

“Cohort Effects” in the Labor Market & Inter- & Intra-generational Inequality

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Cohort Effects as Source of Inter- & Intra-generational Inequality

Since Japan’s population is rapidly aging, the issue of inter-generational inequality has emerged as a social concern. The general perception is that the younger generations suffer from a heavier burden because the ratio of the working age population to the retired population is expected to keep decreasing. On top of that, economic growth has been stagnant for two decades, and the future prospects are not very bright either.

At the same time, Japan’s labor market institutions generate another, subtler kind of inter-generational inequality across birth cohorts. As described in more detail later, the labor market conditions at the point of entry have very strong and persistent effects on the future earnings and employment prospects of the affected cohort. Thus, a cohort that unfortunately entered the labor market during a recession suffers from poorer economic performance than other cohorts in the long run. In this sense, these so-called “cohort effects” in the labor market comprise a source of inter-generational inequality. Moreover, the existence of such cohort effects also leads to polarization between young workers by preventing a non-negligible fraction of young workers from transition to regular employment. Without appropriate policy relief, those who are left outside of regular employment might form a poverty group and cause social instability in the future.

Overview of Recent Youth Labor Market Conditions

In most developed countries, labor market conditions for young workers are worse than those for prime-aged workers. Japan is not an exception. The problems in the youth labor market – such as the increasing number of “freeters” (young, unmarried, non-student workers who stay in non-regular employment) – started to attract social attention in the late 1990s. Although some signs of recovery were observed during the upturn in the mid-2000s, labor demand for the young began to decrease again after the Lehman collapse in 2008. For example, the unemployment rate of those aged 20-24 has stayed as high as 9% since 2009, which is about twice as high as the average for all ages (*Chart 1*). According to Labour Force Surveys by the Ministry of Internal Affairs and Communications, about a third of non-student employees in the 15-24 age bracket are in unstable non-regular employment (*Chart 2*). In official statistics, the “freeters” are defined as males and unmarried females aged 15-34 who are not in school and are working or seeking a job in non-regular employment. Although the number of such freeters had been decreasing since the peak of 2.17 million in 2003, it started to increase

again in 2008, and as of 2010 the number was as high as 1.86 million.

Young workers are vulnerable to recessions because it is easier to freeze new hiring than fire incumbent workers. The hiring market for new graduates has become slack since the Lehman shock. *Chart 3* shows the job placement outcomes for college and high school graduates in the period 1998-2012. The ratio of graduates who succeeded in obtaining a full-time regular job upon graduation fell from about 97% in 2008 to 94% for high school graduates and 92% for college graduates in 2010. Note that this number does not include those who do not want to find a job so that they can pursue a graduate degree or prepare for qualification exams for licensed occupations such as physicians and lawyers.

Although the current situation is quite worrying, this is not the first time the Japanese economy has seen a very slack job market for new graduates. As shown in *Charts 1-3*, labor market conditions for new graduates were as bad in the early 2000s as after the Lehman shock. For example, the placement rate for high school graduates hit the lowest level in the past few decades in 2002. The placement rate for college graduates was also at a similar level in 2000 and 2011. Coincidentally, the ratio of non-regular employment among employees in their late twenties and thirties has risen gradually since the mid-2000s. This might suggest that the cohorts that entered the labor market during the deep recession in the early 2000s are still suffering from unstable employment, even though they are now reaching prime age.

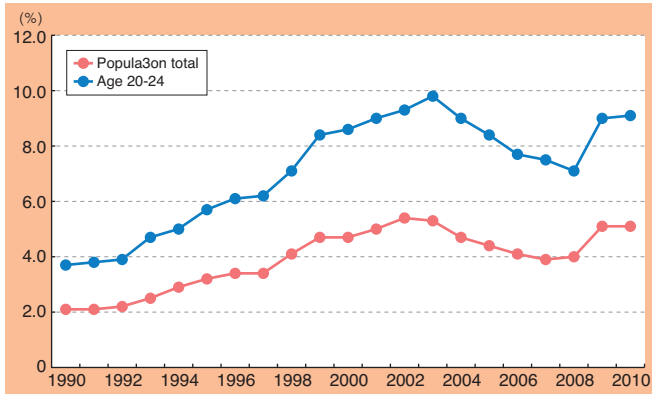
Research Findings about Cohort Effects

A cohort that experienced a recession when entering the labor market tends to suffer from less stable employment and lower earnings than other cohorts for many years. These negative effects of entering the labor market during a recession have been called *sedai koka* (cohort effects) by labor economists in Japan. Empirical research on these cohort effects in the Japanese labor market goes back to at least the mid-1990s. Such effects are also known to exist in Europe and America, but they not as strong and persistent as in Japan.

One recent study shows that for men who enter the labor market right after graduation from high school, a one percentage-point rise in the unemployment rate at the time of their graduation leads to 6-7% lower earnings over the next 12-year period (Yuji Genda, Ayako Kondo and Souichi Ohta, “Long-term Effects of a Recession at Labor Market Entry in Japan and the United States,” *Journal of Human Resources* 45 (1), University of Wisconsin Press, 2010). For those who graduate from college, the effect of a one percentage-point rise in the unemployment rate at graduation leads to 3% lower earnings over the 12 years (*Chart 4*). And the effects seem to continue even beyond the period of study.

CHART 1

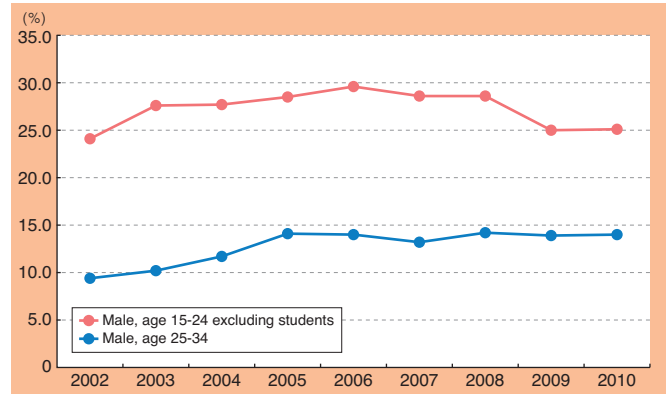
Unemployment rates, 1990-2010 Population total vs. youth



Source: Labour Force Survey

CHART 2

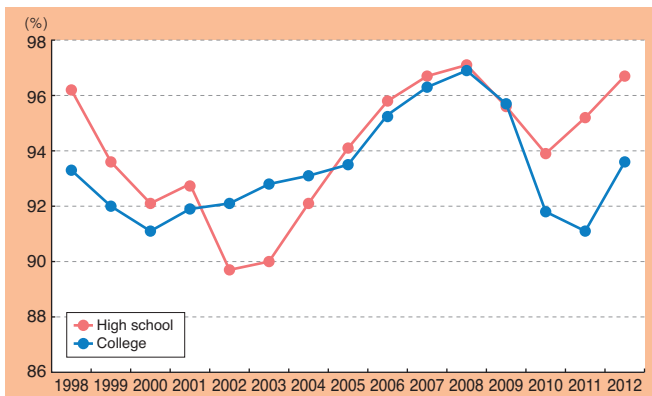
Ratio of non-regular employees to total employees, 2002-2010



Source: Labour Force Survey

CHART 3

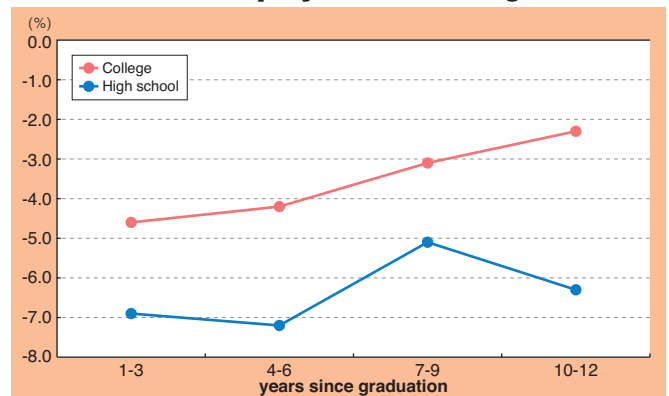
Job-placement rate upon graduation, 1998-2012



Source: Ministry of Health, Labour & Welfare and Ministry of Education, Culture, Sports, Science & Technology

CHART 4

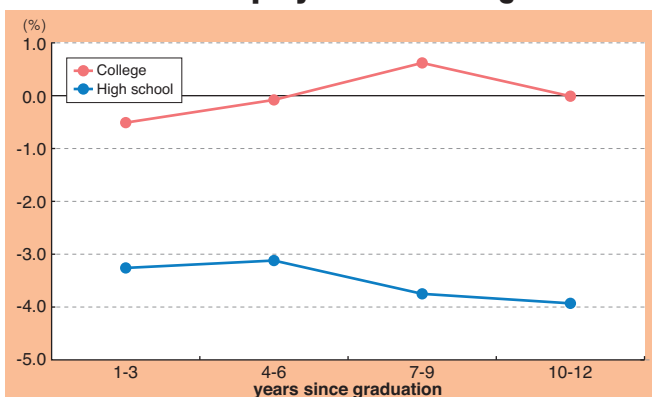
Changes in earnings caused by 1%-point increase in unemployment rate at graduation



Source: Yuji Genda, Ayako Kondo and Souichi Ohta, 2010

CHART 5

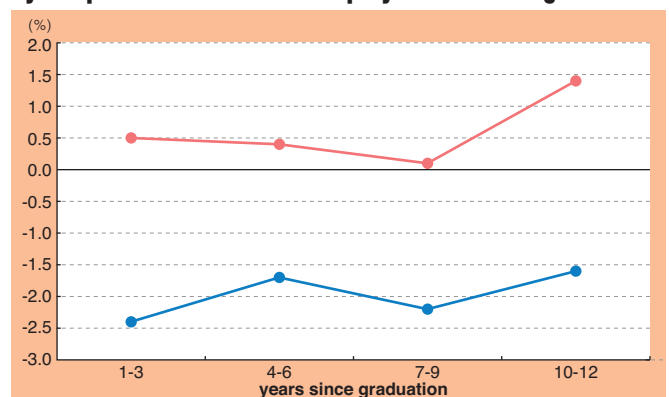
Changes in employment rates by 1%-point increase in unemployment rate at graduation



Source: Yuji Genda, Ayako Kondo and Souichi Ohta, 2010

CHART 6

Changes in full-time employment rates (conditional on employment) by 1%-point increase in unemployment rate at graduation



Source: Yuji Genda, Ayako Kondo and Souichi Ohta, 2010

The negative effects of graduating during a recession are particularly strong and persistent for high school graduates. Furthermore, the effects are not limited to those on earnings. For high school graduates, a one percentage-point rise in the unemployment rate at entry to the labor market leads to a three percentage-point lower employment rate and a two percentage-point full-time rate conditional on being employed for over 12 years

(Charts 5 & 6). A further analysis has confirmed that the negative impact on earnings is due to a long-term decline in the probability of full-time, regular employment. In contrast, the effects on employment and full-time status for college graduates are negligible. Hence, the loss of earnings among college graduates seems to be attributable to poor worker-job matching and downgrading of firm size, rather than a decline in regular employment.

Persistency in Employment Status

The difficulty in transition from non-regular employment to regular employment is thought to be one of the main causes of the cohort effects in the Japanese youth labor market. For example, my own research shows that failure to obtain regular employment at the time of graduation lowers the probability of regular employment 10 years after graduation by 50 percentage points (Ayako Kondo, “Does the First Job Really Matter? State Dependency in Employment Status in Japan,” *Journal of the Japanese and International Economies* 21 (3), Elsevier, 2007). Moreover, the lower probability of regular employment is not attributable to personal characteristics such as preference and aptitude for regular employment. This result implies that a cohort that happened to graduate during a recession and had a lower regular employment rate right after graduation would keep having a lower regular employment rate in the long run.

Several interrelated factors produce this persistent effect of a recession at entry to the labor market. As evidenced by the fact that typical Japanese firms view the annual hiring of new graduates as their primary means of recruitment, social institutions such as employment practices and the school-to-work transition system are favorable to new graduates. Such social institutions not only make it difficult to join the recruiting process without being enrolled in a school but also may stigmatize people whose first job was not a regular full-time one. That is, leaving school without obtaining a regular full-time job works as a bad signal because obtaining a regular full-time job right after graduation is taken for granted. At the same time, this signaling effect reinforces these social institutions. Lack of training opportunities and demoralization may harm the expected productivity of people who failed to obtain a regular full-time job at entry and exacerbate this stigmatization.

The reliance on school-based hiring also leads to a thin mid-career hiring market. Although it is not rare to switch employers for those with previous job experience in regular employment, such mid-career recruitment is mainly to fill vacancies at higher rungs on the job ladder and irrelevant to those lacking sufficient experience. And even for those with working experience in regular employment, wages are more likely to fall when switching jobs. Therefore, it is difficult to recover the initial bad matches by job changes after the business cycle picks up.

Stronger & More Persistent Effects for Less Educated

This explanation is also consistent with the stronger and more persistent effects on a less educated group (high school graduates), because non-regular employment is more prevalent among the less educated. Cohort effects in other countries (e.g. the United States) are typically stronger for more educated/skilled workers and often non-existent for high school graduates. This is probably because the clear distinction between regular employment (*seiki-koyou*) and non-regular employment is peculiar to Japan.

The existence of non-regular employment is a necessary by-product of so-called “lifetime employment” because non-regular employees serve as a buffer to economic fluctuation in order to protect employment of regular employees on the life-time employment track. In other words,

firms need to have a more flexible type of labor in addition to the core workers. The problem is that the gap in work conditions between regular and non-regular employees is quite large: non-regular employees experience almost double the turnover rate and earn much lower wages than regular employees. The gap expands as the worker ages because the wage for regular employees grows as they accumulate work experience but the wage for non-regular employees does not. Some of these non-regular workers who suffer from low wages are called the “working poor” and have been attracting social attention recently.

Implications of Cohort Effects on Inequality

There is no doubt that cohort effects in the labor market cause inter-generational inequality. Lucky cohorts that enter the labor market during a boom can enjoy more stable employment and higher earnings in the long run. Conversely, unlucky cohorts that graduate during a recession suffer from unstable employment and lower earnings. Taking the estimates reported in *Chart 4* literally, high school graduates born in 1985 will earn 18% less than high school graduates born in 1970 (about a three percentage-point rise in the unemployment rate from 1988 to 2003 times 6%).

The persistency in employment status also implies that a cohort that enters the labor market during a recession will contain people who are stuck in non-regular employment for many years and suffer from a higher poverty rate in the future, given the low earnings of non-regular jobs. That is, inequality within this cohort is larger than in other cohorts. In this sense, cohort effects in the labor market also increase intra-generational inequality.

As the proportion of the young labor force not in regular full-time employment increases, repairing the employment prospects of these young people stranded out of the “regular” track has emerged as a pressing issue, with growing fears of a future expansion of poverty and an increasing social security burden. The persistent negative effect of failure to obtain a regular job upon graduation on subsequent likelihood of regular employment implies that spontaneous recovery is unlikely.

Can We Change the Future?

The findings described below are based on research using past data. Most of the existing research uses data on cohorts who were born in the 1970s or earlier (i.e. cohorts that had entered the labor market by the early 2000s). What had been true for them does not necessarily hold for younger cohorts. Although it is not easy to find the right prescription, appropriate policy intervention should be able to improve the situation for current youth, who are facing similar difficulties to those experienced by cohorts currently aged around 30-35.

In fact, in response to deterioration in the youth labor market in the early 2000s, a variety of policy packages have been introduced to mitigate the problems arising from joblessness at the early stage of life. For example, in June 2003, the national government announced a policy package named “Independence and Challenge Plan for Youth” which included various career education plans, job placement support and the promotion of internship programs. This was a joint project by

the Ministry of Health, Labour & Welfare (MHLW) and the Ministry of Education, Culture, Sports, Science & Technology. Also, the MHLW asked employers to accept young job applicants who had already graduated within three years in the hiring market for new graduates. The purpose of this policy was to give those who had failed to obtain stable employment upon graduation a chance to recover.

In addition, the government tried to foster promotion from non-regular employment to regular employment by the amendment of the Part-time Employment Act in 2008 and various support plans by local public employment security offices. The amendment mandated all employers of part-time workers to implement a system for promotion from part-time to regular full-time employment. Although the majority of part-time workers in Japan are married woman who voluntarily choose to work part-time, a non-negligible and increasing proportion of them are young workers who have not been able to find full-time work. Hence the amendment intended to help these young part-time workers to move up to regular employment.

Lack of Effectiveness of Policy Mandates So Far

So have these policy mandates been effective? Unfortunately, the answer seems to be negative. Despite the governments' efforts to promote hiring from the pool of already-graduated youths, Japanese firms' preference for new graduates in the hiring market has been rather strengthened since the Lehman collapse. According to the Survey on Employment Trends by the MHLW, the fall in mid-career hiring was so acute that the proportion of new graduates among all new job starters began to increase in spite of the declining number of new graduates due to the shrinking youth population. The MHLW also reports the proportion of firms that accept job applications from young applicants who have already graduated and failed to settle in stable jobs. This proportion decreased from 33% in 2008 to 27% in 2011. Moreover, about half of the surveyed firms answered that they are not sure if they will accept such applicants in the future, regardless of whether hiring new graduates or hiring mid-career workers. There seem to be few opportunities to obtain a regular job for those who have failed to obtain one upon graduation.

The effect of the amendment of the Part-time Employment Act is also limited. Even though the amendment mandated employers of part-time workers to introduce a promotion system to regular employment, the actual number of people promoted from non-regular employment to regular employment has not increased. According to other surveys by the MHLW, the proportion of firms that actually promoted non-regular employees to regular employment fell from 41% in 2008 to 30% in 2011. These numbers suggest that, in order to encourage promotion from non-regular to regular employment, it is not enough simply to mandate the introduction of a system for promotion by law.

Potential Key Point: Good Incentive Design for Employers

In order to mitigate the persistent negative effects of a recession at entry to the labor market, it is important to open up the opportunities to enter the regular employment track. It would be effective if we could

increase promotion from non-regular to regular employment or reduce the gap between non-regular and regular employment. Another effective policy would be to open the hiring market to those who have already graduated without obtaining a regular job. However, practically it is difficult to make these policies actually work, probably because of the lack of economic incentive for firms to follow these policies. That is, it is more efficient for firms to limit their hiring to new school graduates.

One potential reason for this lack of incentive is the under-development of occupation-specific job markets in Japan. Given the lack of a signaling scheme for general and occupation-specific skills, firms have to rely on the prestige of past employers and employment status as a signal for job applicants' productivity. Then, the fact that the applicant does not have experience in regular employment works as a very negative signal for his or her productivity. An effective signaling scheme to distinguish potentially productive workers from the pool of unemployed and non-regular employees could provide firms with the incentive not to limit their hiring to new graduates. It would be also necessary to develop public training programs to compensate for the lack of work experience in regular employment. Such training programs should allow workers whose current productivity is low to improve their productivity, and through the signaling scheme to move up to regular employment.

It is not easy to make such a signaling scheme work. But once it does get working, it would not only mitigate the youth employment problems and inequality generated by cohort effects but also improve Japanese firms' profitability. Therefore it would improve the overall labor market conditions and economic outlook in the long run, too.

Need for Short-term Remedies

Last but not least, it is also important to provide remedies for anticipated problems arising from inequality already generated. The cohorts that entered the labor market during the end of 1990s and early 2000s have already been out of school for more than a decade. As shown by the studies described above, a non-negligible proportion of these cohorts are still left outside of the regular employment track. They have already lost the opportunity to develop human capital through regular employment. Since it is impossible to nullify the loss borne by these so-called "lost generation" cohorts, we need to prepare for problems expected to emerge as these cohorts age.

Already parts of the poverty problem have come to the surface as, for instance, the phenomenon of "Net cafe refugees" (homeless young workers who live in Internet cafes) and demonstrations by dispatched workers at the end of 2008. The situation is expected to become even worse as these cohorts age. For example, they will lose support from their parents as they retire. Also, since non-regular jobs tend to require physical labor, it will become harder and harder to find even non-regular jobs as these workers become older. Providing public relief for these people is a pressing issue, which must be done separately from the more fundamental policy reforms necessary to mitigate inequality in the future. **J.S**

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