Topic 3: Compensation and Seniority

*The purpose of this topic is to understand how the compensation over a worker's career differs across countries.

*To do so, I will consider what are called "age-wage" profiles, which measure how wages change during one's working life.

1. Is there evidence that age-wage profiles differ across countries?

2. Are older workers overpaid? Is this inefficient? What policies will firms use in addition to seniority?

3. How does seniority operate in promotion decisions?
We begin by considering wage profiles earned by workers over their careers in a variety of countries.

- This is given in Figure 1 for blue collar males in manufacturing in European countries and Japan.
Figure 11 Age-wage profiles in Japan and the EC (male blue-collar workers)

BLUE-COLLAR MALES

Figure 1
* The data here illustrate a clear return to seniority in Japan relative to these European countries; the two most steeply sloped lines are for large and small Japanese firms

• Figure 2 carries out the same exercise for white collar workers. Here the results are very different.
Figure 2

**White-collar Males**

**Figure 2**

**Text:**

<table>
<thead>
<tr>
<th>Key</th>
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<tr>
<td>Japan companies with 1000 or more employees (blue collar)</td>
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<tr>
<td>Japan companies with 10-99 employees</td>
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**Table:**

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<td>55-59</td>
<td>1000</td>
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<tr>
<td>60</td>
<td>1100</td>
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</table>
* The data in Figures 1 & 2 are not ideal as the idea of seniority really refers to length of service in a company rather than simply the age of a worker as is given in Figures 1 & 2.

* In Figure 3, the same type of evidence is given based on length of service for Japan and the UK.
Figure 1A

**KOREA/JAPAN**: Age/Earnings Profiles for Non-Manual and Manual Men Separately, As Percentage of Pay for 20-40 Year Olds, Production Sector. Select Year

Notes:  
a. Monthly pay including overtime premiums (excluding bonuses).
b. Mining, manufacturing and construction.
The 1961 and 1971 Japanese profiles are interpolated.
Sources: Korea, OWS original data on individuals.
* The data in Figures 1 & 2 are not ideal as the idea of seniority really refers to length of service in a company rather than simply the age of a worker as is given in Figures 1 & 2.

* In Figure 3, the same type of evidence is given based on length of service for Japan and the UK.

![Chart showing wages by age and length of service in Japan and Britain (males in all company sizes).]
Figure 3
Steep age-wage profiles can represent two very different phenomena:

1. Workers may be collecting skills throughout their lives which increase their wages.

2. Older workers may be getting paid more than their value in companies.
• In order to get some idea of whether there is a difference in productivity we look at inter-rank wage differentials, i.e., the difference in wages between a white collar and a blue collar worker.

• This is given in Figure 4, where we see much smaller differences in the wages earned by blue and white collar workers in Japan than in the European countries studied.
Figure 15 Wage differentials by occupational group in Japan and the EC (male white-collar workers)

Figure 4
* The data above are quite old; for the mid-1970s. To get some evidence of recent developments we might take a look at Figure 5.

**Returns to College**
Returns to College

Figure 5
* Before we get carried away, once again consider the plight of women in Japan. This is given in Figure 6, where we consider the number of cents earned by females in a variety of countries for every dollar earned by a male.

![Graph showing age-related wage differentials by sex in Japan and the US.](image)

**Figure 1.10** Age-related wage differentials by sex in Japan and the US (male workers ages 18-79, manufacturing).
Figure 6
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Figure 4A
Self Selection

Self-Selection

*Self-selection implies that the firm offers a contract where the terms of the contract are only attractive to certain types of workers.*

* Examples: motivation, health, ability, turnover propensity.

* The key issue here is that you have to design contracts not only that the desired types want to work for you, but also that those you do not want to hire choose to go elsewhere.

Self Selection

There are two kinds of workers: *Clever* and *Slow*

A slow worker can get a wage of $w_s$ elsewhere. A clever worker can get a wage of $w_c$ elsewhere.

A worker's career lasts two periods, 1 and 2, so firms can offer wages of $w_1$ and $w_2$. 
At the end of the first period, there is a probability $p$ that a slow worker is identified to be such. If that happens, she is fired.

In order to satisfy selection, two conditions are necessary:

1. The contract has to be acceptable to the clever workers:

\[ w_1 + w_2 > 2w_c \]

2. The contract has to be unacceptable to the slow workers:

\[ w_1 + pw_s + (1-p)w_2 < 2w_s \]

How do you satisfy both of these? By deferring pay.
Seniority as Back-Loaded Wages

How would we test for this?

1. Rules

2. Common-Sense Tests: bus drivers and airline pilots

3. Entrepreneurs vs. the employed

How differently are those employed in firms paid compared to those doing similar jobs who are self-employed?

4. Who is offered seniority pay?

5. The Acid Test

* Are firms happy when older workers retire?
Why would a firm choose to offer deferred compensation?

We will consider three possible reasons for efficient deferred compensation:

(i) Self-selection – deferring compensation gets better workers.

(ii) Incentives – deferring compensation increases effort.

(iii) Preferences – workers just like it.
BACKLOADING OF WAGES
AS A SELF-SELECTION DEVICE
Policies Used in Conjunction with Seniority

Here we deal with two issues that typically arise when firms defer compensation: retirement issues, and pensions.

A. Mandatory Retirement

* Is it necessary for efficient employment?

* Q: Do you think that work lives have increased or decreased over the last twenty years? In other words, are people retiring earlier or later in life? Is this true for both men and women?
Participation in the Labor Force for Older Individuals  (Age 55-64)

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<tr>
<td>US</td>
<td>42.2</td>
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Final Note: For the 65+ age group, the average of all the countries that I could find was about 4% in 1990, with the exception of Japan, where the rate was 16.2%.
A greyer tomorrow
Ratio of workers to retired people

- United States
- Britain
- France
- Germany
- Italy

Sources: OECD; The Economist
B. Pensions

- Vesting issues: "Cliff" versus "Staggered"

- It is worthwhile to distinguish between two kinds of pensions:

*Defined Benefit*: Specifies an Annuity

- But the annuity usually has a seniority component:

\[ \text{Payment} = a \times \text{wage} \times \text{seniority} \]

Issues associated with this:

1. The final year's wage

2. Causes very serious deferred compensation issues.
Defined Contribution: Specifies Contributions
3. Promotion Systems

- How seniority actually does seem to operate in Japan, where among white collar workers what is known as the “escalator model” of promotion is used.

- This implies that workers are not differentiated much early in their careers; divergence really occurs only after 35.

Q: What are the costs and benefits of slow evaluation?
Promotion Systems

• "escalator model"

• More generally, firms have two methods of career advancement that they could follow: (i) equal treatment and (ii) a fast track.

• only 3% of employees are in the two fastest promoted groups after 15 years in the US while Tanaka notes for the Japanese firms he studies that 25% belong to that group.

• "managing through ambiguity."
4. Why Does Japan Choose a Different Promotion Scheme than European and US Companies?

A. *Different Labor Markets*

B. *Different Production Techniques*