

AGRICULTURAL POLICY REFORM AND STRUCTURAL ADJUSTMENT IN KOREA AND JAPAN

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KOREA and JAPAN

- ▶ Located in east Asian monsoon climate zone
- ▶ Large & net food importing countries
- ▶ Maintaining most protective positions in multilateral agricultural trade negotiations
- ▶ Bio-chemical technology development path → high land productivity


EVOLUTION OF AGRICULTURAL POLICIES IN KOREA AND JAPAN

PERIODS	KOREA	JAPAN
Pre - 1950s	Japanese Colonial Policies; Korean War	Production Oriented Agricultural Policies
1950s	Disincentive Agricultural Policies	
1960s		Protective Agricultural Policies
1970s	Protective Agricultural Policies	Agricultural Adjustment Policies
1980s		
Post-UR	Toward Market-Oriented Agricultural Policies	Toward Market-Oriented Agricultural Policies



COMPARISON OF KOREAN AND JAPANESE AGRICULTURAL POLICIES



- ❖ **Similar paths with some time gap due to the difference in economic development stage.**
 - ❖ **Korea had a disincentive agricultural policy until 1960s while Japan gave up such policy in the late 1940s.**
 - ❖ **Japan experienced spontaneous production adjustment or agricultural reform while Korea moved directly to market opening and internationalization stage.**
 - ❖ **Korea has not been well prepared for current trade liberalization by jumping directly up to the market opening stage.**
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CHARACTERISTICS OF AGRICULTURAL STRUCTURES in the TWO COUNTRIES

- **Small Farm Management Structures**
- **Large Agricultural Importing Structures**
- **Paddy Rice Dominant Farming System**
- **Excess of Elderly Farm Labor**
- **Full - time Farm Households (Korea)**
- **Part - time Farm Households (Japan)**
- **Farm Household Income Deterioration (Korea)**

Small Farm Management Structures

Population, Arable Land, and Agricultural Employment

Countries	Total population (thousand) (2002)	Total arable land (thousand) (2001)	Agricultural employment (thousand) (2001)	Arable land per farmer (ha) (2001)
Korea	47,430	1,696	2,271	0.75
Japan	127,478	4,445	2,608	1.70
UK	59,287	5,652	515	10.97
Netherlands	16,067	905	241	3.76
USA	291,038	175,209	2,964	59.11
Germany	82,414	11,813	967	12.22
Denmark	5,351	2,292	106	21.62
France	59,850	18,447	858	21.50

Large Agricultural Importing Structures

Agricultural Trade and Food Grain Self-Sufficiency Ratio

	Korea			Japan		
	1990	2000	2002	1990	2000	2002
Ag. Exports (100mil. US\$)	7.9	12.8	14.7	12.1	16.4	
(Share of total exports, %)	1.2	0.7	0.9	0.4	0.3	
Ag. Imports (100mil. US\$)	37.5	67.8	76.5	322.3	480.5	
(Share of total imports, %)	5.4	4.2	5.0	12.4	12.7	
Food grain self-sufficiency ratio	43	30	30	30	30	28

Paddy Rice Dominant Farming System

Rice Farming in Korea and Japan, 2002

		Korea	Japan	Share (%)	
				Korea	Japan
Areas (thous. ha)	Cultivated area(a)	1,862	4,762	-	-
	Paddy field(b)	1,138	2,607	b/a = 61.1	54.7
	Rice production area(c)	1,053	1,683	c/b = 92.5	64.6
Revenue (thous. JPY and KRW)	Revenue from farming(d)	19,951	3,474	-	-
	Revenue from rice farming(e)	7,471	971	e/d = 37.4	27.9
Income (thous. KRW)	Farm household income (f)	24,475	NA	-	NA
	Income from farming (g)	11,274	NA	h/g = 46.9	NA
	Income from rice farming (h)	5,289	NA	h/f = 21.6	NA

Full vs. Part-time Farm Households

(Continued)

Distribution of Farm Households by Full and Part-time Basis
(thous. households, %)

Year	Korea			Japan		
	Full-time	Part-time		Full-time	Part-time	
		Class I	Class II		Class I	Class II
1990	1,052 (59.6)	389 (22.0)	326 (18.4)	473.4(15.9)	520.6(17.5)	1,976.6(66.5)
1995	849 (56.6)	277 (18.4)	375 (25.0)	427.6(16.1)	498.4(18.8)	1,725.4(65.1)
2000	902 (65.2)	225 (16.2)	257 (18.6)	426.4(18.2)	349.7(15.0)	1,560.9(66.8)
2002	862 (67.3)	139 (10.9)	279 (21.8)	439.3(19.5)	300.2(13.3)	1,509.3(67.1)

- a. Part-time household in 'Class I' derives more than 50 percent of annual household income from farming.
- b. Part-time household in 'Class II' derives less than 50 percent of annual household income from farming.

Excess of Elderly Farm Labor

Age Distribution of Farm Managers, %

	Total (number of farm households in 1000)	39 years old under	40 – 49	50 – 59	60years old over
Korea	100 (1,383)	6.6	17.2	25.2	51.0
Japan	100 (2,337)	3.4	17.8	25.4	53.3

Farm vs. Urban Household Income

Farm Household Income Relative to Urban Household Income

Year	Korea (thous. KRW)			Japan (10 thous. JPY)		
	Farm (A)	Urban (B)	A/B	Farm (C)	Urban (D)	C/D
1990	11026	11319	0.97	839.9	626.1	1.34
1995	21803	22933	0.95	891.7	685.0	1.30
2000	23072	28643	0.81	828.0	675.3	1.23
2002	24475	33509	0.73	802.2	647.9	1.24

CHARACTERISTICS OF AGRICULTURAL POLICIES

Structure of Producer Support Estimate(PSE) (unit: bn KRW and bn JPY)

	Year	PSE		MPS	Payments based on				
		Total PSE	% PSE		output	area planted/ animal numbers	input use	input constraints	overall farming income
Kor.	1986	9,675	70	9,578(99.0)	0	0	69(0.7)	0	28(0.3)
	2002	22,655	66	20,649(91.1)	0	445(2.0)	793(3.5)	21(0.1)	747(3.3)
Jap.	1986	7,143	61	6,396(89.5)	221(3.1)	0	298(4.2)	228(3.2)	0
	2002	5,502	59	4,971(90.3)	165(3.0)	0	250(4.5)	117(2.1)	0

CHARACTERISTICS OF AGRICULTURAL POLICIES

(continued)

Producer Support Estimates for the Top-four Products in Korea and Japan

Year	Korea, bn. KRW(%)		Japan, bn. JPY(%)	
	1986-88	2002	1986-88	2002
Total PSE	9,675(100)	22,655(100)	7,143(100)	5,502(100)
Rice	4,541(46.9)	8,268(36.5)	2,939(41.1)	1,849(33.6)
Beef and veal	508(5.3)	1,378(6.1)	377(5.3)	174(3.2)
Milk	328(3.4)	1,134(5.0)	631(8.8)	550(10)
Pig meat	311(3.2)	924(4.1)	294(4.1)	264(4.8)

DIRECTIONS FOR POLICY REFORM UNDER CONSIDERATION

Korea	Japan
<ul style="list-style-type: none"><input type="checkbox"/> For agriculture → Industrial policy<ul style="list-style-type: none">- market orientation and competitiveness- management stabilization<input type="checkbox"/> For rural areas → Community development policy<ul style="list-style-type: none">- rural community as an amenable living space- expansion of welfare infrastructure- enhancement of social safety net<input type="checkbox"/> For farmers → Income policy<ul style="list-style-type: none">- expansion of direct payments- increase in off-farm income- enhancement of income safety net	<ul style="list-style-type: none"><input type="checkbox"/> For agriculture → Targeting full-time farmers<ul style="list-style-type: none">- market orientation and competitiveness- management stabilization<input type="checkbox"/> For rural areas → Maintenance of rural vitality<ul style="list-style-type: none">- multi-functionality- maintenance of regional resources- direct payments for hilly-mountainous area



IMPLICATIONS FOR AGRICULTURAL POLICY REFORMS

In comparison with Japan, some structural aspects of Korean agriculture impose restrictions on policy reforms.

- **Large Farm Employment**
- **Large number of old farmers due to Rapid Structural Change**
- **Rice Monoculture**
- **Farm Household Income Structure**

Large Farm Employments

- Share of agricultural employment in total civilian employment is still near 10%.
- In 2001:
Germany(967,000)+France(858,000)+UK(515,000)
÷ Korea(2,271,000)
- Large number of farmers make it very difficult to convert market price support to direct payments.
- Reducing the number of farmers is in general regarded as the most urgent prerequisite for successful policy reform in Korea.

Excess of old farmers



■ **Aftermath of Rapid Structural Changes**

- **The excess of old farmers besides the large size of farm employment gives rise to several problems impeding smooth policy reform.**

- 1) difficult to reduce the number of farmers**
- 2) land mobility is restricted by old farmers**
- 3) old farmers intensify rice-monoculture**

Rapid Structural Changes

International Comparison of Time Required for Structural Changes

Countries	Agricultural Share of GDP			Agricultural Share of Employment		
	Year of 40%	Year of 7%	Years required	Year of 40%	Year of 16%	Years required
Korea	1965	1991	26	1977	1991	14
Japan	1896	1969	73	1940	1971	31
UK	1788	1901	113	1800	1868	68
Netherlands	1800	1965	165	1855	1957	102
USA	1854	1950	96	1897	1950	53
Germany	1866	1958	92	1900	1942	42
Denmark	1850	1969	119	1920	1962	42
France	1878	1972	94	1921	1965	44

Excess of old farmers :

Difficulty to reduce the number of farmers

- ◇ **Main cause of decrease in farm labor: 'natural exits' by death or retirement**
- ◇ **The rate of 'natural exits' is independent of changes in agricultural share of total economy, and is very stable**
- ◇ **The aging process in Korean agriculture is not expected to cease in near future**

Excess of old farmers : Land mobility is restricted

- ◆ **Old farmers have no other choices except farming, resulting in very low land mobility.**
- ◆ **The rigid land mobility causes high land prices which is regarded as the most restrictive factor in achieving price competitiveness.**
- ◆ **Rigid land mobility makes it difficult to improve the structure of small scale farming system and hence to improve competitiveness.**

Overflow of old farmers : Rice-monoculture is intensified


- ◆ **Long lasting government policies concentrated on the rice industry have induced labor saving technology in favor of rice farming.**
- ◆ **Old farmers tend to stick to rice farming since this requires less work.**

Overflow of old farmers : Rice-monoculture is intensified (continued).....


Labor Hours Required for the Cultivation of Major Products (hours / 10 acres)

	Rice	Chinese Cabbage	Red Pepper	Onion	Lettuce (protected farming)	Apple
1981	93(100%)	176(100%)	249(100%)	220(100%)	837(100%)	415(100%)
1995	35(37%)	140(80%)	243(98%)	193(87%)	724(87%)	334(81%)
2001	28(30%)	101(57%)	205(82%)	136(62%)	688(82%)	196(47%)

Rice Monoculture

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- Rice monoculture is a heavy burden to government in reforming policies, especially in Korea.**
- **Rice serves as predominant source of farm household income in Korea.**
 - **Rice has become a kind of political good rather than a commercial good. Any trial of rice policy reform leads to serious protests.**

Farm Household Income Structure

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- Full-time vs. part-time based farming systems have brought about a different composition of farm household income.**
 - **High dependency of farm household income on non-farm sources could allow more flexible policy options and relieve the burden on government in the process of agricultural policy reform.**

Farm Household Income Structure (continued)

Share of Off-Farm Income in Farm Household Income

Year	Korea(thous. KRW)		Japan(thous. JPY)		Taiwan(thous. TW\$)	
	Total	Off-farm(%)	Total	Off-farm(%)	Total	Off-farm(%)
1985	5,736	2,037 (35.5)	6,916	5,850 (84.6)	310.6	233.7 (78.2)
1990	11,026	4,762 (43.2)	8,399	7,235 (86.2)	503.8	402.9 (79.9)
1995	21,803	11,334 (52.0)	8,917	7,474 (83.8)	871.1	699.0 (80.2)
2000	23,072	12,175 (52.8)	8,280	7,176 (86.9)	917.6	756.5 (82.4)
2001	23,907	12,640 (52.9)	8,022	6,988 (87.1)	881.3	718.1 (81.5)

CONCLUSION

- **Full-time based Korean agriculture has more barriers to smooth policy reform mainly due to the income-related problems.**
- **With high level of off-farm income, the farm household income problem is not such a great problem in Japan.**
- **Japan has limited issues in policy reform: small number of full-time farmers, remote hilly and mountainous areas.**

CONCLUSION (continued)

- **The most urgent precondition for Korea to reform current agricultural policy is to reduce the number of farmers.**
- **Considering that most of the large farm employment consists of old farmers, it will take some time for Korea to have a reasonable farm employment size so that policies for structural adjustment can be effectively implemented.**

CONCLUSION (continued)

- **The most likely way to achieve more rapid adjustment is through policy initiatives like direct payments for early retirement and resource transfers to more productive farmers.**
- **However, such policies would not be expected to have a large impact in the short run because of the large number of farmers and budget constraints.**