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## Retirement Transitions In Japan

By

Robert L. Clark, Rikiya Matsukura, and Naohiro Ogawa

Stanford Institute for Economic Policy Research  
Stanford University  
Stanford, CA 94305  
(650) 725-1874

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**RETIREMENT TRANSITIONS IN JAPAN**

**Robert L. Clark**

**Rikiya Matsukura**

**Naohiro Ogawa**

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Populations throughout the developed world are aging in response to low fertility rates and increases in longevity. Delaying retirement becomes increasingly important to individuals as they must confront the need to finance more years in retirement while governments are concerned about the cost of public retirement programs and maintaining the rate of economic growth. Japan is at the leading edge of these issues as it has one of the world's lowest fertility rates along with one of the highest life expectancies.<sup>1</sup> Table 1 shows the several key demographic statistics including the total fertility rate which was over 2.0 in the 1970s but then declined sharply to less than 1.3 in the early 2000s. During the same period, life expectancy at birth rose substantially reaching 80.2 for males and 86.6 for females. Figure 1 shows that life expectancy in Japan is the highest in the world for women and among the highest for men.

[Table 1]

[Figure 1]

The prolonged period of low fertility combined with limited migration has resulted in a decline in the size of the population. Projections indicate that the Japanese population will decline from 128.1 million in 2012 to 116.6 million in 2030 and continue to decline throughout the 21<sup>st</sup> century. The proportion of the population aged 65 and over is projected to rise from 23.0 percent in 2010 to 33.4 percent in 2035 (National Institute of Population and Social Security Research, 2012) and reach 40 percent by the middle of the century. Figures 2, 3 and 4 illustrate how low fertility combined with low mortality at older ages is producing a super aging of the Japanese population as the number of individuals 65 and over approaches the number of those aged 20 to 64. In this environment, maintaining high levels of labor force participation among

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<sup>1</sup> For the past two decades, the total fertility rate in Japan has hovered around 1.3 before rising slightly to 1.43 in 2013. In 2012, life expectancy at birth for men was 79.9 and 86.4 for women. See OECD (2013) for a comparison of these demographic data in Japan to other developed countries.

the elderly is essential to maintain national economic growth. Clark, et al (2008, 2010) simulated the importance of high levels of labor force participation in maintaining the real growth rate of the Japanese economy. Their results indicate that increases in the labor force participation rate of individuals aged 60 to 64 that might accompany increases in the age of mandatory retirement in Japan would increase GDP and GDP per capita by over 10 percent.

[Figure 2]

[Figure 3]

[Figure 4]

This paper examines two interesting and seemingly contradictory aspects of the Japanese labor market. First, virtually all Japanese firms continue to impose mandatory retirement policies at the relatively young age of 60. Second, the labor force participation rates of persons aged 60 and over in Japan are the highest among the developed countries. Table 2 compares the labor force participation rates of older men and women in Japan and the United States. The participation rates of Japanese men are greater than those in the U.S. for all older ages and the difference widens between ages 50-54 and 60-64. An interesting question is whether these differences are due to a more well-developed set of retirement transitions in Japan.

[Table 2]

This apparent anomaly of the wide spread utilization of mandatory retirement coupled with high labor force participation rates is explained by the labor force transitions of workers who have been mandatorily retired from their career jobs.<sup>2</sup> The movement of older workers from

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<sup>2</sup> The labor force participation rate for Japanese men aged 60 to 64 was 76.0 percent in 2013 and the rate for men 65 to 69 was 50.7 percent. In comparison, the participation rates for men in the U.S. were 60.5 and 35.0 percent respectively (OECD, 2013).

career jobs to bridge jobs and self-employment is an important factor in Japan and explains the high participation rates among older persons. Older Japanese have a strong preference to continue working until relatively old ages and this is achieved by shifting from career jobs to bridge jobs that might last for another decade. As one can see in Table 2, the participation rate of men 55 to 59 is similar to that of men 50 to 54. The difference in these two rates was virtually eliminated when the mandatory retirement age in Japan was increased from 55 to 60 in the 1980s as workers aged 55 to 59 were able to remain on their career job (Clark et al, 2010; Matsukura, et al, 2007). The labor market transitions to bridge jobs explain how the size of the labor force is remaining relatively stable even as the population declines. This paper examines the transition from career jobs to complete retirement in Japan by reviewing past studies of this transition and presenting new evidence from the Japan Survey of Aging and Retirement (JSTAR).

## **I. Mandatory Retirement and Labor Force Participation Rates**

Mandatory retirement has long been a major component of Japanese employment contracts in large firms.<sup>3</sup> Shimizutani (2011) reports that 60 percent of firms with 30 or more employees had mandatory retirement policies in 1980 but coverage by compulsory retirement had risen to almost 100 percent by 2000.<sup>4</sup> In the 1970s, most firms maintained a mandatory retirement age of age 55. Figure 5 shows that over the time firms have moved toward a

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<sup>3</sup> Mandatory retirement policies in Japan are the end point of an employment system that focused on attracting young workers and retaining them until retirement that resulted in low turnover rates throughout one's career coupled with mandatory retirement at relatively young ages. Ono (2007) reviews the system of lifetime employment, describes its importance in the Japanese economy, and discusses how it is changing. Also see Shimizutani and Yokoyama (2009)

<sup>4</sup> If workers employed by smaller firms are included in the analysis, the coverage rate by mandatory retirement falls to 60 percent for men and 40 percent for women (Shimizutani, 2011).

mandatory retirement age of 60 with over 80 percent of firms with such a policy using age 60. The increased age for mandatory retirement has been due, in part, to changes in government policies and more recently, there has been a push to move the age of mandatory retirement to age 65. The increased age of mandatory retirement from 55 to 60 during the 1980s resulted in a flattening of the age earnings profiles which made older workers more attractive to their career employers (Clark and Ogawa, 1992 a,b; 1995; Hashimoto and Raisian, 1992). Matsukura, et al (2007) show the increase in the labor force participation rates of persons 55 to 60 after the age of mandatory retirement was increased to 60.

[Figure 5]

Despite the prevalence of mandatory retirement at age 60, three quarters of men age 60 to 64 remain in the labor force and almost half of women of this age are also in the labor force, see Figures 6 and 7.<sup>5</sup> Obviously, older Japanese who are mandatorily retired by their career firm are shifting to other types of employment. Several earlier papers have examined this labor force transition. Clark and Ogawa (1997) report that in the 1990s, 90 percent of all Japanese firms with 30 or more employees required workers to retire at some specified age. Using the 1987 Survey of Mandatory Retirees, they found that one-third of those who were required to retire were re-employed by their career firm. Typically, re-employed retirees were paid a substantially lower annual salary, were shifted to a lower status job, and relinquished seniority rights. Re-employment was generally at the firm's discretion.<sup>6</sup> While 71 percent of all firms had adopted

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<sup>5</sup> Williamson and Higo (2007) show that the participation rates for Japanese age 60 and older are substantially higher than those in Western Europe and North America.

<sup>6</sup> One example of the extensive use of re-employment and its impact on compensation is Komatsu which is the world's second-biggest construction equipment producer. Matsuyama (2012) reported that Komatsu rehires 90 percent of its retirees but wages for these retired career workers is 40 percent lower

some type of re-employment policy, only about 40 percent of firms with 5,000 or more employees utilized retired workers in this fashion.

[Figure 6]

[Figure 7]

Another employer-assisted labor force transition is for retirees to move to one of their career firm's subsidiaries or client firms with the flow generally being from the larger parent company to a smaller firm. Clark and Ogawa (1997) found that half of the men who were mandatorily retired but not rehired by their career employer found new employment with a subsidiary or client firm of their career employer. A third form of transition is for the retiree to move to a bridge job unrelated to their career employer or to shift into self-employment. Williamson and Higo (2007) report that a dramatic increase in self-employment between men aged 55 to 64 and those over age 65. The proportion of male workers who are self-employed rises from 20.8 percent for the younger group to 51.9 percent among those 65 and over.

Key findings reported by Clark and Ogawa (1997) included:

1. Re-employment by career employers is less frequent among large firms; however, shifting to subsidiaries or client firms is more common among retirees from large firms.
2. Workers with higher levels of education were likely to remain in the labor force after being required to retire from their career firm.

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than their pre-retirement compensation. Yamada and Higo (2011) also discuss the re-employment process and its impact on annual earnings.

3. Higher level management employees were more likely to remain in the labor force, more likely to be re-employed by their career firm, and more likely to be able to shift to a subsidiary or client firm of their career employer.
4. Workers with more years of job tenure had a greater likelihood of moving to a subsidiary or client firm.
5. Retirees tend to move to smaller firms but often are hired in more prestigious jobs than they held at their career employer.

Shimizutani and Oshio (2010) update and extend this analysis using data from the *Survey of Employment of the Elderly* between 1983 and 2004. Their analysis shows a continued high incidence of employment extension and re-employment by career firms and employer-assisted transitions to new jobs. Shimizutani and Oshio also examine labor force transitions for women and find similar patterns of post-retirement employment. Similar to Clark and Ogawa, they find that men with higher levels of education are more likely to continue working after mandatory retirement but their analysis does not find a significant relationship between working and education of women. Shimizutani and Oshio conclude that the role of the career employer in assisting mandatorily retired employees has declined both in terms of re-employment and movements to related firms during the low growth era of the 1990s.

While these studies illustrate retirement transitions among older Japanese workers in the 1980s and 1990s, it would be useful to have more recent analysis that would include significant changes in the Japanese population and economy. One reason for the need to re-examine the retirement process in Japan is the adoption in 2012 of the revision of the Stabilization of Employment of Older Persons. This law requires companies to develop a system for extension



of employment for employees who reach retirement age of 60 but wish to continue working until age 65. Implementation of this requirement has been slow and as yet, its impact is uncertain.

These employment policies have resulted in a long retirement transition process. Despite the early age of mandatory retirement, the average age of labor force withdrawal in Japan is the highest in the developed world. Shimizutani (2011) reports that the average retirement age for Japanese men is 69.5 years and 66.5 for women.<sup>7</sup> The prolonged retirement process and late permanent departure from the labor force is due in part to the desire to maintain living standards and the assessment that individuals have insufficient assets and retirement benefits to achieve this objective. Among the 12 countries included in the AEGON Retirement Readiness Index, Japan ranks as the country with the lowest level of readiness (AEGON, 2013).

Clark, Ogawa, and Matsukura (2013) found that workers often prepare for these labor market transitions to bridge jobs by engaging in on-the-job training and other activities to enhance their human capital. Older workers with a higher level of financial literacy were more likely to engage in training and education activities to increase their promotion opportunity on their career jobs and make themselves more attractive in the post-retirement labor market. In related research, Sekita (2011) finds that the overall level of financial literacy in Japan is low but those with higher levels of literacy are more likely to have a saving plan for retirement.

## **II. Japan Study of Aging and Retirement**

The Japanese Study of Aging and Retirement (JSTAR) is a panel survey of persons aged 50 to 75 conducted by the Research Institute of Economy, Trade and Industry, Hitotsubashi

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<sup>7</sup> OECD (2008) data indicate that the second highest retirement age is Sweden which is 3.8 years younger than the Japanese age of average retirement.

University, and the University of Tokyo.<sup>8</sup> JSTAR began in 2007 with a survey of elderly in 5 prefectures. The cities included in the 2007 survey were: Takikawa city in Hokkaido, Sendai city in the Tohoku area, Adachi ward which is a special city in the center of the Tokyo metropolis, Kanazawa city in the Hokuriku area and Shirakawa town in a mountainous town in the Chubu area. The initial sample was about 4,200 individuals and the response rate was approximately 60 percent.

A second wave, which was conducted in 2009, re-interviewed these initial respondents and added two additional prefectures to the sample. In 2011, all previous respondents in the 7 prefectures were re-interviewed along with individuals in three municipalities in other prefectures.<sup>9</sup> See Ichimura, Hashimoto, and Shimizutani (2009) for a more detailed discussion of the sampling technique used and the survey design of JSTAR.

We employ data from the first three waves of JSTAR to examine labor force transitions from career jobs. We begin by analyzing the 2007 sample and restricting the analysis to respondents who were working full-time and had at least 5 years of service with their current employer. The employment status of these career employees is examined in 2009 to determine whether they left their career employer and upon retirement do they exit the labor force or move to a bridge job. Table 3a shows the change in employment status between 2007 and 2009 for employees with 5 or more years of service in 2007. Individuals who remained with their career employer in 2009 are then re-examined to determine their employment status in 2011. Of the

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<sup>8</sup> The JSTAR website provides a comprehensive discussion of the survey and its development along with a list of papers that have used these data. <http://www.rieti.go.jp/en/projects/jstar/>

<sup>9</sup> The JSTAR is not based on a probabilistic national sample; however, the sample in the seven cities included in the survey is based on a probabilistic sample for each site.

470 employees meeting these criteria, 324 remained on their career job between 2007 and 2009. Thirty were retired and then re-employed by their career employer while 76 or 16 percent of these respondents moved to bridge jobs. The second segment of Table 3a reports the employment transitions of employees between 2009 and 2011 who had remained on their 2007 career job in 2009 and were re-interviewed in 2011. Of the 315 career employees in 2009 who were still on their 2007 job in 2009, 256 remained on their 2007 job in 2011. Between 2009 and 2011, an additional 20 individuals were re-hired after retirement by their employer and 17 more moved to a bridge job. Thus, during the 4 year interval, 50 people retired and were re-hired and 93 shifted to bridge jobs while more than half remained on their career job. Table 3b reports the two year transitions for the new cohort added in 2009.

[Table 3]

Table 3b repeats this analysis for respondents who were added to JSTAR in 2009. Among these first time interviewees, 221 were full-time employees with at least 5 years of tenure on their current job in 2009. When re-interviewed in 2011, 18 of these had retired and been re-hired and 12 had moved to bridge jobs. When combining these three observations of transitions, there are 255 respondents who are observed as retiring from their career jobs. Of these, only 32 percent are not in the labor force two years later while 27 percent of retirees were rehired by their career employer and 41 percent moved to bridge jobs.

Table 4 focuses only on those individuals aged 58 to 59 in one survey year and examines their employment status in the next survey. The table has 3 segments illustrating the employment transition between 2007 and 2009 for individuals aged 58-59 in 2007; between 2009 and 2011 for the 2007 cohort respondents who were aged 58-59 in 2009; and between 2009

and 2011 for the 2009 cohort respondents who were aged 58-59 in 2009. Limiting the sample to respondents aged 58-59 focuses on career employees who are most likely to reach and cross the mandatory retirement age between the two survey years. Examining these individuals allows us to see the retirement transitions that are influenced by mandatory retirement more clearly.

Among these respondents, the movement to bridge jobs and re-employment compose a much higher proportion of individuals making this transition. Combining the three groups, we find that about half of these individuals remain on their career jobs while about one third of those that retire between the two survey periods were re-employed, one third moved to a bridge job, and one third left the labor force. Summarizing the findings from Tables 3 and 4, only about one-third of retirees move from a career job to complete retirement. Other retirees extend the retirement transition as they are rehired by their career employer or shift to bridge jobs.

[Table 4]

### **III. Data Analysis of Labor Force Transitions**

To further examine the transitions from career jobs to retirement in Japan, we estimate changes in work status between 2007 and 2009. The sample is based on individuals aged 50 to 59 in 2007 who were working full time and for a similar sample for those from the 2009 cohort. The means of these samples are presented in Table 5. Using a multinomial logit model, the retirement transitions are estimated for these groups. Comparing the employment status of full-time career employees in one survey to their employment status in the next survey provides information on the first step in the retirement transition. In the following survey, respondents are either still with the same employer, working at a bridge job, or no longer working.

[Table 5]

The results shown in the following tables indicate the predicted probability of being in each of the three employment states and how this probability varies with individual and firm characteristics. Table 6 shows the first step in the retirement transitions for the 2007 career employees. For the sample of 2007 career employees, 83.4 percent are predicted to remain on the career job with 11.9 percent shifting to a bridge job and only 4.6 leaving the labor force. Men are more likely to have moved to a bridge job while women are more likely to have left the labor force. Compared to workers aged 50-51, workers aged 52-55 have only slightly lower probability of remaining on the career job. For those workers who were more likely to have reached the age of mandatory retirement, almost half do not continue with the same employer. Of those employees aged 58-59 in 2007 that have left the career job by 2009, twice as many move to a bridge job as leave the labor force.

[Table 6]

#### **IV. Importance of Retirement Transitions in Japan**

Japan is the most rapidly aging country in the world. The absolute size of the population is declining due to very low fertility rates that have been below 1.5 for two decades. A long term decline in mortality has substantially increased the number of older persons. Continued economic growth will depend in part on retaining older workers in the labor force. Despite the rapid population aging, Japan employers continue to maintain mandatory retirement policies with the relatively low age of 60. Fortunately Japan has a well-developed retirement transition and most workers move from career jobs to bridge jobs. As such, Japan has the highest labor force participation rate of older persons among the developed countries. Retaining and improving the retirement transition process may be a key to maintaining living standards in Japan.

## References

- AEGON. 2013. "The Changing Face of Retirement: The Aegon Retirement Readiness Survey 2013.
- Clark, Robert and Naohiro Ogawa. 1992. "The Effect of Mandatory Retirement on Earnings Profiles in Japan," *Industrial and Labor Relations Review* 45(2): 258-66.
- Clark, Robert and Naohiro Ogawa. 1992. "Employment Tenure and Earnings Profiles in Japan and the United States: Comment," *American Economic Review* 82(1): 336-45.
- Clark, Robert and Naohiro Ogawa. 1996. "Human Resource Policies in Japan," *The Gerontologist*, 36(5): 627-36.
- Clark, Robert and Naohiro Ogawa. 1997. "Transitions from Career Jobs to Retirement in Japan," *Industrial Relations* 36(2): 255-70.
- Clark, Robert, Naohiro Ogawa, Makoto Kondo, and Rikiya Matsukura. 2010. "Population Decline, Labor Force Stability, and the Future of the Japanese Economy," *European Journal of Population*, May: 207-227.
- Clark, Robert, Naohiro Ogawa, and Rikiya Matsukura. 2013. "Low Fertility, Human Capital, and Economic Growth: The Importance of Financial Education and Job Retraining," *Demographic Research*, October 23, 2013: 865-884, <http://www.demographic-research.org/volumes/vol29/32/29-32.pdf>.
- Clark, Robert Naohiro Ogawa, Sang-Hyop Lee, and Rikiya Matsukura. 2008. "Older Workers and National Productivity in Japan," *Population and Development Review*, Supplement to 34: 257-274.
- Hashimoto, Masanori and John Raisian. 1992 "Employment Tenure and Earning Profiles in Japan and the United States: Reply," *American Economic Review*, 82(1): 346-354.
- Ichimura, Hidehiko, Hideki Hashimoto, and Satoshi Shimizutani. 2009. "Japanese Study of Aging and Retirement (JSTAR) First Results 2009 Report." RIETI Discussion Paper Series 09-E-047.
- Matsukura, Rikiya, Naohiro Ogawa, Robert Clark, Kazuo Nemoto, and Katsuya Akaike. 2007. "Analysis of Employment Patterns and the Changing Demographic Structure of Japan," *The Japan Economy*, Spring: 82-153.
- Matsuyama, Kanoko. 2012. "In Japan, Retirees Go On Working," *Bloomberg Businessweek*, August 30.
- National Institute of Population and Social Security Research. 2012. "Population Projections for Japan (January 2012): 2011 to 2060," [http://www.ipss.go.jp/site-ad/index\\_english/esuikei/ppfj2012.pdf](http://www.ipss.go.jp/site-ad/index_english/esuikei/ppfj2012.pdf)
- OECD. 2008. "Ageing and Employment Policies – Statistics on Average Effective Age of Retirement."
- OECD. 2013. [http://stats.oecd.org/Index.aspx?DatasetCode=LFS\\_SEXAGE\\_I\\_R](http://stats.oecd.org/Index.aspx?DatasetCode=LFS_SEXAGE_I_R)

Ono, Hiroshi. 2007. "Lifetime employment in Japan: Concepts and measurements," *Journal of the Japanese and International Economies*, 24(1):1-27.

OECD. 2008. *Aging and Employment Policies – Statistics on Average Effective Age of Retirement*.

Sekita, Shizuka. 2011. "Financial Literacy and Retirement Planning in Japan," Netspar Discussion Papers.

Shimizutani, Satoshi. 2011. "A new anatomy of retirement process in Japan," *Japan and the World Economy*, 23: 141-152.

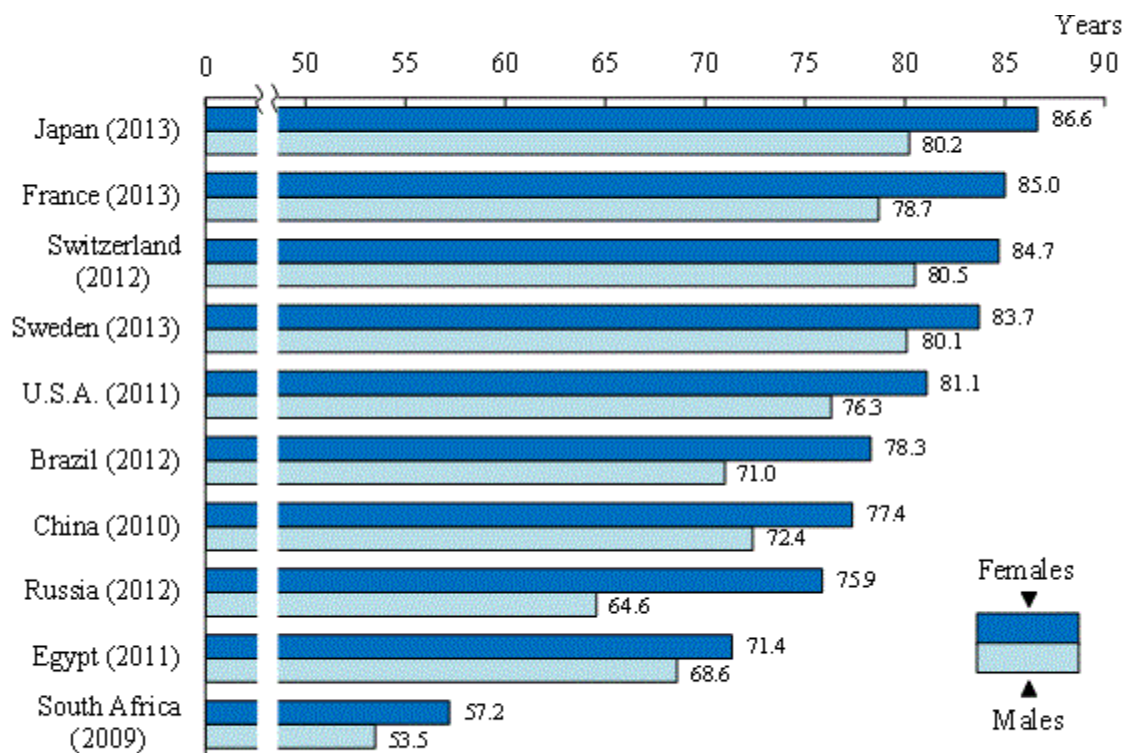
Shimizutani, Satoshi and Takashi Oshio. 2010. "New Evidence on Initial Transition from Career Job to Retirement in Japan," *Industrial Relations*, 49(2): 248-274.

Shimizutani, Satoshi and Izumi Yokoyama. 2009. "Has Japan's long-term employment practice survived? Developments since the 1990s." *Industrial and Labor Relations Review* 62(3): 311-324.

Williamson, John and Masa Higo. 2007. "Older Workers: Lessons from Japan," Center for Retirement Research at Boston College, June.

Yamada, Atsuhiko and Masa Higo. 2011. "Institutional barriers to work beyond retirement in an aging Japan: Evidence from a recent employee survey," *Contemporary Japan* 23: 157-186.

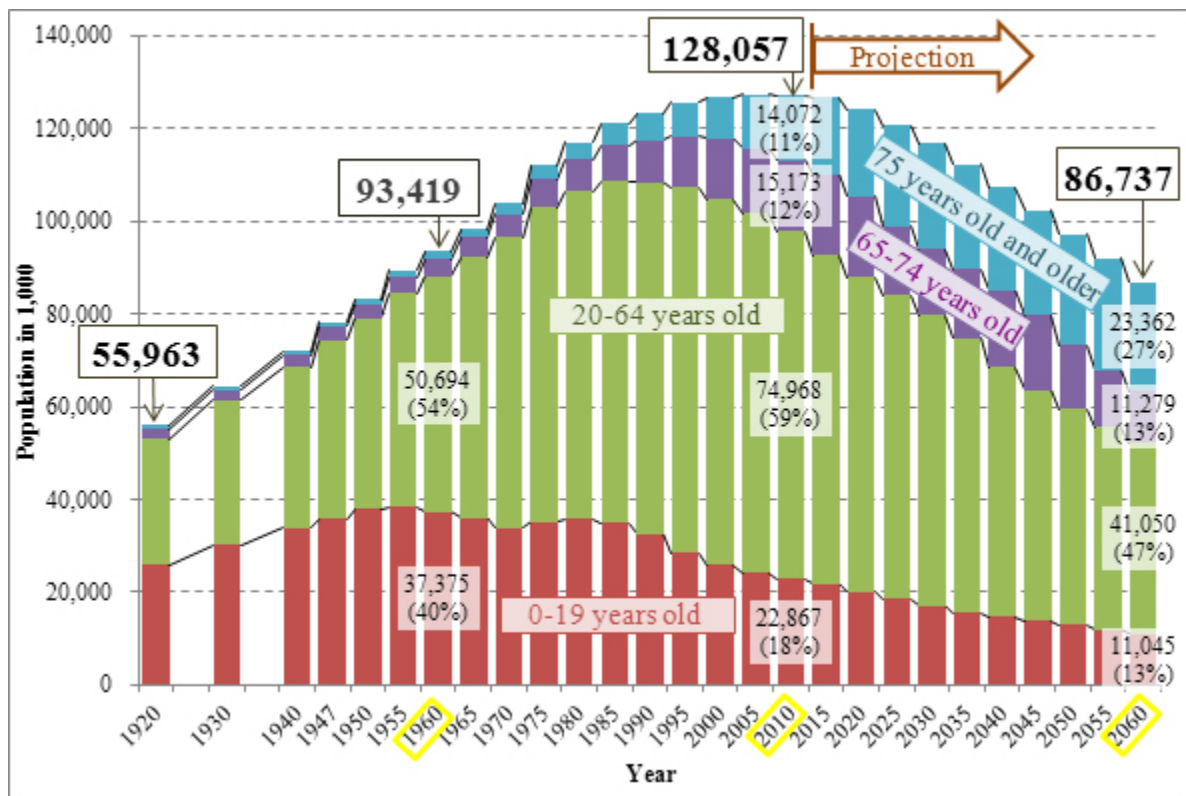
**Figure 1. Life Expectancy at Birth by Country**



Source: Ministry of Health, Labour and Welfare.

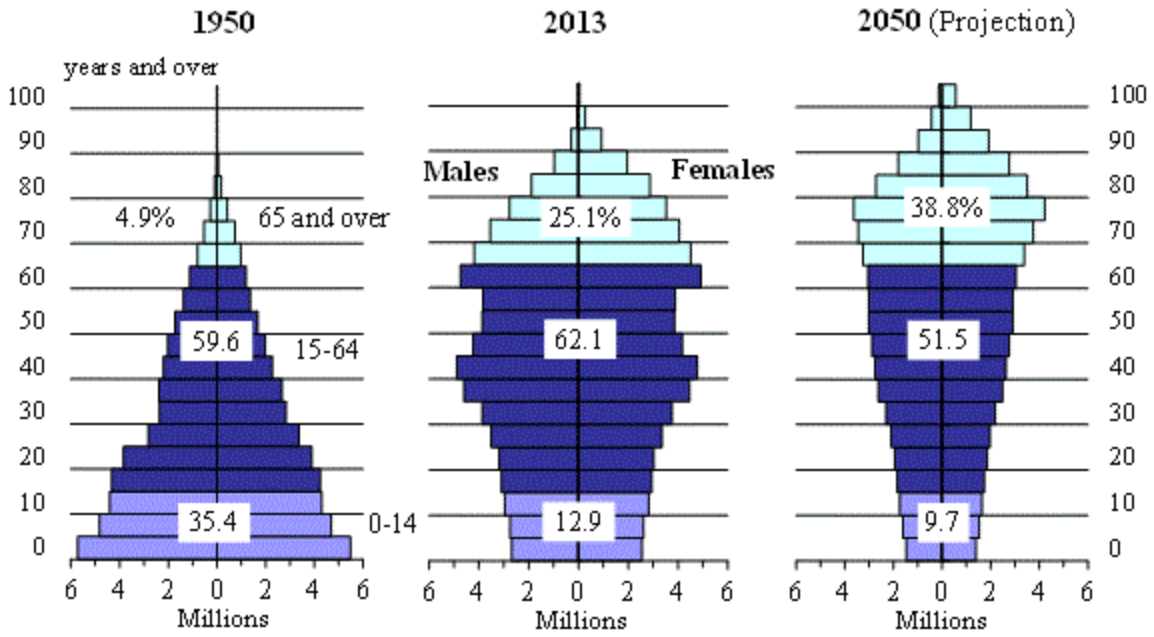


**Figure 2. Population Trends and Age Structure Changes: 1920 to 2060**



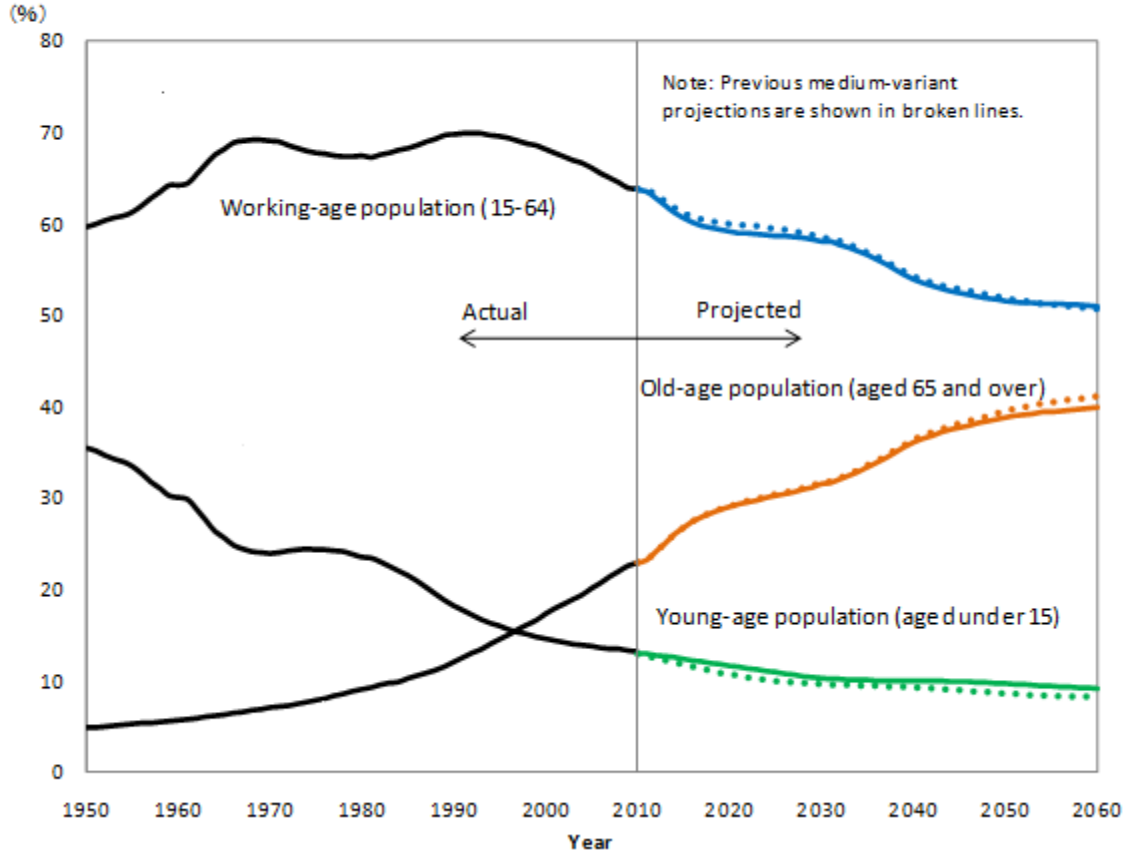
Source: National Institute of Population and Social Security Research. <http://www.ipss.go.jp/s-info/e/ssj2014/001.html> accessed September 15, 2014.

**Figure 3. Changes in the Population Pyramid**

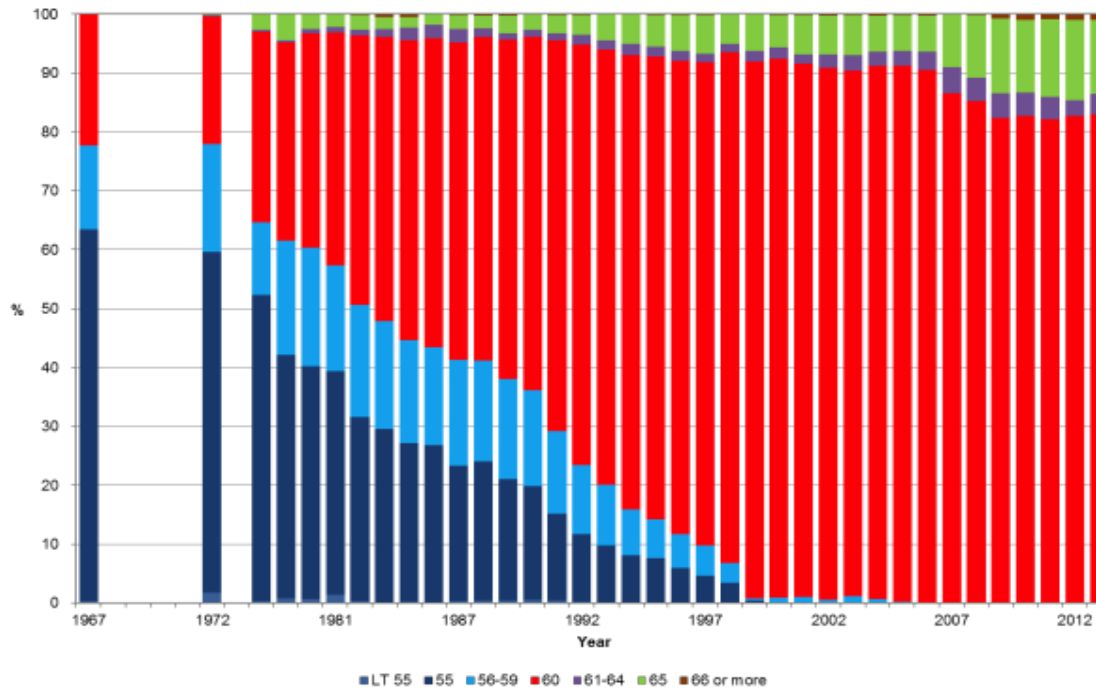


Source: Statistics Bureau, MIC; Ministry of Health, Labour and Welfare.

**Figure 4. Trends in the proportion of major three age groups:  
Medium-fertility (medium-mortality) projections**

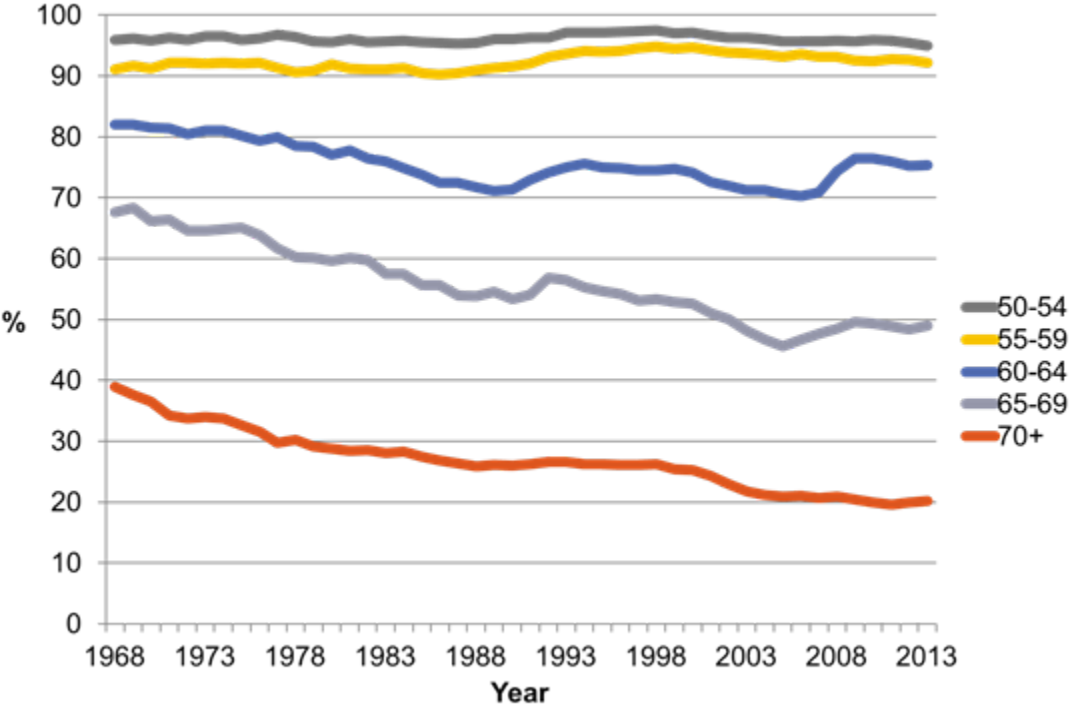


**Figure 5. Distribution of Mandatory Retirement Age in Japanese Firms**



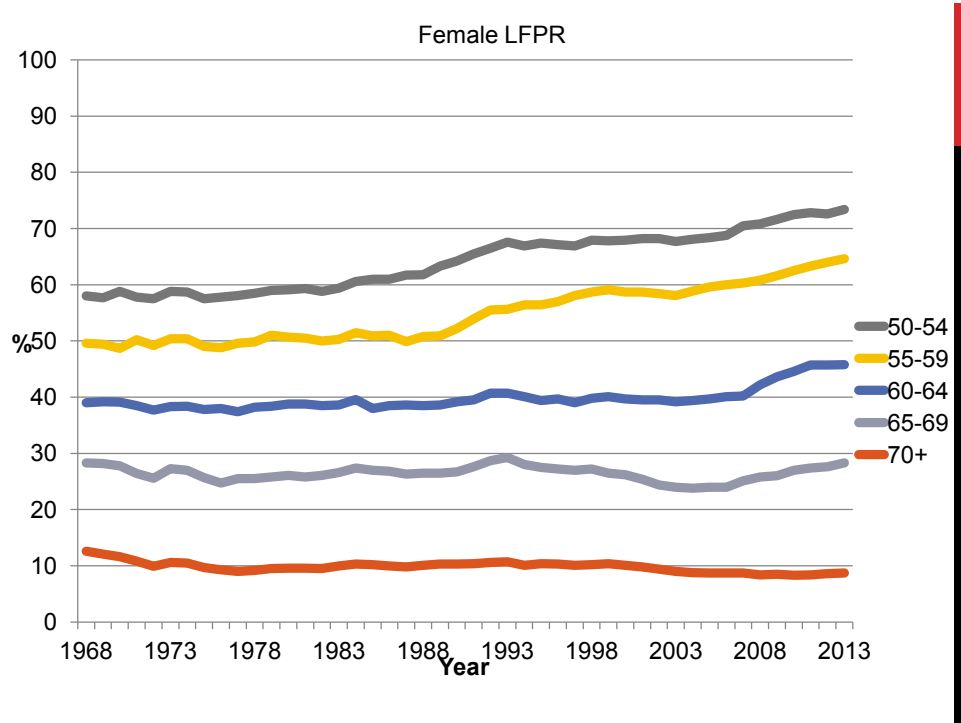
Source: Ministry of Health, Labour and Welfare, Survey on Employment Trends for years up to 2005. Thereafter, the data are from the General Survey on Working Conditions.

**Figure 6. Labor Force Participation Rates of Older Men by Age**



Source: Ministry of Health, Labour and Welfare, Annual Report on the Labour Force Survey, various years.

**Figure 7. Labor Force Participation Rates of Older Women by Age**



Source: Ministry of Health, Labour and Welfare, Annual Report on the Labour Force Survey, various years.

**Table 1. Population Statistics for Japan: 1950-2013**

Year	Rates per 1,000 population <sup>1)</sup>				Total fertility rate <sup>2)</sup>	Life expectancy at birth (years)	
	Live births	Deaths	Infant mortality	Natural change		Males	Females
1950	28.1	10.9	60.1	17.2	3.65	a) 59.57	a) 62.97
1955	19.4	7.8	39.8	11.6	2.37	63.60	67.75
1960	17.2	7.6	30.7	9.6	2.00	65.32	70.19
1965	18.6	7.1	18.5	11.4	2.14	67.74	72.92
1970	18.8	6.9	13.1	11.8	2.13	69.31	74.66
1975	17.1	6.3	10.0	10.8	1.91	71.73	76.89
1980	13.6	6.2	7.5	7.3	1.75	73.35	78.76
1985	11.9	6.3	5.5	5.6	1.76	74.78	80.48
1990	10.0	6.7	4.6	3.3	1.54	75.92	81.90
1995	9.6	7.4	4.3	2.1	1.42	76.38	82.85
2000	9.5	7.7	3.2	1.8	1.36	77.72	84.60
2005	8.4	8.6	2.8	-0.2	1.26	78.56	85.52
2010	8.5	9.5	2.3	-1.0	1.39	79.55	86.30
2011	8.3	9.9	2.3	-1.6	1.39	79.44	85.90
2012	8.2	10.0	2.2	-1.7	1.41	79.94	86.41
2013	* 8.2	* 10.1	* 2.1	* -1.9	* 1.43	80.21	86.61

1) The infant mortality rate is per 1,000 live births. 2) The average number of children that would be born alive to a hypothetical cohort of women if, throughout their reproductive years, the age-specific fertility rates for the specified year remained unchanged. a) 1950-1952 period.

Source: Ministry of Health, Labour and Welfare.

**Table 2. Labor Force Participation Rates of Older Persons in Japan and the United States: 2013**

<b>Age</b>	<b>Japan</b>		<b>United States</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
50-54	95.3	75.1	83.9	73.2
55-59	92.7	66.5	78.0	67.2
60-64	76.0	47.4	60.5	50.0
65-69	50.7	29.8	37.2	27.6
70-74	31.7	16.9	23.2	15.8
75 and over	13.4	5.1	11.3*	5.0*

\*Data is for 2012.

Source: OECD. 2013. [http://stats.oecd.org/Index.aspx?DatasetCode=LFS\\_SEXAGE\\_I\\_R](http://stats.oecd.org/Index.aspx?DatasetCode=LFS_SEXAGE_I_R)  
Data retrieved Sept.14, 2014.



**Table 3a. Number of Full-time Paid, Career Workers by Survey Year: 2007 cohort aged 50-59.**

Workers with 5 or more years of job tenure in 2007 interview      470

*Employment Status in 2009 Survey of respondents who were full-time employees in 2007*

Still on 2007 Job	324
Retired, Re-employed by same company	30
Bridge Job	76
Not working	40

Of the 324 respondents who remained on their career job in 2009, 315 were re-interviewed in 2001

*Employment Status in 2011 Survey of respondents who were full-time employees on same job in 2007 and in 2009*

Still on 2007 Job	256
Retired, Re-employed by same company	20
Bridge Job	17
Not working	22

**Table 3b. Number of Full-time Paid, Career Workers by Survey Year: 2009 cohort aged 50-59.**

Workers with 5 or more years of job tenure in 2009 interview      221

*Employment Status in 2011 Survey of respondents who were full-time employees in 2009*

Still on 2009 Job	171
Retired, Re-employed by same company	18
Bridge Job	12
Not working	20

**Table 4a. Number of Full-time Paid, Career Workers by Survey Year: 2007 cohort aged 58-59. 26**

Workers with 5 or more years of job tenure in 2007 interview 108

*Employment Status in 2009 Survey of respondents who were full-time employees in 2007*

Still on 2007 Job	38
Retired, Re-employed by same company	22
Bridge Job in 2009	29
Not working	19

**Table 4b. Employment Status in 2011 of Respondents Who Were Full-time Paid, Career Workers in 2007: 2007 cohort aged 58-59 in 2009.**

Workers with 5 or more years of job tenure in 2009 interview 30

*Employment Status in 2011 Survey of respondents who were full-time employees in 2009*

Still on 2007 Job	26
Retired, Re-employed by same company	2
Bridge Job in 2011	0
Not working	2

**Table 4c. Employment Status in 2011 of Respondents Who Were Full-time, Career Workers in 2009: 2009 Cohort Aged 58-59.**

Workers with 5 or more years of job tenure in 2009 interview 27

*Employment Status in 2011 Survey of respondents who were full-time employees in 2007*

Still on 2007 Job	16
Retired, Re-employed by same company	3
Bridge Job in 2009	0
Not working	8

**Table 5. Means for 2007 and 2009 JSTAR Cohorts of Career Employees**

Variable	<u>2007 cohort</u>	<u>2009 cohort</u>
Sex		
Male	67.6	66.8
Age at 2007 survey		
52-53	18.6	
54-55	21.5	21.2
56-57	24.1	22.6
58-59	22.3	24.5
Education		
Junior college	14.6	14.2
University	25.8	27.0
Current job's tenure		
Less than 9 years	16.6	16.1
Housing loan		
Yes	30.1	29.9
IDALs (score)	0.1060	0.0766
Health Condition Change		
Worse	2.9	1.9
Better or no change	97.1	98.1
Firm Size: number of employees		
-30	42.7	43.8
30-99	17.8	18.6
100-499	17.8	16.4
500-999	6.6	7.3
Sample size	349	214

**Table 6. Predicted Probability of Employment Status of 2007 Career Employees in 2009<sup>+</sup>**

			Career	Bridge	No longer working
Predict			83.4	11.9	4.6
-----					
Sex					
	Male		80.2	16.2 **	3.6
	Female	†	86.3	6.6	7.1
Age					
	50-51	†	93.0	3.6	3.4
	52-53		89.1	7.2	3.7
	54-55		89.1	9.0	1.9
	56-57		82.8	13.6	3.6
	58-59		56.0 **	29.1	15.0
Education					
	Senior or Junior high	†	84.2	10.9	4.9
	Junior college		79.0	13.2	7.8
	University		83.0	14.2	2.8
Tenure					
	LT 9 years		80.3	16.2 *	3.5
	10 years or more	†	84.6	10.0	5.4
Housing loan in 2009					
	Yes		87.5 **	11.0 **	1.5
	No	†	80.5	12.2	7.3
Firm size					
	-30		85.3 **	11.2 *	3.5
	30-99		84.3 **	12.4 *	3.3
	100-499		75.6	15.1	9.3
	500-999		91.5 *	6.8	1.7
	1000+	†	76.7	11.8	11.4

N=459

Log likelihood = -266.43

\*\*=5% significant level, \*=10% significant level. † is reference group.

+The dependent variables indicate the job status of 2007 career employees in 2009.

Equations also included variables for the number of IADLs reported by respondents and the change in IADLs between the surveys.