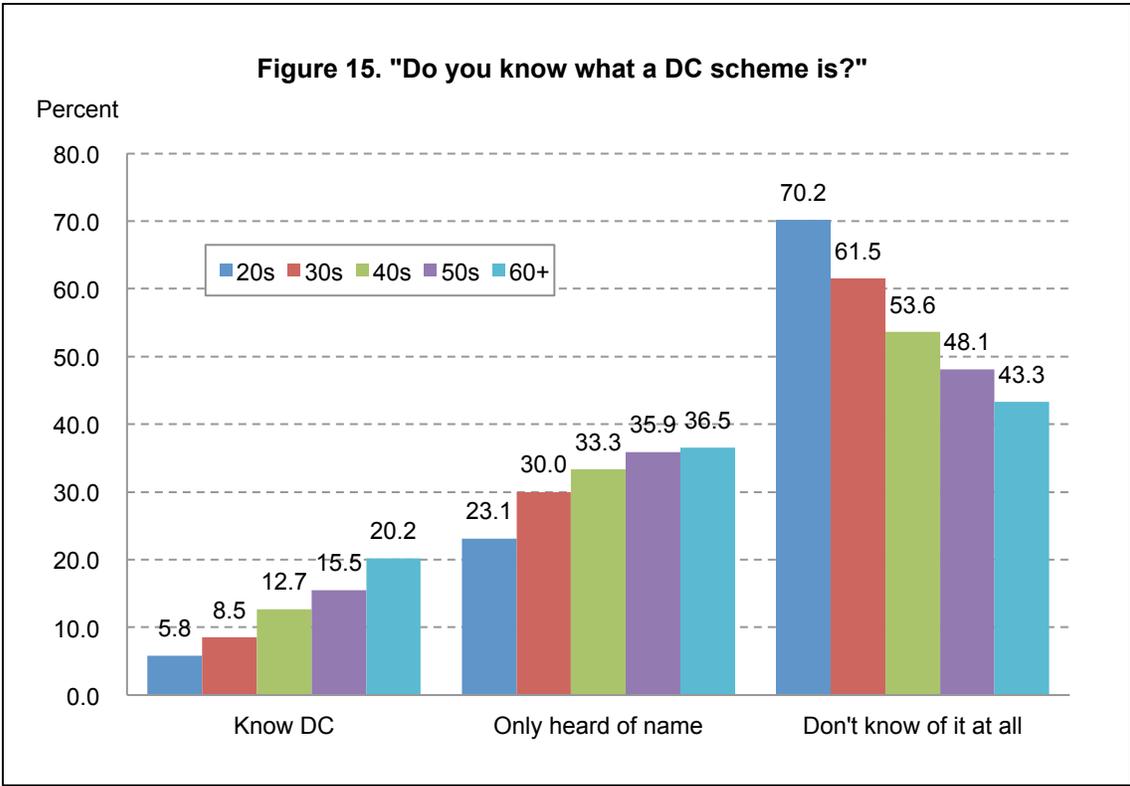


sought information on retirement and pension programs from their employers.

Figure 13 (above) illustrates that more than half of younger cohorts (54.5% and 56.4% for age group 20s and 30s, respectively) failed to answer whether they are eligible for the retirement benefits sponsored by their employers, whereas approximately a third of the same cohorts (33.9% and 31.1%) responded with an eligible status. The oldest cohort (age 60+) was more knowledgeable than any of their younger cohorts with regard to their understanding about eligibility status, with nearly two-thirds (64.4%) positively self-identifying as eligible whereas only a quarter (24.0%) failed to provide a definite answer.



Overall, large proportions (57-61%) of respondents in all age groups identified “being able to view own account balance any time” as a desirable attribute of retirement benefits (Figure 14). Moreover, the younger cohorts, particularly employees in their 20s (50.4%), 30s (54.1%), and 40s (51.7%) favor “being able to carry over the benefits as one changes a job” than their older cohorts. Furthermore, the youngest cohort (20s age-group) of employees favor “being able to receive retirement allowances even with short tenure” (53.7%), whereas less than 30 percent of older cohorts favor this attribute (36.8%, 30.4%, and 38.0% for age groups 40s, 50s, and 60+).

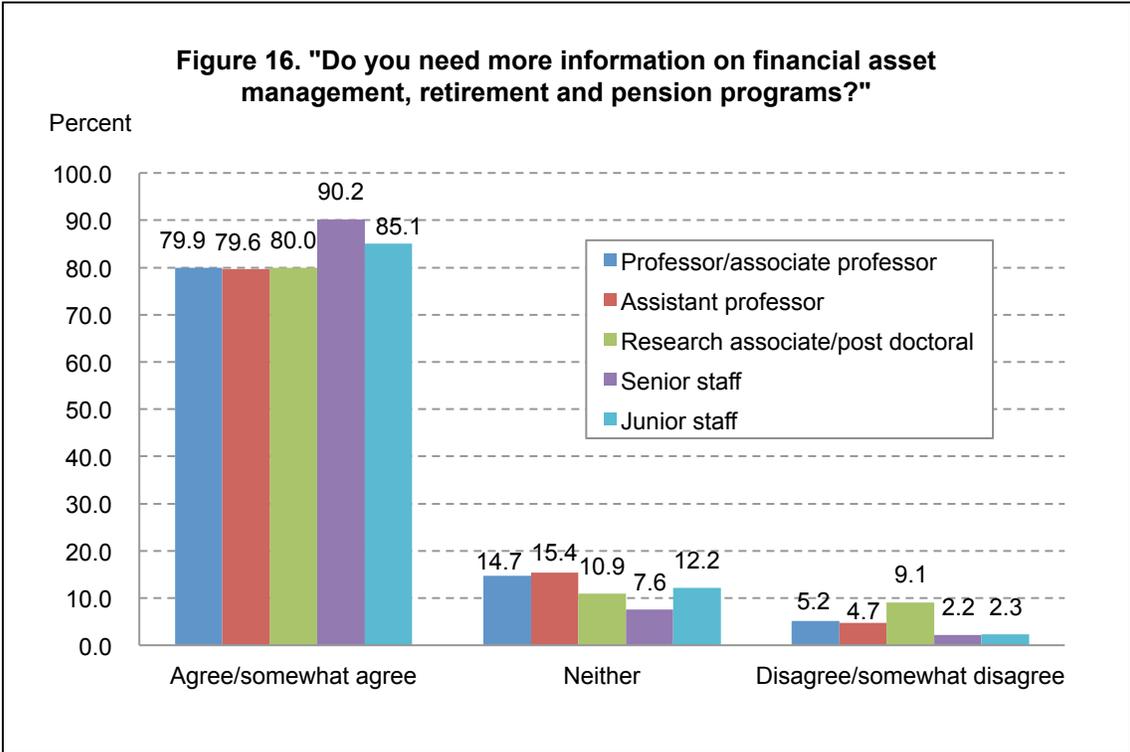


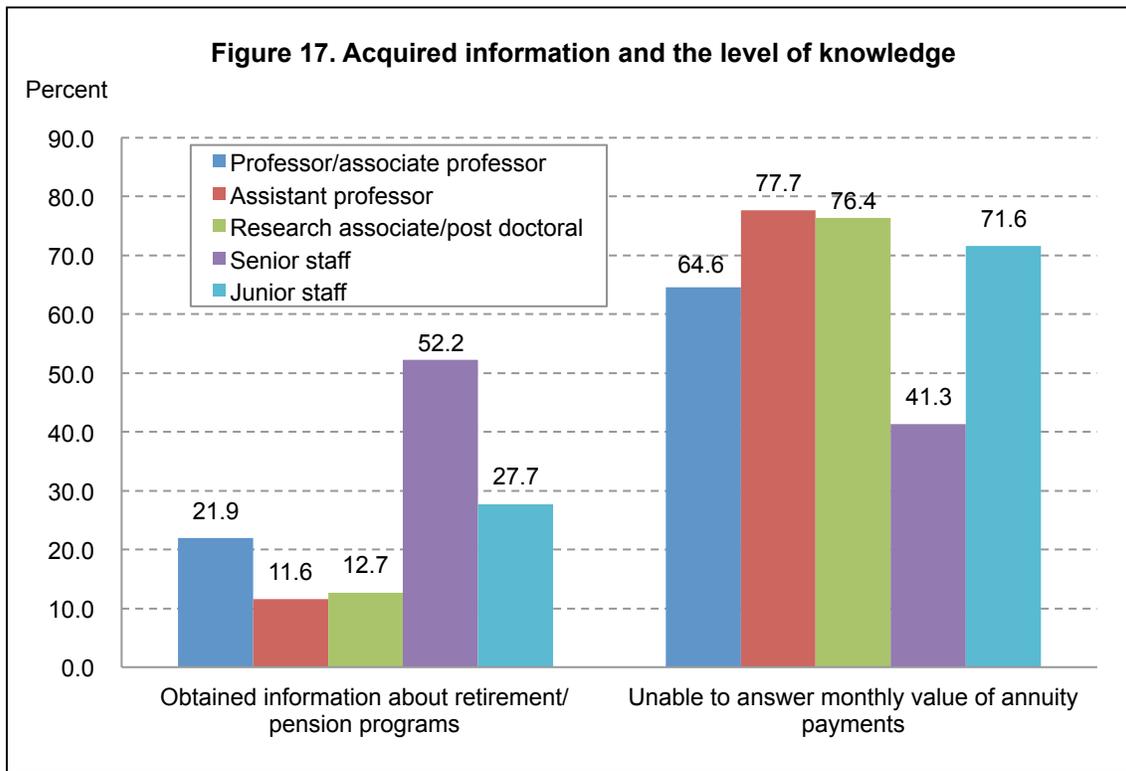
Finally, the proportions of employees who are familiar with the DC scheme increase with age as demonstrated in Figure 15. Only small proportions of employees

in the younger cohorts answered that they know what a DC scheme is (5.8% among 20s and 8.5% among 30s) however, while one-fifth of the oldest cohort (age 60+) responded positively to the question. The proportions of those who did not know at all what the DC pension scheme is conversely decline with age.

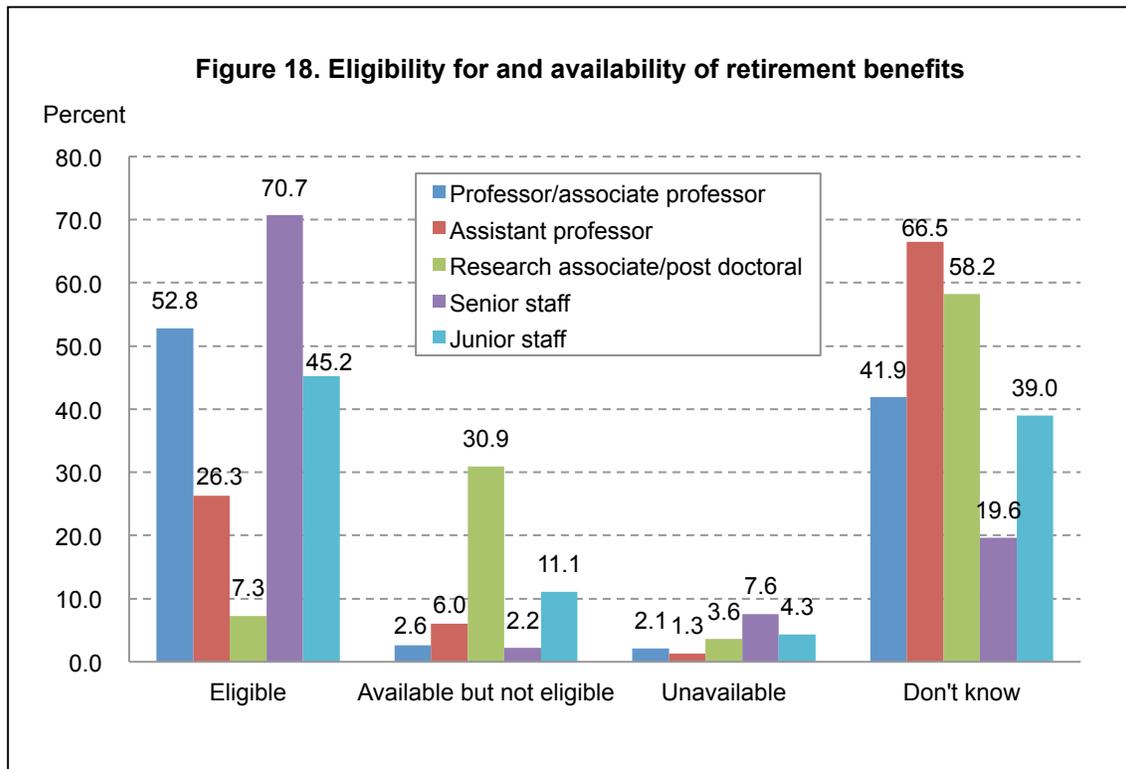
6.4 Descriptive findings by job category and rank

The largest proportion of senior administrative staff members (90.2%), in particular, reveal their urgent needs for increased information on financial asset management, retirement and pension programs (see Figure 16 below). However, the figure shows that the lack of information is in general commonly perceived by the majority of employees, regardless of their job category and/or rank.





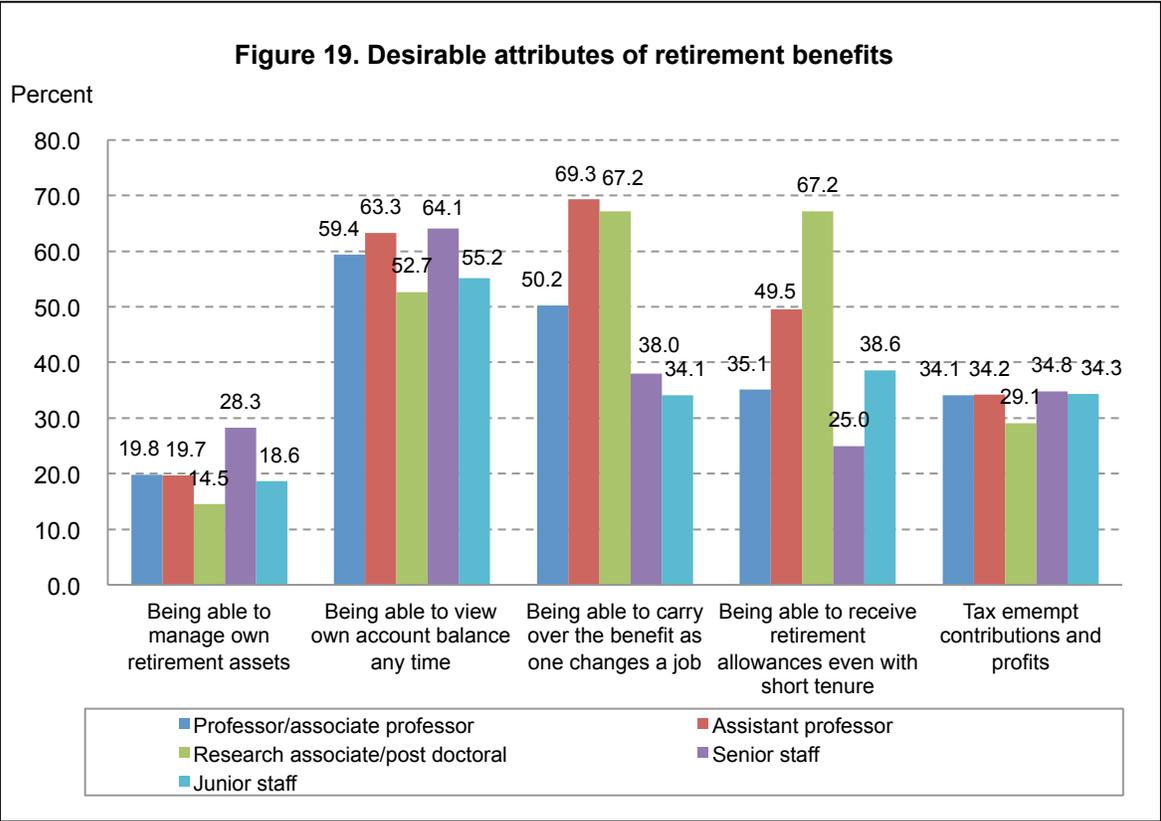
Despite the highest proportion of senior administrators revealing their needs for an increased amount of information, Figure 17 above demonstrates that the senior staff members were also highly motivated group of employees on campuses, with regard to gathering retirement and pension-related information. More than one half of senior administrators (52.2%) sought relevant information from their employers, while significantly smaller proportions (e.g., 11.6% for assistant professors and 12.7% for research associates and postdoctorals) of employees in other job categories and ranks previously sought the similar information. As a result, a significantly smaller proportion (41.3%) of the senior administrators failed to give the predicted amount of monthly pension payments than their colleagues of other job categories and ranks.



The survey results suggest that junior faculty and researchers critically lack knowledge on their own retirement benefits. Figure 18 shows that two-thirds (66.5%) of assistant professors did not know whether they are eligible or not for employer-sponsored retirement benefits or whether such benefits are available from their employers. Only a quarter (26.3%) of assistant professors responded that they are eligible for employer-sponsored retirement programs. Similarly, only seven percent of research associates/postdoctoral researchers identified themselves as eligible, whereas 58 percent failed to answer whether they are eligible employees or the retirement benefits are available from the employers. Perhaps more importantly, research associates and postdoctoral researchers may be placed in disadvantageous positions without organizational support for securing post-retirement income sources.

Nearly one-third (30.9%) of the junior non-faculty researchers responded that they are not eligible for employer-administered retirement benefits even though such benefits are available at the employing institutions.

These results highlight that entry-level faculty and junior researchers, who are perhaps most inclined to change employers due to their non-tenured status, are not necessarily as well protected by the long-term organizational effort in preparing for their future retirement spending as their non-faculty colleagues as well as senior ranked faculty members. In contrast, senior administrators are much better off in this respect with more than 70 percent responding eligible for retirement savings programs and only 20 percent being unable to answer the eligibility status question.

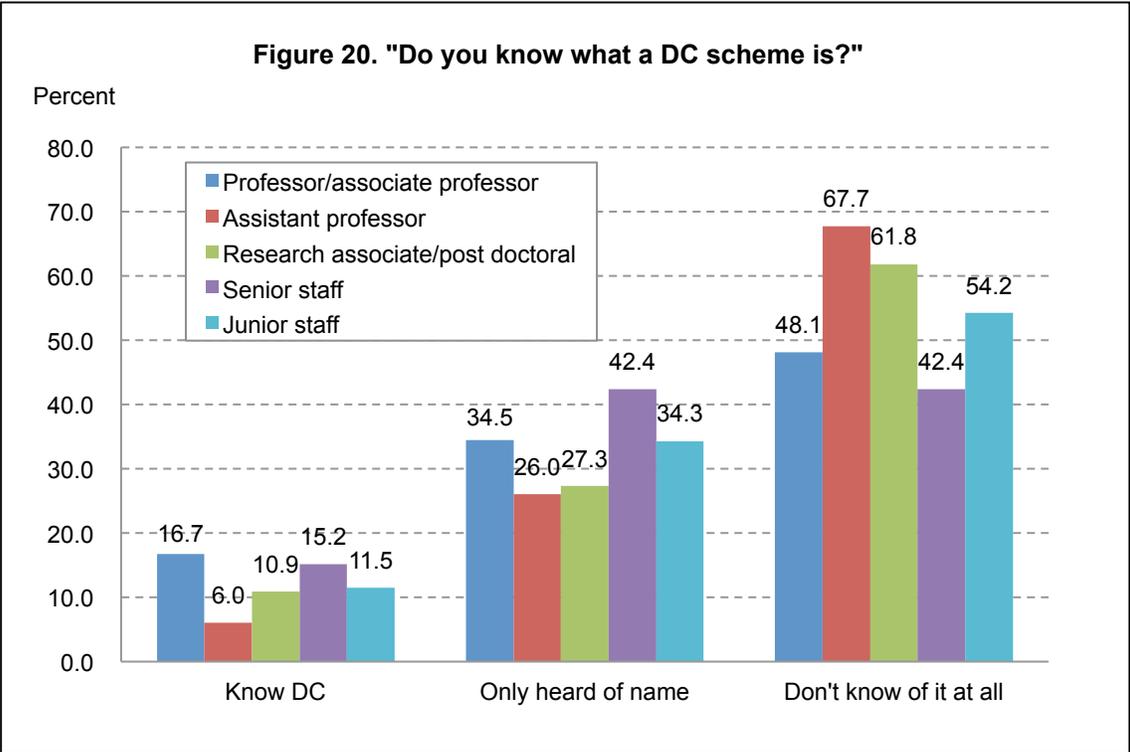


As shown in Figure 19 (above), research associates/postdoctoral researchers are also concerned about the nature of their short-term employment contract, in relation with their retirement benefits. Two-thirds (67.2%) of this group responded “being able to receive retirement allowances even with short tenure” as a desirable attribute of a retirement program. The same proportion of the junior researchers also identified “being able to carry over the benefits as one changes a job” as a desirable characteristic of a retirement program. Similarly, nearly 70 percent (69.3%) of assistant professors also identified the merit of “portability” as a desirable attribute. Both senior administrators and junior staff members seem to be less concerned about the portability of the benefits, owing perhaps to their smaller probability of changing employers than faculty members.

These results suggest that junior faculty and researchers who have not obtained tenured status are particularly concerned about the “vesting” requirement as well as the portability of the benefit as their employment contract terminates due to their non-tenure track career or the possibility of being unable to obtain tenure as a faculty member. Reinforcement of their long-term benefits is also an urgent matter as increasing proportions of junior faculty and researchers in Japanese colleges and universities are placed in limited-term or non-tenure track positions.

Consistent with the findings presented in Figure 18, junior faculty and researchers also lack their knowledge on the newly introduced DC retirement scheme (Figure 20). Over 60 percent of research associates and postdoctorals as well as 68 percent of assistant professors did not know what a DC scheme is, more than ten years after the

introduction of the scheme by the central government.



7. Some implications and thoughts

In this section, we summarize our main findings obtained from the survey results and draw some implications on individual preferences and employee knowledge on retirement benefits, financial volatility, as well as faculty productivity and retirement incentives, through comparisons between alternative schemes in Japan, the U.S. and the U.K.

7.1 Individual preferences and relevant knowledge

Accurate understanding of the factors affecting individual preferences for

alternative options, *e.g.*, between DB and DC schemes or a choice of annuity versus a lump-sum cash-out, is imperative for devising a new pension scheme which equally provides a post-retirement savings opportunity for all employed individuals. Although a portable retirement account may be considered a beneficial feature for an increasingly mobile workforce in Japan, DC savings plans typically entail investment risk and uncertainties due to the volatile nature of the financial markets.

Clark and Pitts (1999), using a sample of faculty members at North Carolina State University, show that workers in the academic labor market tend to strongly prefer DC plans over DB pensions. Clark and Pitts attribute their finding to the faculty members trying to reduce mobility risk associated with the loss of pension benefits inherently embedded in the conventional DB plans. However, their findings indicate that older new hires are more likely to choose the DB plan and that there is a strong trend over time toward greater enrollment in the DC options although various factors such as mobility expectations, college of appointment, and faculty rank also influence individual choice of plan type.

Similar studies on individual preferences for different pension options are nearly nonexistent in Japan. Watanabe (2010b), using a dataset with a sample of full-time workers employed in small- to medium-sized private firms, examines the preferences for DC pension plans and finds that both male and female workers prefer a DC plan to the DB alternative in response to its portability benefit. However, Watanabe's finding also provides evidence that Japanese female full-time workers are less likely than their male counterparts to choose a DC plan over DB pensions due to the associated

investment risk and uncertainty.

As for the sample used in this report, a higher proportion of female faculty and administrators in Japan tend to favor such benefit attributes as “being able to receive retirement allowances even with short tenure” and “being able to carry over the benefit as one changes a job” more than their male colleagues, but they also tend to shy away from cumbersome management of investment portfolios. The result implies that simply introducing a new DC scheme in the higher education industry in Japan would not automatically raise the DC enrollment rate for female faculty and administrators. Similar tendencies were also found among younger cohorts, particularly junior faculty and researchers desiring the short “vesting” requirement and “portability” of the benefits. While male and older cohorts are generally better informed and more knowledgeable about their retirement benefits and pension systems, female and younger cohorts seem to critically lack the relevant knowledge necessary to make the optimal decisions. Moreover, the results commonly show that smaller proportions of female, junior faculty/researchers, and postdoctorals identified themselves as eligible for employer-administered retirement plans, than their male and senior colleagues. Therefore, reinforcement of relevant knowledge as well as the eligibility status for these employees is essential to help them make well-informed decisions over the longer horizon of their careers.

Although further investigation on individual preferences and relevant knowledge is required for the employees of Japan’s HEIs, reduction in mobility risk is definitely an important policy agenda as Japan’s academic labor market becomes increasingly

dynamic with more terminal or non-tenure track appointments, particularly among the younger cohorts. Efforts to integrate the currently segmented DB pension programs for public and private institutions would certainly add the portability feature, while the financial liabilities may be shared by the sponsoring-employers and employees through implementation of a hybrid plan with combined features of DB and DC schemes.

7.2 Financial volatility

The financial health of institutional pension funds has been severely struck and damaged on the global level due to the recent financial crisis. The impact of the market crash could be particularly ruthless for DC account holders who are approaching retirement age as the significant losses caused in their retirement accounts cannot likely be replenished in the remaining years of their active career. Based on a simulation result, Butrica et al. (2009) project that 26 percent of last wave boomers who were born between 1961 and 1965 in the U.S. would have lower family incomes at age 67 and 10 percent of them would experience at least a 5 percent decline.

The damage of the economic turmoil in the global financial markets has affected some of the leading institutions of higher education in the world. For example, Harvard University, which holds the largest endowment of all the US institutions, suffered investment losses of approximately 22 percent between July 1 and October 31, 2008. The pre-crisis value of Harvard's endowment was \$36.9 billion as of June 2008, and the value lost due to the market crash in this short period is estimated by Harvard

Management Company as equivalent of \$8 billion.¹³ Most leading universities in the U.K. have also suffered significant losses. According to the Chronicle of Higher Education issued on December 12, 2008, “the endowments of Britain’s top universities have suffered losses of at least £250-million (\$373-million) in the current economic crisis,” and “the Universities of Cambridge and Oxford, whose endowments were valued at £907-million (\$1.4-billion) and £680-million (\$1-billion), respectively, in July, are understood to be the biggest losers.”

Although the potential danger of financial volatility is widely recognized by the institutions and their employees, investment risk and liabilities cannot be completely swept away. Financial liabilities of the DB scheme could be burdensome for benefit-sponsoring employers in Japan and the U.K., but DC plans offered by many US institutions shift investment risk from institutional members to individual benefit participants, which creates uncertain environments for employees of colleges and universities in planning for their golden years. In our survey result, only a handful of respondents, generally less than one-quarter of the sample regardless of establishment type, gender, age group, and job category/rank, listed “being able to manage own retirement assets” as a desirable attribute for their retirement plans. This perhaps reflects both the reluctance and anxiety of these individuals in handling cumbersome and risky investment of their retirement portfolios. Thus, examining whether a balanced mix of shared risk and liabilities between two parties can be reached through the current or alternative plans is a critical area for future research.

¹³Financial update released on December 8, 2008 by Harvard University’s Office of President, http://president.harvard.edu/speeches/faust/081202_economy.php.

7.3 Faculty productivity and retirement incentives

Retirement systems in Japan and the U.K. critically differ from that of the U.S. as mandatory retirement ages are still legally used in the former countries, while setting such an age is prohibited by law in the U.S. In this short sub-section, we consider faculty efforts on improving productivity towards the closing stage of the academic career and the incentive to retire.

In the United States, a special exemption from the 1986 Age Discrimination Act legally allowed colleges and universities to enforce the mandatory retirement of faculty members at age 70 until 1994. Ashenfelter and Card (2002), using a survey that permits comparison of faculty turnover rates before and after the law enforcement at a sample of DC-providing institutions, find that the retirement rates of 70- and 71-year-olds fell by two-thirds after the elimination of compulsory retirement. Based on this result, Ashenfelter and Card conclude with a projection of a rise over the coming years in the number of older faculty members in US colleges and universities. Clark and Ghent (2008) also obtained a similar result using a dataset from the University of North Carolina system.

As an interesting and contrasting case, the University of California offered its older and longer-service employees financial incentives to leave the institution in response to budgetary shortfalls experienced in the early 1990s. Pencavel (2000) used a dataset from this period and estimated that an individual presented with 10 percent higher severance benefits has a 7-8 percent higher probability of quitting, although he acknowledges that quit probabilities are very difficult to forecast with accuracy.

Similarly, Kim (2003) used samples of several hundred faculty members at the University of California and examined whether professors' research productivity was related to the acceptance of early retirement incentives. His finding shows that professors who slowed down on research later in their careers were more likely to retire early, although their overall research productivity was not related to early retirement.

Over the past few years, many colleges and universities in Japan, particularly in the public sector, have extended their mandatory retirement ages of faculty members. The preceding findings in the U.S. therefore suggest that the extended retirement age in Japan may also increase the number of "self-selecting" older faculty cohorts in the future, who would continue to demonstrate high productivity in their research activities. However, the prolonged career of senior faculty members also raises the dilemma of squeezing the career opportunities for younger researchers and educators. Our current data set shows that the respondents desire to retire on average at the age 63.6, which is perhaps close to the actual retiring age of many employees in Japanese colleges and universities today. Whether and to what extent the actual retiring age is linked to the stretched mandatory retirement age is an important future agenda of retirement and pension policies as it directly affects the final amount of the benefits paid and received.

8. Conclusions

The accumulating process of retirement savings, as Butrica et al. (2009) discuss, requires deliberation of complex factors that may vary with labor market experience as

represented by the level of earnings and job changes over time as well as market fluctuations in housing and stock prices, and simple individual preferences, among other factors. The impact of reforms in pension provisions on retirement well-being of future retirees could be significant, particularly in today's economic turmoil, and mechanisms to reduce financial risk and liabilities in retirement assets are strongly called for in order to build a sustainable pension system.

Considering that the complete termination of DB plans in favor of the newly implemented DC scheme is a rare event for US organizations (Ippolito and Thompson 2000), a drastic switch of the offered plan types by Japanese colleges and universities may not be a realistic scenario. The Committee on Retirement of the American Association of University Professors initiated its first retirement policies survey in 2000 to address a lack of reliable and systematically collected information on retirement policies and practices across US institutions of higher education. Similar efforts toward accurately understanding the institutional policies on pension provisions and individual preferences for asset magnifying vehicles must be made in order to design a sustainable scheme that meets the needs of Japan's colleges and universities as well as their employees. In order to address these research agendas, we conducted a survey questionnaire which is expected to fill the deficiency in the knowledge of optimal retirement and pension systems for the community of higher education in Japan.

The current data set contains a number of important variables and information that are not used in this report. The results are preliminary and restrictive in the

sense that all the findings discussed in the report are based on descriptive and categorical analyses of the selected variables. Further scrutiny of these variables with more rigorous and advanced multivariate methodologies, capitalized on the preliminary findings, is certainly required and is under way in order to develop more reliable and profound discussions on the critical issues raised in this report.

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Appendix

Table A1. Survey questions and descriptive statistics of the raw data

	Questions & responses	Frequency	Max	Min	Mean
Q.1	What is your perception about the necessity of information on financial asset management, retirement and pension programs? (Choose only one)				
	1. Definitely necessary/necessary	1,333	1	0	
	2. Unnecessary/definitely unnecessary	69	1	0	
	3. Neither	219	1	0	
	Total	1,621			
Q.2	Have you ever obtained information on the items listed below from institution of employment? (Choose all that apply)				
	1. Public pension, medical/health insurance programs	484	1	0	
	2. Employer-administered retirement/pension plans	383	1	0	
	3. Preparation for retirement savings	73	1	0	
	4. Financial commodities and investment	52	1	0	
	5. Never obtained information listed above	927	1	0	
Q.3	What is your desired age of retirement?	1,571	100	30	63.56
Q.4	Does your institution provide retirement benefit programs which will pay allowances in the form of a lump-sum and/or annuity at retirement? (Choose only one)				
	1. Yes, and I am an eligible employee (→ go to Q5)	735	1	0	
	2. Yes, but I am not an eligible employee (→ go to Q7)	109	1	0	
	3. No such programs are available from my employer (→ go to Q7)	48	1	0	
	4. I don't know (→ go to Q7)	727	1	0	
	Total	1,619			
Q.5	Approximately how much retirement allowance do you expect to receive in full from your institution at retirement?				
	1. A lump-sum value of () ten thousand yen	260	5,000	0	1757.7
	2. I don't know	646	1	0	
	Total	906			
Q.6	In which form of payment (listed below) would you like to receive your retirement allowance? (Choose only one)				
	1. Only a lump-sum payment at retirement	499	1	0	
	2. Only monthly annuity payment after retirement	34	1	0	
	3. A combination of a lump-sum and monthly annuity payment	361	1	0	

	Total	894			
Q.7	Approximately how much annuity payment do you expect to receive per month after retirement?				
1.	Approximately () ten thousand yen per month	506	1,000	0	18.41
2.	I don't know	1,101	1	0	
	Total	1,607			
Q.8	Do you know what a defined contribution scheme is, which was introduced in October 2001 in Japan? (Choose only one)				
1.	Yes	207	1	0	
2.	I have only heard of the name	535	1	0	
3.	Not at all	880	1	0	
	Total	1,622			
Q.9	What are the attributes you would desire if your employer expanded the current retirement/pension programs or introduced new alternative options? (Choose all that apply)				
1.	Being able to manage own retirement assets	322	1	0	
2.	Being able to view own account balance any time	959	1	0	
3.	Being able to carry over the benefit as one changes a job	785	1	0	
4.	Being able to receive retirement allowances even with short tenure	636	1	0	
5.	Tax exempt contributions and/or profits	558	1	0	
6.	Other	67	1	0	
Q.10	Institution name	1,617			
Q.11	Establishment type (Choose only one)				
1.	National	967	1	0	
2.	Municipal (prefectural/city)	184	1	0	
3.	Private	452	1	0	
	Total	1,603			
Q.12	Gender (Choose only one)				
1.	Male	1,113	1	0	
2.	Female	512	1	0	
	Total	1,625			
Q.13	Age () years old	1,563	76	23	44.93
Q.14	What is your job category or rank? (Choose only one)				
1.	Executive officer	13	1	0	
2.	Dean/chairperson	48	1	0	
3.	Full professor/associate professor	621	1	0	

	4. Assistant professor (including <i>Kōshi</i> , <i>Jokyō</i> , and <i>Joshu</i>)	319	1	0
	5. Research associate/postdoctoral	55	1	0
	6. Senior administrator	92	1	0
	7. Junior administrator/staff	469	1	0
	Total	1,617		
Q.15	Does your position have a term of service? (Choose only one)			
	1. Yes	557	1	0
	2. No	1,001	1	0
	3. I don't know	62	1	0
	Total	1,620		
Q.16	Number of service/work years (as of March 2012)			
	1. At the current institution: () years		55	0 11.02
	2. As a faculty/researcher and/or administrator, including previous institutions of employment: () years		46	0 13.69
	3. Entire career including other occupations: () years		50	0 19.11
	Total			
Q.17	Are you married? (Choose only one)			
	1. Yes (→ go to Q18)	1,142	1	0
	2. Separated/divorced/widowed (→ go to Q19)	40	1	0
	3. No (→ go to Q21)	438	1	0
	Total	1,620		
Q.18	What is your spouse's occupation? (Choose only one)			
	1. Private firm employee (full-time)	204	1	0
	2. Public servant	130	1	0
	3. Self-employed	45	1	0
	4. Part-time worker	199	1	0
	5. Not employed	466	1	0
	6. Other	103	1	0
	Total	1,147		
Q.19	Do you have a child(ren)?			
	1. Yes (→ go to Q20)	985	1	0
	2. No (→ go to Q21)	206	1	0
	Total	1,191		
Q.20	What is/are your child(ren) categorized as (Choose all that apply)			
	1. Preschooler	282	1	0
	2. Elementary/junior high school student	319	1	0
	3. Senior high school student	125	1	0

	4. College student (including undergraduate/graduate student)	229	1	0
	5. Completed formal schooling	339	1	0
Q.21	<u>What is your current housing/residential type? (Choose only one)</u>			
	1. Own house (with mortgage)	462	1	0
	2. Own house (without mortgage)	431	1	0
	3. Rental housing/apartment	630	1	0
	4. Other	99	1	0
	Total	1,622		