



# Migrant Workers and Aging Population in Japan

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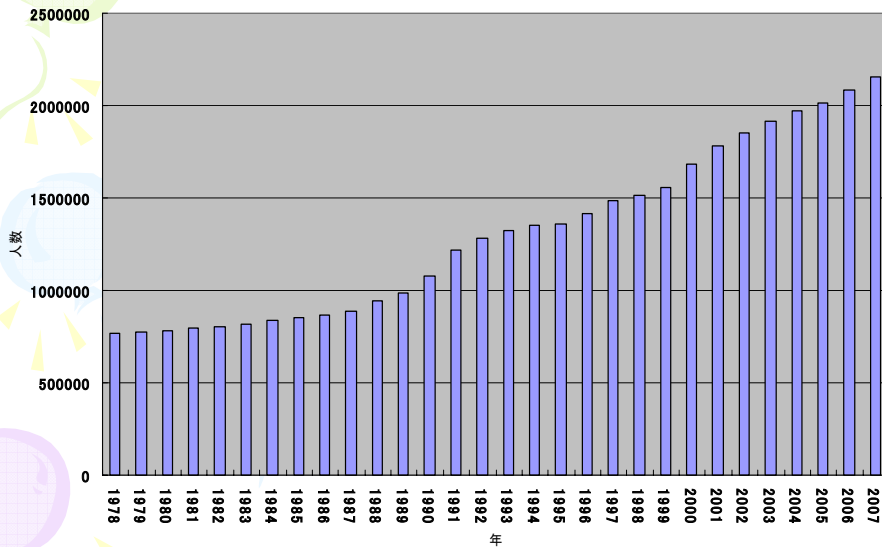
## Outline

- **Salient features of migrant workers in Japan**
  - Rapid increase since 1990
  - Three major categories
  - Dramatic increase of *Nikkeijin*
- **Migration and aging population**
  - fertility rate, aging, labor shortage
  - Alternative measures to cope with future labor shortage due to the decline in fertility rate
    - immigration, female labor, trade liberalization, labor productivity,

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Immigration in Japan has been rapidly increasing since 1990

## Number of Registered Foreigners in Japan



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China, Brazil, Philippines, Korea are major sending countries

## Registered Foreigners by Origin

		1995	2000	2004	2007
Total	number	1,362,371	1,686,444	1,973,747	2,152,973
	share(%)	100.0	100.0	100.0	100.0
Korea	number	666,376	635,269	607,419	593,489
	share(%)	48.9	37.7	30.8	27.6
China	number	222,991	335,575	487,570	606,889
	share(%)	16.4	19.9	24.7	28.2
Brazil	number	176,440	254,394	286,557	316,967
	share(%)	13	15.1	14.5	14.7
Philippines	number	74,297	144,871	199,394	202,592
	share(%)	5.5	8.6	10.1	9.4
Peru	number	36,269	46,171	55,750	59,696
	share(%)	2.7	2.7	2.8	2.8
USA	number	43,198	44,856	48,844	51,851
	share(%)	3.2	2.6	2.5	2.4
Other	number	142,800	225,308	288,213	321,489
	share(%)	10.5	13.4	14.6	14.9

(Source) Japanese Ministry of Justice

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## Basic policy of the Japanese Government toward Immigration

- Skilled Immigration should be promoted.
- In principle, unskilled immigration is prohibited
- Two exceptions (since early 1990s)
  - *Nikkeijin* (immigrants of Japanese origin)
  - Technical internship program

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Three major categories

## Migrant Workers in Japan(2007)

- **Legal Skilled Workers**
  - 190 thousand
- **Nikkeijin (foreigners of Japanese Origin)**
  - 270 thousand—510 thousand
- Working Students
  - 80 thousand
- Workers under the Technical Internship Program
  - 50 thousand
- **Illegal Workers (mostly unskilled)**
  - 150 thousand
- Total 740 thousand—980 thousand

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Category 1: Legal skilled workers

## Number of Skilled Immigrants in Japan (2007)

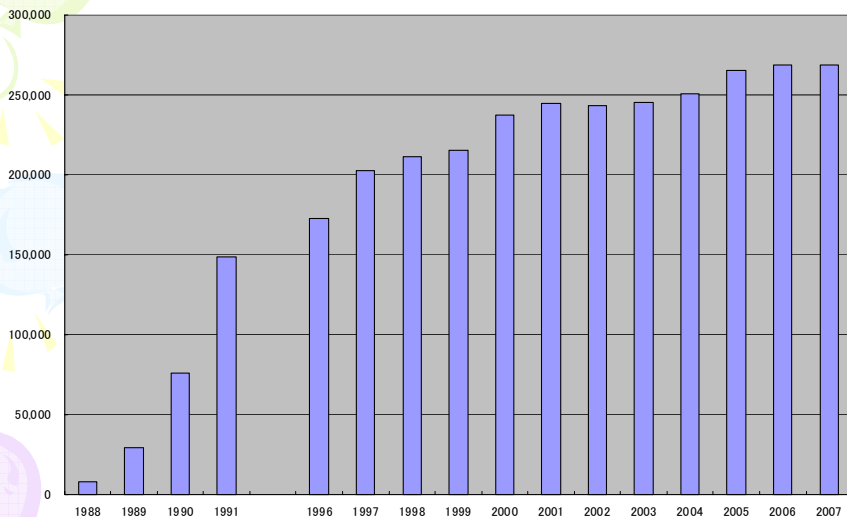
	Total	China	Korea	Philippines	USA	Brazil	Peru	Other
Skilled Workers	193,785	74,147	23,291	15,378	19,599	800	75	60,495
Professor 教授	8,436	2,453	965	73	1,167	36	9	3,733
Art 芸術	448	129	37	3	85	12	-	182
Religion 宗教	4,732	114	1,047	266	1,775	121	9	1,400
Press 報道	279	10	66	1	44	4	1	153
Investment 投資・経営	7,916	1,729	1,900	38	1,108	27	1	3,113
Legal 法律・会計業務	145	9	4	-	76	-	-	56
Medical 医療	174	91	17	-	4	-	-	62
Research 研究	2,276	901	269	38	81	11	2	974
Education 教育	9,832	101	85	88	4,960	14	5	4,579
Skill 技術	44,684	23,247	7,733	2,004	760	53	9	10,878
Humanity and International 人文知識・国際業務	61,763	26,692	6,926	825	7,706	108	16	19,490
Transfer 企業内転勤	16,111	5,712	2,181	709	1,468	93	-	5,948
Entertainer 興行	15,728	1,193	441	11,065	305	228	4	2,492
Technical 技能	21,261	11,766	1,620	268	60	93	19	7,435

(Source) Compiled from the data by the Japanese Ministry of Justice

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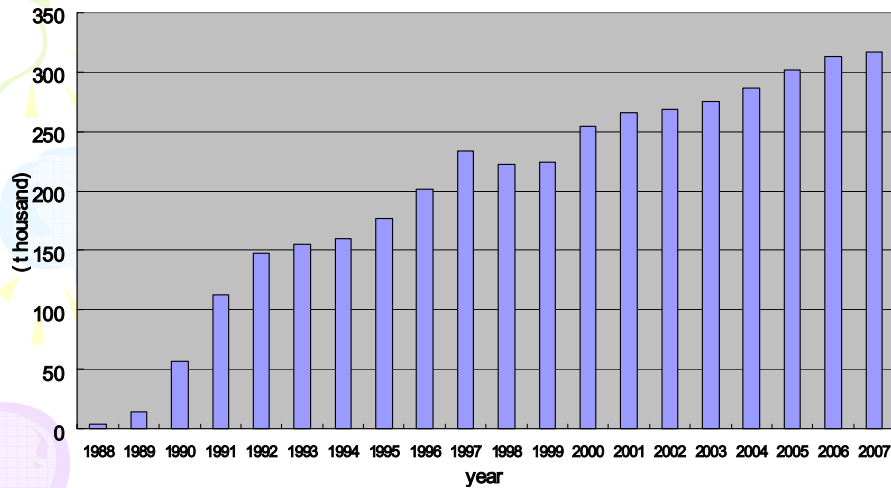
Category 2: *Nikkeijin* Workers

## Number of Long-term Stayers in Japan



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Figure 4: The Number of Brazilians Staying in Japan



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The employment situation of non-Japanese and *Nikkeijin* from Latin America

(as of Jun.1st, 2003)

	non-Japanese who come from Latin America	Composit ion ratio	(Of those) <i>Nikkeijin</i> from Latin America	
			Composit ion ratio	Composit ion ratio
The total number of direct labor	61,172	100.0%	55,193	100.0%
(by industry)				
<b>Manufacturing industry</b>	<b>51,980</b>	<b>85.0%</b>	<b>47,444</b>	<b>86.0%</b>
Service sector	4,524	7.4%	3,708	6.7%
Wholesale and retail trade	669	1.1%	571	1.0%
Restaurant, lodging industry	271	0.4%	205	0.4%
Instruction, learning assistance service	189	0.3%	80	0.1%
Others	3,539	5.8%	3,185	5.8%
The labor who takes up employment with a business establishment which primarily performing labor dispatch or contracting business	38,542	63.0%	35,469	64.3%

sources: Ministry of Health, Labour, and Welfare

### Category 3: Illegal Unskilled Workers

#### Number of Illegal Immigrants (illegal overstayers) in Japan, 2007

Total	149,785
Korea	31,758
China	31,088
Philippines	24,741
Thailand	7,314
Indonesia	5,096
Malaysia	4,804
Peru	4,481
Sri Lanka	3,615
Vietnam	3,362
Other	33,526

(Source) compiled from the data of Japanese MOJ

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### Three Waves of Debates on Immigration in Japan

- Immigration is necessary to cope with labor shortage in construction etc. under the economic boom in the late 1980s (**3-D Jobs**)
- Large-scale immigration is necessary to cope with long-term labor shortage due to **aging population**
- Some **FTA (EPA)** requires admission of immigration (imports of labor)

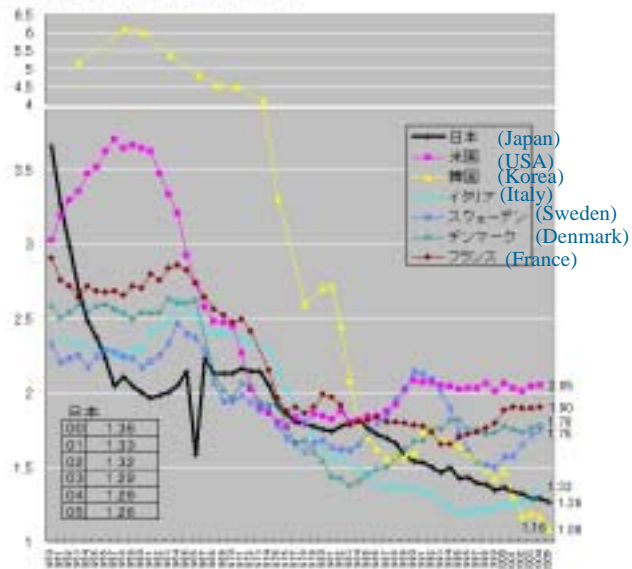
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## Rapid decline in fertility rate in Japan



## Fertility Rate (Japan and other major countries)

合計特殊出生率の推移(日本及び諸外国)

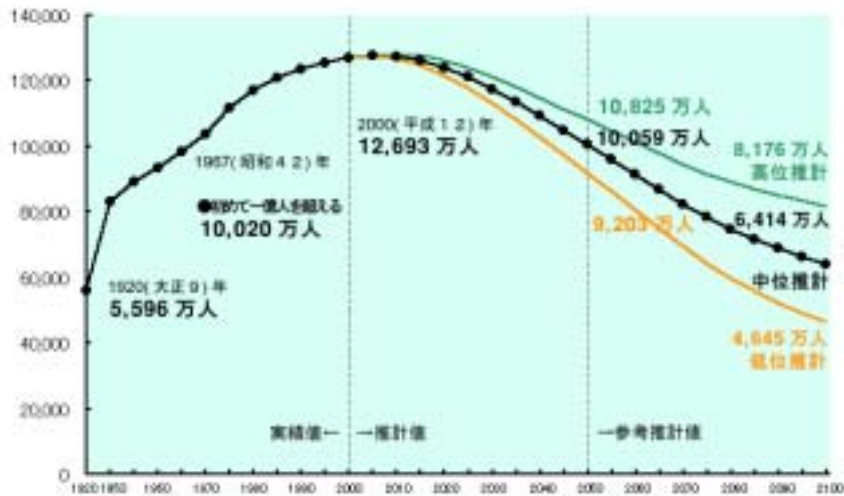


(注) 合計特殊出生率は女性の年齢別出生率を合計した値。日本は推定値、韓国暫定値。

(資料) 厚生労働省「平成13年度人口動態統計特殊報告」(人口動態統計)。

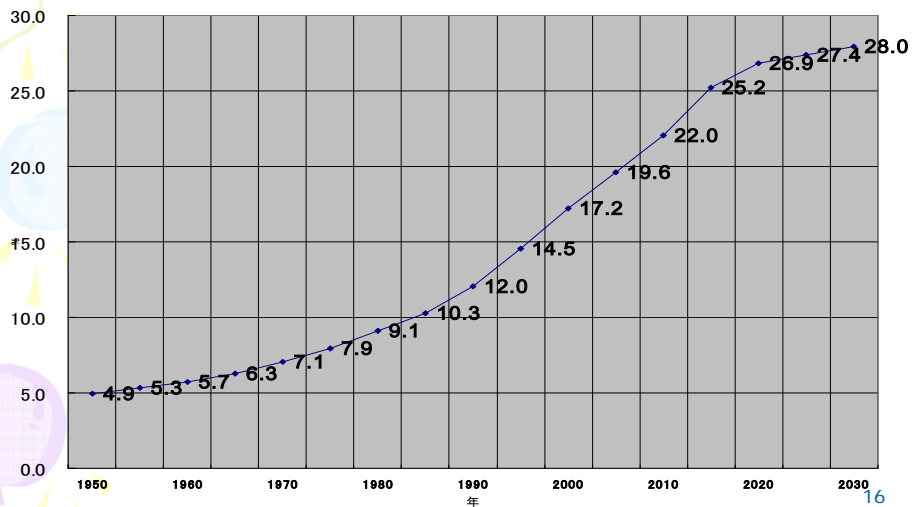
国立社会保障・人口問題研究所「人口統計資料集2006」, Home National Statistics Office

## Prospect for future population in Japan



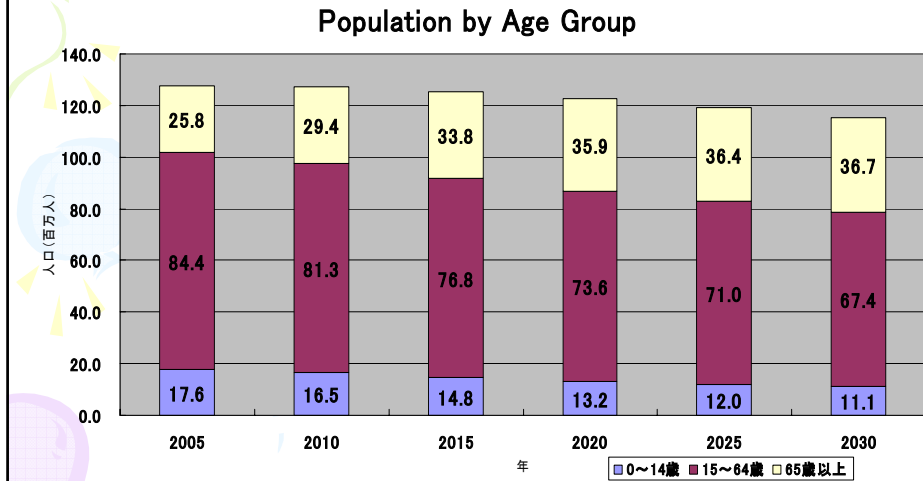
As a result, population is rapidly aging

## Ratio of Elderly Population (%)





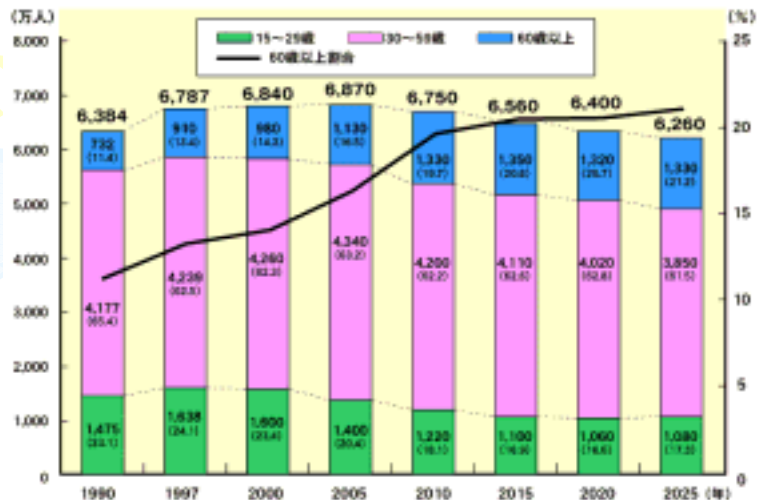
## Dramatic decline in working-age population:



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## Labor shortage is expected.

### Labor Force in Japan



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## Popular argument

- Japanese society is rapidly aging.
- Working population will decrease by 17 million in the next 25 years
- Possibility of serious labor shortage
- Therefore, Japan must import foreign labor.
- Also, migration benefits sending countries (international responsibility by rich Japan)

## Alternative views

- Number of migration needed must be unrealistically large (Japan is not ready to accept 17million migrant workers)
- Various side effects (economic and social)
- Alternatives to migration
  - Productivity
  - Domestic labor supply (women, elderly, youth etc.)
  - international movements of people vs. those of money and goods (indirect use of foreign labor)

## Migrant Workers in Japan

- 1-2 percent of labor force, but increasing
- Three Categories
  - Legal Skilled Workers
    - No sharp increase
  - Illegal Unskilled Workers
    - Sharp increase since mid-1980s
    - Mostly from neighboring Asia
    - Female → male
    - Non-traded goods sector
  - Migrant Workers of Japanese Origin (*Nikkei*)
    - Mostly from Latin America
    - Dramatic increase since the revision of immigration law (1990)

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## Economic Theory on the Impact of Migration

- Traditional View
  - Good to both host and home countries, because labor moves from labor-abundant countries to labor-scarce countries.
- Alternative View
  - Goto (1998): existence of trade barriers and non-traded goods.
  - Schiff (1999): role of social capital

Under the realistic assumptions, the conventional wisdom breaks down.

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## Economic Effect under the New Framework (The Model, Goto 1998)

- Detailed model is shown in the paper.
- Three characteristics of the model
  - Trade barrier
    - Tariff wedge
  - Non-traded good
    - Three sector model
  - Possible change in factor prices
    - Jones type specific factor model

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## Alternative Views on the Impact of Migration (Goto, 1998)

\* Three Sub-effects

▶ Effect of Immigration

= Cheaper Foreign Labor Effect (positive, because MLP and wage decline as the number of migration increases)

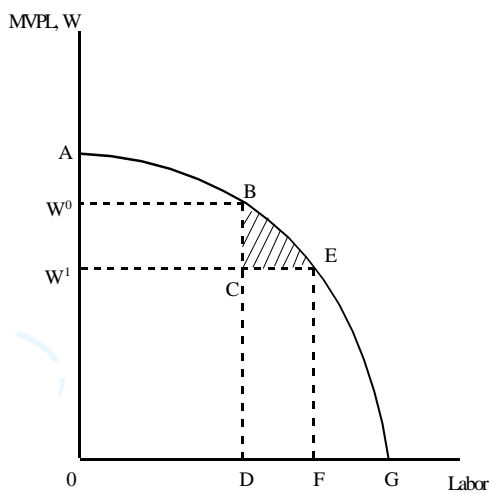
+ Trade Barrier Effect (negative, Uzawa effect)

+ Nontradable-Good Effect (ambiguous because positive consumption effect and negative income effect)

• **So, overall effect is ambiguous.**

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**FIGURE 4**  
**CHEAPER FOREIGN LABOR EFFECT**



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***MECHANISM OF BRECHER=DIAZ-ALEJANDRO EFFECT***

IMPORT RESTRICTION



PRICE OF IMPORTABLE GOODS (LABOR-INTENSIVE)  
HIGHER THAN INTERNATIONAL PRICE



INFLATED FACTOR PRICE OF LABOR (=WAGE)



OVERPAYMENT TO IMPORTED FACTOR



WELFARE LOSS TO HOST COUNTRY

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## Non-traded goods effect

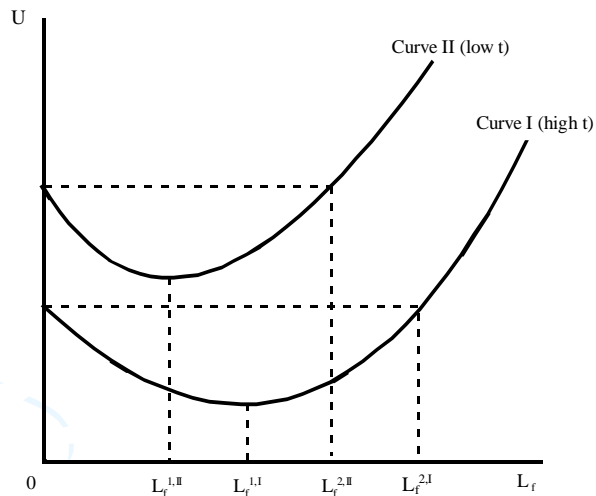
- Lower price of non-traded goods
  - Gains to consumers (e.g., cheaper maid service)
- Lower wage of workers in the non-traded goods sector
  - Loss to workers (e.g., lower wage of domestic maids)

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## Overall Effect (trickle vs. flood)

FIGURE 5

MIGRANT WORKERS AND HOST COUNTRY WELFARE



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## Social Effect of Migration in the Host Country

- Diversification and Internationalization
  - Positive externalities
- Burden on the Fiscal Expenditure
  - Especially when accompanied by dependents
- Possible Increase in Crime (???)
  - No scientific proofs
- Continuation of “3-D” Jobs
  - Very serious

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## Effect of Emigration on the Sending Country

- Remittance and Income Creation
  - Large but unstable; luxury goods
- Alleviation of Domestic Unemployment
  - Overall vs. sectoral disparity
- Transfer of Knowledge and Skills
  - Very small if unskilled
- Brain Drain
  - Unskilled work by skilled workers (inefficient allocation of resources)

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## Alternative measures:

- Alternatives in international perspective
  - Movements of goods, capital and labor
  - Migration vs. trade liberalization
  - “import of labor” vs. “import of labor intensive goods”
- Alternatives in domestic setting
  - productivity
  - Female workers
  - elderly workers, youth etc.

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## Labor Productivity Increase

- 17 million in 25 years = 0.9 percent annual decline
- **Unit efficiency**
  - To raise productivity at each workplace by investment, better management etc.
- **Allocation efficiency**
  - To raise productivity at national level by shifting low-productivity industries to high-productivity industries

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## Migration, FDI, and Trade Liberalization (The Model)

- Simple 2x2x2 trade model with:

- Migration

$$(13) \quad I_{1A} + I_{2A} = L_A + L_F$$

$$(28) \quad I_{1B} + I_{2B} = L_B - L_F$$

- FDI

$$(14) \quad k_{1A} + k_{2A} = K_A - K_F$$

$$(29) \quad k_{1B} + k_{2B} = K_B + K_F$$

- Trade Barrier

$$(31) \quad P_{2A} = (1 + t_A) P_{2B}$$

$$(32) \quad P_{1B} = (1 + t_B) P_{1A}$$

## Result of Simulation A: Impact of Migration

	Base	Case A-1 (small)	Case A-2 (middle)	Case A-3 (large)
Migration (LF)(thousand)	319	419	500	1000
Japanese Trade Barrier (TA)(%)	13.29	13.29	13.29	13.29
East Asian Trade Barrier (TB)(%)	26.58	26.58	26.58	26.58
Stock of FDI (KF) (\$billion)	60.45	60.45	60.45	60.45
Japanese Welfare (UA)	100,000	99,997	99,994	99,980
change	0	-3	-6	-20
East Asian Welfare (UB)	100,000	100,029	100,049	100,176
change	0	29	49	176

## Result of Simulation B: Impact of Trade Barrier

	Base	1 (small)	Case B-2 (middle)	Case B-3 (large)
Migration (LF)(thousand)	319	319	319	319
(TA)(%)	13.29	12.63	11.96	9.3
(TB)(%)	26.58	25.25	23.92	18.61
Stock of FDI (KF)	60.45	60.45	60.45	60.45
Japanese Welfare (UA)	100,000	100,087	100,085	100,543
change	0	87	85	543
East Asian Welfare (UB)	100,000	100,780	102,088	105,937
change	0	780	2088	5937

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## Migration vs. Trade Liberalization

Comparison with 30% reduction

	Trade		
	Base	Liberalization	Migration
Migration (LF)(thousand)	319	319	<b>24,875</b>
Japanese Trade Barrier (TA)(%)	13.29	9.30	13.29
East Asian Trade Barrier (TB)(%)	26.58	18.61	26.58
Stock of FDI (KF) (\$billion)	60.5	60.5	60.5
Japanese Welfare (UA)	100,000	100,543	99,371
change	0	543	-629
East Asian Welfare (UB)	100,000	105,937	105,937
change	0	5,937	5,937

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Alternative measure 3: Domestic labor supply (women, elderly, youth etc.)

(A Simulation)	(thousand)	
	normal	high speed
Female participation	379	783
Efficient agriculture	223	325
Trade liberalization	153	304
Curb on the export drive	96	96
FDI	158	158
Total of the above	1009	1666
(Note) the number of expected decline in employment is 7 million		
(Source) Goto (1994)		

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Female labor is most promising, but there are many obstacles to overcome.

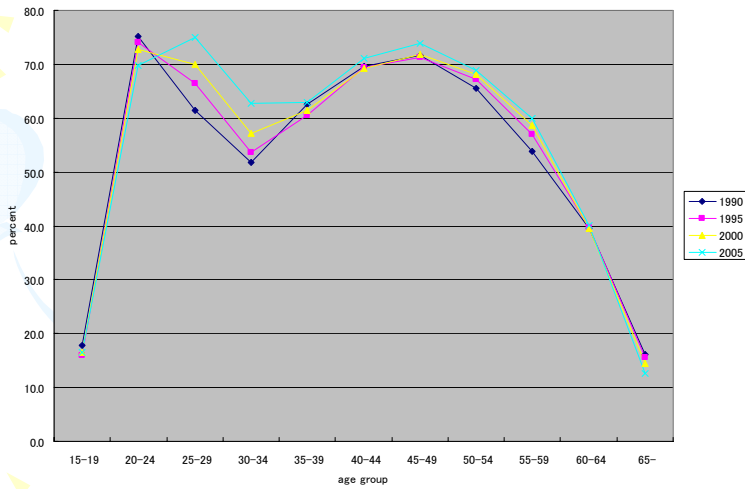
## Obstacles to Female Participation

- Working environment which prevents mothers from working
- Gender gap in wage and promotion
- Difficulty in second-challenge
- Old-fashioned view toward gender role.

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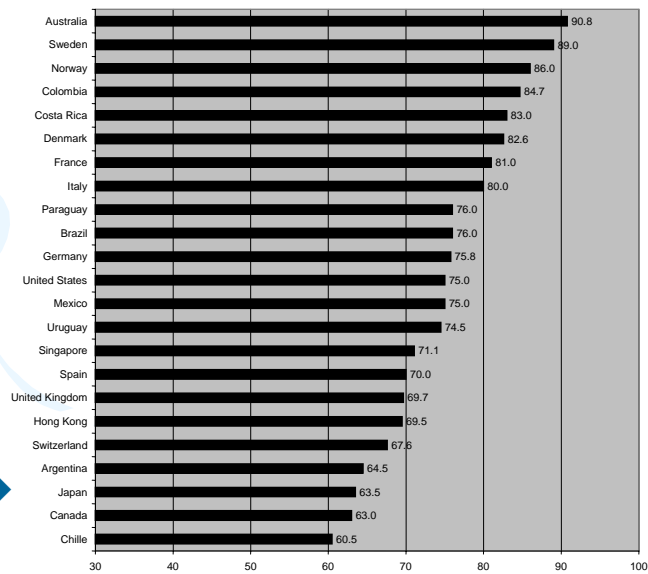
## ◆ barriers associated with child bearing and child care

Female Labor Participation Rate by Age Group (Japan)



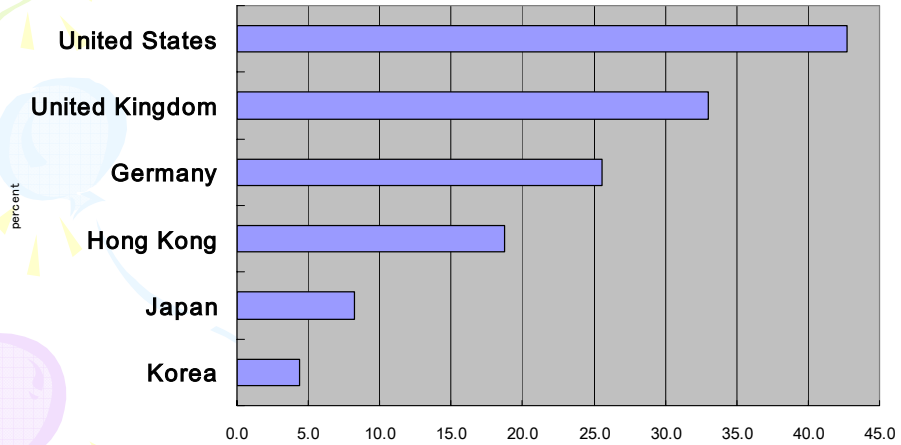
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## Gender wage gap is one of the worst in spite of egalitarian society

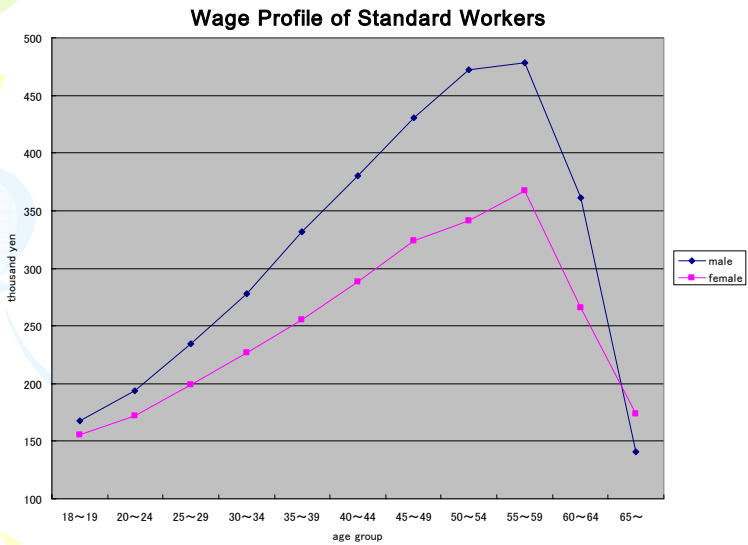


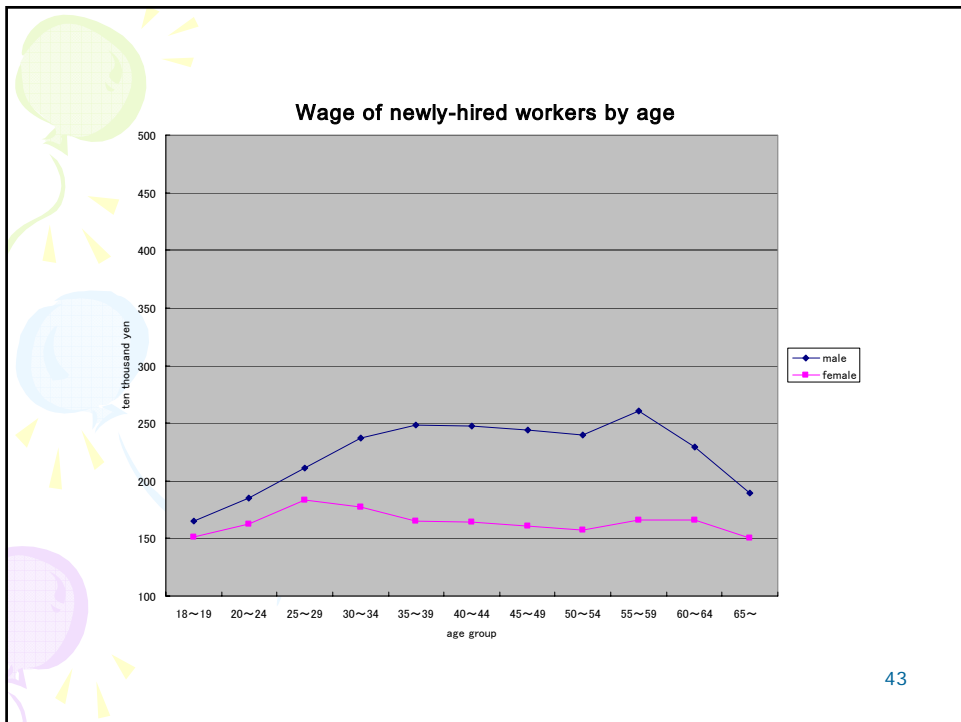
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**Female managers are (very) few  
Gender gaps in promotion, too.**

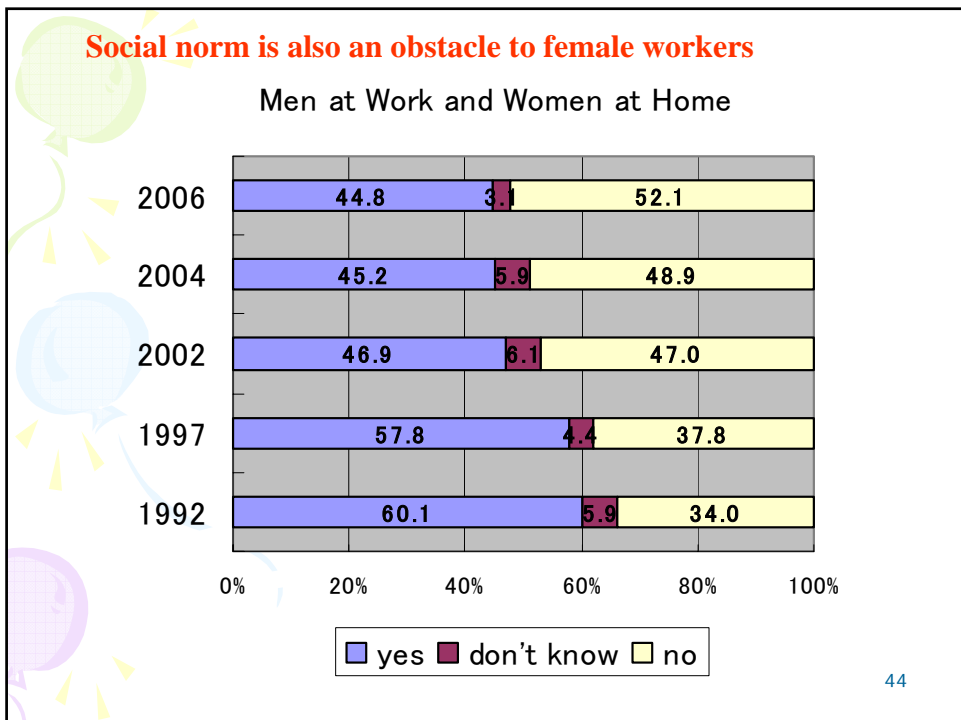


**Mainstream vs. marginal workers (fundamental divide in Japan)**






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## Concluding Remarks

- **Migration in Japan is rapidly increasing**
  - **Nikkeijin inflow is remarkable**
  - **Three kinds of debates toward immigration**
    - 3D jobs, Aging, FTA(EPA)
  - **Alternative measures to cope with labor shortage due to aging**
    - Immigration, productivity, trade liberalization, female labor
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