



Capacity Building Programme 2016

**Korean Rural Development Experience
for the member countries of CIRDAP**

22nd ~ 26th Feb.2016

KCCI, Seoul

Brief on the Public Governance Programme, OECD KPC

Public Governance Programme (PGP)

The Programme was established in 2005 as the Asian Government Innovation Center to carry out policy research on human resource management, administration reform, public service ethics, and local finance and disseminate the results throughout the Asia Pacific region, in cooperation with the OECD. In 2008, with three other Programmes including Competition Programme, Tax Programme, Health and Social Policy Programme, it was integrated into OECD Korea Policy Center.

Purposes and Functions

As a partner of the OECD Directorate for Public Governance and Territorial Development, the Programme works with all levels of central and local governments in the Asia-Pacific region in (a) disseminating the OECD's work on public governance in the region, (b) strengthening the understanding of Asia-Pacific societies on the OECD's public governance research and analysis, (c) and fostering peer review in the field of public governance. For this, the Public Governance Programme holds regular international meetings, provides capacity building programmes for public officials, and promotes joint activities in research and translation.

Capacity Building Programme for Government Officials

The Capacity Building Programme (CBP) offers training programmes for government officials from the Asia-Pacific countries in order to assist capacity development in their interested area and spread the public sector governance policies and best practices of Korea. Calls for Proposals are circulated, and the selection of the participating organization is made for further coordination in the design of the programme based on the organization's need in order to maximize the gains. CBP fully financed and sponsored by the OECD Korea Policy Centre.

- Target Participants and Duration

Participants in this programme will consist of Asian-Pacific mid-level public officials from both central and local governments. PGP especially aims to target those public officials who have relatively few opportunities to benefit from training programme. Each programme will last for about 1 week.

- Finance

Participants in the programme are provided with full financial support by the OECD Korea Policy Centre, including fees for round trip flights, meals, accommodation, and domestic transportation for 10 participants.

- Selection of Topics

To fulfill the goal of each training program, PGP strives to match their contents with the policy needs and priorities identified by the participating Asian-Pacific country as much as possible. As examples, past topics for capacity-building programme include: public-private partnership, economic development, local government finance management, local administration, e-government, and civil service human resource management, regulatory reform, and legislative drafting.

- Process of Organization

Call for Proposals: PGP will be circulating a notice to our foreign partners and the relevant ministries of the Asia-Pacific countries, requesting interested parties to submit a proposal detailing programme contents they want based on the proposal guideline.

Proposal & Theme Selection: PGP will select a proposal among the submissions, based on the organization's need and feasibility of the proposed contents, among other factors.

Structuring the Programme: Once a proposal is selected, PGP and the partner organizations will coordinate to structure the specifics of the programme.

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(CIRDAP)

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[Lecture 3] Introduction of Saemaul Undong

[Lecture 4] Agriculture Development and Strategy

[Lecture 5] Local Administration & Finance

[Lecture 6] Human Resource Development & Management

[Lecture 7] E-Government & Gov't 3.0

[Field Study 1] Saemaul Museum

[Field Study 2]

- Chungnam Agricultural Research & Extension Services
- Nonsan Strawberry Experiment Station

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I. Partner agency

- Centre on Integrated Rural Development for Asia & the Pacific, CIRDPAP

The Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) is a regional, intergovernmental and autonomous organisation. It was established on 6 July 1979 at the initiative of the countries of the Asia-Pacific region and the Food and Agriculture Organization (FAO) of the United Nations with support from several other UN bodies and donors. The Centre came into being to meet the felt needs of the developing countries at that time as an institution for promoting integrated rural development in the region.

From the original six members, CIRDAP has now grown up as a Centre of 15 member countries. The member-countries are Afghanistan, Bangladesh (Host State), Fiji, India, Indonesia, Iran, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam.



Operating through designated contact ministries and link institutions in member countries, CIRDAP promotes regional cooperation. It plays a supplementary and reinforcing role in supporting and furthering the effectiveness of integrated rural development programmes in Asia and the Pacific.



II. List of participants

No.	Name	Organization	Country
1.	Mr. Salahuddin Mahmud	<i>Director-General</i> Bangladesh Academy for Rural Development (BARD)	BANGLADESH
2.	Ms. Chanda Pandit	<i>Registrar & Director</i> National Institute of Rural Development	INDIA
3.	Ms. Azizah Ahmad	<i>Deputy Director</i> Institute of Rural Advancement (INFRA) Ministry of Rural and Regional Development	MALAYSIA
4.	Mr. Kyaw Swe Lin	<i>Deputy Director-General</i> Department of Planning Ministry of Agriculture & Irrigation	MYANMAR
5.	Mr. Masood Akhtar Chaudry	<i>Director-General in charge</i> Akhtar Hameed Khan National Centre for Rural Development (AHK NCRD)	PAKISTAN
6.	Mr. Ghulam Haider	<i>Executive Director</i> Afghanistan Institute for Rural Development (AIRD) Ministry of Rural Rehabilitation and Development (MRRD)	AFGHANISTAN
7.	Ms. Siriporn Thanaratchataphoom	<i>Policy & Plan Analyst</i> Bureau of Foreign Agricultural Affairs (BOFAA) Ministry of Agriculture and Cooperatives	THAILAND
8.	Mr. Cecep Effendi	<i>Director-General</i> CIRDAP	BANGLADESH
9.	Ms. Vasanthi Rajendran	<i>Director, ICD & Training</i> CIRDAP	BANGLADESH
10	Mr. Md. Shafiqur Rahman	<i>Assistant Programme Officer</i> CIRDAP	BANGLADESH

III. Curriculum

Date	Time	Schedule	Remarks
Day 1 21 st Feb		Arrival	
	09:30 ~ 10:00	[Opening Session] Opening Remarks Mr. Deok Soo Park, Director-general of the Public Governance Programme, OECD KPC [MOU Signing Ceremony]	KCCI
	10:00 ~ 13:00	[Lecture 1] Experience of Korean economic development Mr. Lim, Wonhyuk / Professor, KDI school of Public policy & Management	KCCI
Day 2 22 nd Feb	13:00 ~ 14:00	Lunch	
	14:00 ~ 17:00	[Information Sharing] Sharing information on current status of the countries participated in this programme. Facilitator: Ms. Vasanthi Rajendran / Director of Training Division, CIRDAP	KCCI
	17:30	Official Welcome Dinner	Fraser Place Hotel
	09:00 ~ 12:00	[Lecture 2] Rural Development Mr. Yi, Yang Soo / Professor of the Yeungnam University	KCCI
	12:00 ~ 13:00	Lunch	
Day 3 23 rd Feb	14:00 ~ 15:30	[Lecture 3] Introduction of Saemaul Undong Mr. Cho, Myungsoo, Secretary-General The Saemaul Undong Center	Saemaul Undong Training Center, Seongnam
	15:30 ~ 18:00	[Field Study 1] Saemaul Museum	Saemaul Undong Training Center, Seongnam
	09:00 ~ 12:00	[Lecture 4] Agriculture Development and Strategy Mr. Lee, Seonghee, Professor Dankuk University	KCCI
Day 4 24 th Feb	12:00 ~ 13:00	Lunch	KCCI
	13:00 ~ 17:00	[Lecture 5] Local Administration & Finance Mr. Choe, Chang Soo / Cyber Hankuk University of Foreign Studies	KCCI

Date	Time	Schedule	Remarks
Day 5 25 th Feb	09:00 ~ 12:00	[Lecture 6] Human Resource Development & Management Mr. Park, Kyung-Bae / Vice president Korea Institute for Development Strategy	KCCI
	12:00 ~ 13:00	Lunch	KCCI
	13:00 ~ 16:00	[Lecture 7] E-Government & Gov't 3.0 Mr. Lee, Nagyeon UN Asian & Pacific Training Centre for Information & Communication Technology for Development	KCCI
	16:00 ~ 18:00	[Wrapping-up] Evaluation and Discussion	KCCI
Day 6 26 th Feb	09:00 ~ 18:00	[Field Study 2] <ul style="list-style-type: none"> • Chungnam Agricultural Technology Center • Nonsan Strawberry Experiment Station 	Yesan Nonsan
Day 7 27 th Feb		Departure	

IV. Lectures & Study visits

- **Lecture 1** Experience of Korean economic development
 - **Lecture 2** Rural Development
 - **Lecture 3** Introduction of Saemaul Undong
 - **Lecture 4** Agriculture Development and Strategy
 - **Lecture 5** Local Administration & Finance
 - **Lecture 6** Human Resource Development & Management
 - **Lecture 7** E-Government & Gov't 3.0
-
- **Field Study 1**
Saemaul Museum

 - **Field Study 2**
Chungnam Agricultural Research & Extension Services
Nonsan Strawberry Experiment Station

Lecture 1



Korean Economic Development

Dr. Lim, Wonhyuk

Professor, Public Enterprise Reform/Economic Development
Korea Development Institute School of Public Policy and Management

He has written extensively on development issues, in conjunction with policy consultation projects under Korea's Knowledge Sharing Program (KSP). After the 2002 Presidential Election in Korea, he worked for the Presidential Transition Committee and the Presidential Committee on Northeast Asia.

In 2010, Dr. Lim helped to formulate the G20 Seoul Development Consensus for Shared Growth. In 2013, he became Vice President and Director of Department of Competition Policy at KDI. In 2014, he served as the inaugural Executive Director of the Center for Regulatory Studies

Korea's Development Experience

Wonhyuk Lim



I. Introduction

II. Discovering and Exploiting Latent Comparative Advantage

Natural Endowment and Historical Hindsight SWOT Analysis
Korea's Big Push Partnership: Government and Business Groups
Export-Oriented Industrialization, Financing for Development, and Planning and Implementation

III. Promoting Inclusive Growth, Environmental Sustainability, and Industrial Upgrading

Saemaul Undong (New Village Movement)
Reforestation
Heavy and Chemical Industry Drive
Technology Absorption, Assimilation, and Innovation

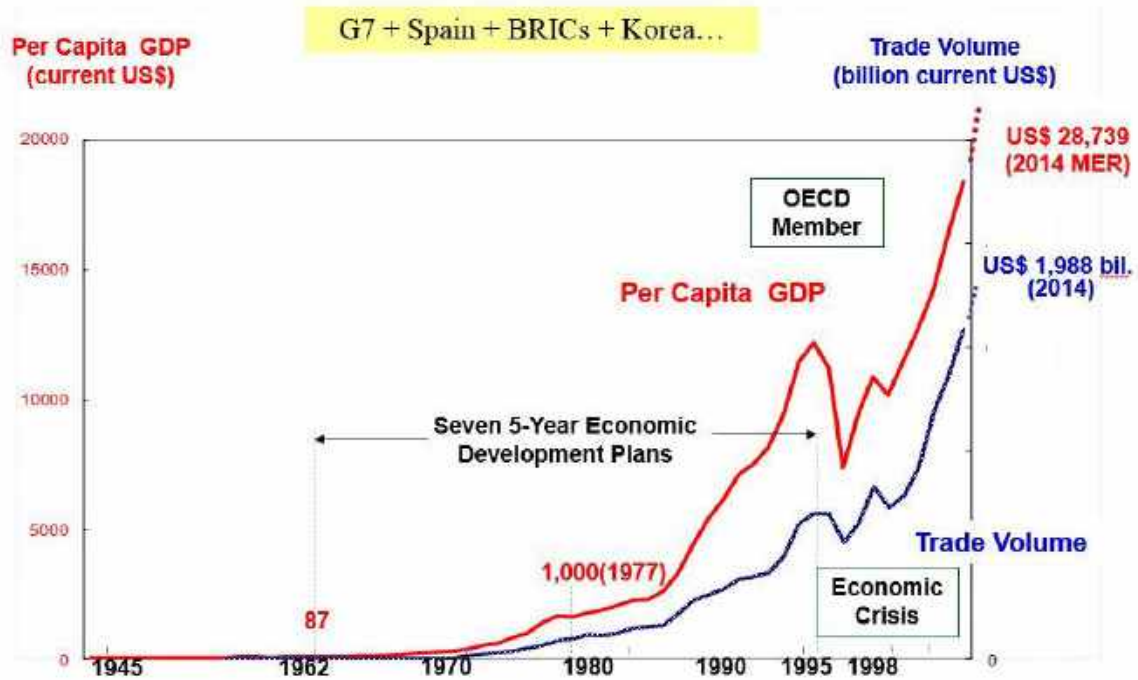
IV. Lessons from Korea's Experience

Compelling Vision and Developmental Governance: Rapid, Resilient, and Shared Growth
Performance-Oriented Approach: Pragmatism and Feedback
Big-Push Partnership: Information and Risk Sharing
Export Orientation: Market Test for Government and Business
Industrial Policy: Outward-Oriented, Bottom-up, Integrated Engineering Approach

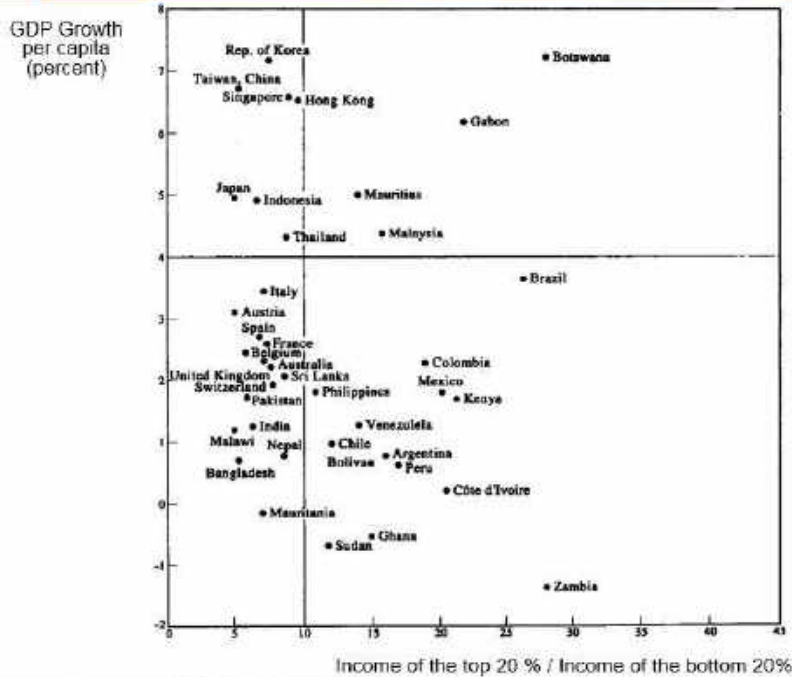
Part-01 | Introduction



**Korea's Journey from Poverty to Prosperity:
"The Face of Hope"**

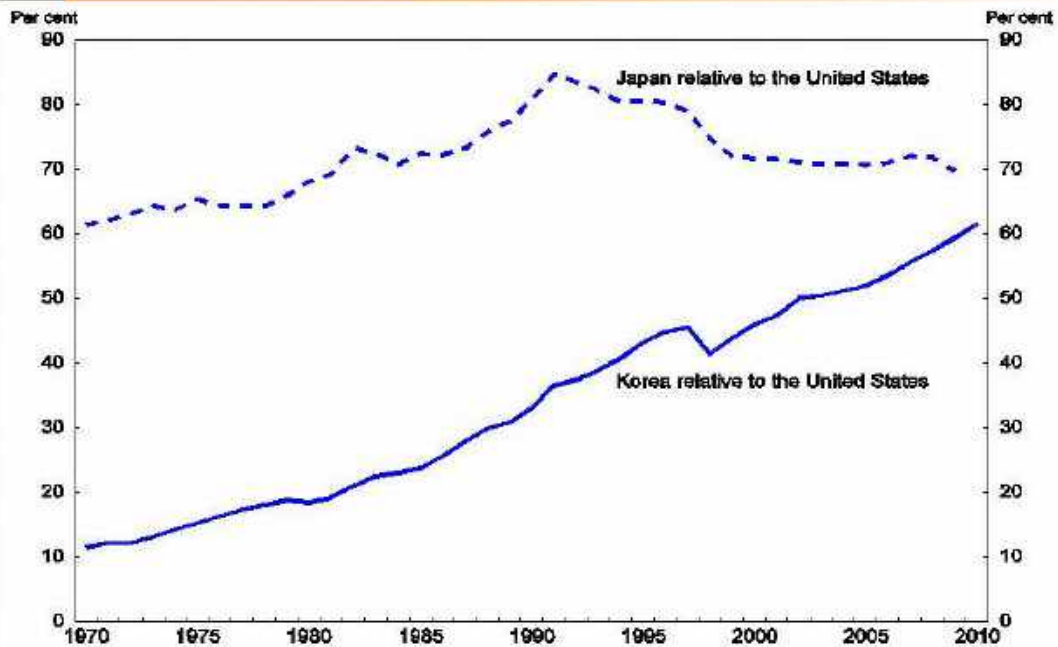


“Rapid, Shared Growth”



Note: Average over 1965-1989.
Source: World Bank (1993), *The East Asian Miracle*, p.31.

Korea's Economic Development



Note: Based on 2009 purchasing power parity exchange rates.
Source: OECD Economic Outlook database.

Korea's Political Development

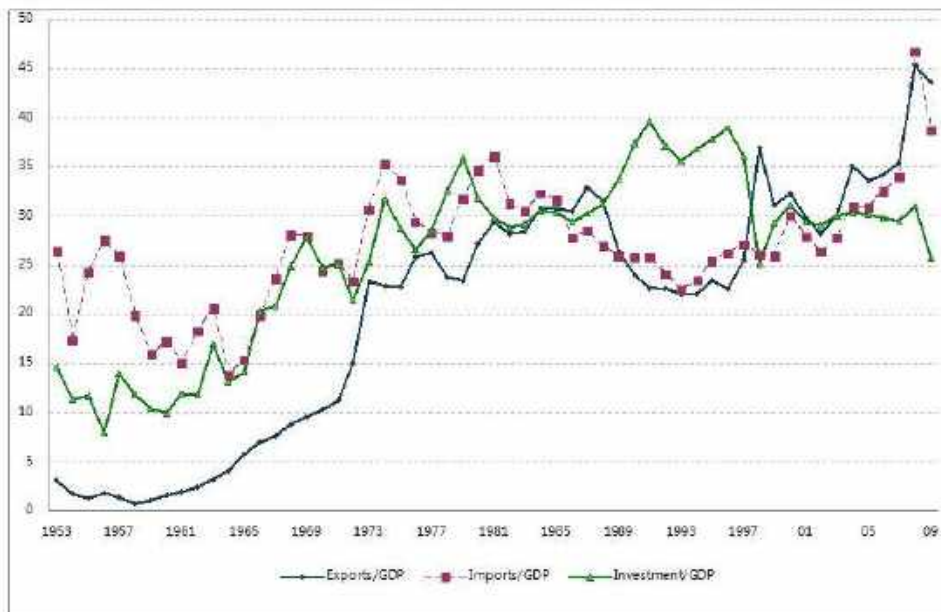


	1972			1980			1990			2000			2010		
	PR	CL	S	PR	CL	S	PR	CL	S	PR	CL	S	PR	CL	S
Korea	5	6	NF	4	5	PF	2	3	PF	2	2	F	1	2	F
Italy	1	2	F	1	2	F	1	1	F	1	2	F	1	2	F
Japan	2	1	F	1	1	F	1	1	F	1	2	F	1	2	F
Iran	5	6	NF	5	5	PF	6	5	NF	6	6	NF	6	6	NF
Ethiopia	5	6	NF	7	7	NF	7	7	NF	5	5	PF	6	6	NF
Zimbabwe	6	5	NF	3	4	PF	6	4	PF	6	5	PF	6	6	NF
Cambodia	6	5	NF	7	7	NF	7	7	NF	6	6	NF	6	5	NF

Note: Political Rights (PR) and Civil Liberties (CL) are measured on a scale from 1 to 7, with 1 being the best. Status (S) has three categories: Not Free (NF), Partly Free (PF), and Free (F).

Source: Freedom House (2011), Freedom in the World Comparative and Historical Data.

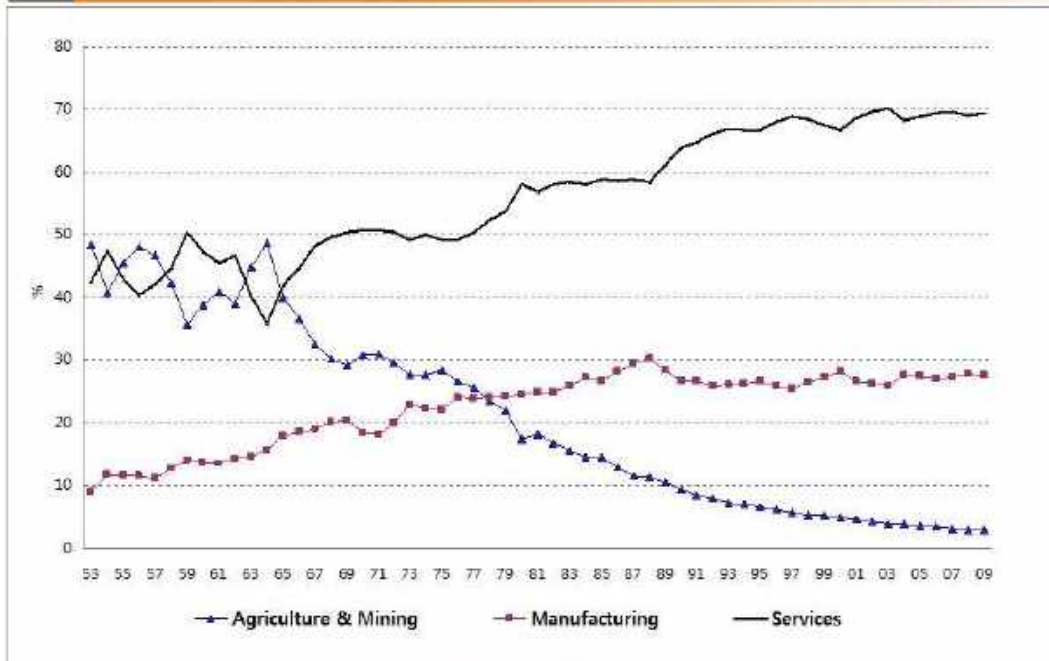
Korea's Exports, Imports, and Investment Relative to GDP



Source: IMF, *International Financial Statistics*.
Bank of Korea, *National Account* (<http://ecns.bok.or.kr>).

Sectoral Composition of Korea's GDP

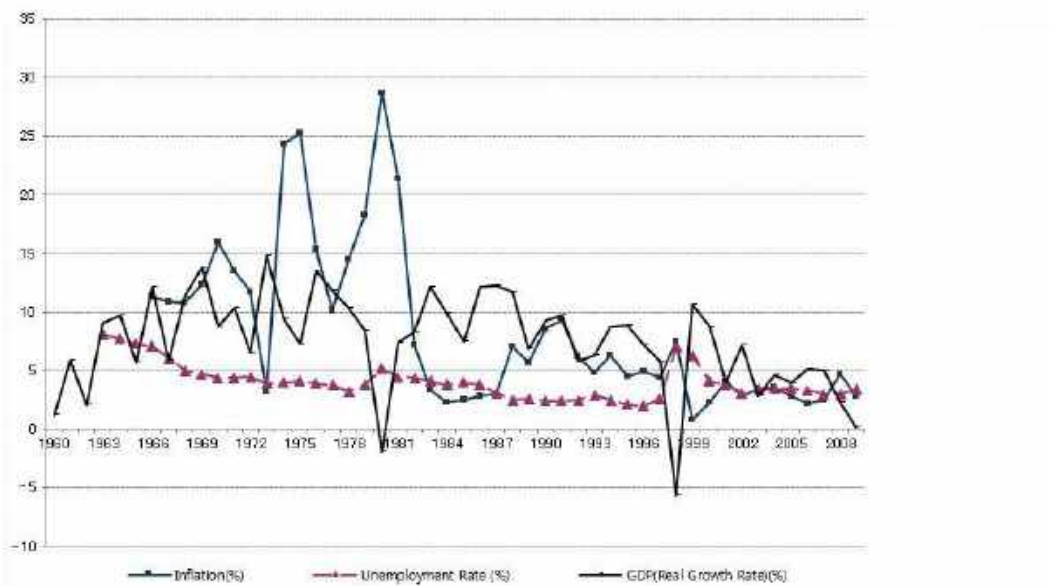
KDI



Source: Bank of Korea, National Account (<http://ecos.bok.or.kr>).

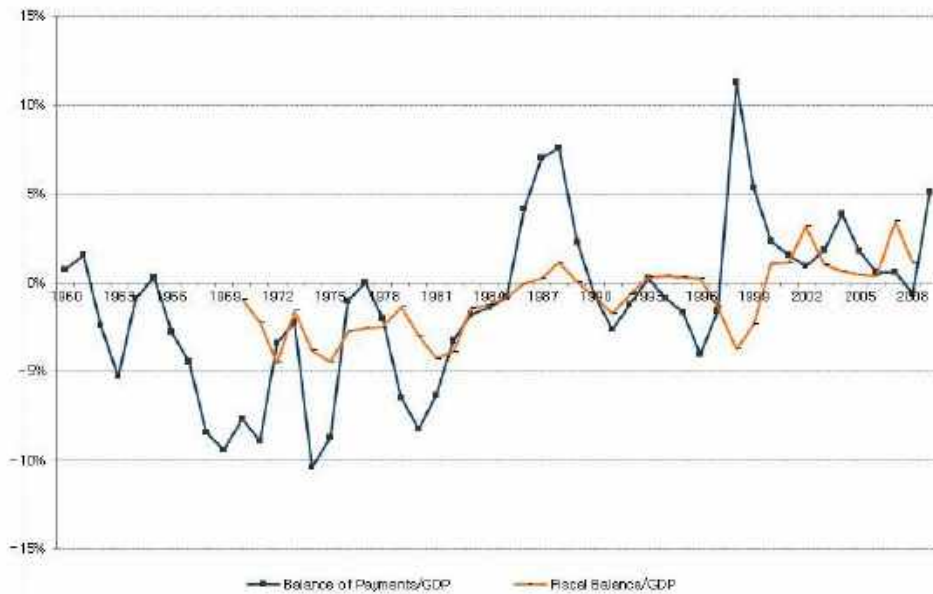
Inflation, Unemployment, and Growth

KDI



Source: Bank of Korea, ECOS (<http://ecos.bok.or.kr>); Statistics Korea, KOSIS (<http://www.kosis.kr>)

Current Account and Fiscal Balance



Source: Bank of Korea, ECOS (<http://ecos.bok.or.kr>); Statistics Korea, KOSIS (<http://www.kosis.kr>)

Korea's Leading Think Tank

Part-02 | Discovering and Exploiting Latent Comparative Advantage



Korea's Natural Endowment



◆ Territorial Area

- Reunified Korea: 210,000 Km² (slightly smaller than Britain)
- South Korea: 99,000 Km² (similar to Portugal)

◆ Population

- Reunified Korea: 70 million (slightly larger than France)
- South Korea: 50 million (similar to Spain)



◆ Natural Resources

- No significant mineral resources other than some tungsten; limited arable land
- However, in an increasingly integrated global economy, resource abundance is not as important for development as access to inputs at international prices; a nation's economic performance largely depends on its ability to enhance its relatively immobile factors of production to attract mobile factors of production.

Children Drinking Aid Milk (Daegu, 1954)



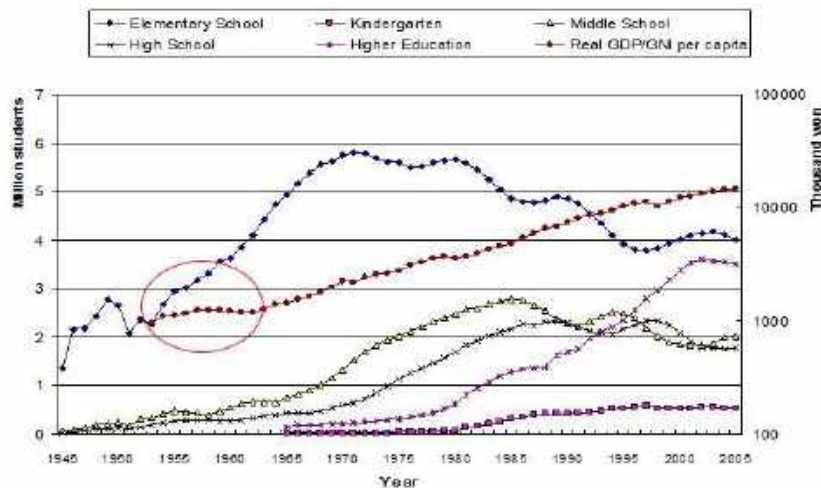
Foreign aid financed approximately 70 percent of total imports between 1953 and 1962. It was equivalent to nearly 8 percent of GNP. Korea was regarded as "a bottomless pit."

Resource Endowment and Institutional Infrastructure: Historical Hindsight SWOT Analysis for the 1950s



- ◆ **Egalitarian and Cohesive Society: Implications for HRD**
 - Cultural and Ethnic Homogeneity
 - Land Reform and War
- ◆ **Abundance of Cheap Educated Labor: Latent Comparative Advantage**
 - High Level of Education Relative to Income: Equivalent to Education Level in Countries with 2 or 3 Times Korea's Per-Capita Income
 - Primary Enrollment Rate: from under 30% (pre-1945) to 95 % (1959)
 - High-School Enrollment Rate: from 3% (1951) to 20 % (1959)
- ◆ **Market Economy with Structural Distortions**
 - Birth and Growth of Businesses
 - Entry Barriers and Import Restrictions
- ◆ **Lack of Capital**
 - Low Domestic Savings
 - Limited Access to FDI and Foreign Loans
- ◆ **Rapidly Expanding and Integrating Non-Communist Market**
- ◆ **Geopolitical Uncertainty**
 - Communist Threat
 - Korea as "Too Important to Fail" during the Cold War?

Human Resource Development: School Enrollment and Per Capita Income



Source: Center for Education Statistic Information (<http://cesi.kedi.re.kr>)

Korea invested in its people even when it was quite poor. Prior land reform and flattening of the traditional hierarchy created expectations for social mobility conducive to human resource development. Universal primary education greatly increased the number of enrolled students at all levels, but did not raise per capita income until complementary developments in industrial and trade policy took place.

Korea's Big-Push Partnership: Government and Business Groups



- ◆ **Two-Tier Approach to Coordination and Innovation**
 - Government: National-Level Coordination and Innovation
 - Chaebol and SOEs: Group-Level Coordination and Innovation
 - Big-Push Partnership: Information and Risk Sharing
- ◆ **International Trade as an Essential Component**
 - Coordination
 - Scale Economies: Overcoming the Limits of Domestic Market
 - Market Test and Reward Based on Performance in a Competitive Setting: Less Prone to Political Influence and Manipulation
 - Learning by Exporting: Upgrading Mechanism
- ◆ **Containment of Corruption and Rent-Seeking**
 - Changes in Political Economy (1960-61)
 - Meritocracy, Monitoring, and Incentives

Diversification into High Value-Added Areas: LG Story



- My father and I started a **cosmetic cream** factory in the late 1940s.
- At the time, not one company could supply us with **plastic caps** of adequate quality for cream jars, so we had to start a plastics business. Plastic caps alone were not sufficient to run the plastic molding plant, so we added **combs, toothbrushes, and soap boxes**.
- This plastics business also led us to manufacture **electric fan blades and telephone cases**, which in turn led us to manufacture **electrical and electronic products and telecommunications equipment**.
- The plastics business also took us into **oil refining**, which needed a **tanker shipping** company.
- The oil refining company alone was paying an insurance premium amounting to more than half the total revenue of the largest insurance company in Korea. Thus, an **insurance** company was started.
- This natural step-by-step evolution through related businesses resulted in the **Lucky-Goldstar (LG)** group as we see it today.

The chaebol and state-owned enterprises (SOEs) served as centers of local capacity development and external interaction. They were willing to pursue vertical integration and related diversification on their own, but usually worked in conjunction with government policy when they ventured into unrelated industries.

Export-Oriented Industrialization: Secure Economic and Political Independence



- ◆ **Centralization and Coordination of Economic Policymaking**
 - Establishment of the Economic Planning Board (EPB): Policy Coordination and Budgetary Powers with a Multi-Year Horizon
 - Five-Year Plans and Monthly Meetings: Blueprint, Implementation, and Feedback
 - Nationalization of Commercial Banks
- ◆ **Adjustment of Macroeconomic Variables**
 - Devaluation of the Korean Currency (KRW/USD: 130 → 255 in 1964)
 - Adjustment of the Interest Rates (15% → 30% in 1965)
- ◆ **Reinforcement of Experiments through Performance-Based Rewards**
 - Support Contingent on Performance in Competitive Markets (L/C-Based Financing)
 - State Guarantee to Foreign Financial Institutions on Private-Sector Debt
 - This state guarantee became effective after Korea established a track record of earning hard currency through exports and paying back foreign loans.
 - The state guarantee was extended to foreign financial institutions providing loans to Korean firms, not to their owner-managers, but subsequent developments blurred this distinction.

Financing for Development: Investment and Savings in Korea, 1962-81



(unit: percent)

	1962-66	1967-71	1972-76	1977-81	1962-81
Annual GNP Growth	7.9	9.7	10.2	5.7	8.4
Investment / GNP	16.3	25.4	29.0	31.0	25.4
Domestic Savings / GNP	8.0	15.1	20.4	25.5	17.3
Foreign Savings / GNP	8.6	10.0	6.7	5.6	7.7
Foreign Savings / Investment	52.8	39.4	23.1	18.1	30.4

Korea had to rely heavily on foreign capital in the early stages of its development. Most of this foreign capital was in the form of loans, which allowed Korea to take advantage of the domestic-international interest rate differential and be the residual claimant on its investments. Foreign direct investment played a relatively minor role in Korea.

Foreign Capital Inflow for Korea, 1945-92: Exit from Aid Dependency



(unit: current million dollars, percent)

	1945-61	1962-65	1966-72	1973-78	1979-85	1986-92
Public Loans	5 (0.1)	62 (7.1)	1,130 (26.4)	3,431 (30.6)	10,105 (28.9)	4,688 (15.4)
Commercial Loans		71 (8.0)	1,950 (45.6)	5,858 (52.2)	7,937 (22.7)	5,206 (17.1)
FDI		13 (1.5)	227 (5.3)	704 (6.3)	1,157 (3.3)	5,684 (18.7)
Bank Loans			205 (4.8)	1,007 (9.0)	11,892 (34.1)	4,318 (14.2)
Bonds (Fin. Inst.)				219 (1.9)	2,989 (8.6)	5,978 (19.7)
Bonds (Firms)				-	834 (2.4)	4,515 (14.9)
US & UN Grants	3,117 (99.9)	739 (83.4)	552 (13.0)	-	-	-
Reparation Grants			211 (4.8)	-	-	-
Total	3,121	886	4,275	11,219	34,914	30,289

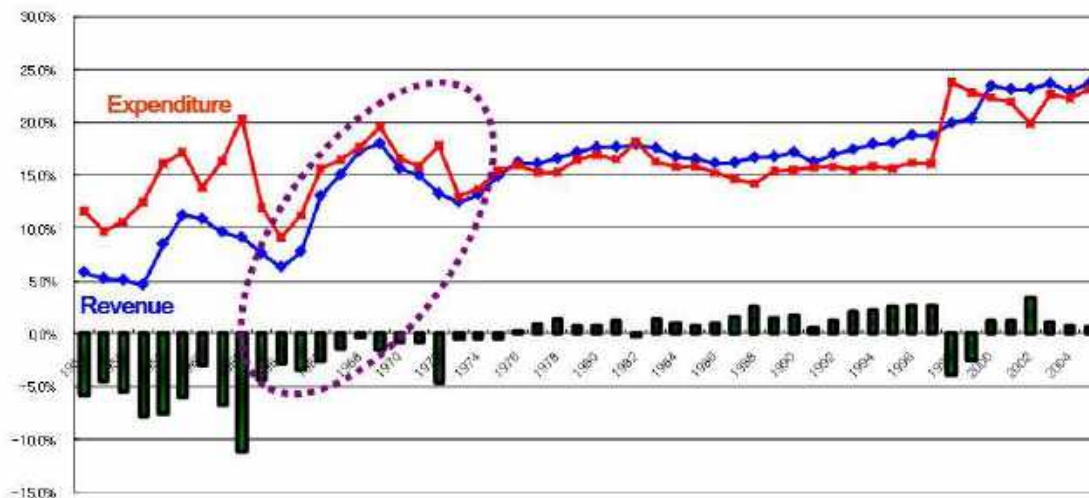
Source: Ministry of Finance and Korea Development Bank (1993), *Foreign Capital and the Korean Economic Development: A Thirty-Year History* (in Korean), pp 616, 618, 621.

Note: This source does not provide data on grant aid after the 1966-72 period. Public loans include concessional loans, but this source does not provide a detailed breakdown. Nor does it separate the grant element in concessional loans that meet the definition of ODA (i.e., loans with a grant element of 25 percent or more).

Domestic Resource Mobilization and Policy Space



< Government revenue, expenditure, and fiscal surplus (% of GDP) >



Investing for Development: Industrial, Infrastructure, and Human Resource Development



Project	S mil.	%
Agriculture	39	7.8
Fishery	27	5.4
Manufacturing	278	55.6
Construction of POSCO	119	23.9
Purchase of raw materials	133	26.5
Promotion of SMEs	22	4.5
Science and Technology	20	4.0
Equipment for practical training for schools	6	1.2
Equipment/facilities at KIST	3	0.6
Infrastructure	90	18.0
Soyang River Multi-Purpose Dam	22	4.4
Gyeongbu (Seoul-Busan) Expressway	7	1.4
Improvement of Railway System	20	4.2
Yongdong Thermal Power Plant	2	0.4
Expansion of Waterworks	4	0.8
Namhae Bridge	2	0.4
Rehabilitation of Han River Bridge	1	0.2
Electric Power Transmission Lines	4	0.7
Expansion of out-of-town Telephone Lines	4	0.8
Total (Reparation funds for grants and public loans)	500	100.0

Instead of simply subsidizing consumption, Korea allocated funds to facilitate self-sustaining growth, which in turn would support human development.

Korea adopted a proactive science and technology policy from the mid-1960s

Korea used reparation funds to develop projects that were opposed by international lenders (e.g., POSCO and Gyeongbu Expressway).

Source: EPB (1976), *White Book on Reparations* pp. 378-381.

Planning and Implementation: Multi-Year Plan, Monthly Meeting, and Ad Hoc Meeting



◆ Multi-Year Plan: Long-Term Vision

- A multi-year plan provides a blueprint and helps people to understand where the government wants to take the nation for the long term.
- To be effective, a multi-year plan must establish priorities and have flexibility to adapt to changing conditions

◆ Monthly Meeting: (Mundane Art of) Implementation

- A monthly meeting between the government and private sector provides an opportunity to secure sustained attention from top political leadership, monitor progress on the long-term vision, and identify emerging problems and devise solutions together.

◆ Ad Hoc Meeting: Much Ado About Nothing

- An ad hoc meeting between the government and private sector often degenerates into a one-shot event where the government pretends to listen to business leaders issuing a long list of "help wanted" items, but does nothing afterwards.

Monthly Export Promotion Meetings



◆ Membership

- President (since Jan. 1966), PM, DPM, key ministers
- Bank of Korea, KOTRA, KorCham, Korea Int'l Trade Association
- Federation of Korean Industrialists, Co-Ops

◆ Mechanism

- Comprehensive annual plan for export promotion: indicative plan based on informed national targets by product and region, not command-and-control plan based on firm-level targets
- Reward based on performance in competitive global markets (e.g., L/C-based financing): asymmetric information, feedback, and self-discovery
- Monthly progress report by the Minister of Commerce and Industry
- Monthly briefing on overseas markets by the Minister of Foreign Affairs
- Identification of bottlenecks and constraints
- Policy recommendations and responses
- Monitoring, evaluation, and feedback– month after month, not an annual review without any follow-up

◆ Institutional Innovations

- Export Insurance
- General Trading Companies
- Regulatory Reform
- Export Promotion Special Account Fund

Monthly Export Promotion Meetings



“Export Day” Award Ceremony: Promoting Export Culture **KDI**



Traditionally at the bottom of the social hierarchy, merchants were now presented as patriotic entrepreneurs contributing to the nation's modernization.

Korea's Leading Think Tank

Part-03 | Promoting Inclusive Growth,
Environmental Sustainability,
and Industrial Upgrading

KDI

Saemaul Undong (New Village Movement) and Rural Development



Background

- Widening Urban-Rural Income Gap: 33 percent by the late 1960s
- Failure of Previous Rural Development Programs: "Unless farmers develop a spirit of self-reliance, rural villages will be mired in poverty for another 5,000 years."

Core Elements

- Community Empowerment under "Diligence, Self-Help, and Cooperation"; Local Decision-Making on Community Projects and Voluntary Contributions
- Peer Inspiration: Learning from Other Villages with Similar Endowments Through Study Tours and Training Sessions (Basic, Self-Help, Self-Reliant)
- Performance-Based Support from the Government: **Effective Scaling Up**
 - In 1970, the government provided each of 33,000 villages with 335 bags of cement and let each village decide their best use for the good of the community.
 - In 1971, the government provided 500 bags of cement and 1 ton of reinforced steel to only those villages that had achieved good results in the first year.

Linkage with Other Programs

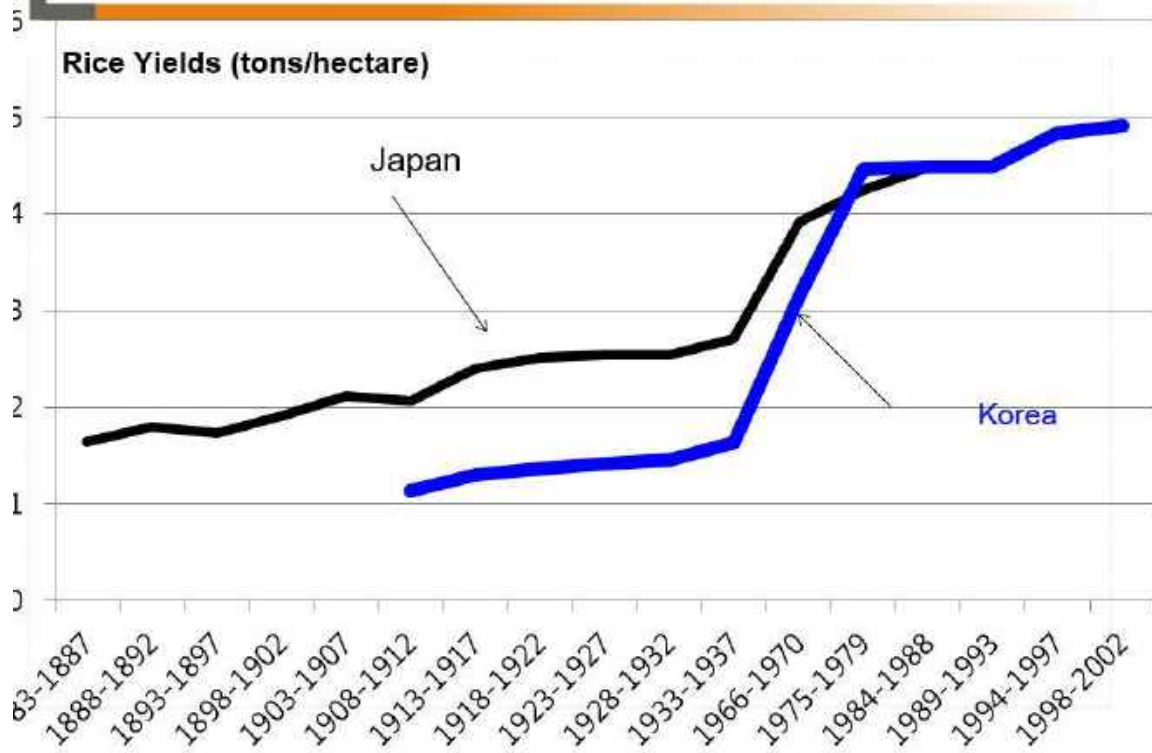
- Green Revolution and Silver Revolution: New Varieties and Greenhouses
- Dual Grain Price System: Procurement Price > Resale Price

Rural Infrastructure Development



Productivity Improvement

KDI



Reforestation

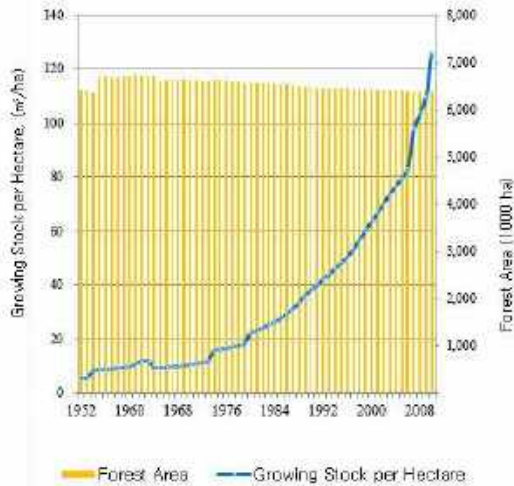
KDI



Growing Stock Per Hectare: Korea vs. Europe

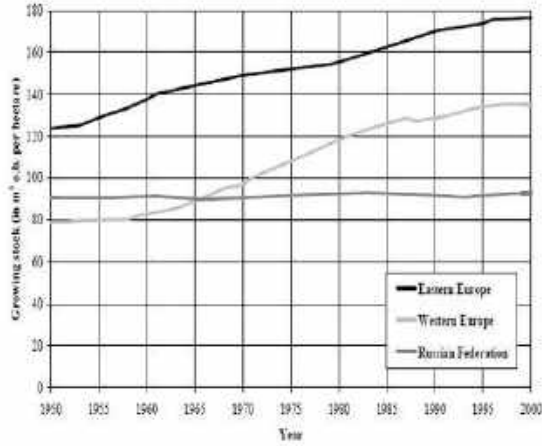


Trends in Forest Area and Growing Stock per Hectare in Korea, 1952-2010



Source: Korea Forest Service & Korean Statistical Information Service

Trends in growing stock per hectare in selected European countries from 1950 to 2000

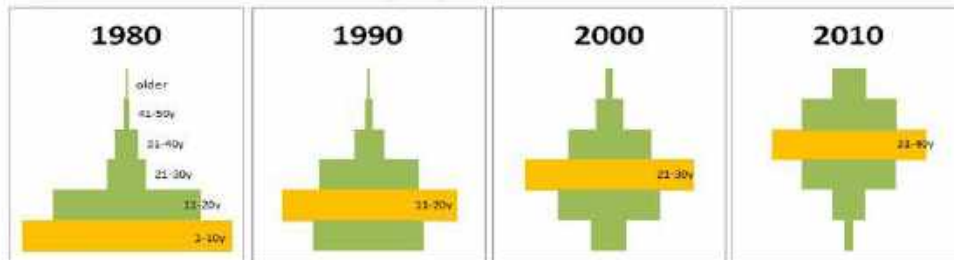


Source: Gold(2003), rectified from "LNU(2005), European Forest Statistics Outlook Study Main Report"

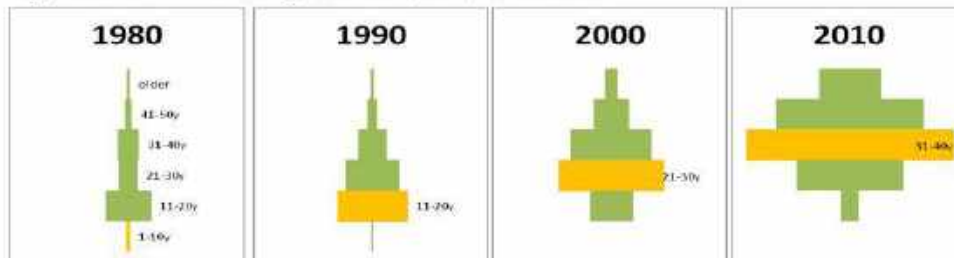
Changes in the Age-Class Structure of Forest Area and Growing Stock



Age-Class Structure of Forest Area in 1980, 1990, 2000 and 2010



Age-Class Structure of Growing Stock in 1980, 1990, 2000 and 2010



Source: Korea Forest Service & Korean Statistical Information Service

Heavy and Chemical Industry Drive: Increase Local Value-Added and Establish Defense Industry

KDI

	1972	1976	1981
GNP per capita	\$302	\$488	\$983
HCI Share in Manufacturing Value-Added	35.2%	41.8%	51.0%
HCI Share in Manufacturing Exports	27.0%	44.0%	60.5%

Targets: \$10 billion in exports and \$1,000 in per capita income by 1981

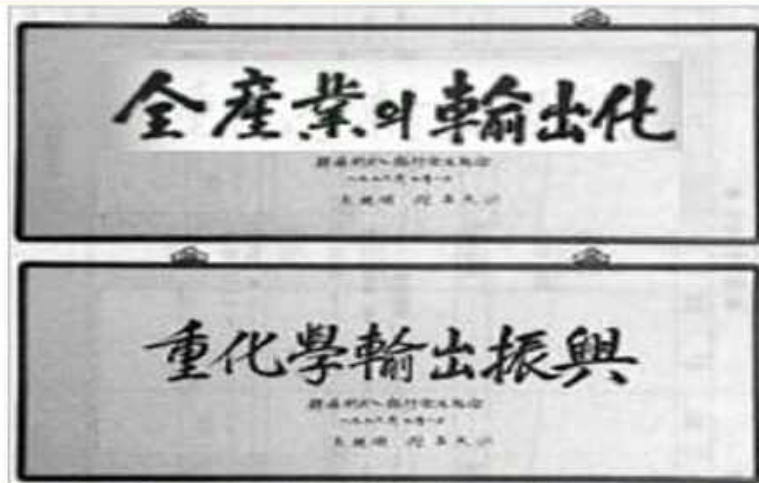
	Foreign Capital	Domestic Capital	Total	Percent Share
Iron and Steel	1,502	674	2,176	22.7
Non-Ferrous Metals	222	123	345	3.6
Machinery	1,049	1,137	2,186	22.8
Shipbuilding	416	352	768	8.0
Electronics	593	599	1,192	12.4
Chemicals	1,523	662	2,158	22.8
Sub-Total	5,305	3,547	8,852	92.3
Others	468	273	741	7.7
Total	5,773	3,820	9,593	100.0

Source: HCI Promotion Planning Board, cited in K. Kim (1988).

Instead of setting up armories or factories for specific weapons, Korea established dual-use industrial complexes, with a target production ratio of 70 percent civilian and 30 percent military in peacetime.

“Exportization of All Industries” “Heavy and Chemical Export Promotion”

KDI



For Korea, export development-- for which the nation continuously has had to measure itself against global benchmarks-- has been the engine of growth and the organizing principle under which industrial upgrading, infrastructure development, and human resource development could be pursued. Korea promoted heavy and chemical industries with a view toward securing international competitiveness from the outset; they were not just for domestic demand.

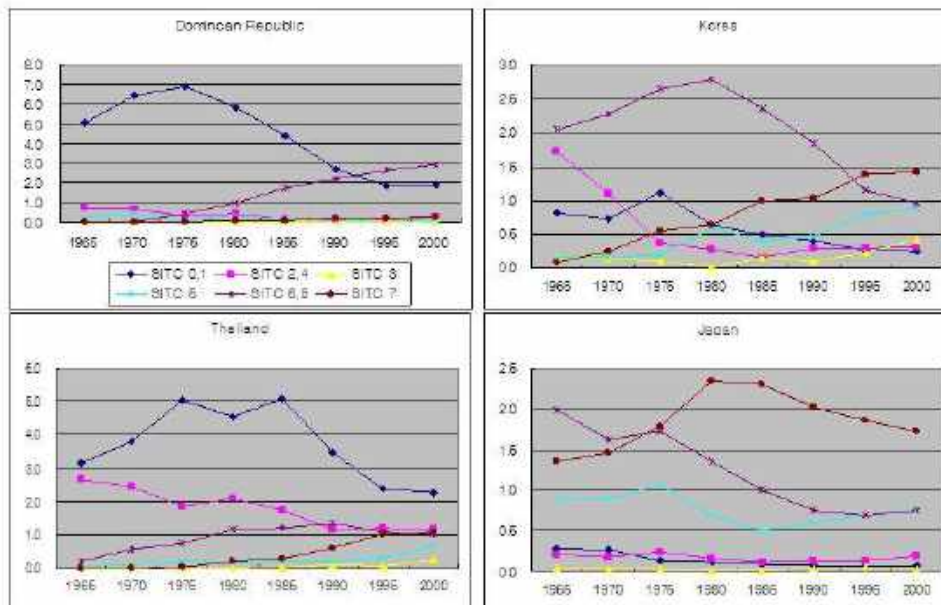
“Scientification of All People” “Flag-Bearer for the Nation’s Modernization”



Question circa 1970: “To raise the share of the domestic value-added in exports and stay ahead of late-developing countries, Korea must upgrade its industries, but do the Korean people have the right national character to succeed in sophisticated industries?”

Policymakers had initial doubts, but these young students showed the answer was positive.

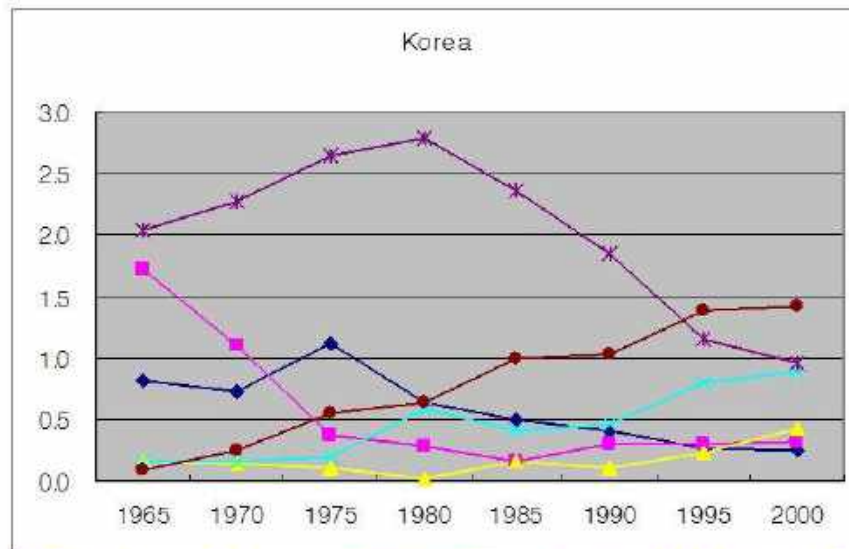
Revealed Comparative Advantage: CA-Conforming or CA-Defying or Something More?



SITC 0, 1 (Food and Beverages), SITC 2, 4 (Crude Materials), SITC 3 (Mineral Fuels),
SITC 5 (Manufactures), SITC 6, 8 (Manufactures), SITC 7 (Machinery and Equipment)

Revealed Comparative Advantage: CA-Conforming or CA-Defying or Something More? **KDI**

Korea had a strong *and* increasing comparative advantage in light industries when it made its strategic gamble to promote heavy and chemical industries in 1973, after benchmarking advanced industrial nations with similar natural endowments as Korea's.



SITC 0, 1 (Food and Beverages), SITC 2, 4 (Crude Materials), SITC 3 (Mineral Fuels), SITC 5 (Agriculture), SITC 6, 8 (Manufactures), SITC 7 (Machinery and Equipment)

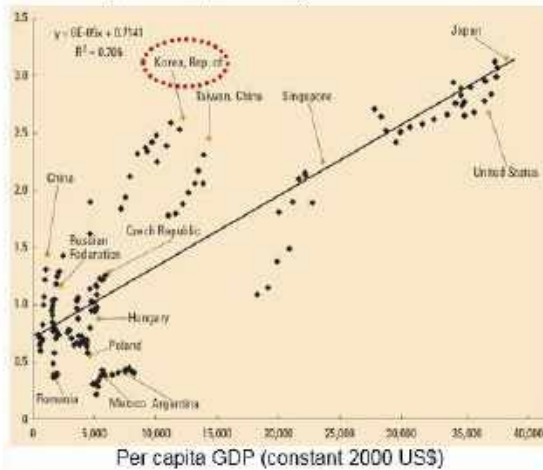
IT Industry Promotion: Forge Ahead in New General-Purpose Technology **KDI**

- ◆ **Institutional Architecture for IT Promotion after the HCI Drive**
 - Targeting IT: Reserved EPB, HCI-Focused MCI, and Weak MPC
 - Office of the Presidential Secretary for Science and Technology
 - Corporatization of the Korea Telecommunication Authority (from MPC)
- ◆ **Public-Private Consultation and Value Chain Expansion**
 - Deregulation: TV and Telephone Sets
 - Demand Creation through Procurement: National Backbone Information System
 - Collaborative R&D: TDX, Semiconductors, and Computers
- ◆ **Outward-Oriented, Bottom-up, Integrated Approach**
 - Focus on International Competitiveness
 - (Absorptive) Capacity Development, Technology Licensing, and Innovation
 - Merit-Based Appointments and Performance-Based Rewards

Korea's R&D Expenditure Trends

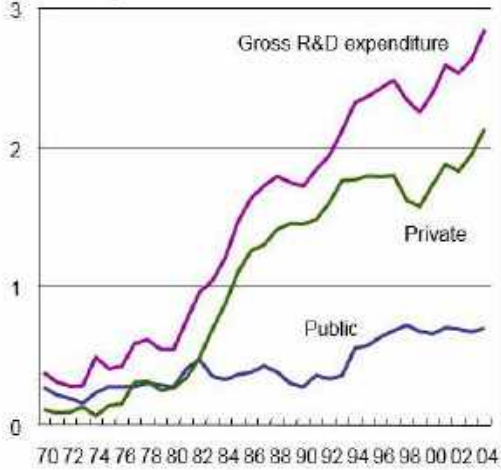


Gross R&D expenditure (% of GDP)



Source: World Bank (2007).

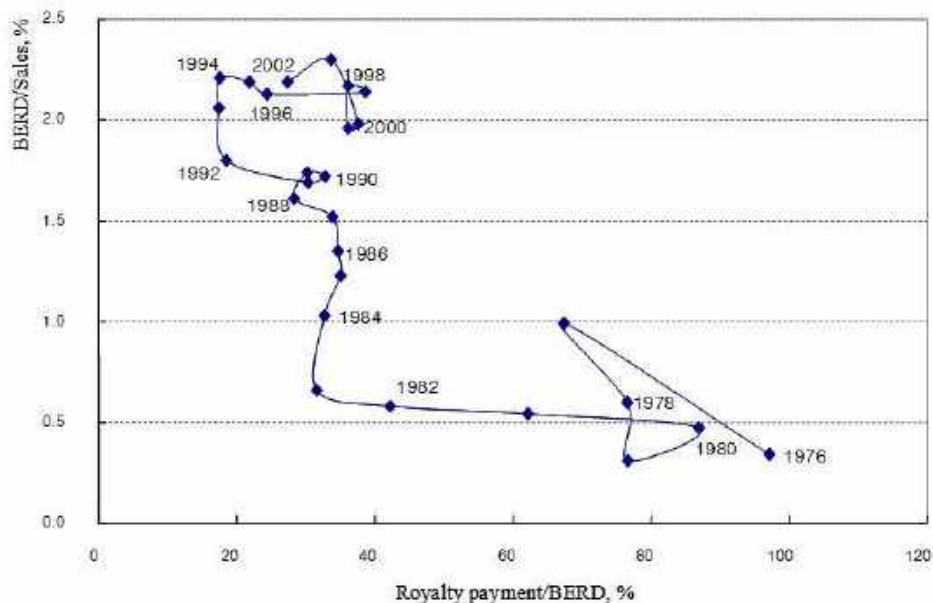
(% of GDP)



Source: Ministry of Science and Technology, Bank of Korea

Exposed to global competition, private-sector companies came to realize that innovation was key to their prosperity and dramatically increased their R&D expenditures.

Business Expenditures on R&D: From Assimilation to Innovation



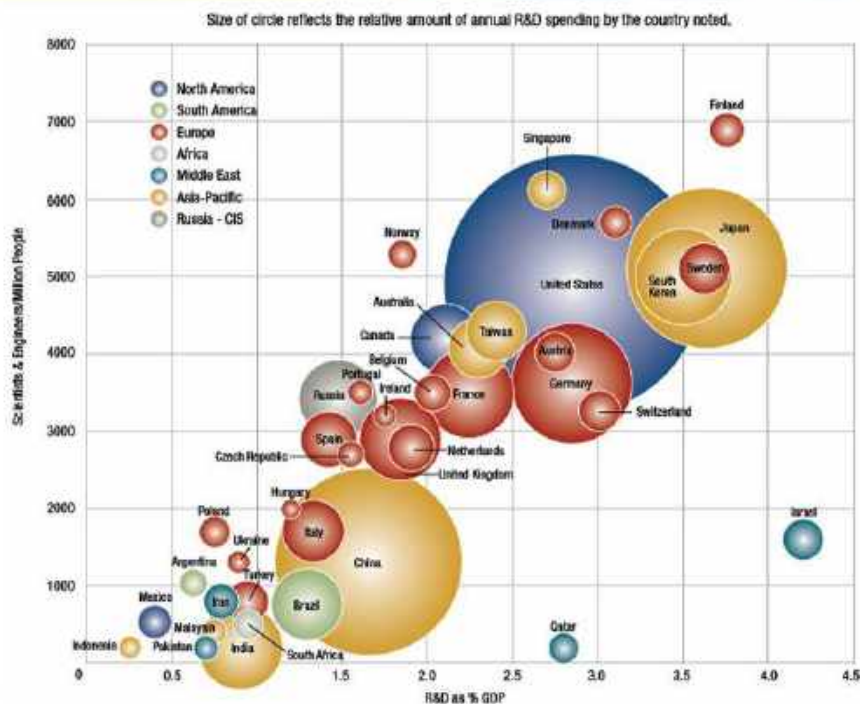
Not only did Korean firms increase BERD as a share of sales, but they also increasingly conducted their own R&D instead of just relying on technology licensing. As a result, royalty payment as a share of BERD tended to decrease over time.

Korea's Transition Toward a Knowledge Economy KDI

Korea's transition toward a knowledge economy was intimately linked to export promotion, industrial upgrading, and human resource development, and institution-building was largely complete by the end of the 1980s.

	1960s	1970s	1980s	1990s	2000s
Development Stage	Factor-Driven	Investment-Driven		Innovation-Driven	
Industrial Policy	Support Export Development	Promote Heavy and Chemical Industries	Shift from Industry Targeting to R&D Support	Provide Information Infrastructure and R&D Support	Promote New Engines of Growth and Upgrade R&D
S&T Policy	<ul style="list-style-type: none"> - MOST/KIST - S&T Promotion Act - Five-Year Economic Plan Including S&T 	<ul style="list-style-type: none"> - Government Research Institutes - Technical and Vocation Schools - R&D Promotion Act - Daedeok Science Town 	<ul style="list-style-type: none"> - National R&D Plan - Private Sector Initiatives in R&D 	<ul style="list-style-type: none"> - Informatization - E-Government - GRI Restructuring - U-I-G Linkages 	<ul style="list-style-type: none"> - Universities' Leading Role - Efficient NIS - RIS and Innovation Clusters

Global R&D Landscape in 2010 KDI

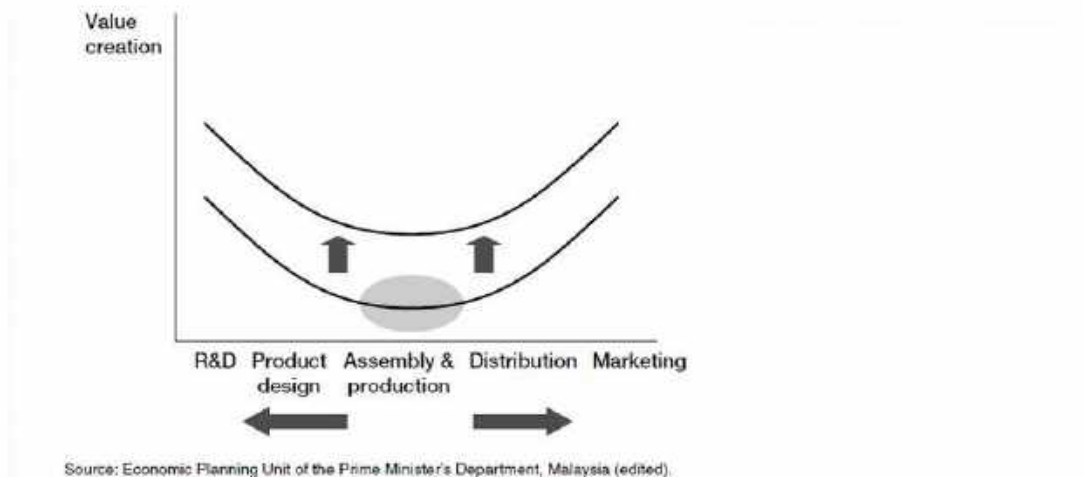


Korea's Top 10 Exports: Evidence on Industrial Upgrading



	1960	1970	1980	1990	2000	2010
1	Iron Ore	Textiles	Textiles	Electronics	Semiconductors	Semiconductors
2	Tungsten Ore	Plywood	Electronics	Textiles	Computers	Ships
3	Raw Silk	Wigs	Iron and Steel Products	Footwear	Automobiles	Phones
4	Anthracite	Iron Ore	Footwear	Iron and Steel Products	Petroleum Products	Petroleum Products
5	Cuttlefish	Electronics	Ships	Ships	Ships	Automobiles
6	Live Fish	Fruits and Vegetables	Synthetic Fibers	Automobiles	Wireless Telecommunication Equipment	Liquid Crystal Devices
7	Natural Graphite	Footwear	Metal Products	Chemicals	Synthetic Resins	Auto Parts and Components
8	Plywood	Tobacco	Plywood	General Machines	Iron and Steel Products	Plastic Products
9	Rice	Iron and Steel Products	Fish	Plastic Products	Textiles	Org. & Inorg. Compounds
10	Bristles	Metal Products	Electrical Goods	Containers	Video Devices	Electronic Appliances

Double Smile Curve: Moving along and Shifting up the Value Chain



Developing countries typically start their industrialization in the assembly & production segment of the value chain, using their comparative advantage in labor-intensive manufacturing (e.g., garments). Only a few manage to move to higher value-added segments along the value chain (e.g., R&D and marketing) as well as shift up to higher value-added sectors (e.g., machinery & equipment). Close consultation between the government and the private sector is key to solving information and incentive problems in this stage, when countries try to upgrade their comparative advantage.

Part-04 | Lessons from Korea's Experience

Lessons from Korea's Experience



- ◆ **Compelling Vision and Developmental Governance: Rapid, Resilient, and Shared Growth**
 - Vision that Imparts a Shared Sense of Purpose
 - Broad-Based Growth: Beyond Enclaves and Dual Economy
 - Appeal to Nationalism, Legitimation of Political Power Through Economic Modernization (after 1960 and 1961), Inter-Korean Competition
 - Responsive and Responsible Governance: From Authoritarian Developmental State to Democratic Market Economy
- ◆ **Performance-Oriented Approach: Pragmatism and Feedback**
 - No Ready-Made Model to be Taken off the Textbook: "Big Push" / Import-Substituting Industrialization, Taiwan's Export-Led Industrialization, Japan's Spillover Industry Promotion
 - A blueprint (indicative plan) operates as a provisional goal which is constantly revised, based on an informed discussion of where the experiment in question is going.
 - Reinforce successful experiments and phase out unsuccessful ones through performance-based rewards and peer learning.

Lessons from Korea's Experience



◆ Big-Push Partnership: Information and Risk Sharing

- Information, Incentive, and Decision-Making Shared by the Government and the Private Sector
- Controlling Corruption and Rent-Seeking
- Developmental State: Autonomy from Particularistic Interests *and* Responsiveness to Popular Pressure
- Problem of Transition: Danger of De-Control without De-Protection

◆ Export Orientation: Market Test for Government Policy and Corporate Performance

- Less Prone to Political Influence and Manipulation: Reward Based on Performance in a Competitive Setting
- Alleviating Coordination Problem
- Exploiting Scale Economies
- Learning by Exporting: Upgrading Mechanism

Lessons from Korea's Experience



◆ Outward-Oriented, Bottom-up, Integrated Industrial Policy: Relentless Focus on Domestic Value Added

- Discover latent and potential comparative advantage through experimentation and international benchmarking.
- Systematically study what has to be done to fill the missing links in the domestic value chain and move up the quality ladder, and make conscious and concerted efforts to aim for international competitiveness from the outset.
- Accumulate skills. Make a transition from imitation to innovation.
- Set up public-private search networks to address emerging problems.
- Take strategic risks, weighing the challenges of skill accumulation, scale economies, and complementary investments against the possibility of capacity underutilization and financial distress.

◆ Inward-Oriented, Top-down, Ad Hoc Industrial Policy

- Promote upstream industries with large spillovers
- Go top-down. Disregard feedback.
- Problem: Insufficient Demand, Suboptimal-Scale Plants, Higher Costs, Monumental Projects

Korea retained the ownership of its export-oriented industrialization and progressively developed its own capabilities to add value and respond to shocks even as it actively learned from, and engaged with, the outside world.

Lecture 2



Rural Development

Dr. Yangsoo, Yi

Professor, Department of Saemaul Studies and International Development
Yeungnam University

He received his Ph.D. in Regional Development Policy from the University of Louisville. Prior to joining the faculty at YU in 2012, he was a foreign investment advisor for the Busan Metropolitan City and an associate professor at Pusan National University. He also served as the project manager of the Myanmar rural development project in 2013 and the Rwanda Saemaul ODA project post-feasibility study. In addition, he has participated on a variety of preliminary feasibility studies for rural development ODA projects.

한국의 농촌개발정책 : 과거 · 현재 · 미래

The S. Korean's Rural Development Policy:
Past, Present, Future

2016. 02

Contents

1 Introduction

What Is The Rural Development?

2 Main Subject

- Rural Communities in S. Korea
(Problems, Objectives)
- Rural Development Policy : 1970s ~ Present
(Strategies, Examples)

3 Conclusion

Suggestion : Applying for developing countries
through rural development of Korea

2

Rural Development

- Rural development is a process integrated with economic and social objectives, which must seek to transform rural society and provide a better and more secure livelihood for rural people.
- Rural development is a process of change, by which the efforts of the people themselves are united, those of government authorities to improve their economic, social and cultural conditions of communities.
- Rural development is a dynamic process, which improve the agricultural growth, economic and living conditions, and change attitude
- The problems that rural development programs attempt to solve are not only agricultural; such programs must also tackle the social or institutional problems found in rural areas.
- ✓ *Physical problems relating with environments; e.g., lack of water, poor infrastructure, lack of health facilities, or soil erosion.*
- ✓ *Non-physical problems relating with social and political conditions; e.g., limited access to land, no contact with government services, or dependence upon a bigger farmer.*

Rural Communities in S. Korea at 1960s

- **One of Least Developed Countries in the World** GNP/Capita: US\$ 87 in 1962
- **Rural poverty ratio in 1967: 34% in absolute term.**
- **Rural Development was an urgent issue for poverty alleviation and for reduction of income disparity (social instability).**
- **Poor Infrastructure**
 - **Car accessible villages: 60%**
 - **Electricity accessible villages: 20%**
 - **Repeated natural disasters**
 - **Low agricultural productivity**

Rural Communities in S. Korea at 1960s

- Introduced CD Program in 1958
- Types of rural development
 - Poverty reduction/eradication: Agr. productivity (HYVs)
 - Income increase: cash crops
 - Living env. improvement: Housing, roof, roads, bridges, etc.
 - Industrialization: urban/rural
- Traditional Peasant Society
 - Seasonality of labor: Drinking & Gambling
 - Resistance to change (chance)
 - * Fatalism
- But, not put down roots successfully in Korea
- Introduced Saemaul Undong program in 1971

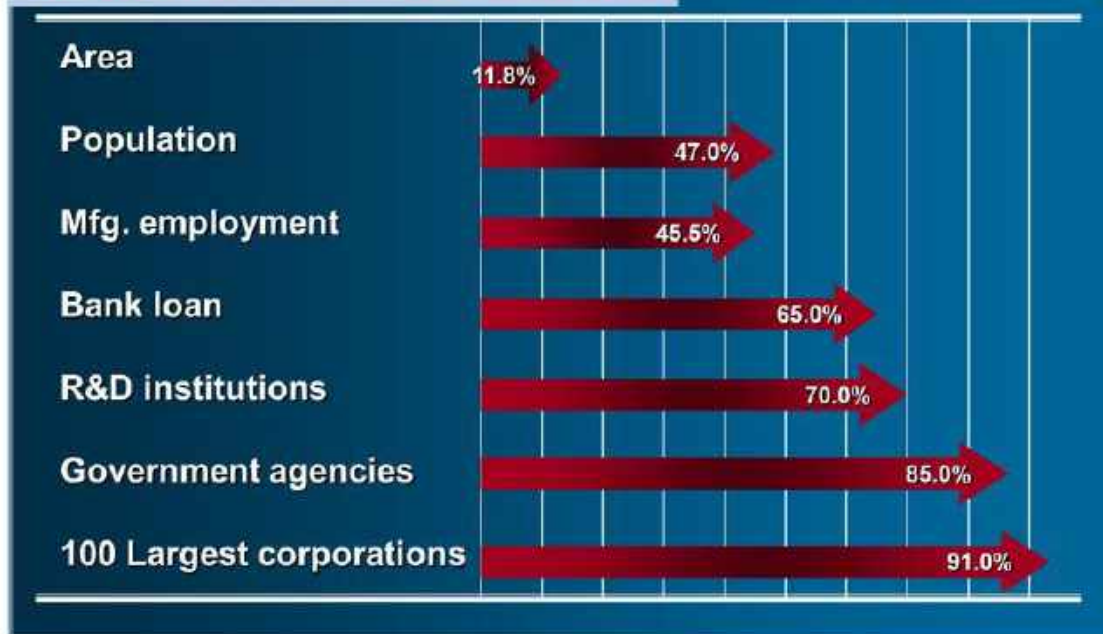
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Rural Communities in S. Korea at 1960s ~ Present

Korea Agricultural Indices					
	1975	1980	1990	2000	2010
Farmers (Thous. , %)	13,244 (37.5)	10,827 (28.4)	6,661 (15.5)	4,031 (8.6)	3,063 (6.2)
Rural Pop. (Thous. , %)	17,910 (50.8)	16,002 (42.0)	11,102 (25.9)	9,381 (20.0)	8,758 (17.7)
Farm land Above 3ha (Thous. Hous.) (Ratio,%)	36 (1.5)	31 (1.4)	44 (2.5)	85 (6.1)	97 (8.2)
Hous. Income (Thous. Won)	873	2,693	11,026	23,072	32,121
Agr. Income (Thous. Won, %)	715 (81.9)	1,755 (65.2)	6,264 (56.8)	10,897 (47.2)	10,098 (31.4)

Rural Communities in S. Korea at 1960s ~ Present

Concentration of the Capital Region



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Rural Communities Development Approaches

Timeline of Development Approaches						Progression of community involvement
1950s →	1960s →	1970/80s →	1990s →	2000 →	2005 →	
Centralized						
De-Centralized						
	Sectoral Technology Led/"Green Revolution" Irrigation development					Consultation ↓
	Special Area/Target Group Area Development Program & Integrated Rural Development Program	Community-Based Development	Social Funds			Participation ↓
	NGOs and Private sector			Community-Driven Development (CDD)	Local & Community-Driven Development (LCDD)	Empowerment

Source: Binswanger-Mkhize, et al., p. 8.

Rural Communities in S. Korea at 1960s

1) People Related Problems

- Traditional way of thinking
- Low level of education
- Lack of confidence, Lack of technological orientation

2) Agricultural Related Problems

- Small size of land holding and small(peasant) farmer
- Poor marketing facility and limited market size
- Unwillingness to work and stay in rural areas
- Uneconomic agriculture

3) Infrastructure Related Problems

- Lack of Water, Electricity, Transportation, Educational and Vocational institutes
- Lack of Health(sanitation, sewage) and Storage facilities etc.

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Rural Communities in S. Korea at 1960s

4) Economic Problems

- Unfavorable economic condition(long distance from market)
- High cost of inputs
- Under privileged rural industries
- Lack of Employment

5) Leadership Related Problems

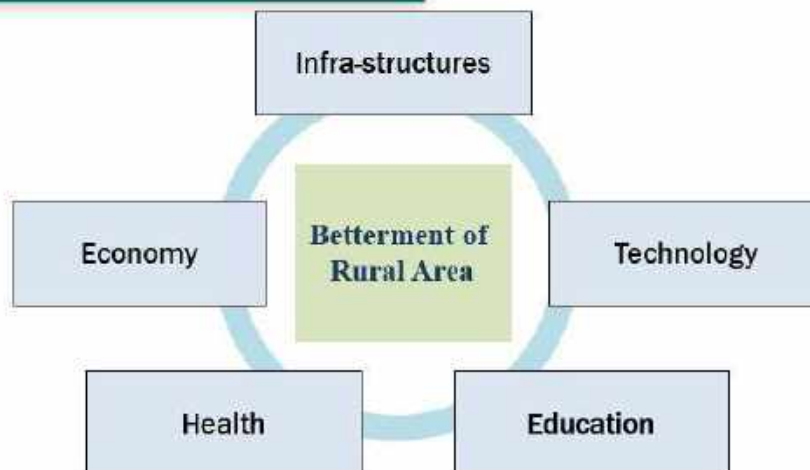
- Inactive(passive) and incompetent people
- Self interest of leaders
- Biased political
- Variety of cultural(tribal) interests

6) Administrative Problems

- Corruption, Lack of motivation and interest
- Unwillingness to work in villages
- Lack of public budget
- No proper monitoring of programs
- Lack of public administrative structure to implement projects

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Objectives Rural Development in S. Korea



Objectives of Rural Development

- To develop farm, home, public service and village community
- To bring improvement in crops' productivity and livestock
- To improve health and education condition
- To improve villagers with their own efforts
- To improve village communication

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1970 ~ 1980

Rural Development Policy: SaeMaul Undong

- In Korea, the rural community was completely transformed through a comprehensive **state** development policy called the **SAEMAUL UNDONG(SMU)**
- The SMU is guided by the state in the way of **nationwide, traditional village-based, and integrated approach in terms of projects and public policy**
- The SMU is a catch-up government program improving the quality of rural life by overcoming the rural poverty and accelerating the rural development behind in urban and industrial development

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1970 ~ 1980

Rural Development Policy: SaeMaul Undong

Definition of SMU

Saemaul Undong is a community-based social movement to reform the farmers' way of thinking,

Saemaul Undong is a modernization movement, which is the community-based rural development strategy,

Highlights of Saemaul Undong is an enlightenment of people, values such as diligence, self-help and cooperation.

Sae (New, meaning progressive renewal) dealt with modernization goals, whereas **Maul** (meaning rural community) dealt with community(village)-based, **Undong** dealt with movement

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1970 ~ 1980

Rural Development Policy: SaeMaul Undong

Infrastructure Projects

- Paving or Widening access into villages
- Building bridges
- Improving water systems
- Improving roofs
- Electricity in households
- New water pipelines
- Community facilities

Mental Reform

- Living up to the Saemaul spirit(diligent, self-help, cooperation)
- Saving (Micro Financing Fund)
- Helping each other
- Following rules

Income Increase

- Cooperative production (fertilizers, pesticides)
- Improvement of seeds
- Non-farm income, Saemaul factory
- Raising specialty crops

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1980 ~ 1997

Rural Development Policy: Economic Liberalization

- Change in Basic Philosophy of Economic Policy
 - Rely more on **market mechanism** for resource allocation **than on government control**
- Expanding Gap of Inter-industry and Inter-region
 - **Decline** of light industry and agriculture, **growth** of electronics, automobiles, steel, and shipbuilding industry
 - Expanding rural-urban income gap
- Weakening Importance of Agricultural Industry
 - Production share of **13.5%** in 1980 fell to **7.6%** in 1990.
 - Share of farmers fell from **28.4%** in 1980 to **15.4%** in 1990.

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1980 ~ 1997

Rural Development Policy: Economic Liberalization

- Widened the Concept of Rural Development
 - Include improvement of rural living standards, off-farm employment and improvement of rural infrastructure and services
 - Set the umbrella policy framework in 1989 with the '**comprehensive plan for rural area development**'
- Efficiency-oriented Top-down Approach
 - Performed through central government subsidy
- Very Limited Residents Participation
 - Residents become passive beneficiaries
 - Even unaware of what project is going to be set out in their village

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1980 ~ 1997

Rural Development Policy: Economic Liberalization

Examples of Comprehensive Plan for Rural Area Development

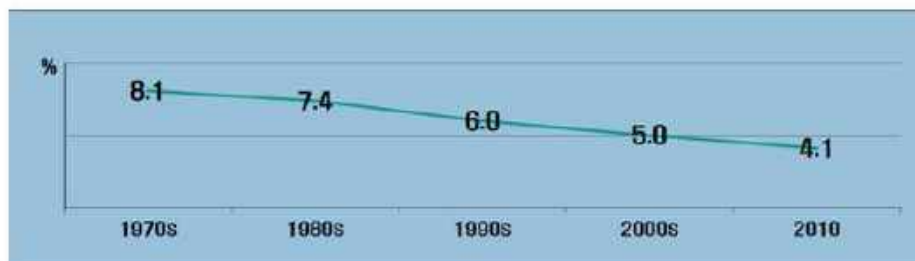


Community Center

1998 ~ Present

Rural Development Policy: Knowledge-Based Economy

- A High-level Restructuring of the Overall Society after the "IMF Crisis at 1997"
 - Increasing demand for quality of life, environment
- Declining Economic Growth Rate
 - The change of average economic growth



1998 ~ Present

Rural Development Policy: Knowledge-Based Economy

- Implement Village-level Tourism Development Project
 - Green Rural Village Experience Project
 - One Company–One Village Sisterhood Campaign
 - One School–One Village Sisterhood Campaign
- Create Programs to Improve the Welfare of Rural Residents
 - Scholarship and financial aid for rural students
 - Medical facilities improvement and health management programs
 - Support for national pension program for rural workers
- Establishment of Town and Country Exchange Promotion Act(2009)
 - Promote urban people to visit rural area for developing rural tourism
 - rural resort village development projects
- Establishment of Improvement of Farmers' and Fishermen's Quality of Life and Promotion of Rural Area Development Act(2010)

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1998 ~ Present

Rural Development Policy: Knowledge-Based Economy

Farming Experience Activities



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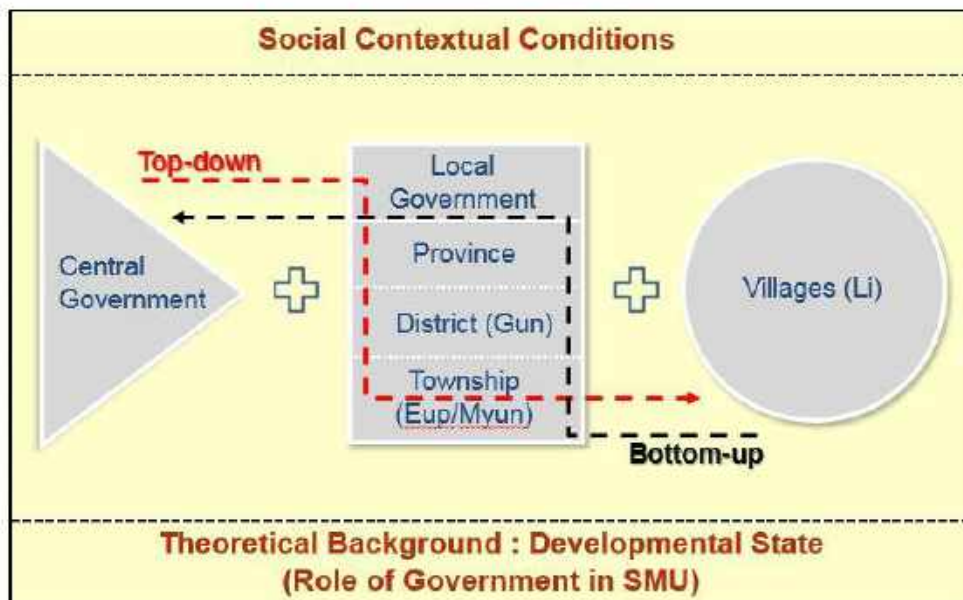
1998 ~ Present Rural Development Policy: Knowledge-Based Economy

Case of Rural Tourism in Household Unit



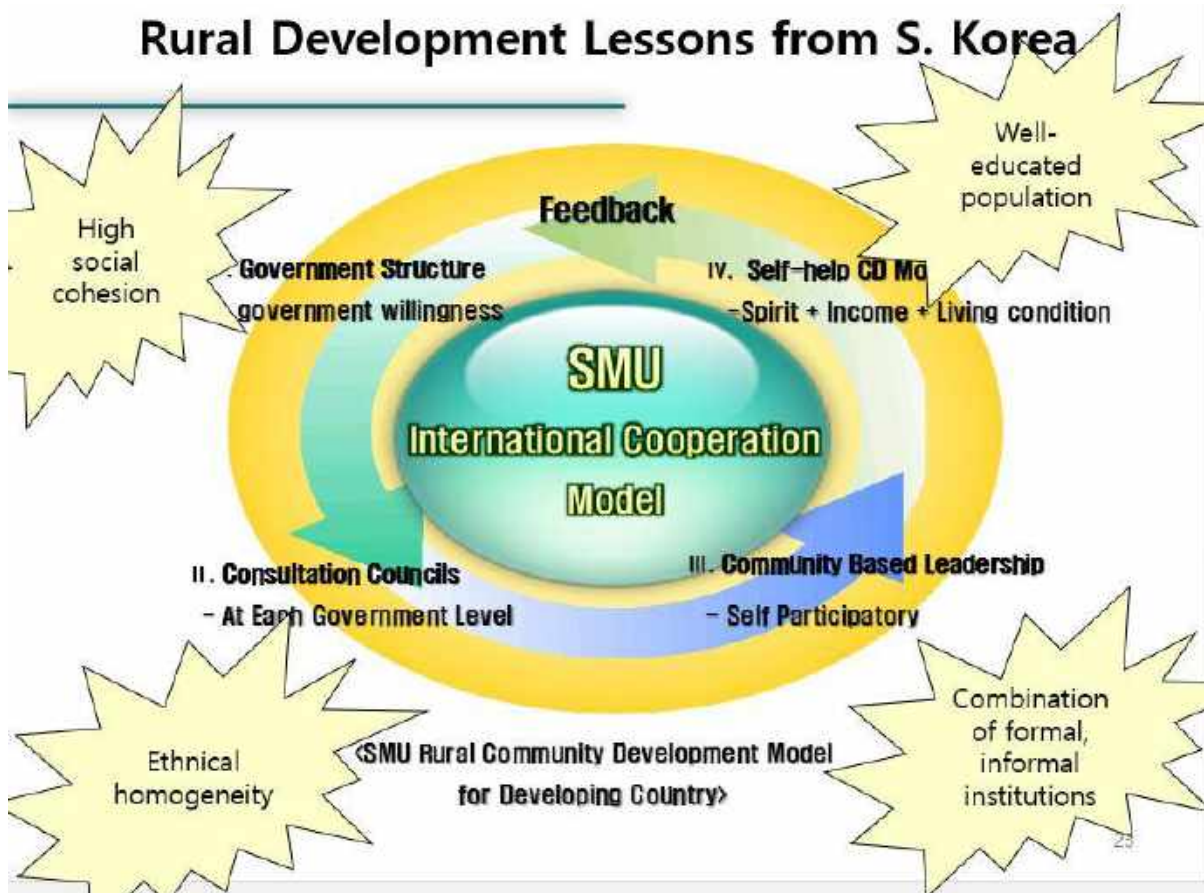
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Local and Community Driven Development of SMU (Vertical & Horizontal Integration)



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Rural Development Lessons from S. Korea



Rural Development Lessons from S. Korea

◆ Macroscopic (State) policy & Microscopic (Villages) participation Intertwined

- The government should implement policies that meet **villages' and residents' needs**
- Strong commitment and leadership from the very top play a crucial role in success of rural development policy; To be maximize the impact of the policy, it requires **national supporting programs and investments**
- Villagers participation and capacity building from the grass root are prerequisite to be a successful rural development by inducing local residents' voluntary participation basis of **traditional social capital**

Rural Development Lessons from S. Korea

- A broad range of agricultural reforms including **land reform, improvement of crop species and fertilization (government responsibility?)**.
- To finance investments, foreign capital inflows could be induced such a concessionary loans from WB, ADB, etc
- Education for the capacity building and leadership for training program should be stressed

The most important lessons learned from the SaeMaul Undong are that “we ca do” spirit based on appropriate strategies and measures depending on the enabling environment in your country

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Lecture 3



Introduction of Saemaul Undong

Dr. Cho, Myung-Soo
Secretary-General
Saemaul Undong Center

He started to serve for the government of Rep. of Korea in the Ministry of Home Affairs and experienced different ministries like the Ministry of Foreign Affairs, local government etc. during his service period.

After public service in the government, he joined the United Nations Governance Centre from 2007 and became a visiting professor for development administration in Kangwon National University.

Since 2013, he has been working for Saemaul Undong Center as a secretary-general. He is promoting "Saemaul Undong" to developing countries in cooperation with ODA activities. It is his belief that "Saemaul Undong will be a key player to support developing countries' economic and cultural growth.

Saemaul Undong vs. Community Development



The Saemaul Undong Center

Secretary General
Myungsoo Cho

Saemaul Undong

Contents

- i Questions about Development
- ii Saemaul Undong vs. Community Development
- iii Saemaul Undong in other Countries

ODA : Official Development Assistance

- (a) undertake by the official sector
- (b) with promotion of economic development and welfare as the main objective
- (c) at concessional financial terms

ODA & Poverty < ODA trends for 50yrs >



Sub-Saharan Africa's Share of Global Economic Activity (per capita): 1965-2004
 - total DAC : 1960. **4676** → 2008. **119759** USD million (26times)

ODA Project

< ODA outcomes >

: rate of population under poverty line (%) (World Bank)

	1981	1993	2004
East Asia, Pacific	57.7	25.2	9.1
Europe, Central Asia	0.7	3.6	1.0
South America , Caribbean	10.8	8.4	8.6
Middle East, North Africa	5.1	2.1	1.5
South Asia	49.6	36.9	30.8
Sub Saharan Africa	42.2	45.5	41.1

: population with under 1\$/day income : 12 hundred million,
20% (2003) least developed country (Under1000\$ GDP) :
50 (UN.2008)

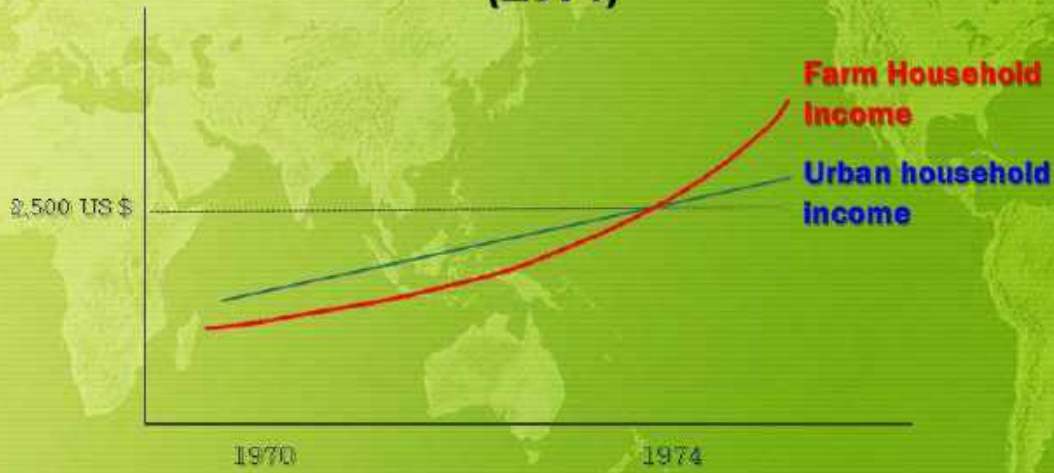
MDGs evaluation

MDGs	2005	2015 (Target)	Outlook
Eradicate extreme poverty and hunger (MDG-1)	41	22	Impossibility
Achieve universal primary education (MDG-2)	60	100	Impossibility
Promote gender equality and empower women (MDG-3)	0.88	01	Possibility
Reduce child mortality (MDG-4)	159	62	Impossibility
Improve maternal health (MDG-5)	900	230	Impossibility
Combat HIV/AIDS, malaria and other diseases (MDG-6)	5.8		Impossibility
Ensure environmental sustainability (MDG-7)	56	75	Possibility
Develop a global partnership for development (MDG-8)	39,005	50,000	Impossibility

World Bank, 2008. World Development Indicator Database.

Saemaul Undong

farm household income > Urban household income (1974)

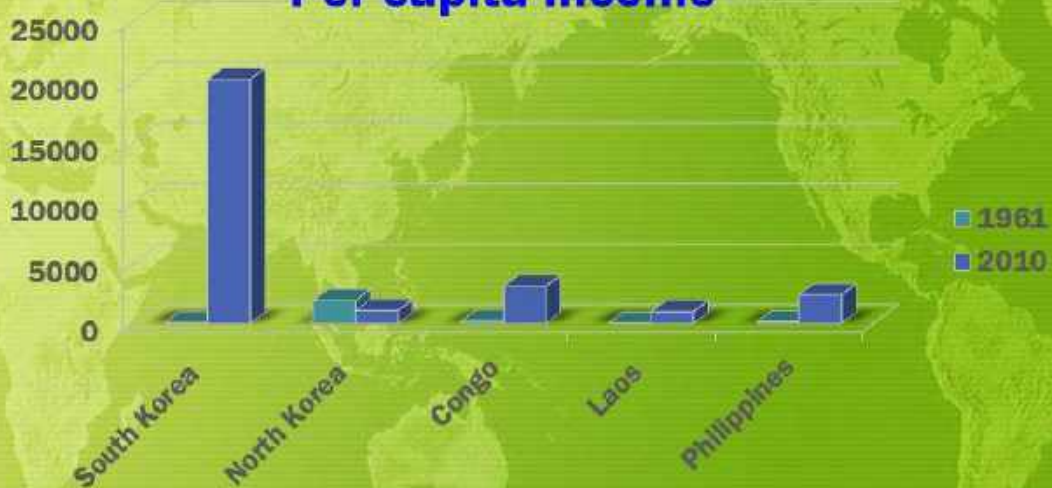


The economic planning board (1985)

7

Economic growth

Per capita Income



world Development Indicators database, 2010-2012, World Bank.
World Economic Outlook Database-October 2010, IMF.

8

Questions :

Q1) What means this difference?

Q1) What is the most essential factor of Economic Development ?

9

Theoretical Perspectives on Economic Development

- **Technology**
- **Resources**
- **Institutions**
- **Capital**

10

Saemaul Undong

- ▶ **Sae** : New, Better, Change
- ▶ **Maul** : Village, Community
- ▶ **Undong** : movement

**Movement for new (better)
Community (Village)**

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Historical Context

- **Dynasty : 5000 years**
- **Japanese Occupation : 1910~1945
(35years)**
- **Independence : 1945**
- **Division : 1948**
- **Civil War : 1950~1953**
- **Military Coup. : 1961**

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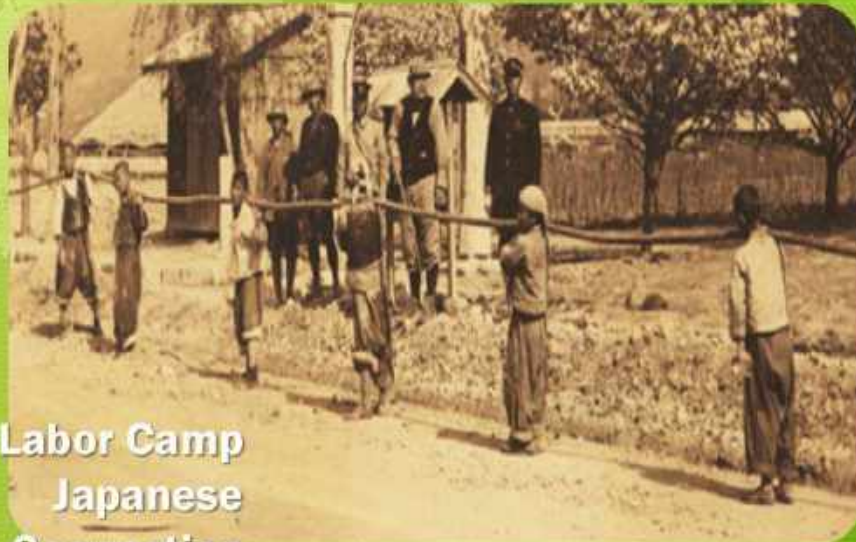
Historical Context



Busan
Chosun Dynasty

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Historical Context



Labor Camp
Japanese
Occupation

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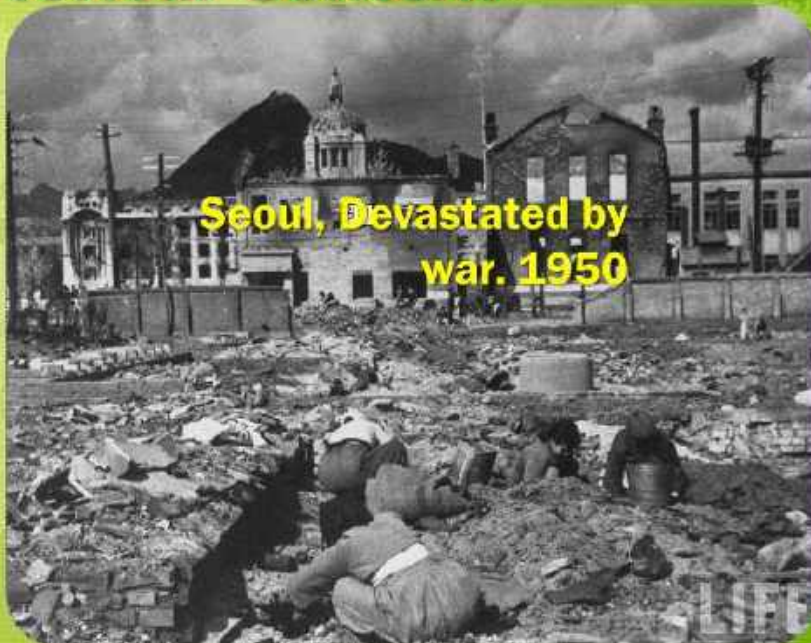
Historical Context



Independence Day 1945

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Historical Context



Seoul, Devastated by war. 1950

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Saemaul Undong

Historical Context

5yr-term
Economic
Development Plan (1961)

- **Typical under-developed country**
 - : **Scarce natural resources**
 - : **Near-total devastation by war**
 - : **Lack of human resources**

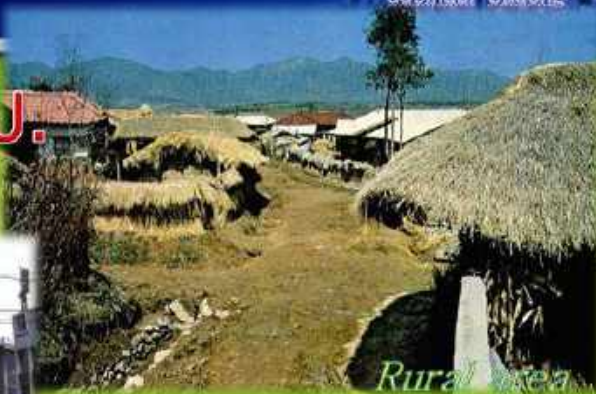


Historical Context

- **Per capita Income (1961)**
 - : South Korea / US\$ 91\$
 - : North Korea / US\$ 1906\$
 - : Congo / US\$ 197\$
 - : Laos / US\$ 789\$
- **US financial aid**
 - : more than 50% of budget

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Launching of S.U.



- **Successful Economic Development (1961~1970)**
 - : Rapid industrialization
 - : growing economic disparity between urban area and rural area

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Launching of S.U.

1969. Late President Park toured flooded area in Kyungbuk Province

- ❖ reported : village people initiate restoration
- ❖ directed : Community led development

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Launching of Saemaul Undong

*Officially announced launching of S.U.
: 1970.4.22. Mayors, Governors meeting (Busan)*



22

< Late President Park >

“Without voluntary initiative of village people, your community cannot stand on your own feet. If you have self-reliant spirit, you will be able to become independent with least support from government.”

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First Initiative of government

- **Government handed out**
: 330 packs of cement to every village
- **Asked village people**
: select community leaders (man, woman)
: discuss and decide what to do, how

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Core spirit

< diligence, self-help, cooperation >

Saemaul Training

- : All government employees (Central, Local)
- : Saemaul Leaders, opinion leaders
- : Later, leaders of private sector

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Government support

- Do not ask what to do
Decision making → community
- Government just supports
 - : material (cement, iron cores)
 - : technical support
 - : financial support
 - : administrative support



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Development of S.U.

< Project >

- Every Community took different projects
 - : paving village road, re-building fence, kitchen, toilet or house, small bridges...
- Simple and small project with immediate necessity



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Development of S.U.

<Change of Mindset>

- **“We can do it”**
- **Do not wait until government to come**
- **We can plan, manage, and develop our community**
- **Community start asking Gov't to support**

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Development of S.U.

< Projects developed >

- **First**
: **renovate physical environment**
- **Later**
: **enhance community economy**
: **livestock (cow, pigs, hens, etc)**
: **crops yielding high income**
: **improving farm-land productivity**
: **new farming machines and appliances**



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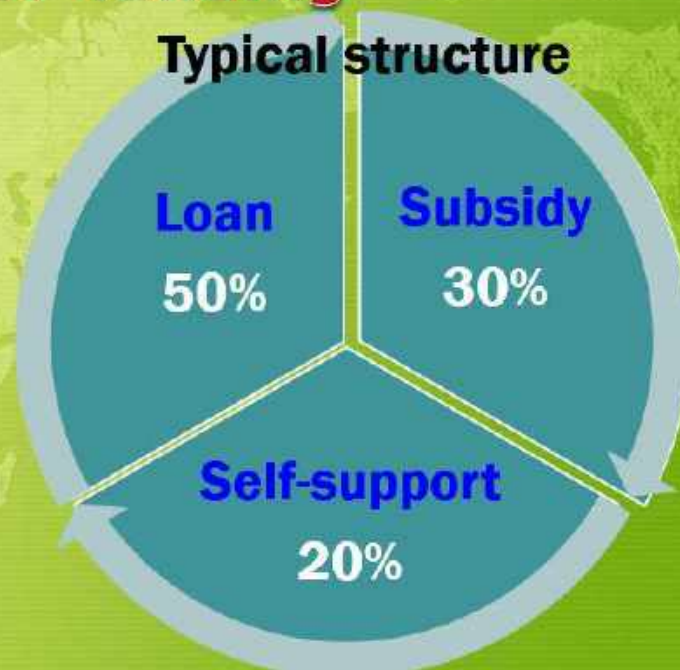
Development of S.U.

< Project - examples >

- Cement 2100 packs per village, 2.6m/t of ironcores
→ annually US\$ 2000 per village ('71~78)
 - Village road total 85.851km, 2.601m per village ('71~75)
 - Cultivators (power tillers) 0.5 per village('70)→26 ('86)
 - Electricity 20% ('70) → 98% ('77)
 - High-yielding rice planting 16%('72) → 55% ('77)
* rice 3.34m/t per ha('72) → 4.94 m/t
- ➔ a farm household income US\$ 824('70)→ 2,961('77)

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Project funding



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Development of S.U

< Role of Central Gov't : Ministry of Home Affairs >

- Comprehensive plan (goal, project, budgeting..)
- General guidance
- Saemaeul Training
- Financial support (special loan, subsidy)
- Incentives and promoting competition
- Establishing saemaeul institutions

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Development of S.U.

< Role of local governments >

- Action plan for supporting project
- Monitoring, evaluating the project
- Technical support
- Distribution of materials
- ➔ Linking Pins between government and community
- Localgov't official performance evaluation

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Development of S.U.

< Motivating Change : gov't >

- Saemaul Education / Training Program
- Full & Active Utilization of Media to Promote Saemaul Spirit
- National Convention of Saemaul Leaders
(central / regional / local)
: Presentation of best practice
: Exchange of information
- ◆ Classification of communities by levels of development / success
- ◆ Strong incentives offered to most distinguished communities

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Development of S.U.

< Expansion of the Movement >

Success of Saemaul in Rural Areas

URBAN AREA

- Efforts to eradicate corruption
- Improvement of social services
- Enhanced public order
- Environmental reforms
- Strengthening of community awareness

CORPORATE SOCIETY

- Improvement of working environment
- Enhanced community outreach

Development into a Nation-Wide Movement

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Outcome

< Income >

**Farm household income > Urban household income
(1974)** (won)

	Urban household income(A)	Farm Household income(B)	B/A (%)
1970	381.240	255.804	67
1972	517.440	429.394	83
1974	644.520	674.541	1 04

The economic planning board (1985)

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Success Formula



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Important factor Community Empowerment strategy



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Saemaul Undong vs Community Development

< Initial Process >

Providing Material

- ➔ Suggest Program Outline
- ➔ Elect Community Leader
- ➔ Ask Community Decision
- ➔ Training for Leaders

Aimed at Awakening Self-reliant Mindset

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Saemaul Undong vs Community Development

Decision on Project Community	vs.	Donor
Managing Project Community	vs.	Donor(Staff)
Financing Community + Gov't	vs.	Donor
Education Self-reliant Mindset	vs.	Knowledge, Skill

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Invitation Training of Saemaul Undong (1973~2013)

One-day training : 143country / 21,615person

Communal camp training : 117country / 5,691person

Visit of The Saemaul Undong Center

Thein Sein

President of the Republic of the Union of Mynamar('12)

Raila Amollo Odinga

Prime Minister of Republic of Kenya('12)

Yoweri Kaguta Museveni

President of Republic of Uganda('13)

Joyce Hilda Banda

President of Republic of Malawi('13)

Choummaly Sayasone

President of Republic of Lao People's Democratic Republic('13)

Joseph N. Bokai

Vice President of Liberia('13)

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County	Village	Project	County	Village	Project
Mongolia	Argens tulen	Building Saemaul Park, Fencing, Plantation	Sri Lanka	Epitawaththa	Pavement of Village Access Road, Three Phase Electricity, Machinery Bank, Handicraft
Nepal	Piple 2	Pavement of Village Access Road, Cow Bank, Fish Farm		Kahabilvagoda	Communal Factory for pottery, Machinery Bank
	Hadxay	Pavement of Village inroad, Communal Farm(Watermelon, Corn)	Myanmar	East Poundge	Pavement of Village inroad, Commune Well
	Phonhe a	Pavement of Village inroad, Building Greenhouse, Mushroom Growing		Tha Nat Pin	Pavement of Village inroad, Commune Well, Piggery Bank
Laos	Lingsan	Pavement of Village inroad, Rain Shelter Farming	Uganda	Katereke	Construction of Village Hall, Fish Farm, Improvement of Village inroad, Livestock Feed Factory
	Pahkthab	Pavement of Village inroad, Construction of Village Hall		Kitemu	Construction of Village Hall, Soap Making Factory, Piggery Farm, Communal Farm,
	Kampong Thnal	Construction of Village Hall and Nursery, Waterpump, Livestock, Rice Seed Bank		Niia Nne	Rice Farming, Village Credit
Cambodia	Sonan Chay	Construction of Village Hall, Waterpump, Livestock, Rice Seed Bank	Tanzania	Mfru Mwambao	Saemaul Farm

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S.U. in other Countries

< Mongolia >

- National Council of S.U. introduced S. U. (2004)
- S.U. Leader K. Marina volunteered (Nalaikh)
 - : her hairsalon as an office, collect membership fee (10 members)
 - : first project : well with electric motor (Gyonggido)
 - : establish S.U. Center, all Villagers participated
 - : joint farming , community library, road paving, S.U. bridge, S.U. wool factory, etc
- Led by community leaders without Gov't support. S.U. Center expanded to 10 Communities.

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S.U. in other Countries

< Democratic Republic of Congo >

- **Dr. N'KUMU** started S.U. in D.R.C (2004)
 - : **Saemaeul Leadership building**
 - : **improving agricultural productivity**
 - : **rebuilding houses, wells, roads**
 - : **goat bank, livestock, fish pond, etc**
- **Kabueya Region income**
 - : **US \$ 35~40 / household ('04)**
 - **US \$ 470 / household ('08)**



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Remarks on S.U.

- **Hu Jintao**
president. China
“**Saemaeul Undong** should be applied to 『**New Village**』 **Building campaign..**”
- **Hun Sen**
prime minister. Cambodia
“**I hope Saemaeul Undong** can contribute to the rural development of **Cambodia.**”



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Remarks on S.U.

- **Enkhbayar**
ex-President. Mongol
“Friendship between two countries
has been consolidated through
Saemaeul Undong.”
- **Ban ki moon**
UN. secretary-general
“We have to learn Saemaeul
Undong to fight against
poverty in Africa.”



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Saemaul Undong vs Community Development <After 2015>



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Lecture 4



Agriculture Development & Strategy

Dr. Lee, Seonghee

Professor

Dankuk University, Graduate School

His major in agriculture field is plant science and served as a government officer of the Ministry of Agriculture, Forestry and Fisheries. He had served most of time in Rural Development Administration more than 20 years.

After retiring from RDA in 2007, he took a responsibility for a committee member of International Agriculture Development Special Committee in the MAFF and in other public expertised committees. Mr. Lee is now a professor in higher education organizations.

[Agriculture Policy]

1/69

Introduction to Korean Agriculture

2016. 2. 24

SEONG HEE LEE

Lecturer

2/69

Name : Seong Hee Lee

<Educational Background>

- B.S. in Seoul National University, Korea (Agronomy)
- M.S. in Lincoln College of Canterbury University, New Zealand (Plant Science)
- Ph.D. in Lincoln University, New Zealand (Plant Science – Plant Physiology, Biometrics)

<Research & Administrative Background>

- Chief, Pesticide Residue Lab., National Agro-Chemicals Research Institute
- Chief, Cropping & physiology Lab., National Winter-cereals Research Institute
- Director, International Cooperation Division, Rural Development Administration
- Director, Research Planning Division, Rural Development Administration
- Director General, National Highland Agricultural Research Institute
- Director General, National Honam Agricultural Research Institute
- Director General, National Yeongnam Agricultural Research Institute
- Director General, National Institute of Crop Science
- Director, Center for Korea Program In International Agriculture, Vietnam

<Other former positions>

- NSF Professor, Post-graduate School of National Andong University
- Member, Board of Trustees, International Rice Research Institute, Philippines
- Member, Directors Board, IRRI Fund Singapore

CONTENTS

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3. DOMESTIC AND INTERNATIONAL CHALLENGE
4. DEVELOPMENT OF AGRICULTURAL POLICY
AND ITS DIRECTION
5. CURRENT AGRICULTURAL POLICY
6. DRIVING FORCE FOR NEXT GENERATION
AGRICULTURE
7. CONCLUSION



<Korean peninsula>

- bordered by Yellow Sea, East Sea, China and Russia
- temperate climate
 - . $124^{\circ}36'E - 131^{\circ}52'E, 33^{\circ}06'N - 43^{\circ}01'N$
- 1,000 *km* north to south, 250 *km* east to west
- total area : 221,300 *km*²
 - . South Korea: 99,430 *km*², North Korea: 121,870 *km*²
- characterized by hills and mountains
 - . 1.7 million *ha* (17% of total land) used for agriculture

<Climate and seasons>

- average temperature : 11 °C
- annual rainfall : 1,300 mm, mainly June and August
- four distinct seasons
 - . difficult for forages and cereals, but favorable for rice

<Geographical feature>

- easy access to the continent, land bridge to the Pacific
- frequent aggression by powerful neighbors

<History>

- more than 1,300 years of history as an unified nation
- modern Korea created in 1948 after Japan's defeat in W.W. II
- division of Korea in 1945, and civil war for 1950 – 53

<National development>

- 4 decades in economic development, democratization and social reform
- economic development plan since 1962 laid the foundation for national economic growth
- recent reforms aimed to an advanced nation

<Economic development>

- success of the industrial sector in world markets
- GDP growth in 4 decades : 9 % per annum
- GDP/caput: \$ 87 ('62) → 11,380 ('96) → 28,180 ('14)
- export : \$ 0.5 billion ('62) → 621 billion ('14)
- unemployment rate : 8 % ('62) → 2.0 ('95) → 3.1 ('13)
- export-oriented policy, supported by cheap labor and extensive government intervention (trade restrictions, subsidies and credit allocation)

* with rapid development of other sectors, agriculture lagged behind (Un-balanced Dev. Str.)

<Recent Economic Development>

- role in world economy expanded by increased trade
 - . about 5 % of world trade(6th largest), 10th GDP
- late 90's recession caused by financial turmoil and fundamental weakness of Korean economy
 - . US\$ 57 billion rescue loan from IMF in '97
- Recent recession by mismanaged banking systems (2008/9)

* a series of measures are taken to overcome the crisis

<Contributions of agriculture>

- a share of GDP (2.3 %) and employment (5.7 %)
- provision of food and feed
- supply of labors and capitals to non-agro-sectors
- preservation of environment and traditional culture

<Declining role of agriculture>

- losing its importance to industrial and export sectors
- GDP share : 27.5 % in '70 → 2.3 % in '14
- employment share : 50 % in '70 → 5.7 % in '14

<Special position of agriculture>

- * "agriculture is the foundation of the nation"
- * "farming is a divine calling"
- backbone of Korean culture : people's roots in farming
- strong government intervention and support by people

<Considerations on agricultural significance>

- particular significance in Korean culture and economy
- imbalance between rural and urban sectors
- price fluctuation of agro-commodities affects consumer prices
- public benefits
 - green environment, water holding and flood prevention, soil erosion control, recycling of wastes etc.

<Recent Agricultural Development>

- ❖ Open market policy in '80s and implementation of WTO in late '90s following the UR Round
 - Great increase in import of agricultural commodities
- ❖ WTO meetings with Doha development agenda and China's membership in WTO leads to;
 - Importation of agricultural products with low price threatening domestic markets, especially food/feed grains

1. INTRODUCTION

13/69

- ❖ Shift to profitable crop farming (vegetables, fruits, special cash crops, cattle) results in;
 - Falling price of entire products, thus increasing farm-household debt

- ❖ Lose enthusiasm due to the uncertainty in the future
 - In-confidence on the investment to the agricultural sector and rural communities



2. CURRENT STATUS OF KOREAN AGRICULTURE

2. CURRENT KOREAN AGRICULTURE

15/69

A. Rapid decrease in rural population and shift toward expensive cash crops through adoption of high-tech.

- ❖ Number of farm households
 - 1.74 M in '90 → 1.12 M in '14 (2 % down/year)
- ❖ Farm household by the type of crops
 - Rice and upland crop growers decreased by 4%/year, while vegetable, flower farms and orchards increased
 - * Cattle farms have fallen since '95, following the opening of beef market

2. CURRENT KOREAN AGRICULTURE

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B. Imported agricultural goods lowered the domestic prices

- ❖ Incompetent domestic goods were replaced by imports
 - Import : 0.05 B\$ in '70 → 36.1 B\$ in '14
 - Export : 0.02 B\$ in '70 → 8.3 B\$ in '14
- ❖ Net market price declined due to excessive supply
 - Consumer price for '14 : 82 % up from that in '95
 - Price increase of agro-products for the same period :
 - . cereals 21%, fruits 180%, vegetables 80%, meat & dairy 65%

2. CURRENT KOREAN AGRICULTURE

17/69

C. Declined farm income widened the gap to urban workers

- ❖ Agricultural income has stayed flat since 1995
 - Income gap between urban and rural households:
 - * 2.6 % in '90 → 37.8 % in '12 (47,614 : 29,619 \$)
 - Unstable agro-business with ever-increasing property price and agro-commodity price fluctuation
 - Non-farming income: 24.2% in '70 → 70.5% in '14
 - * Japan (72% in '12), Taiwan (78% in '12)
- ❖ Farm debt rose sharply: 27,878 thousand ₩/farm ('14)
 - Payable debt: 43% of income, 191% of surplus in '90
 - 80% of income, 634% of surplus in '14

2. CURRENT KOREAN AGRICULTURE

18/69

D. Vitality of rural communities were lost

- ❖ Rapid decline of rural population: 40 % of sub-counties have less than 2,000 people
 - Declined population triggers school closing, and poor education forces farmers to abandon their homes
- ❖ Insufficient amenities in rural areas hamper the welfare of low income, aged and female farmers
 - Poor educational, cultural, and medical condition limit rural settlement
- ❖ Unsatisfactory environment in promoting green tourism
 - Pollution from excessive use of chemicals and animal waste disposals

2. CURRENT KOREAN AGRICULTURE

19/69

E. Increased proportion of aged farmers and ever widening income gap within agriculture

❖ Rapid deterioration in labor quality

- 20 years old or less : 54 % in '70 → 10.4 % in '14
- 60 years old or above : 8 % “ → 49.7 % “

❖ Deviation of income group by farm size

- 3 ha above : 1.5 % in '70 → 8.7 % in '14
- 1.0 ha below : 66.8 % “ → 65.9 % “

3. DOMESTIC AND INTERNATIONAL CHALLENGE



3. DOMESTIC AND INTERNATIONAL CHALLENGE

21/69

A. Free trade and open market

- ❖ Intensified pressure for free trade and importation
 - DDA, FTA, China's membership in WTO
 - Possible solution: competitiveness of domestic Products, safety of the imported goods
- ❖ Tariff and non-tariff barrier being lowered continuously
 - Active encouragement of export of agro-products and strengthened support on competitive crops
 - Gradual reduction in crop support, while developing policies such as direct payment on income and environment

3. DOMESTIC AND INTERNATIONAL CHALLENGE

22/69

<Summary of DDA Negotiation : Tax Reduction>

	Developed countries				Developing countries			
	Current Tariff	Reduction		Period	Current Tariff	Reduction		Period
		Av.	Mini-mum			Av.	Mini-mum	
DDA	>90%	60%	45%	5 years	>120%	40%	30%	10 years
	15-90%	50%	35%		60-120%	35%	25%	
	<15%	40%	25%		20-60%	30%	20%	
					<20%	25%	15%	
				Special Item	10%	5%		
After UR		36%	15%	6 years		24%	10%	10 years

3. DOMESTIC AND INTERNATIONAL CHALLENGE

23/69

<Summary of DDA Negotiation: Average Tax Reduction>

Terms	Developed Countries		Developing Countries	
	Reduction	Implementing Period	Reduction	Implementing Period
After DDA	60%	5 years	40%	10 years
After UR	20%	6 years	13.3%	10 years

3. DOMESTIC AND INTERNATIONAL CHALLENGE

24/69

<Tariff rates of major crops in Korea before UR>

Tariff Range	Crop(Tariff)
>90%	Hulless barley(300), Corn(328), Bean(487), Malting barley(513), Potato(304), Sweet potato(385), Peanut(231), Green pea(608), Red bean(421), Pine nut(567), Chesnut(219), Sesame(630), Ginseng(223), Red pepper(270), Garlic(360), Onion(135), Honey(243), Orange(144)
15-90%	Beef(40), Pork(25), Apple(45), Pear(45), Grape(45), Sweet persimmon(45), Peach(45)
>15%	-
Average	257%

3. DOMESTIC AND INTERNATIONAL CHALLENGE

25/69

<Importance of crops, judged by production, trade, and competitiveness (1)>

		Competitiveness				
		Export (6)	Exportable (12)	Domestic consumption (28)	Require technical & political support (16)	Manageable by technical & political support (15)
Key crops (27)	Major (7)		Pork (1)	Dairy(milk), Water melon (2)	Native cattle (1)	Rice, Red pepper, Garlic (3)
	General (20)	Ginseng (1)	Cucumber, Strawberry, Apple, Orange, Grape, Pear, Persimmon (7)	Radish, Cabbage, Green pepper, Melon, Agaricus (5)	Potato, Welsh onion, Onion, For age crop (4)	Barley, Sesame, Bean (3)

Key Crop : Major(income >4,000), General(income >150 billion)
 Potential Crop : Major(income > 50 billion), General(income >10 billion), Minor(income <10 billion)
 Competitiveness : Export(> 2.5 million or >10% of Production), Exportable(2.5-1.0 million),
 Domestic consumption(ex + import <2.5 million or with low possibility),
 Require technical and political support(import 2.5-0.5 million)
 Manageable(import <0.5 million, production surplus, ready to import)

3. DOMESTIC AND INTERNATIONAL CHALLENGE

26/69

<Importance of crops, judged by production, trade, and competitiveness (2)>

		Competitiveness				
		Export (6)	Exportable (12)	Domestic consumption (28)	Require Tech. and Pol. (16)	Manageable. (15)
Potential (50)	Major (15)	Rose, Cherry-tomato (2)	Peach (1)	Sweet corn, Pumpkin, Lettuce, Plum, Orchid, Chicken, Egg, Duck, Apiculture (9)	Sweet potato (1)	Carrot, Jujube (2)
	General (21)	paprika, Chrysanthemum (2)	Egg plant, Lily (2)	Spinach, Cabbage, Melon, Parsley, Danggui(Angelica), Cnidium rhizome, Tricholoma (7)	Forage barley, Kiwifruit, Champignon, Tea, Whangi(Astragali) (5)	Red-bean, Ground-nut, Perilla, Ginger, Ganoderma (5)
	Minor (14)	Grafted cactus (1)	Cherry (1)	Cactus (5)	Apricot, Matrimony vine, Peony, Schisandra, Foxglove (5)	Wheat, Silk-yarn (2)

3. DOMESTIC AND INTERNATIONAL CHALLENGE

27/69

<Type of counter-measures by crops>

Type	Item	Income	Tech.	Demand	Comp.	Counter-measures
A	Strawberry, Melon, Gypsophila	stable	high	up	good	Labor saving tech, Production scaling, Export expansion
B	Pumpkin, Green pepper, Cucumber, Tomato, Rose, Chrysanthemum	stable	improvable	up	good	Intensive production, Improved tech., Export expansion
C	Pear, Grape, Peach	stable	high	up	good	Control supply
D	Lettuce, Garlic, Green onion, Ginger	stable	improvable	up	-	Improved management, Control supply
E	Lily, Carnation	unstable	improvable	down	-	Control production, Labor saving tech, Production scaling
F	Onion, Red pepper, Water melon, Corn, Ground nut	unstable	improvable	up	-	Control production and scaling, Substitutable crops
G	Rice, Maling barley, Potato, Sesame, Perilla, Tobacco, Apple	unstable	high	down	-	Control production, Improved tech.
H	Cabbage, Carrot, Persimmon, Orange	unstable	improvable	up	-	Reduce production, Improved tech.
I	Radish, Chinese cabbage, Bean, Sweet potato	unstable	improbable	down	-	Reduce production, Substitutable crops

3. DOMESTIC AND INTERNATIONAL CHALLENGE

28/69

B. Broadening target consumers and convincing food safety

- ❖ Clear difference in preference on high quality food among income classes
 - allow imports of low quality and low price, while focusing on high quality and high price local production
 - assist production, marketing and post-harvest management
- ❖ Increased demand on safe, healthy and convenient foods
 - Systematic and active support on environment-friendly agriculture
 - Develop wide varieties of processed foods with functionality and under strict quality inspection and quarantine standard
- ❖ Rapid growth of big retail shops and diverse outlets
 - Organize farmer groups to improve bargaining capacity in marketing and to create effective markets

3. DOMESTIC AND INTERNATIONAL CHALLENGE

29/69

C. Improving environmental quality and sustainable use of lands

- ❖ Develop policies to solve problems both for rural communities and urban population together
 - Concentrate support to provincial cities and surrounding areas
 - Seek policies to make rural areas to be the better places to live on both for urban citizen and farmers
- ❖ Improve rural environment by reducing pollution, especially from animal industry
 - Establish the recycling system with organic wastes

3. DOMESTIC AND INTERNATIONAL CHALLENGE

30/69

D. Reinforcing reciprocal benefits between agriculture and related industries

- ❖ Synergy between agricultural production and related industries (e.g. food processing)
 - Creating additional income by supporting small processing and marketing business operated by farmers or farmer groups
 - Encourage the export of processed agro-products to obtain additional value
 - Boost the export of processed agro-products manufactured from imported raw material (Designated area)

3. DOMESTIC AND INTERNATIONAL CHALLENGE

31/69

E. Preparing future reunification of Korea

- ❖ Collaboration with the North by expanding food and material aids and support the agricultural reform
 - Institutionalize cooperation policy instead of one-way aids
 - exploit the collaboration programs such as exchange of surplus commodities that fit to respective environments
- ❖ Devise the mid- and long-term measures to secure food safety upon future reunification by developing overseas agriculture



4. DEVELOPMENT OF AGRICULTURAL POLICY AND ITS DIRECTION

4. DEVELOPMENT OF AGRICULTURAL POLICY

33/69

<Before mid 90s>

- ❖ Survival despite the lack of competitiveness resulted from low investment, trade protection and support on local production of food crops
 - Tremendous impact by UR agreements with trade barrier removal
- ❖ Integrated policy on rural villages in '89, Agricultural restructuring policies in '91, New five year policy on agriculture in '95
 - Policy development to improve agricultural structure, to increase competitiveness, investment and financial aid
- ❖ Growth of agriculture by improving market structure and bigger farming: 1.12% for '91 ~ '95
 - Small and middle size farms accounting 80% were not included in restructuring
 - Doubled investment, lack of linkage between programs, excessive assist caused backlash—over dependency on government supports

4. DEVELOPMENT OF AGRICULTURAL POLICY

34/69

< After mid 90s >

- ❖ Damage with IMF, and recovery by increased investment
 - Increase in production cost due to high land and energy price
 - Unprofitable farming from low consumption of agro-products with depressed economy
 - Debt relief policy prepared 4 times to reduce the farmers burden from the high interest rate
- ❖ Adjustment policy by previous governments to lay down the foundation for agricultural vitality
 - Enacted 'Principal law on agriculture and rural community'
 - Created the Korea Agricultural Infrastructure Cooperation
 - Merged farmer cooperatives (NACF, Dairy & Ginseng boards)
 - Introduced direct payment to nurture environmental agriculture
 - Introduced market regulations, such as for wholesale markets
 - Established the Agricultural Information Center

4. DEVELOPMENT OF AGRICULTURAL POLICY

35/69

<After 2000>

- ❖ 90% of subsidies went to the rice industry, and insufficient for competitive crops
 - Constant invasion of imported produce in local markets
 - Smaller local market and over-production of local commodities
 - Unprofitable farming increased dept, aggravating the income gap between urban and rural households
- ❖ DDA negotiation to reduce subsidy and tariff barrier
 - China as a WTO member invades Korean market by low price
 - Free trade agreement with other countries in progress (Chile, USA, EU, India, Singapore, etc.)

4. DEVELOPMENT OF AGRICULTURAL POLICY

36/69

<SEEKING NEW PARADIGM (1)>

- ❖ Set up the new paradigm, away from the existing framework to revitalize the agricultural industry and rural areas
 - Quick, deliberate and systematic implementation of proper programs
- ❖ Government intervention and adjustment on production
 - Appropriate incentives and monitoring of production to balance demand and supply
 - Planning to allocate crops, taking into account the world market trend
 - Support the crops with higher competitiveness and induce the switch-over to reduce less-competitive crops

4. DEVELOPMENT OF AGRICULTURAL POLICY

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<SEEKING NEW PARADIGM (2)>

- ❖ **Broaden agricultural policies linked to changing consumption pattern and globalization**
 - **Agricultural policy → Agricultural and food policy**
 - * More attention to the food/non-food processing of agro-products
 - **Domestic oriented → International oriented**
 - * More effort on securing and maintaining sufficient import produces (Import development, taking advantage of quotation market)
 - * Export the processed products from imported material
 - **Agro-production Sector → Agricultural industry**
 - * Synergic effect among agro-businesses (material production, processing, marketing, service and goods)

4. DEVELOPMENT OF AGRICULTURAL POLICY

38/69

<SEEKING NEW PARADIGM (3)>

- ❖ **Securing competitiveness by training and nurturing the talented farmers needed for 21C**
 - **Future agriculture depends on man power with advanced technology and management**
 - **Policy aims : average farmers → talented farmers**
 - * Differentiate according to objectives, provide wide selection policies to choose from
 - **Assist farmer associations that can be the models for small farms**
 - **Financial aid to prompt talented farmers to adopt new technologies**
 - **Reorganize the agricultural institutions that support the industry in production, marketing, education, research and extension**

4. DEVELOPMENT OF AGRICULTURAL POLICY

39/69

<SEEKING NEW PARADIGM (4)>

- ❖ Problems arising from agriculture, farmers and rural villages are highly inter-connected and difficult to solve individually
 - Most efforts until now were directed to address agricultural problems
 - Direction in the future should consider all the aspects together
 - ★ Policies on agriculture, farmers and rural communities need to be balanced to satisfy all three areas

5. CURRENT AGRICULTURAL POLICY

A. DIRECTION OF AGRICULTURAL POLICY

(1) Policy for agricultural industry :

Toward 「High Quality」 + 「High Value」 + 「Export」

- ❖ Dominate domestic market with high quality local produce against low priced poor quality imports
 - ★ High quality agriculture refers to the industry that produces differentiated products including environment-friendly agriculture
- ❖ Production of high value, processed food and non-food, including medicines
 - Create overseas markets and occupy local market to certain degrees

(2) Policy for rural areas :

Improved living conditions of rural areas
both for farmers and green tourists

- ❖ Remove the differences between rural and urban residences
 - Turn small and moderate size cities into the center of industry, education, culture and medical services
- ❖ Make rural area attractive to urbaners
 - Find income aside from agriculture and rural areas

(3) Policy for farmers :

Remove uncertainty in income and farming

- ❖ Bring the measures to reduce heavy debt burden
- ❖ Expand the incentives for better land use and multi-functionality, such as direct payment
 - Removal of income gap and compensate for the disadvantages of agriculture compared with other industries
- ❖ Reinforce the training and educational programs
 - Advancing technologies and management ability
 - Attract competent young people to agriculture

B. STRATEGIES TO CARRY OUT

(1) Prioritizing and focusing

- ❖ Promote vegetable farming, fruits and special crops

(2) Soft landing and differentiate policies according to objectives

- ❖ Focus on young farmers & enthusiastic farmer groups, while enhancing the welfare of aged farmers
- ❖ Direct payment and prepare income support system

(3) Reform of agricultural organizations

- ❖ Maximize efficiency and better performance to help agricultural industry

C. MAJOR POLICY INSTRUMENTS

- (1) Restructure and adjust existing programs to comply with the directions of agricultural policies
- (2) Develop and promote promising new areas
- (3) Readjust policies on rice industry
- (4) Promote export agriculture
- (5) Systematic promotion of environment-friendly agriculture
- (6) Advance agro-marketing system
- (7) Consumer oriented supply of safe foods
- (8) Urgently address the farm debt
- (9) Form safety network to stabilize income
- (10) Construct crisis management system and prevent natural disasters
- (11) Prepare agriculture after reunification
- (12) Improve rural environment for living and wellbeing

(1) Restructuring and adjusting existing programs to comply with new directions of agro-policies

❖ FARMLAND:

- Intensify the regulation on farmland ownership while softening the use
- Assist selling and promote entrusting of the farmland

❖ PRODUCTION SUPPORT:

- Integrate various public funds into one
- Expand availability and amount of insurance with the trust fund

❖ EXTENSION SERVICE:

- Mobilize university professors and researchers to on-spot problem solving at farms

❖ FARMERS ASSOCIATION:

- Confederated problematic regional associations
- Promote the involvement of farmers associations in processing and marketing of locally produced commodities

(2) Enhancing the bases of future growth

- ❖ New substitutable crops particularly for winter crops, such as garlic, onion and whole-crop barley
- ❖ Promote food processing industry for value addition
- ❖ Expand both local and export markets
- ❖ Secure more investment on R&D for biotechnology in particular and commercialize the technologies developed
- ❖ Secure infrastructure by constructing network among industry, academia, government and research institutions

(3) Re-adjusting policies on rice industry

- ❖ Gradually reduce proportion of rice industry
 - Substitute with new or existing competitive crops
 - More effort on export to lessen domestic over-supply
- ❖ Improve local rice quality for better consumption
 - Develop environmental production system, functional varieties, world-best quality breeds for food and processing purposes
 - Improve post-harvest technologies
- ❖ Lower production cost for better price competition
 - Reduce land cost by larger scale farming
 - Strengthen direct payment for diverting management and retirement of aged farmers
- ❖ Install public reserve program allowed by WTO to substitute the previous rice procurement system
 - Intensity direct payment to support income and environment

(4) Promotion of export agriculture

- ❖ Improve production technologies and new varieties targeting international demands
 - Post-harvest management (curing, pre-cooling, pre-dry, pre-conditioning, cold storage, sorting, packing, transporting)
- ❖ Additional support on the infra for post-harvest treatments at production sites and marketing centers
- ❖ Exclusive terminal for export and facilities in harbor and airport for cold storage and fumigation
- ❖ Repacking facilities equipped with cold storage, sorting and packing units in importing countries
- ❖ Develop nationally certified brands, and designation of exclusive import lines and operational farms
- ❖ Secure personnel and overseas trade agencies
- ❖ Simplify the export procedures
- ❖ Install trade promotion committee for agriculture and fisheries

(5) Systematic promotion of environment-friendly agriculture

- ❖ Develop natural enemies, integrated nutrient management (INM), integrated pest management (IPM)
- ❖ CODEX enclosed zone production system complying with organic dairy guidelines, and expanded demonstration areas
- ❖ Increase the reward payment to the farms practicing GAP for environmental agriculture
- ❖ Standardize the use and certify the material for environmental agriculture (plant extracts, micro-organisms, chitoic acid, etc.)
- ❖ Financial support on marketing organizations, wholesale centers for organic foods

(6) Advancing agro-marketing system

- ❖ Further support on existing marketing centers and build new centers at production sites
 - Supplement facilities for post-harvest handling
- ❖ Guide the production groups to strengthen bargaining ability
 - Reduce unfair marketing through inventory selling
- ❖ Unify operational and management systems of wholesale markets
 - Introduce trust evaluation program for wholesalers and intermediators toward transparent bargaining
 - Obligate the enrollment of suppliers to wholesale
- ❖ Expand e-markets
 - Public wholesale through internet
 - build merchandizing base in market centers and promote standardization

(7) Consumer oriented supply of safe foods

- ❖ Consolidate quarantine and inspection functions
 - Strengthened inspection through sophisticated technologies
- ❖ Strengthen public relation
- ❖ Enforcing strict food labeling regulation
 - Introduce tracking system to trace back the harmful ingredients in food

(8) Reduction in farm debt

- ❖ Impossible to operate new drives without solving the debt issue
 - Lower interest rate, and adjust repayment scheme
 - Eliminate morale hazard and insufficient funding for farmers in crisis
 - Indifference of local cooperatives, and poor management without prior effort on self-rescue

- ❖ Stop the indiscriminating debt relief programs by central government
 - Improve management by supporting to create new income
 - Support by central government after self-rescue efforts, in association with local governments and local cooperatives
 - Help smooth retirement of farms impossible to survive by providing job training and assisting to sell properties

(9) Safety network to stabilize income

- ❖ Develop income sources utilizing local specificity
 - Link special local products and culture to lure urban populace

- ❖ Enhance direct payment for inferior areas such as mountain regions

- ❖ Extend tax exemptions, support non-taxable fuels and material for agriculture

(10) Crisis management system and prevention of natural disasters

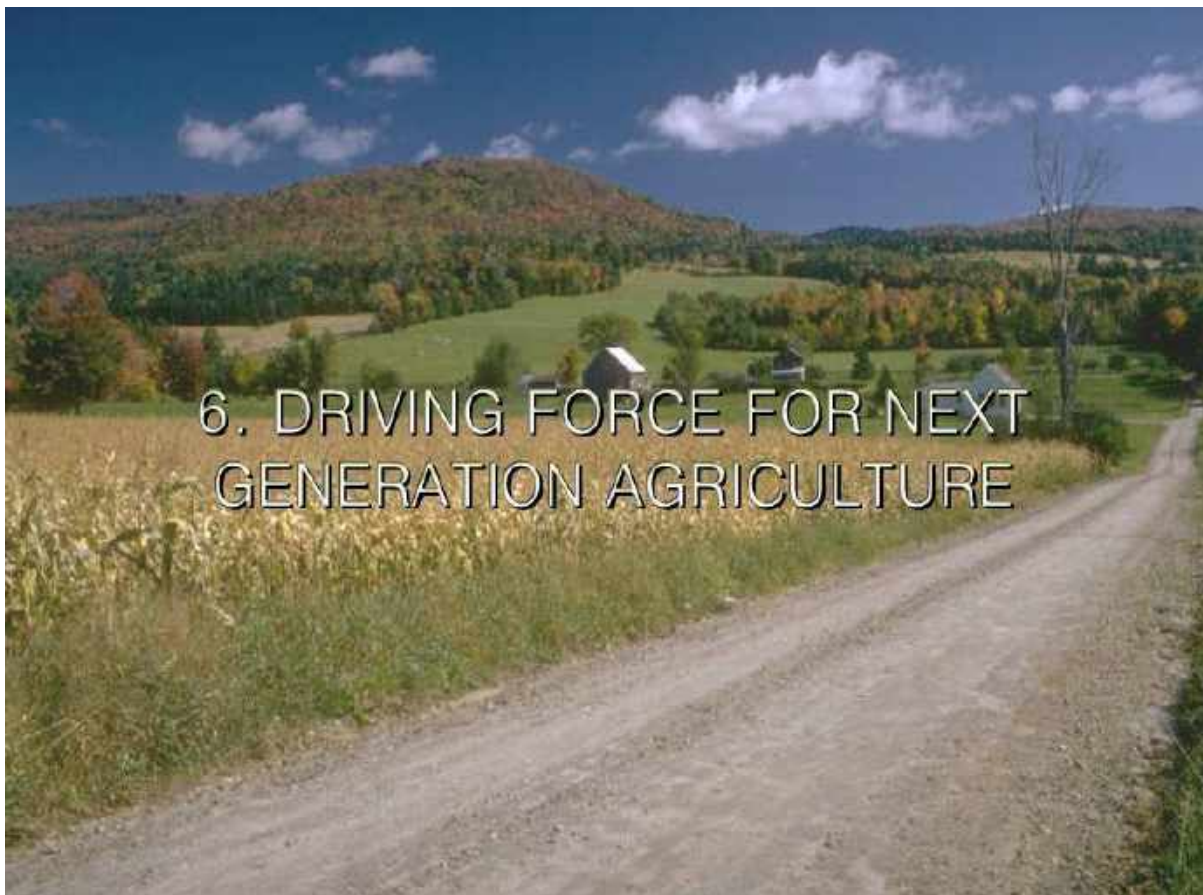
- ❖ Restore and construct reservoirs to prevent drought and enlarge dredging projects
- ❖ Make up livestock deduction fund, and increase government investment on agricultural insurance plan
- ❖ Institutionalize farm management stabilization program
- ❖ Establishment of price stabilization program, and demand and supply control led by producer organizations of respective commodities

(11) Preparation for reunification with the North

- ❖ Shift to conditional supports, away from one-way aids
 - Collaboration for proper assistance and mutual benefits
- ❖ Promote overseas agricultural development projects to secure food and feed after reunification
 - Support construction of global networks

(12) Improved rural living and welfare

- ❖ Improve settlement and integrate welfare to close the quality gap between rural and urban lives
 - Overall improvement in education, culture, medical service, transportation, housing and environmental pollution
 - Road construction, resident restructuring, united small schools, special allowance to universities, and pension programs
- ❖ Build small and medium size cities around rural areas
 - Industry, education, culture, medical service centers of the area
- ❖ Attract urban citizens for sightseeing, eating and resting
 - Improve landscape and traditional culture for tourists
 - Further support to develop local specialty commodities
- ❖ Integrate coordination of rural development programs dispersed among various government offices to the Ministry of Agriculture, Forestry and Fisheries or to the Prime Minister's office
 - Limit similar programs and set long-term vision on rural development



6. NEXT GENERATION AGRICULTURE

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1. BIO INDUSTRY

- Functional and Nutritional Food
- Medicines & Medicinal Material
- Cosmetics & Household Items

Multi-purpose and functional variety



Functional and nutritional food



6. NEXT GENERATION AGRICULTURE

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3. BIO ENERGY PRODUCTION

- Crop → non-food plant ⇒ Petro-Algae

Evolution of bio energy production



Self-sufficient energy village



Biogas produced by biomass



6. NEXT GENERATION AGRICULTURE

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3. SMART FARMING

- Precision Agriculture

Grafting & weed controller robots



Smart phone application for farming



Manless helicopter



6. NEXT GENERATION AGRICULTURE

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- Plant Factory (Vertical farm)
- Seawater Farming



6. NEXT GENERATION AGRICULTURE

63/69

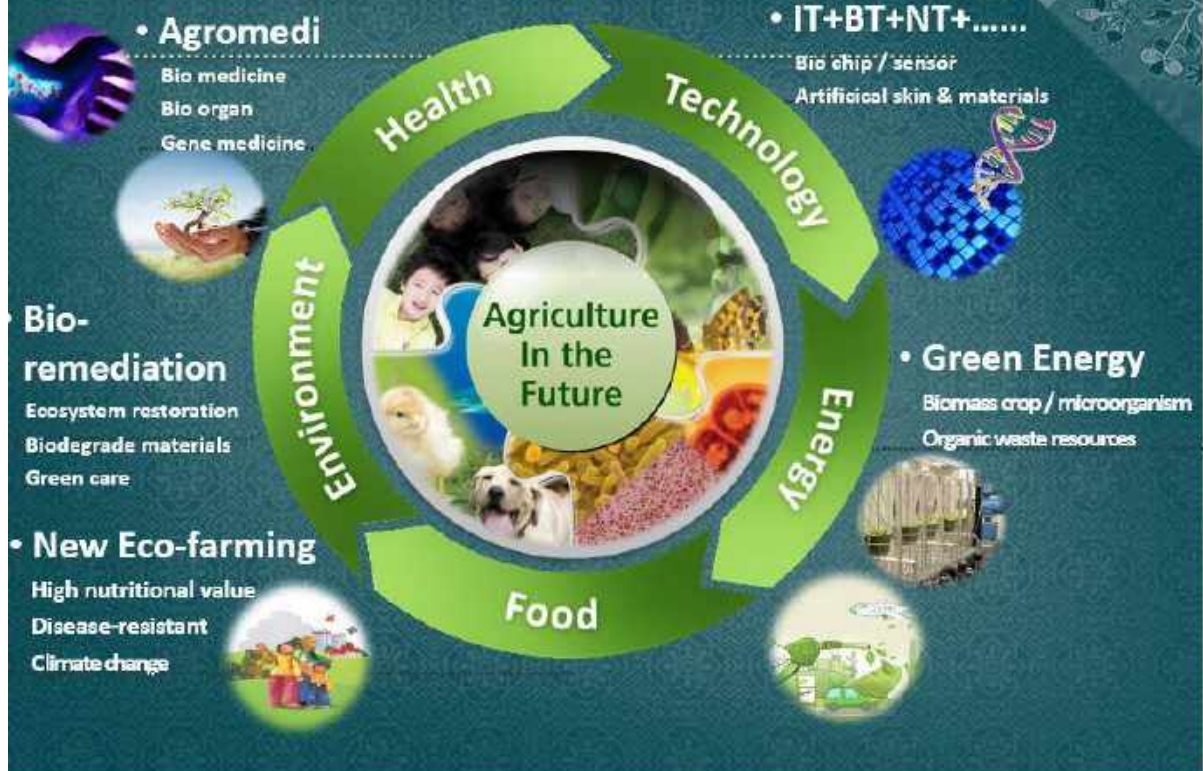
4. AGRI-TAINMENT (AGRICULTURE + ENTERTAINMENT)

- Urban Agriculture
- Art in Agriculture



6. NEXT GENERATION AGRICULTURE

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6. NEXT GENERATION AGRICULTURE

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A. Driving forces in national economy

<Selection Criteria>

1. Technology that is able to dominate world by short intense investment
2. Technology that can significantly create additional value, jobs and enlarge markets

6. NEXT GENERATION AGRICULTURE

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<10 ITEMS selected for NATIONAL ECONOMY >

1. DISPLAY (e.g. HD TV)
2. DIGITAL TV / BROADCASTING
3. INTELLIGENT ROBOT
4. NEXT GENERATION MOBILE COMMUNICATION
5. FUTURISTIC AUTOMOBILE
6. BIOMEDICINE / ARTIFICIAL ORGAN
7. DIGITAL CONTENT/ SOFTWARE SOLUTION
8. NEXT GENERATION BATTERY
9. NEXT GENERATION SEMICONDUCTOR
10. INTELLIGENT HOME NETWORK

6. NEXT GENERATION AGRICULTURE

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B. 10 DRIVING FORCES in FUTURE AGRICULTURE (1)

1. **GMO Crops potential to dominate world markets**
 - DEVELOP GMO CROPS TARGETING WORLD MARKETS
2. **Functional crops with high additional value**
 - CROPS WITH HEALTHY AND HIGH PRICE COMPONENTS
3. **Bio-pesticides, medicines, substitutable organs**
 - UTILIZE ANIMAL AND PLANTS IN MASS PRODUCTION
4. **Low input sustainable precision agriculture**
 - DECREASE COST BY EFFECTIVE USE OF RESOURCES
5. **Post-harvest and marketing technologies**
 - INCOME BY PROCESSING AND QUALITY IMPROVEMENT

6. NEXT GENERATION AGRICULTURE

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B. 10 DRIVING FORCES in FUTURE AGRICULTURE (2)

6. **Intelligent robots for agricultural works**
 - SECURE EXPORT MARKETS OF DEVELOPED ROBOTS
7. **Bio-sensors and related technologies**
 - STABLE PRODUCTION OF HIGH QUALITY PRODUCTS BY PRICISE MANAGEMENT
8. **Expanded e-business for agricultural products**
 - CERTIFICATION AND STANDARDIZATION OF AGRO-PRODUCTS AND OFFERING INFORAMATION INFRA
9. **Agricultural digital contents and softwares**
 - CREATE EDUCATIONAL MARKET AND INFORMATION INDUSTRY OF AGRO-SCIENCE AND TECHNOLOGY
10. **Green tourism**
 - RESTORE RURAL LANDSCAPE AND CREATE OFF-FARM INCOME

7. CONCLUSION

7. CONCLUSION

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- ❖ Central government, local governments and agriculturalists are all responsible for solving problems arising from agricultural industry, farms and rural villages
 - National economy, people's welfare and balanced development of rural communities must be taken into account in finding the solutions

- ❖ Possible to make agriculture to be a profitable industry by choosing right policies and proper investment
 - Expand the export of a wide variety of quality agro-products
 - Create income by producing high quality and safe commodities
 - Change rural areas into better places for living and eco-tourism



[Agriculture R & D]

Introduction to Agricultural Science and Technology of Korea

2016. 2. 24

Seonghee Lee



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Development of Agricultural Science and Technology

II

Challenges of Agricultural Science and Technology

III

Driving Forces of Future Agriculture

IV

Innovative Systems for Efficient Agricultural R & D



Chronicle of Korean Agriculture



... and now



Development and Contribution of Agricultural S & T



Achievements of Agricultural S & T



Green Revolution in the 1970s

Achievement of rice self-sufficiency through high-yielding variety "Tong-il" and labor-saving cropping technologies.



White Revolution in the 1980s

Development of year-round production system for fresh vegetables and fruits

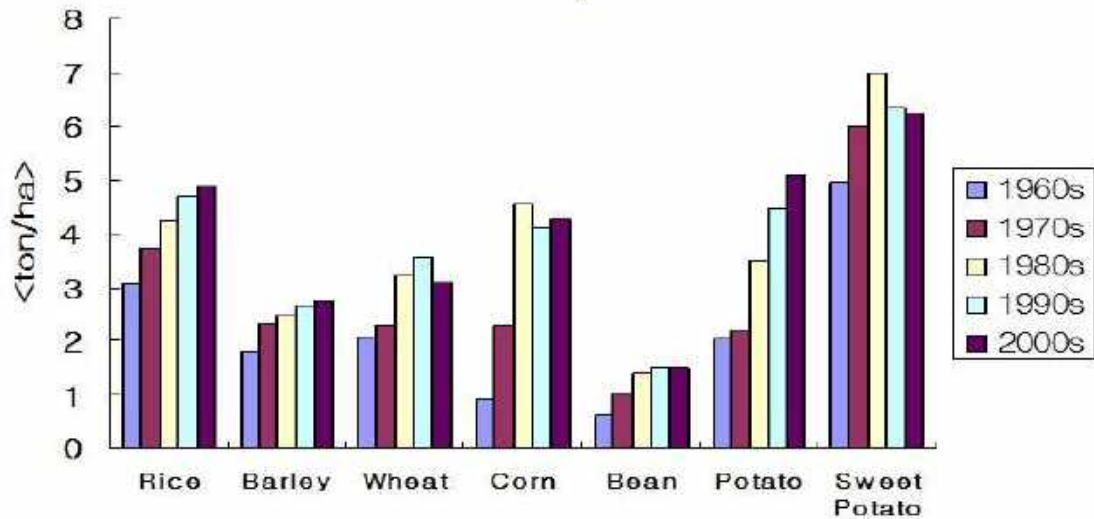
- Protected cultivation technology using greenhouse for winter farming



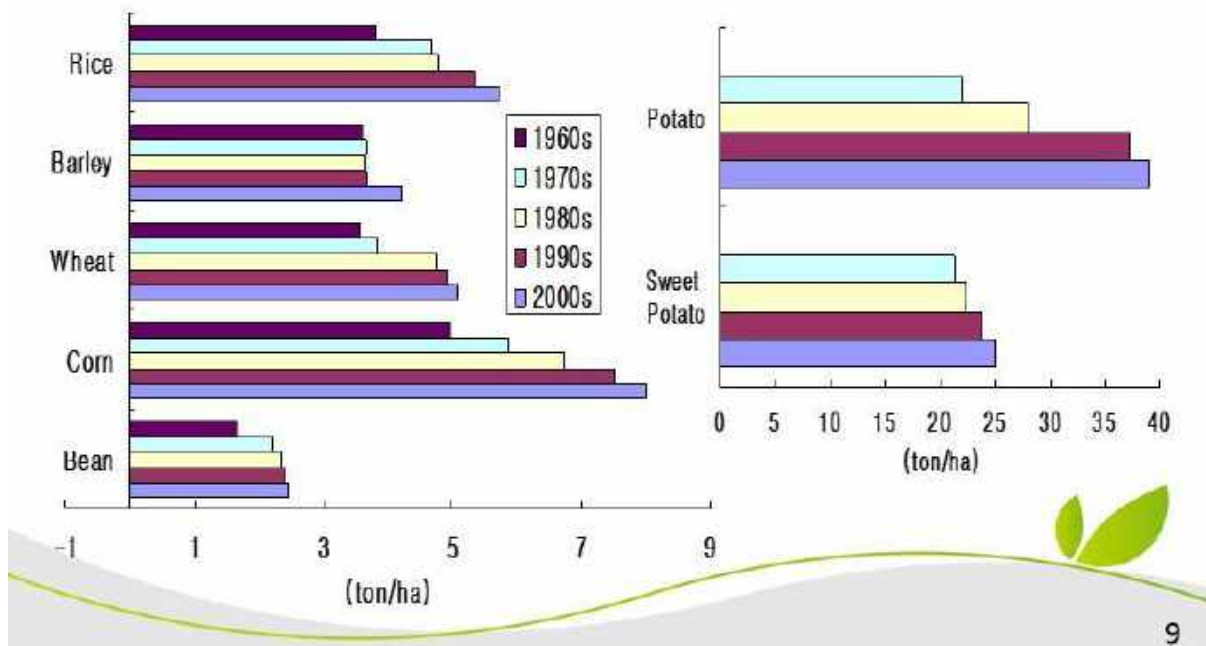
Green Revolution



Increase in Crop Yield

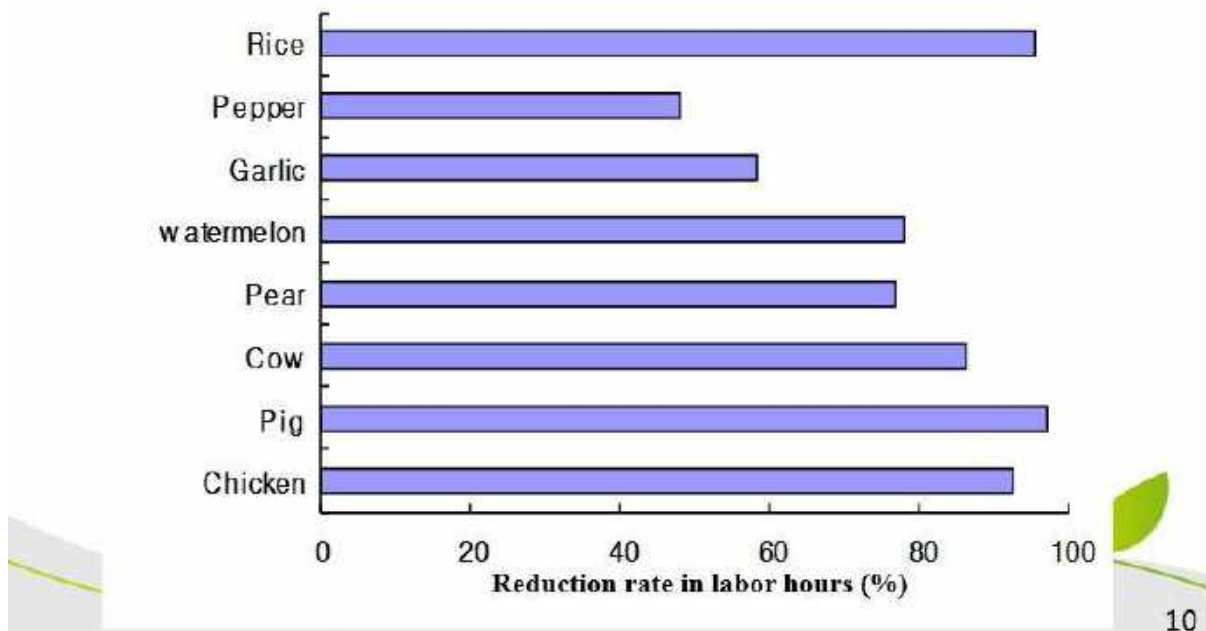


Yield Potential of Common Cultivars



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Reduction in Labor Requirement with Mechanization for 1981 - 2010



10

White Revolution



Development of Protected Horticulture

- Vegetables

Year	Area (thousand ha)		Product amount (ton/year)	Consumption per capita (kg/year)
	Field	Protected		
1960	118	-	1,089	-
1970	254	4	2,653	59.9
1980	359	18	7,676	120.3
1990	277	40	8,677	132.6
2000	296	91	11,282	165.9
2011	261	69	12,555	146.1

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- Fruits

- Flowers

Year	Area (thousand ha)	Product amount (thousand ton)	Consumption per capita (kg/year)	Area (thousand ha)	Product value (million won)	Consumption per capita (thousand won/year)
1960	-	-	-	-	-	-
1970	60	423	-	1.1	6.7	-
1980	99	833	22.3	1.3	21.4	0.5
1990	133	1,766	41.8	3.5	239.3	5.7
2000	173	2,429	58.4	5.9	665.0	13.9
2011	161	2,459	62.4	6.8	821.5	15.5

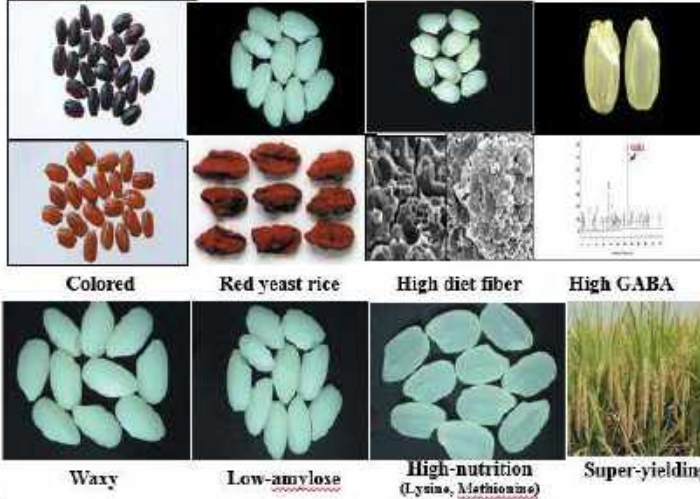
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Recent Outputs of Agricultural R & D



- Development of **highly nutritional and functional crop cultivars**
- nutrient-rich rice, high β -glucan barley, other multi-functional crops

Multi-purpose and functional rice



Soybean



High yielding soybean

For cooking with rice

Barley



Purple-colored barley

Maize



Heugjinjuchal

Functional Rice Varieties developed



Group	Varieties (trait)
Glutinous	Shinseonchal, Hwaseonchal, Sangjuchal, Dongjinchal (1-5%)
Low amylose	Baekjinju(9%), Baekjinju 1(11%), Manmibyeo(13%)
High amylose	Goamibyeo(27%), Goami 2(28%)
Pigmented	Heugjinju (purple), Josaenghengchal (purple, glutinous) Jeogjinju (red), Heughyang (purple+aroma)
Aroma	Hyangnam, Hyangmi 1(aroma), Seolhyangchal(aroma+waxy)
Special texture	Seolgaeng(fermenting), Yangjo(brewing), Daribbyeo(popping)
Big/small grain	Daeribbyeo 1(35mg), Heugkwang(14mg)
Protein	Suweon 511(high methionine, liver-detoxifying)
Functional-ingredients	Goami 2 (high fiber), Keunnun (GABA), Yeongan (high lysine) Heugkwang (high cyanidin-3-Glucoside)

• Enhancement of **quality and productivity** in forage crops
- winter cereals and corn



Forage barley



Silage corn



Triticale



Rye

• **Green manure crops** for substitution of chemical fertilizers
- supply of hairy vetch seeds, forage barley for green manure



Chinese milk vetch



Hairy vetch



Winter cereals



Legume green manure



Grass green manure



Mixed seeding with grass and legume



Landscape establishment

• Development of **bio-fuel crops**
- evaluating pampas grass (*Eulalia*), rice straw etc., conversion process of biomass to bio-ethanol

• Breeding **superior quality cultivars** to promote agricultural competitiveness
- 137 vegetables, 82 fruits, 475 flowers and 53 others since 1991



Pepper 'Wongang 1'



Strawberry 'Sugyeong'



Apple 'Greenball'



Persimmon 'Romang'



'Greenstar'



'Snowstar'



'Mont Blanc'



'Whangwon'



'Redline'

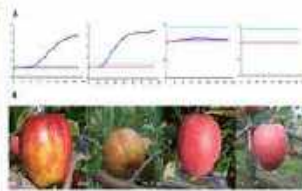


'Mushroom' Geumbit'

- **Cropping technologies for stable supply of quality and safe agro-products**
 - reduction of 'bitter rot' in strawberry
 - detection of infected virus root stock & settle-down of virus and viroid free root stock supply system
 - hydro-culture technology of ginseng as a vegetable
 - environment-friendly aphid management using natural enemies



Reduced strawberry 'bitter rot'



Detection of infected virus root stock



Hydro-cultivation of ginseng



Environment-friendly aphid management



- **Biotechnology for reducing labor, cost, and improving breeding efficiency**



Identifying genes related with self-thinning

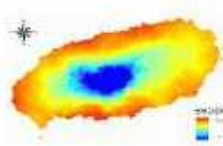


Transgenic plant to enhance rooting



Genetic map of pepper

- **Assessment of climatic impacts and agro-ecosystem changes due to global warming**



New adapted plants to climate change

- **New functional compounds from medicinal herbs, additional value of horticultural products**



Investigation of functional materials from herbal plant



Development of floral decoration material



• **Improvement of genetic performance of Korean native cattle, "Hanwoo"**

- Genetic evaluation, genomics, bioinformatics



Proven bull of Hanwoo and Holstein



Cattle genome DB



QTL map

• **Research on animal biotechnology**

- Production of novel bio-medicine using transgenic animals
- Production of transgenic cloned miniature pig for xeno-transplantation



Transgenic embryos



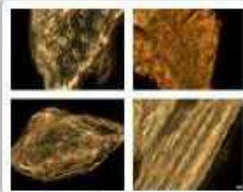
Saerome producing EPO



Mini-pigs

• **Research on feed safety, environment and forage development**

- Feed resources
- Reusable and highly-efficient livestock waste treatment



Detection of meat bone meal in feeds



Slurry composting and bio-filtering system



Bio-filter system for reducing malodor



Forage development

• **Research on Animal products**

- Enhancing safety and quality of animal products



Hanwoo beef loin



Dry-cured ham



Farm-scale dairy products



Goat milk yoghurt

- **Establishment of agricultural amenity resource information system**
- 16,000 villages, 37 species and 216,000 cases
- **Soil resource information DB**
- Land map (6.9million fields) → soil characteristics, fertilization, cropping system etc.
- **Application of LED for energy saving and productivity enhancement**



Agricultural amenity program



Soil information DB



LED beam disposal device

- **Guidelines on safe use of pesticides**
- 20 crops, 639 diseases and insect pests, and 5,170 agricultural item
- **Safety management system of agro-foods including GAP**
- **Tackling global agricultural issues such as climate change, biodiversity, etc.**

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- **Environment-friendly microorganisms for plant disease control**
- Microorganism K87 and M27
- **Disposal of food waste through insects that have decomposable functions**
- Recycling of food wastes into organic fertilizer using the decomposable function of insects
- **Development of food & medicinal materials**
- ex.) Artificial bone from silkworm



Plant disease control by microorganisms



Life cycle of stratiomyidae with decomposable functions

- **Horizontal geothermal heat-pump system**
- Reduction of energy cost for greenhouse facilities
- **Grafting robot system for fruit and vegetables**
- Improvement of grafting efficiency (600-900 plants/hr)



Grafting robot

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• Advancing Korean Food Research for Globalization

- aiming at global promotion of Korean food, Han-sik

- Research on the functionality and health benefits of Korean foods
- Standardizing the recipe by analyzing local tastes
- Publishing of "An overall view on traditional native foods" for integration and globalization of Korean foods
- Development of alcohol brewing technologies



An overview of traditional native foods



'Resource management information system' (Koreanfood.rda.go.kr)



Self brewing machine

Targets of Agricultural Biotechnology

Major target

Crop

- Tolerance to biotic and abiotic stresses
- Enhanced functional ingredients
- Edible vaccines
- Reduced input, environment-friendly crop management

Animal

- Develop transgenic animals producing valuable materials
- Develop transgenic swine for organ transplanting
- Animal genomic mapping and characterization of indigenous animal genes
- Improved meat quality

- Golden rice enriched with vitamin A
- Development of new functional rice with antioxidant & anti-aging



GM Crops developed in Korea



Crop	Gene manipulation	Confirming functions	Breeding lines	Bio-safety evaluation
Rice	18	26	14	4
Hot pepper	-	-	-	1
Chinese cabbage	5	1	-	1
Tobacco	1	4	1	-
Potato	1	5	-	-
Perilla	9	6	3	-
Soybean	-	2	3	-
Alfalfa	1	2	-	-
Garlic	-	2	-	-
Pumpkin	-	1	-	-
Apple	-	7	-	-

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<Continued>



Crop	Gene manipulation	Confirming functions	Breeding lines	Bio-safety evaluation
Rose	1	-	-	-
Toll fescue	1	4	-	-
Bent grass	1	-	-	-
Chrysanthemum	-	2	3	-
Cactus	-	-	1	-
Petunia	-	-	2	-
Pig	5	2	4	-
Chicken	3	1	1	-
Silkworm	-	2	21	-

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Conservation of Genetic Resources



- FAO/GCDT recognized RDA Genebank as "World Seed Vault" (Aug. 14, 2008)
- BI recognized it as "Center of Excellence for International Cooperation and Training on Plant Genetic Resources" (March 27, 2009)
- * National Agro-biodiversity Center (RDA Genebank) : Storage capacity of 500,000 accessions
- Safe back-up of genetic resources for well-being of present and future generations



FAO-GCDT recognized World Seed Vault



National Agro-biodiversity Center



Short term storage facility

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■ Germplasm conserved: 3,737 species 216,270 accessions

Resource	Species	No. of accessions	Storing house
Crop (reproductive)	1,777	151,082	RDA <u>Genebank</u>
Crop (vegetative)	996	22,625	NICS, NIHS
Microorganism	621	15,244	NIAS
Farm animal (live, reproductive cell)	22	26,356	NLRI
Silkworm	321	963	NIAS
Total	3,737	216,270	-

● **Genetic Resources DB** : <http://genebank.rda.go.kr>

● **Microbial Resources DB** : <http://acc.rda.go.kr>

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- **Insect Specimen DB : 5,100 species 330,000 items**
 - <http://insect.niast.go.kr>
- **Gene/DNA DB : 14.2 billion items**
 - <http://10.30.100.11/nabic>
- **Bio-safety Information Center**
 - <http://www.niast.go.kr>
- **Detailed Soil Map and Soil Information : 6.9 million plots**
 - <http://www.niast.go.kr>

Agricultural Science and Technology DBs

- <http://www.rda.go.kr>

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Success of Agricultural R & D

- **「Top 10 in National R&D Achievements for Half a Century」 : Tong-II Rice**
- **「100 Excellent National R&D Achievements」 (Ministry of Education, Science & Technology)**
: (' 08) 7, (' 09) 7, (' 10) 11, (' 11) 10, (' 12) 10 (**Agro-R&D budget: 3% of Nation, Achievements : 15%**)
- **RDA has 52% of government-owned patents** ('10, Korean Intellectual Property Agency)
- **Commercialization rate on R&D results of RDA: 33.2% ('13)**
※ Overall commercialization rate on government patents : 16.1%

❖ Achievements compared with similar institutions in other countries

Classification	Result per Researcher (case/person)				Result per Research Fund (case/0.1billion₩)			
	Total	Result Use	Patent	Paper	Total	Result Use	Patent	Paper
RDA	2.47	1.20	0.17	1.10	2.69	1.30	0.19	1.20
NARO (JAPAN)	1.18	0.33	0.08	0.77	1.42	0.53	0.12	0.77
USDA-ARS (USA)	0.76	0.01	0.01	0.74	0.33	0.01	0.01	0.31

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- **Contribution of R&D on Agricultural GDP : 22.3% ('81~'00, KRED)**
 - ✓ GDP increase of 5 trillion ₩ by 0.3trillion ₩ R&D spending after the 1990s
 - * Rate of return by R&D investment(48.6%) : 14.6% higher than developed country

- **Contribution of R&D on Agricultural Production : 26.0% ('75~'2007, SNU)**
 - ✓ Most of production increase for '87~'97 was caused by R&D investment
 - * Effect : Production cost decrease of 9 million ₩ by agricultural R&D investment of 1million ₩

- **Ripple effects of linkage between regions and industries occurred by agricultural R&D expenditure**
 - ✓ Agricultural R&D investment ⇒ Farm product value ↑ ⇒ (Farm product) used by other industry ⇒ Production value of relevant industry ↑
 - * Especially, higher ripple effect on food commodities, tobacco, furniture, paper, press, publication, construction industry etc. (Kwon, 2010)



Future Prospects of Agriculture

Alvin Toffler

"Tomorrow's economy will open significant business opportunities in field like hyper-agriculture....."
(2006. Revolutionary Wealth)



Jim Rogers

"Agriculture is going to be one of the greatest industries in the next 20 years, 30 years."
(2009. CNBC)



Obama, USA

"Agriculture is facing a huge economic opportunity as well as a challenge."



Sarkozy, France

"Agriculture is the key to open future like a nanotechnology and a space industry."



Future Prospects of Agriculture

Alvin Toffler

"Tomorrow's economy will open significant business opportunities in field like hyper-agriculture....."
(2006. Revolutionary Wealth)



Jim Rogers

"Agriculture is going to be one of the greatest industries in the next 20 years, 30 years."
(2009. CNBC)



Obama, USA

"Agriculture is facing a huge economic opportunity as well as a challenge."



Sarkozy, France

"Agriculture is the key to open future like a nanotechnology and a space industry."



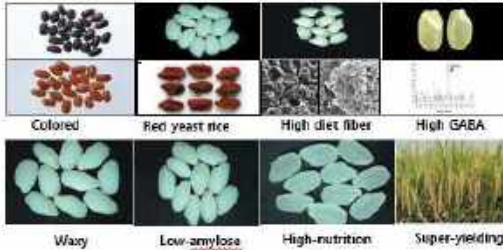
Next Generation Agriculture



1. Bio industry

- Functional and Nutritional Food
- Medicines & Medicinal Material
- Cosmetics & Household items

Multi-purpose and functional variety



Soybean



soybean for cooking with rice

Barley



Purple-colored barley

Maize



Heukjinjchal

Functional and nutritional food



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3. Smart farming



- Precision Agriculture

Grafting & weed controller robots



Smart phone application for farming



Manless-helicopter



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● Plant Factory (Vertical farm)



● Seawater Farming



4. Agri-tainment (Agriculture + Entertainment)

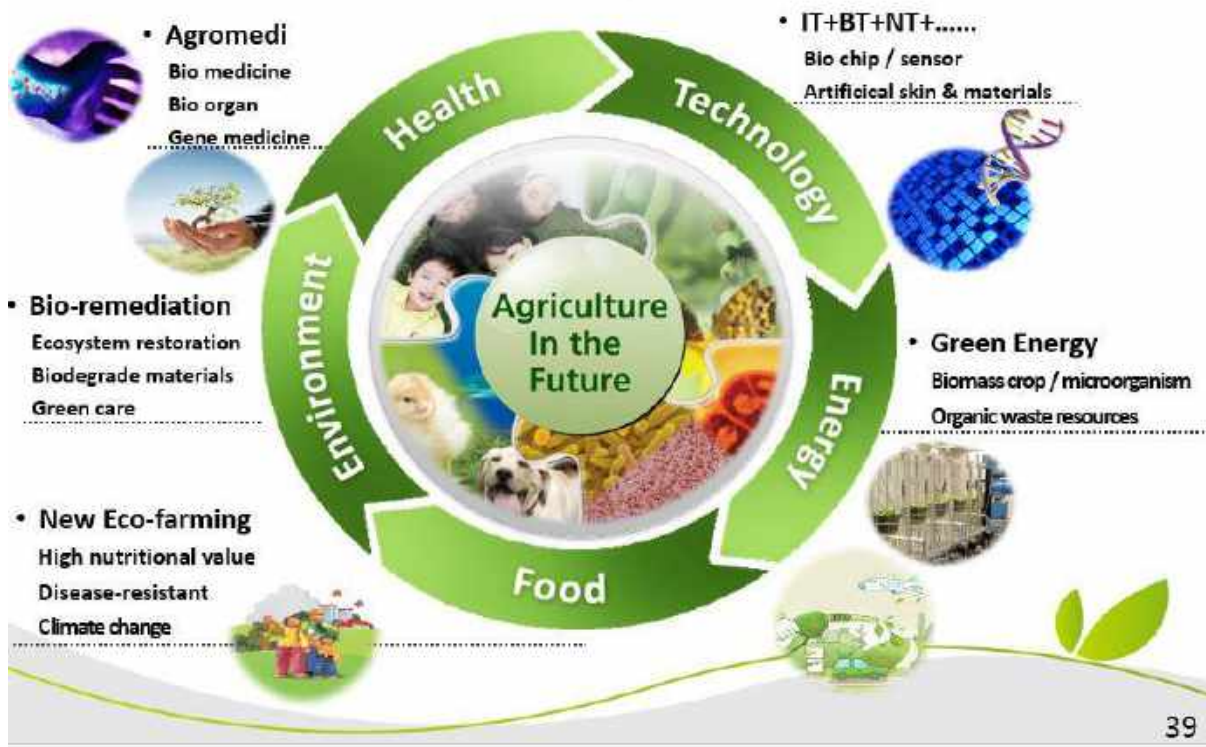
● Urban Agriculture



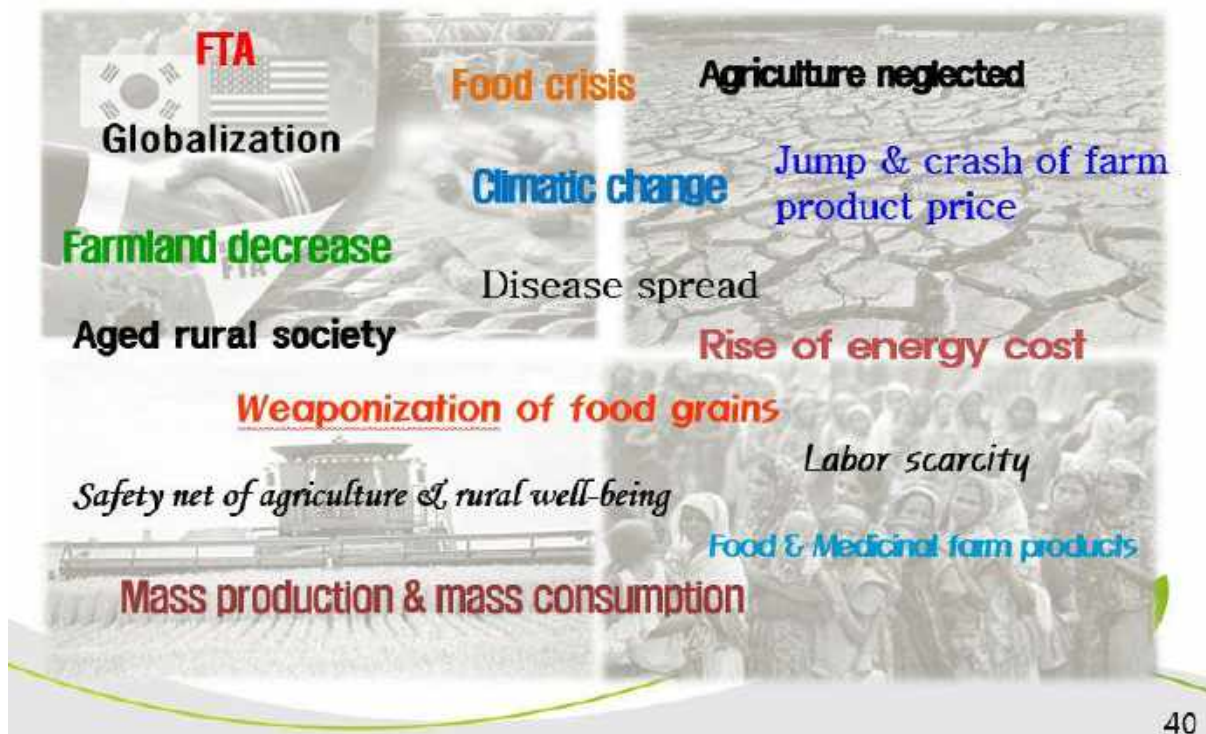
● Art in Agriculture



Multi-facets of Future Agriculture



Challenges of Korean Agriculture



SWOT Analysis on Korean Agriculture



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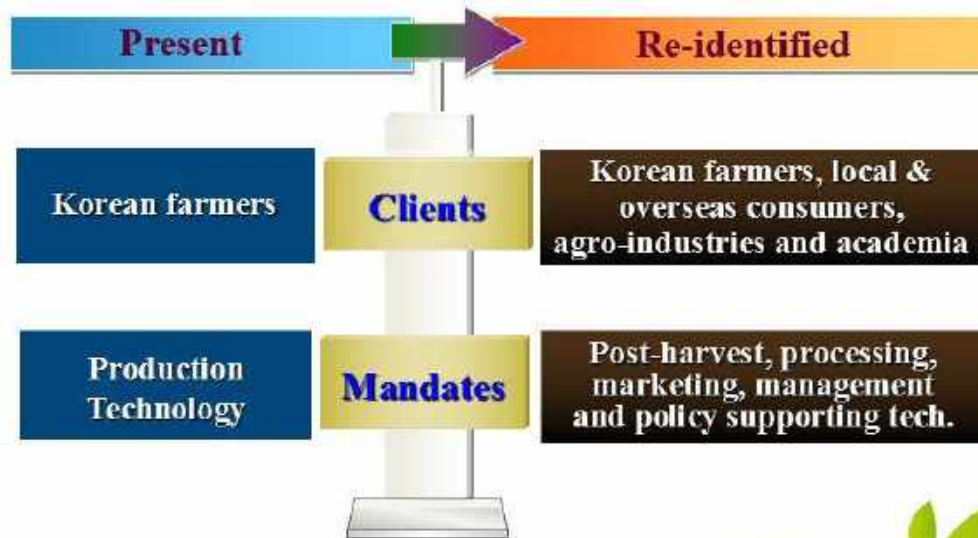
Revised Vision and Targets of R&D



- Increased agro-competitiveness and sustainability
- Enhanced quality of agricultural products
- Creation of future driving forces for development
- Attainment of global IPRs in strategic areas
- Support on global scientific & technological problems
- Promotion of Korean agricultural sciences

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Re-identified Clients and Mandates



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Needs of Various Clients

■ Farmers

- higher income, easier cropping, less-costly and stable production against biotic and abiotic stresses

■ Consumers

- tasty, safe, clean, nutritive, cheap, rich in functionality

■ Industry

- quality, easy to process, cheap

■ Environment

- less pollution, enriched biodiversity, good landscape

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New Direction in Agricultural R & D

- **Future R&D should satisfy consumer senses, needs and emotions.**
 - **Satisfy 5 senses** : appearance, taste, smell, feel, sound
 - **Satisfy 5 needs** : high quality, safe, clean and attractive image, functionality, easiness in use, specialization to distinguish from common/imported goods
 - **Create 5 emotions** : leading global sciences, IPR acquisition, knowledge management, exploring overseas markets, preparation of new driving forces for future agricultural development

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10 Driving Forces of Future Korean Economy



Criteria

1. Leading the world by intensive short-term investment
2. Effective in expansion of markets & creation of jobs and value

1. Display (HDTV etc.)

2. Digital TV / Broadcast

3. Intelligent robot

4. Next-generation
wireless communication

5. Futuristic Vehicle

6. Bio-medicines / Organ-implants

7. Digital-contents / Software-solution

8. Next-generation Power-battery

9. Next-generation Semi-conductor

10. Intelligent Home-network

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Strategic Funding on Frontier Projects



■ Brain Korea 21 Projects

- MoE for educational institutions, 480 million \$/year

■ New Frontier Projects

- MoST for scientific institutions, 250 million \$/year

■ ARPC Projects

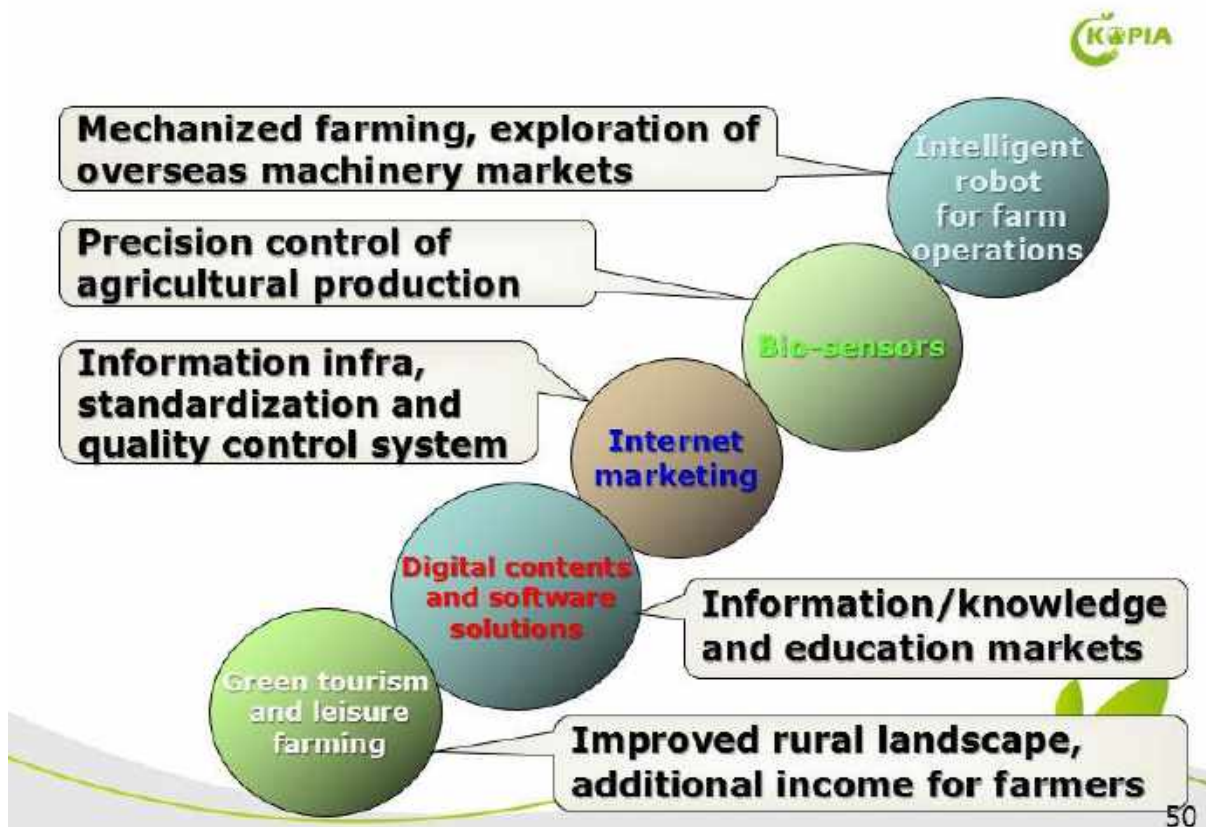
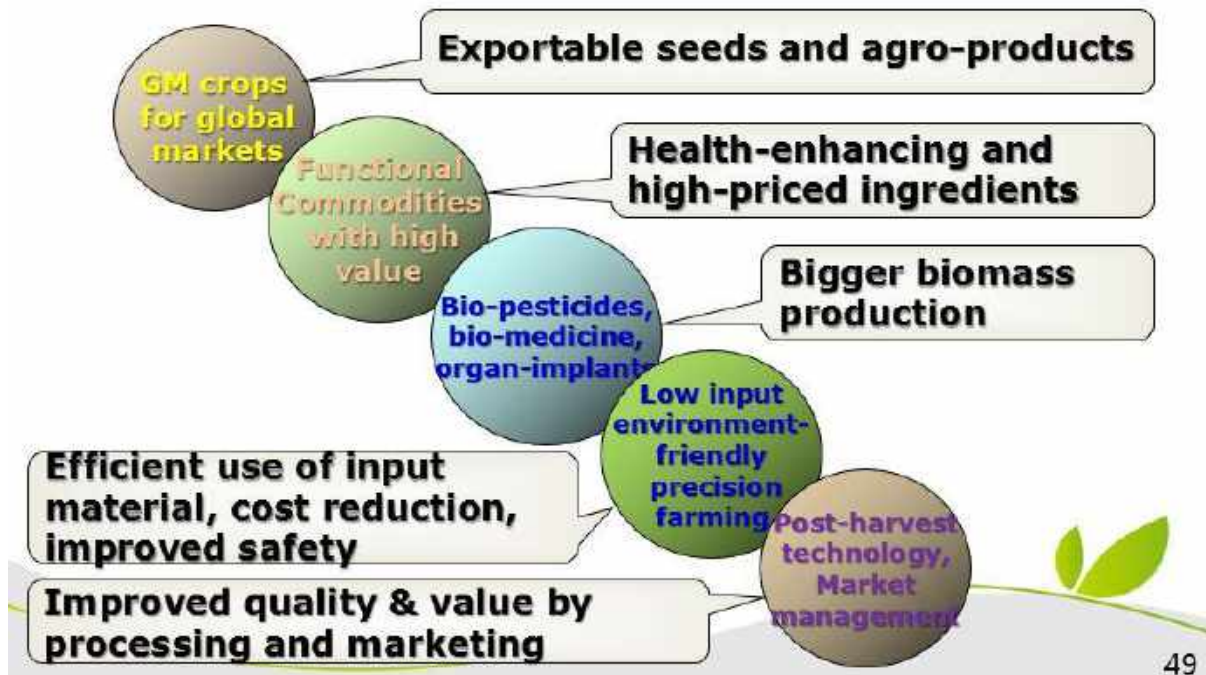
- MAF for agricultural R&D institutions, 70 million \$/year

■ Bio-green 21 Projects

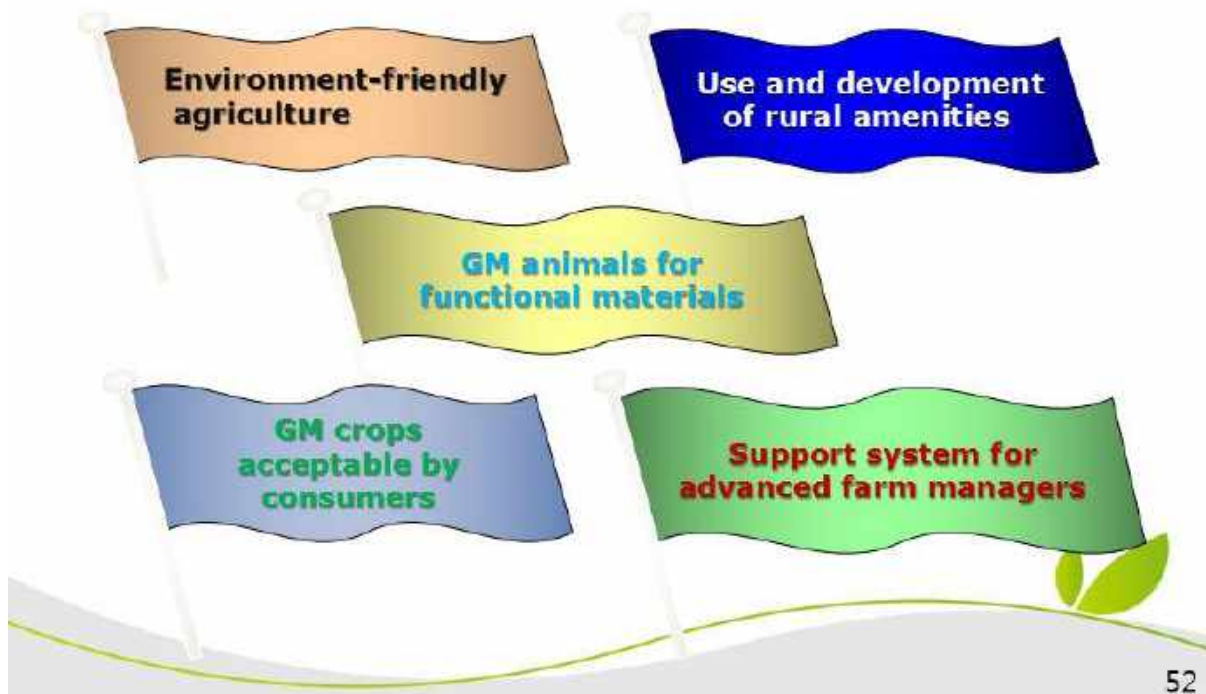
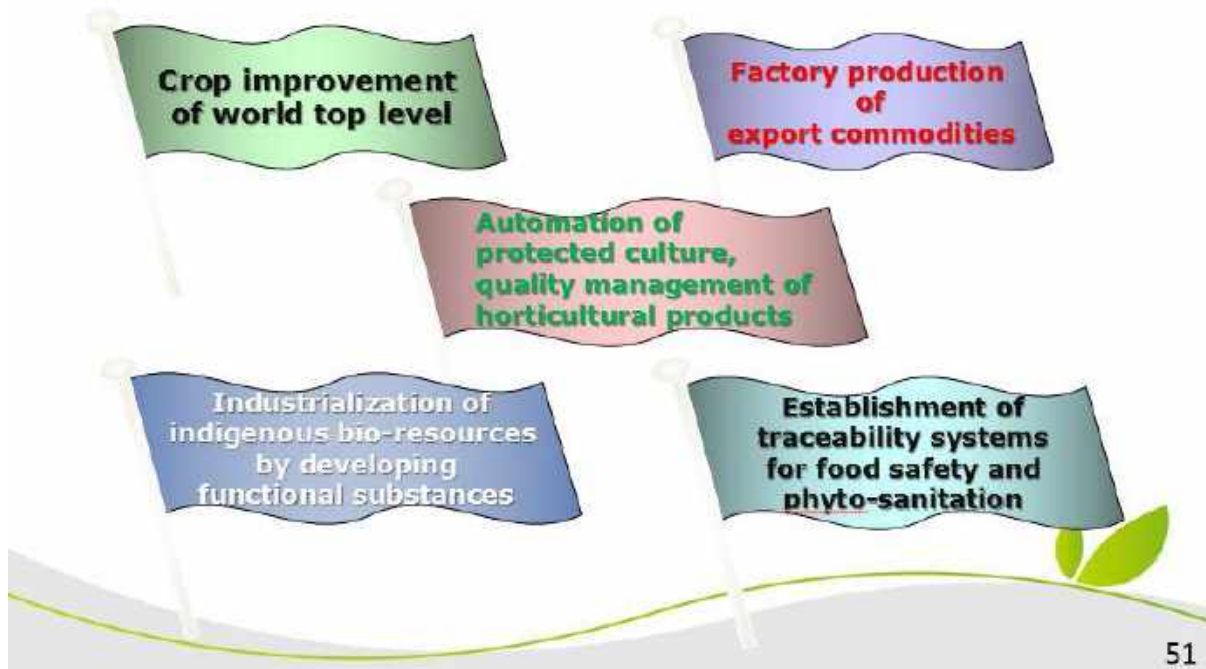
- RDA for biotech research institutions, 60 million \$/year

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10 Driving Forces for Future Agro-development



10 Strategic Agenda of RDA (Top-Ten-Tech.)



20 Fundamental Research Agenda for Breakthroughs in Crop Production



1. Mechanism and control of hybrid vigor (heterosis)

- F1 seeds for super-yield and high quality

2. Mechanism and control of apomixis

- Improved seeds without degradation by reproduction

3. Mechanism and control of cell growth and organ differentiation

- Control of growth and development for maximum yield and quality

4. Control of bio-metabolism (photosynthesis, transformation, etc.)

- Control and maximization of mass and functional production

5. Mechanism and control of bio-rhythm

- Control of growth stages by manipulating the cycles of metabolism



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6. Control of symbiosis between plant and micro-organisms

- Increase in yield and fertilizer efficiency by super-nodulation

7. Control of antagonism between plant and micro-organisms

- Bio-pesticide and herbicide development

8. Bio-active substances between crops and insects

- Crop protection using effective IPM, bio-insecticides and pheromones

9. Production of animal-based materials using plants

- GM crops of great biomass for high-value animal/human proteins

10. Production of animal-based materials using micro-organisms

- GM micro-organisms for high-value animal/human proteins



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11. Development of bio-energy crops

- GM crops of great biomass production for bio-fuels

12. Industrialization of plant-originated substances

- Search for high-value chemicals as medicine and industrial materials

13. Cropping technologies to overcome current constraints

- Mechanization and automation of mass production for high revenue crops under protected culture

14. Crop improvement for tolerances to drought and salinity

- Improved water use efficiency and cropping in saline soils

15. Control of gene expression for useful traits

- Strengthening of qualitative gene effects



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16. Application to agriculture of leading-edge IT, NT, ET, etc.

- Precision farming using bio-sensors and emerging technologies

17. Control of product quality and search for genetic variation

- Standardization of quality to meet consumer demands

18. Crop improvement and IPR for overseas markets

- Maintenance and expanded use of superior R&D capability

19. Evaluation of agricultural activities based on sustainability

- Re-orientation for environment and overall industrial development

20. New concepts on plant physiology and ecology

- breakthrough in crop production and management



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Involvers in Agricultural R & D



- **Governmental agencies** : Rural Development Administration, Ministry of Agriculture and Food (Plant and Animal Quarantine), Forestry Administration, National Seed Management Service
- **Government-funded agencies** : Rural Community Corporation, Agriculture & Fisheries Products Marketing Corporation
- **Private institutions** : Farmers Cooperatives, Private firms on Fertilizer, Pesticide, Seed, Feed, Machinery, Agro-material, Processing, marketing and Trading
- **Academia** : Universities, Government-funded R & D Institutions (KREI, KFRI, KBTRI, KCRI etc.)



Scattered Role of Agro-R&D Domain

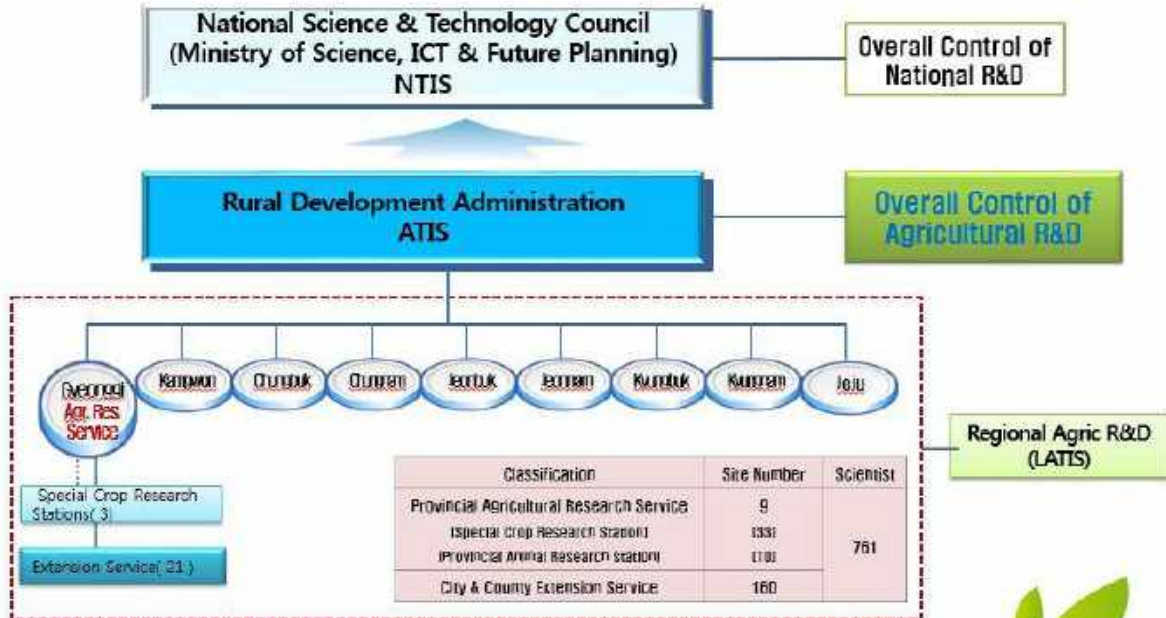


- **Main Research of RDA** : Fulfillment of national missions for plant breeding, food safety management etc.
- **Collaborative Research** : Industry and academic collaboration by application of multi-disciplines
- **Support for Regional Agriculture R&D** : Focusing on specific crops and areas suitable for the region

Function	Main Research	Collaborative Research	Support for Regional R&D
Implementer	4 Institutes under RDA	Universities & private institutions	9 Provincial ARSs, county extension centers
Role	Country proper project by law - Agri. Environ. Change Survey - Genetic resources management - Plant Breeding, Food safety etc.	Industry-academic collaboration Pro - Application of physics, chemistry, electronics, BT etc. - Commercialization promotion	Improving regional R&D capability - Support for equipment & facility - Focusing development of specific crop suitable for the region
Project	Main Research Projects of 4 Institutes	FTA measures, Climatic Change Projects, Next BG2I etc.	Region Res. Foundation Construction Ind.-Aca.-Insti. Collaboration Project for Specific Crop suitable for the Reg.
Budget	(‘13) 170 Million S	(‘13) 200 Million S	(‘13) 26 Million S (Government Subsidies)

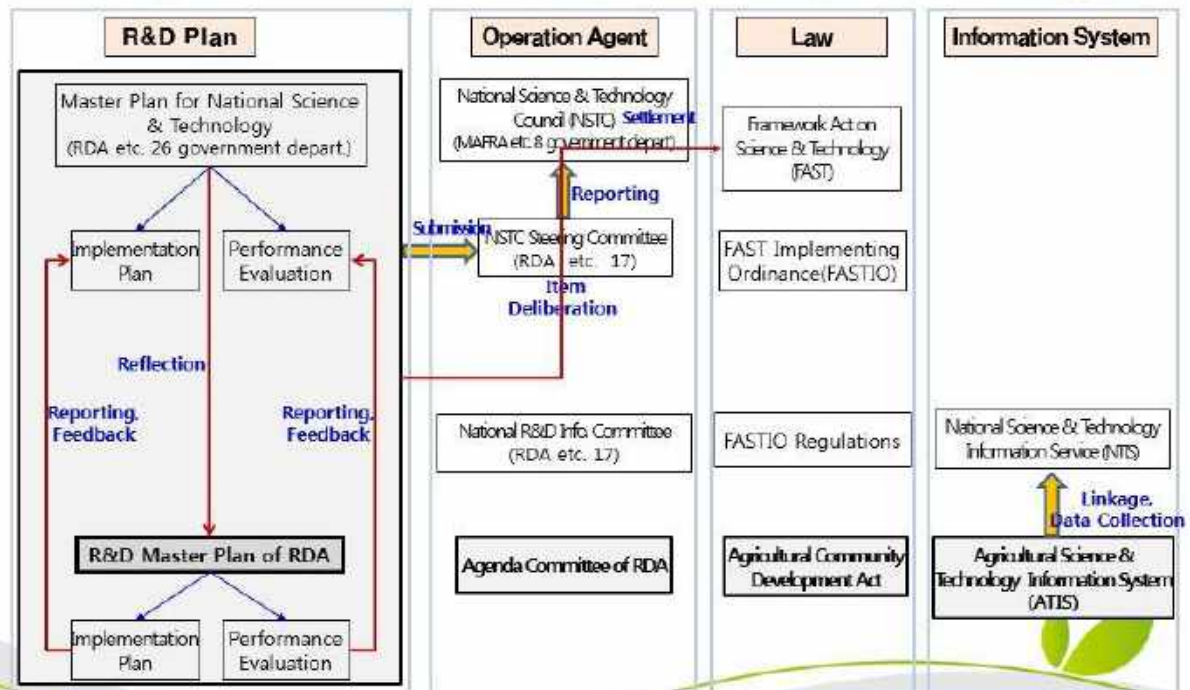
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Governmental Agro-R&D System



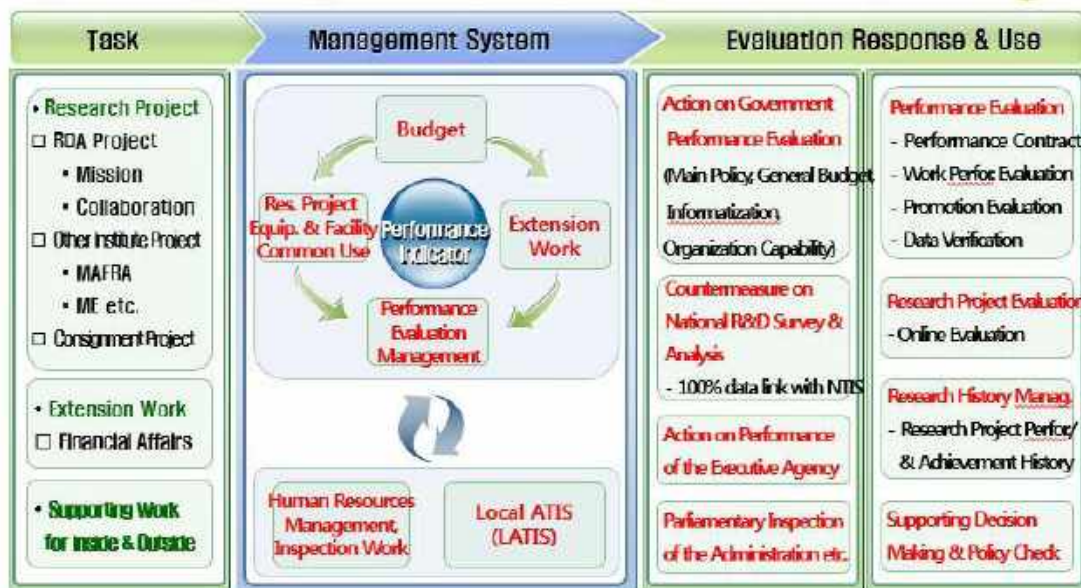
60

Regulation of Governmental Agro-R&D



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Agro-ST Management and Information System



Establishment with Single Integration System

- Product input by performance indicator, Performance evaluation on all employees, Policy evaluation, Statistics analysis function etc.

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National ST Information System



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Agricultural ST Information System (ATIS)

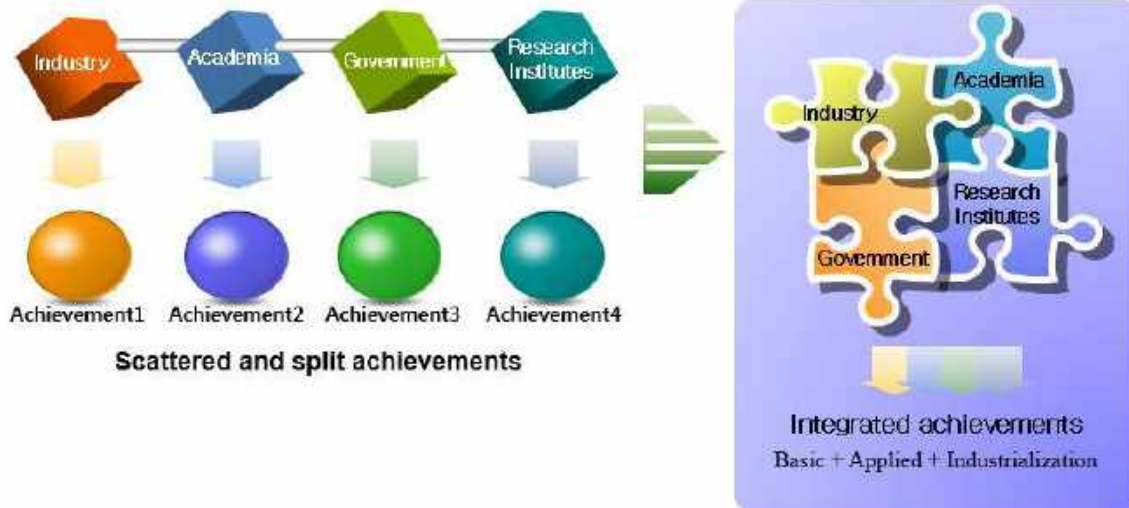


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Local Agro-ST Information System (LATIS)



Cooperation among R&D Institutions



Linkage among R&D Involvers



Exchange with opinion leaders

- Through regular consultational programs
- Committee for 19 agenda programs

Cooperation between governments and the private sector

- Personnel exchange
- Council between RDA and MAF

Cooperation with local agricultural agencies

- Support on region-specific service systems
- Farm-service system, emergency-service system

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R & D Funding by Central Government

(million \$)

Item	2000	2005	2010	2013
Total (A)	3,750	7,800	12,520	15,350
Agriculture (B)	265	415	705	870
B/A (%)	7.1	5.3	5.6	5.7

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Introduction of Rural Development Administration (RDA)



**Central Government Agency for Agricultural Research and Extension
Services in Korea**



- 1906 – Founded as Agricultural Demonstration Station
- 1962 – Reorganized as
Rural Development Administration (RDA)
* over 100 years history

Mission of RDA

Agricultural Research & Technology Development

Technology Dissemination & Extension Service

Guidance & Training for Rural Development & Home Improvement

Organization of RDA



Personnel of RDA

	Scientist	Extension staff	Administration & Technician	Total
Central	1,179	93	578	1,850
Provincial	761	4,388	2,821	7,970
Total	1,940	4,481	3,399	9,820



Budget of RDA



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Vision and Strategy of RDA



Leading National Welfare by Agricultural Technology Innovation

Target

1. Stable supply of food for people
2. Enhancement of agricultural competitiveness for nation development
3. Agro & Food industry as new growth engine
4. Sustainable agriculture and rural community

Core Strategy

- | | |
|---|--|
| <p>① Innovation of Agricultural Technology</p> <ul style="list-style-type: none"> ◆ Research system satisfying consumer needs ◆ Strengthening fundamental & original technologies for the growth of agriculture | <p>② Establishment of Agric. Knowledge Net.</p> <ul style="list-style-type: none"> ◆ Knowledge system connected with policy ◆ Strengthening knowledge spread system of local base |
| <p>③ Global issue & cooperation reinforcement</p> <ul style="list-style-type: none"> ◆ Strengthening action on future issue (climate, energy, resources, food) ◆ Global cooperation for solving global issue | <p>④ Building smart organization</p> <ul style="list-style-type: none"> ◆ Cultivating creative global leader from research human resource ◆ Organization activating communication & discussion |

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Direction and Targets of R&D



Direction	Advancement of Agricultural R&D based on Agenda (19)				
Field	Fundamental Research	Crop Research	Horticulture Research	Animal Research	Collaborative Research
R&D Strategy	Linkage with National R&D Strategy and Establishment of External Collaboration System <ul style="list-style-type: none"> ▪ Linkage with & national R&D strategy & master plan ▪ Linkage with agricultural policy goals & R&D comprehensive plan for agri-food ▪ Enhancement of R&D cooperation for governmental department & local government 		Innovation of investment portfolio on agricultural R&D <ul style="list-style-type: none"> ▪ Leading creative economy by enhancing fundamental and original technology ▪ Value-added increase of agriculture with fusion research vitalization ▪ Technology development expansion for improving the quality of life 		
	Enhancement of Effective R&D System <ul style="list-style-type: none"> ▪ Implementation & planning of research for solving field problem ▪ Enhancement of design & evaluation on large scale project drawn from master plan ▪ Establishment of application system on agricultural science & technology road-map ▪ Enhancement of R&D effectiveness check & result analysis 		Enhancement of Foundation & Capacity for agricultural R&D <ul style="list-style-type: none"> ▪ Enhancement of R&D investment for agricultural science & technology ▪ Expansion of equipment & facility for national & regional agriculture ▪ Cultivation of global leaders from research human resources & laboratories ▪ Enhancement of international cooperation & collaboration project 		

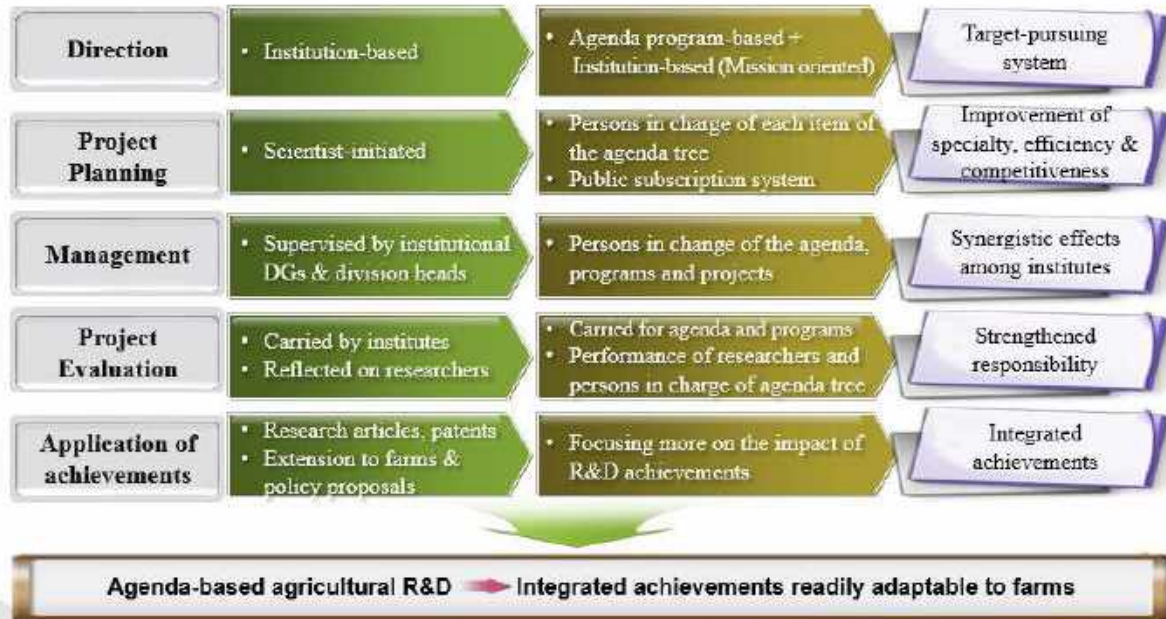
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Agenda-based R&D System



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Target-oriented R&D System

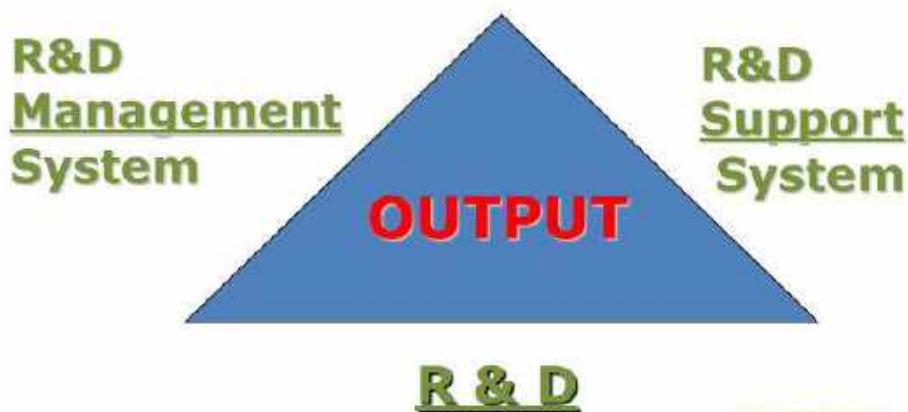


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Outputs of R & D

- Area of the triangle with three facets of R&D**



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Improving R&D Powers



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Lecture 5



Local Administration & Finance


Dr. Choe, Chang Soo

Professor, Public Administration

The Cyber Hankuk University of Foreign Studies (CUFS)

Before joining CUFS, he taught at Korea University for more than ten years and had worked as a Research Fellow at the Korea Research Institute for Local Administration (KRILA), which is a national government research institute devoted to the research and policy development for local self-government. He received a Fulbright Mid-career Research Award in 2009 and was a Fulbright Visiting Scholar at the Arizona State University in the U.S. in 2010.

He has been a resource speaker and expert of Asian Productivity Organization since 2006 and a visiting lecturer for the international capacity building program both at the Local Government Officials Development Institute (LOGODI) and Central Officials Training Institute (COTI) in Korea since 2004.



UNDERSTANDING KOREAN LOCAL GOVERNMENT IN DEVELOPMENTAL PERSPECTIVE: LESSONS & IMPLICATIONS

Chang Soo Choe, Ph.D.

February 24, 2016



Goal of the Lecture

- To understand local self-government in Korea.
- To understand basic concepts related to central-local relations
- To draw lessons from the Korean experience
- To develop strategies for capacity buildings for local government in developing countries



Local Government In Developing Countries

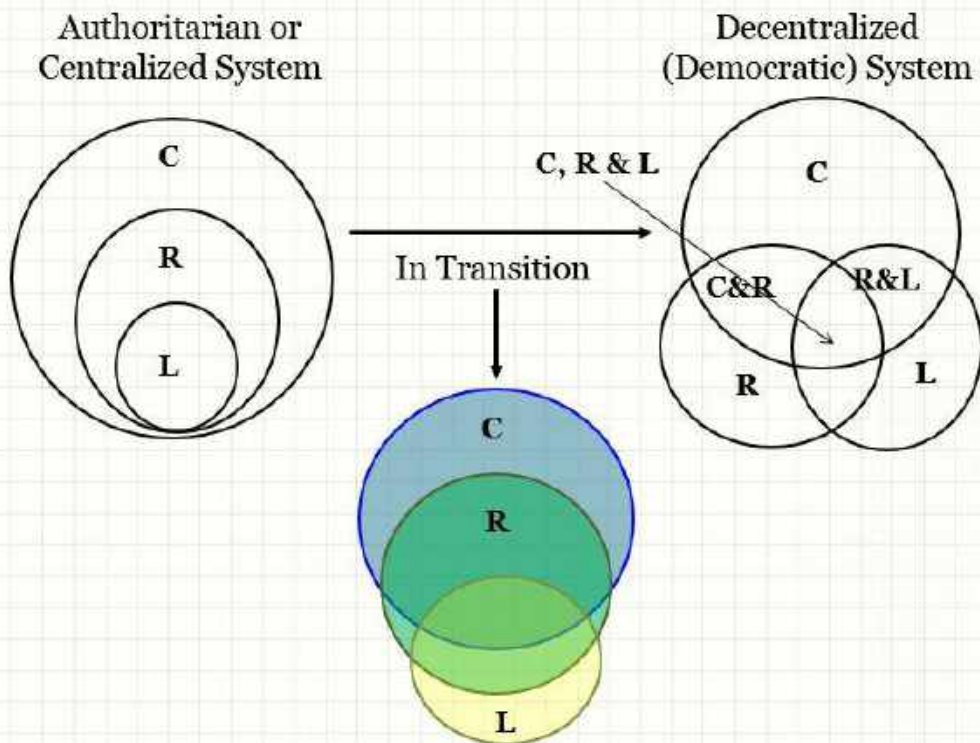
Definition of Local Government

- **Administrative arm of central government:** A kind of branch offices without autonomous power

Or

- **Self-government with a certain level of autonomous power delegated from central government**

Definition of Local Government



Dialogue 1

- **Local :** We don't have enough power to carry out our roles. We just conduct delegated affairs from central and regional governments.
- **Central:** Although we would devolve power to local government, local officials are not capable to handle the power.
- **Local :** Although there are several laws stipulating decentralization, reality is different from the laws.
- **Central:** Our country is not ready to conduct full scale democracy. It would cause chaos.

Dialogue 2

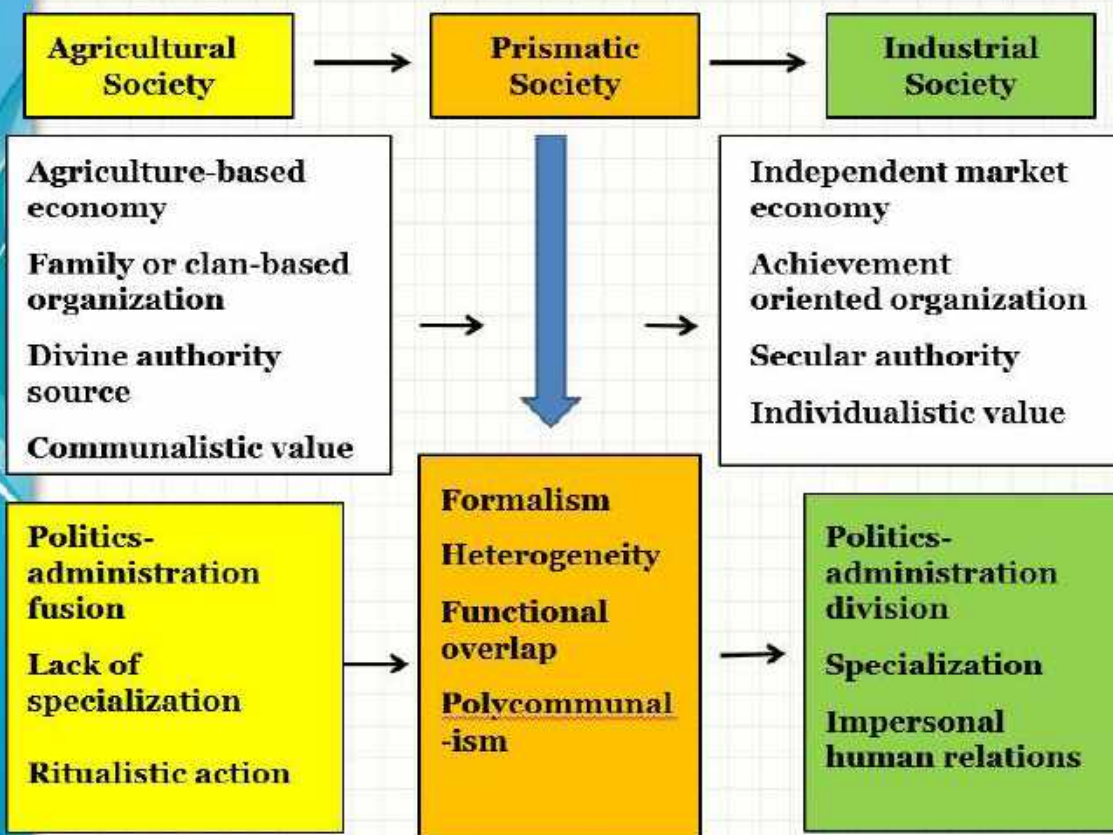
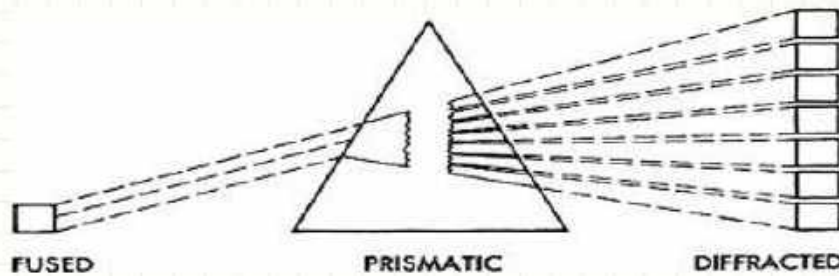
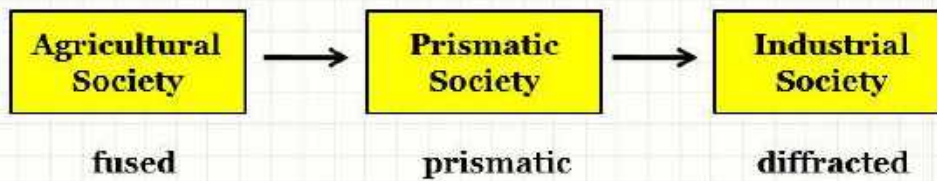
- **Local** : Central officials want to keep their power. Because they do not give up their stakes, they try consistently to maintain their powers over government affairs and financial resources.
- **Central** : We central people are working on democracy step by step. However, local officials are not competent enough to maintain local self-government system.
- **Local** : Are you talking about the capacity of local government officials? How can we improve our capacity without having opportunities to work for any task. It is important to understand that capacity can be built up through practice.

Common Features of LG in Developing Countries

- Lack of powers and financial resources
- High degree of central (or federal) government's control over local government
- Demand for infrastructure building
- Need for capacity building of local officials
- Transparency issues
- Importance of informal (or traditional) networks
- Gap between knowledge (or information) and practice
- NGO's role in community

Characteristics of P. A. in Developing Countries

- Prismatic Society (Fred Riggs)**



Public Administration in Prismatic Society

- **Sala Model: Government in Prismatic Society**
 - Formalism
 - Overlapping functions
 - Coexistence of universal official norms and respect for traditions (nepotism and favoritism)
 - Prevalence of both ascriptive and achievement criteria

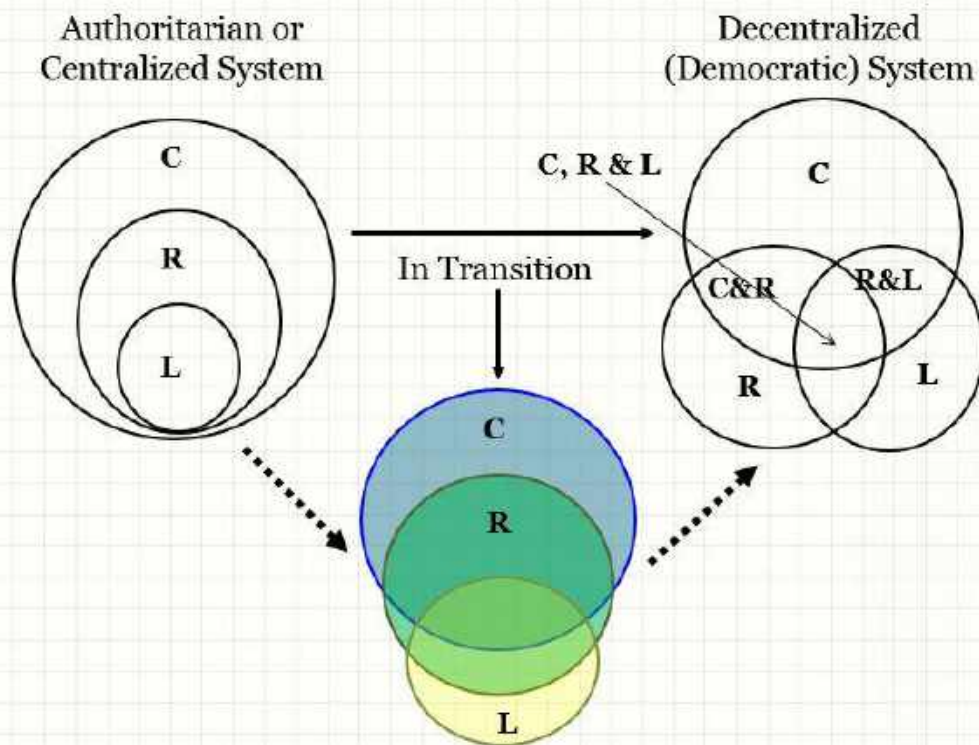


Development of Local Government in Korea

Local Government in Korea

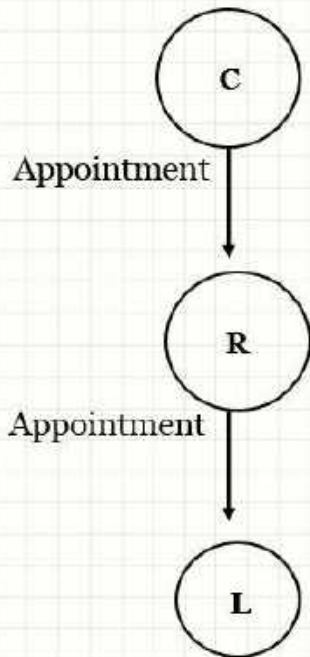
- Centralized System: 1948 ~ 1960
- Local Self-government System: 1960 ~ 1962
- Centralized System: 1963 ~ 1990
- Local Self-government System: 1991 ~ Present

Development of Local Government in Korea



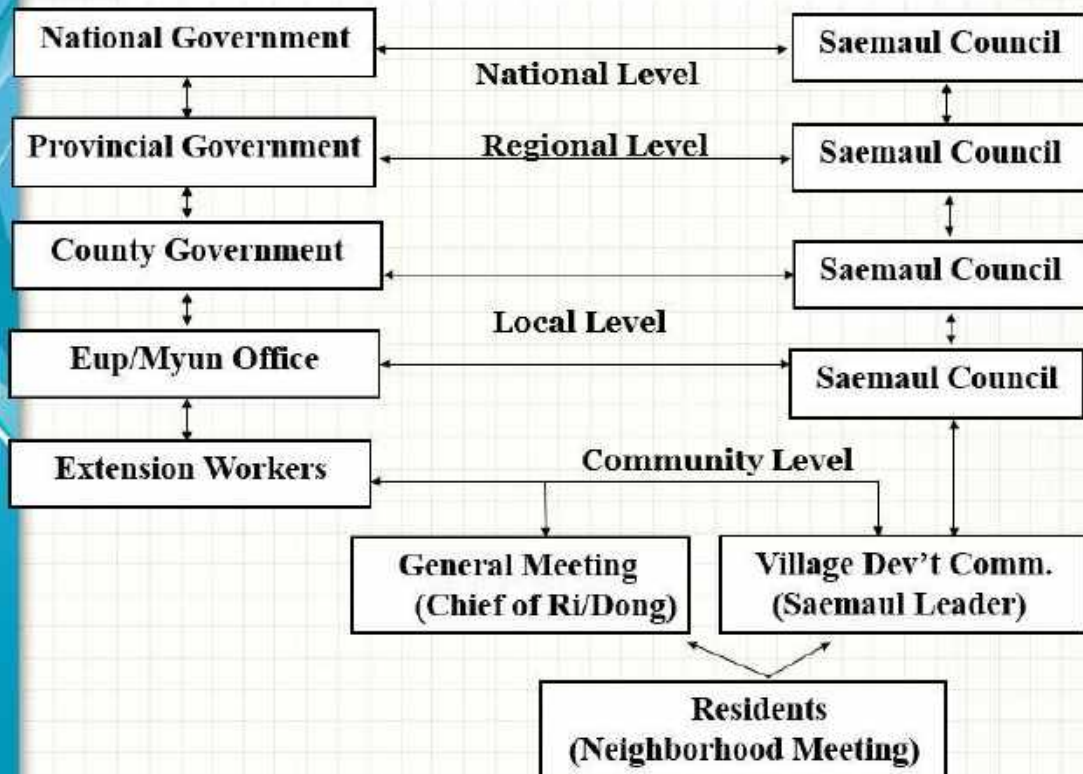
Development of Local Government in Korea

Before 1991



- Authoritarian and Centralized political system
- Regional and local governments as administrative arms of central government
- Central government appointed executives of regional and local governments
- Central government's directed and supervised the affairs of regional and local governments
- No autonomous power on the part of both regional and local governments

Cooperation among NG, LG, & People



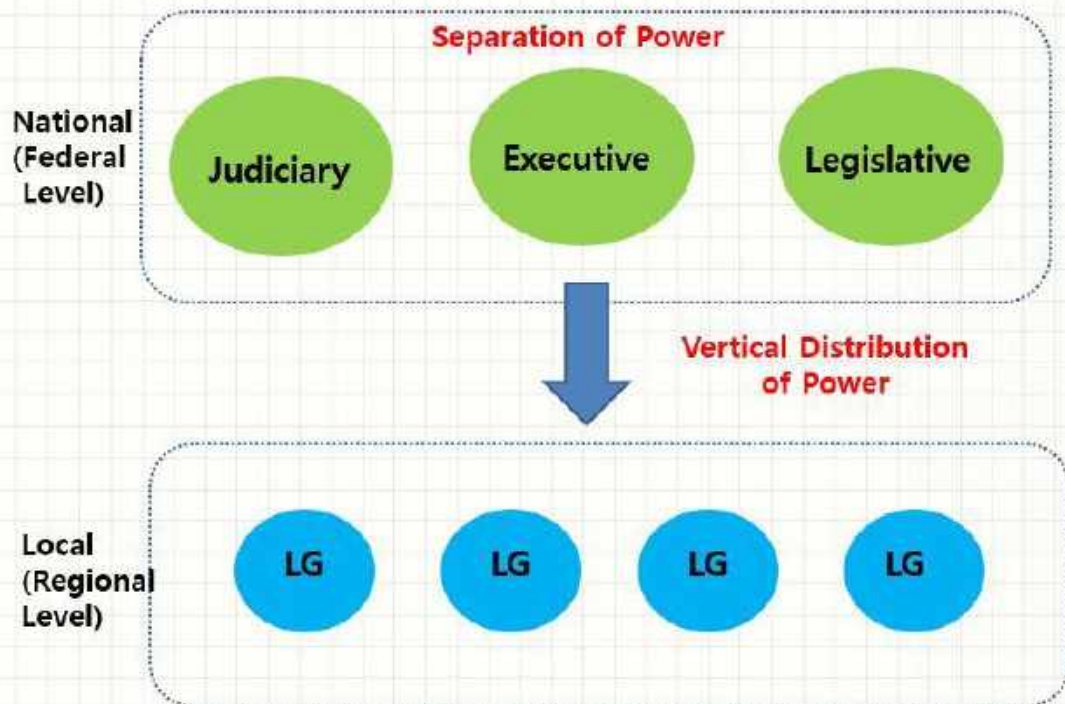
Cooperative Interaction among NG, LG, and People



Democratization Movement in 1987



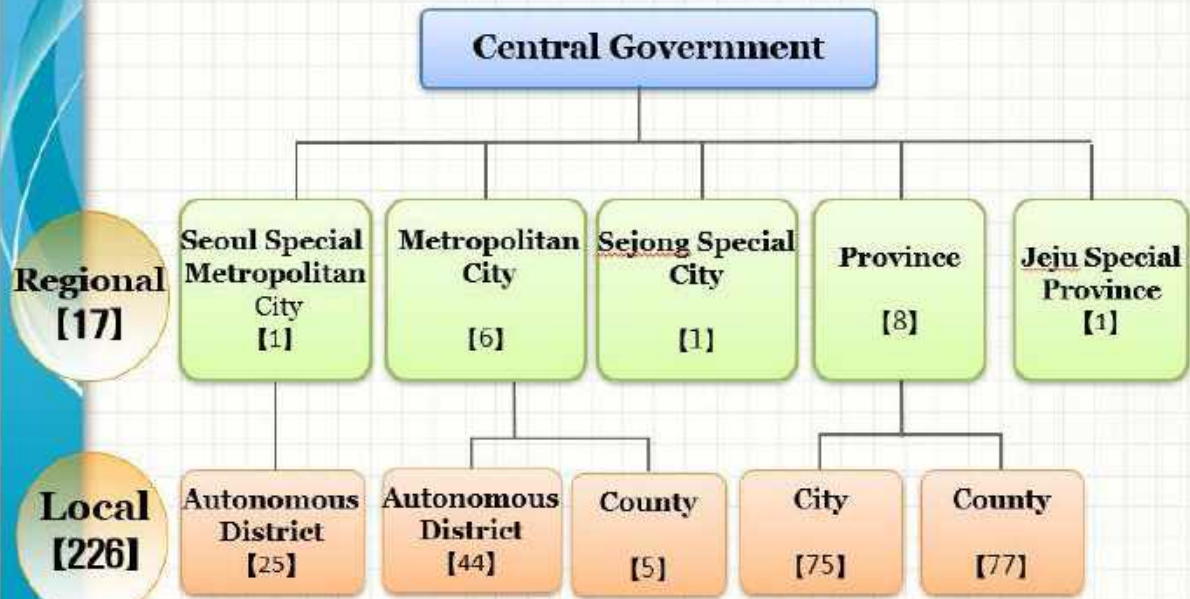
Development of LG in Korea since 1991



What does local self-government imply?

- Vertical distribution of power between CG and LGs
 - **Sharing government power** between national(central) & local (Regional) governments
 - Establishing local autonomy(or local self-government) means that central (or federal) government **devolve some of their power** to local government
 - Relationship between central and local (regional) governments should not be hierarchical, but be **equal or equivalent**.

Korean Local Government System



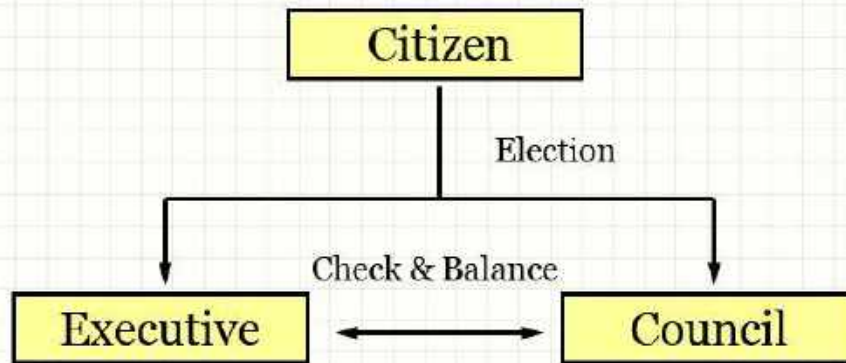
※ Primary local government has small towns such as eup, myeon, dong as sub administrative offices.

Jurisdiction of Upper-Level Local Gov't

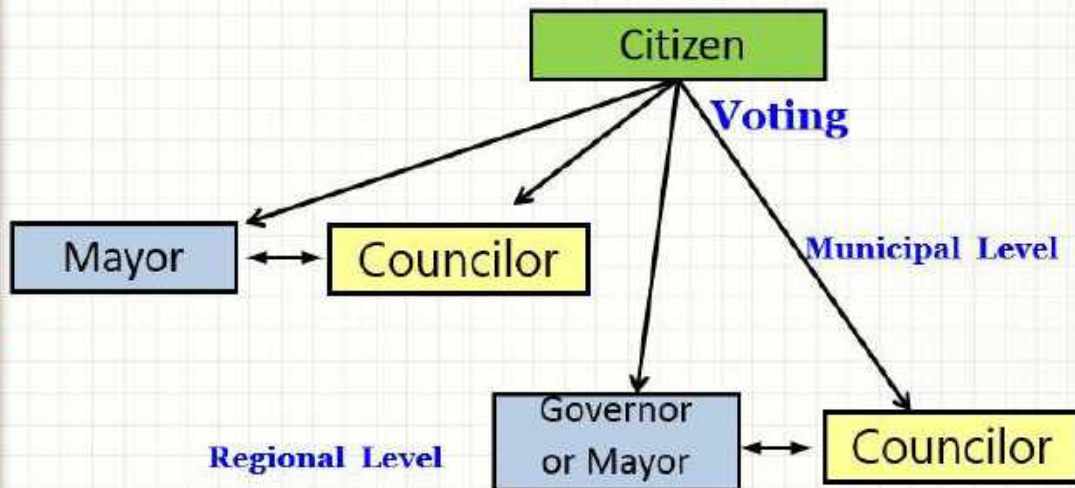


Form of Local Government

- Mayor-Council Type

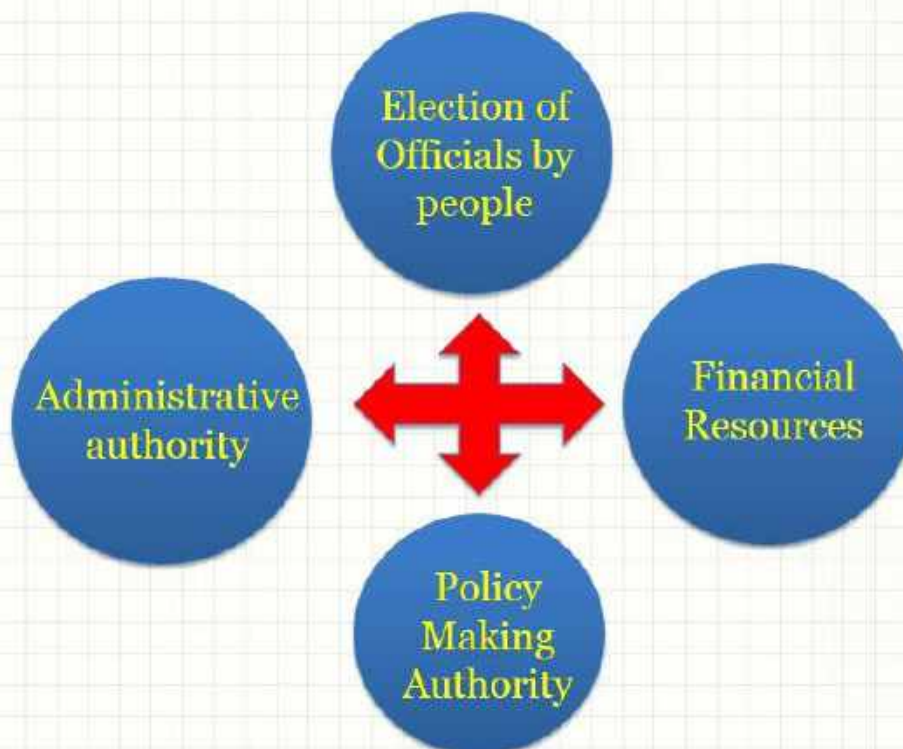


Local Election



Stat of Local Government n Korea

What does the autonomous power mean?



Mayor-Council Type: Theory & Reality

- Power of Elected Mayor
 - Appointment Power
 - Budget Preparation
 - Veto Power
 - Appeal to Court

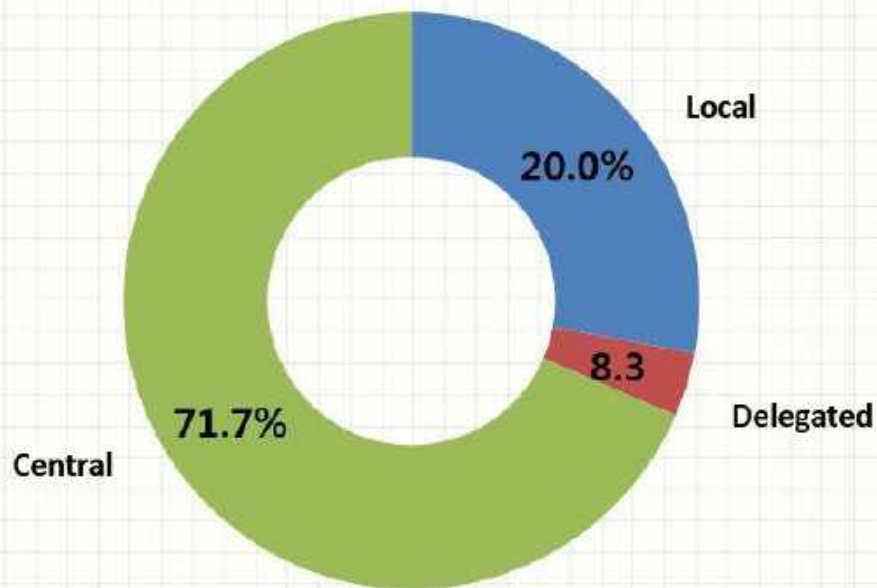
- Power of Council
 - Power of Purse
 - Audit & Inspection
 - Power of Enactment

Mayor-Council Type: Theory & Reality

- Theory
 - Check and Balance: Cooperation and Countervailing
 - Preventing tyranny of one party for democracy

- Practice: two contrasting patterns
 - Conflict between elected executive and local council
 - Dependency of local council upon executive branch

Distribution of Government Affairs in Korea

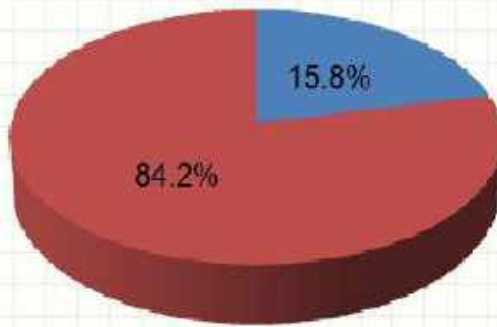


Dialogue 3

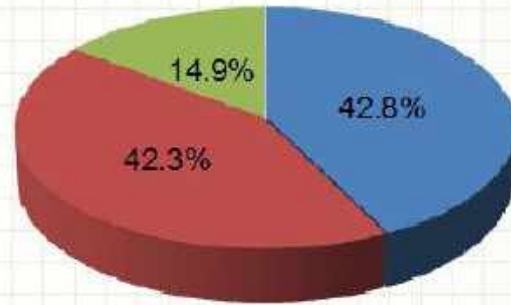
- **Local** : We don't have enough money to provide public services that local residents want.
- **Central** : That's why we provide you with large amount of grants. While local governments say that they are lack of money, they spend big money on unnecessary projects.
- **Local** : Central grants are not enough to afford the need for development of our local government. And we have to take some amount of money out from our limited financial resources as matching fund to get the central grants. Furthermore, there are many restrictions in spending grant as well as too many administrative works.

Local Finance in Korea

Revenue



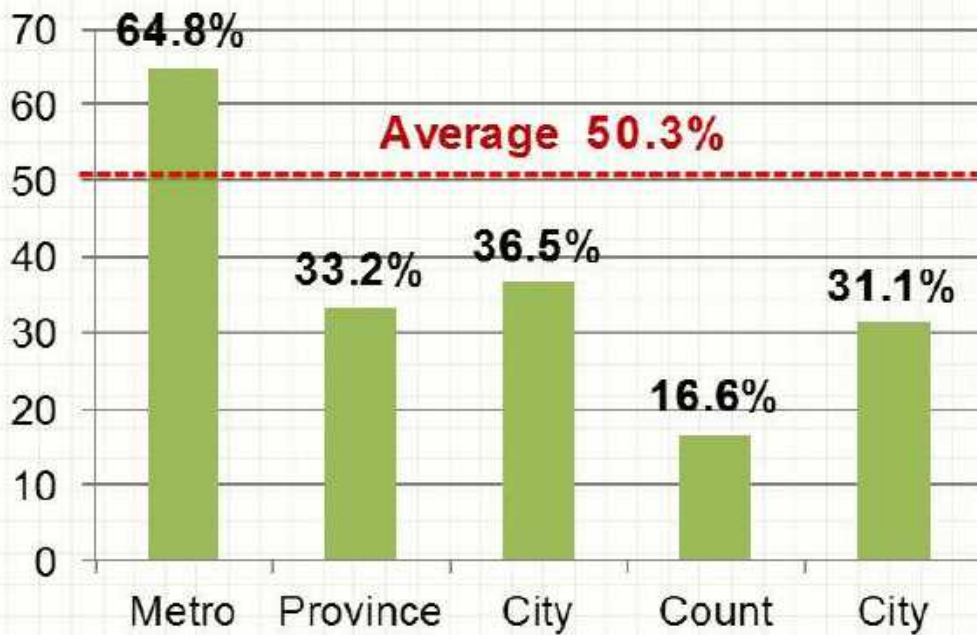
Spending



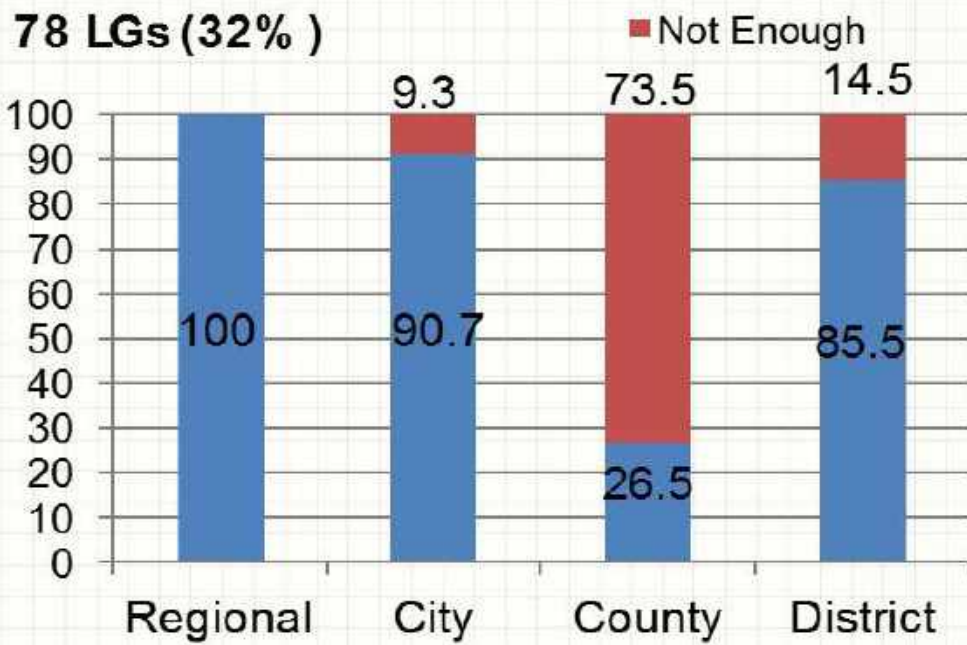
Local National

Local
National
Local Education

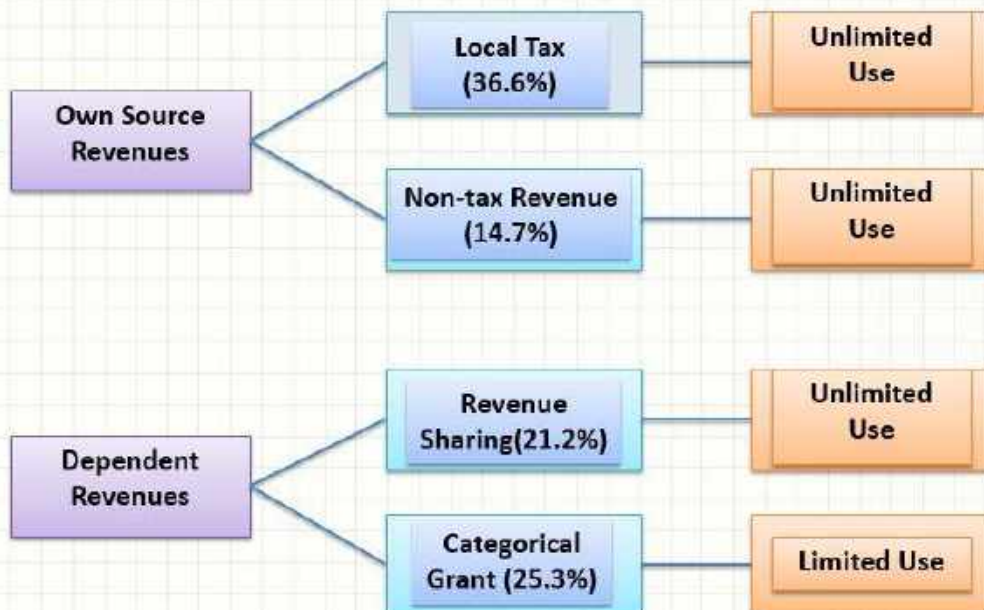
Local Govt's Self-Finance Rate



Local Govt that can't finance labor cost



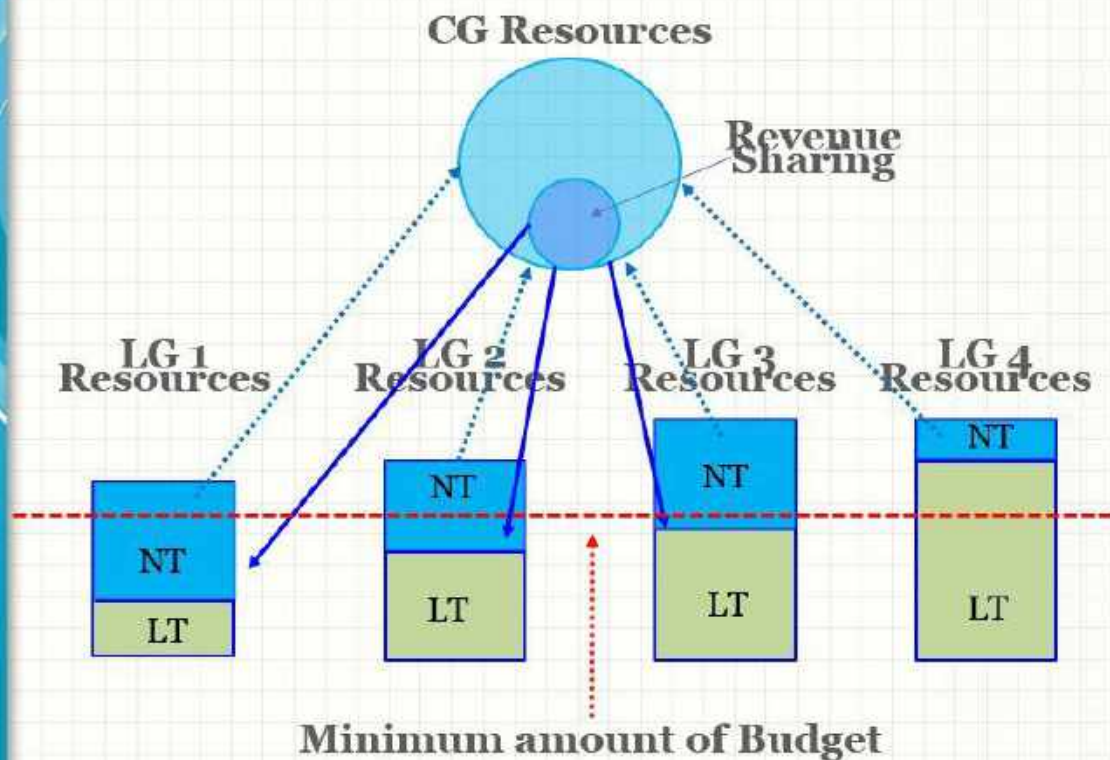
Revenue Structure of Korean LG



Dialogue 4

- Central 1 : County A cannot afford the salary of its officials with its own revenue.
- Central 2 : That's true. In contrast, city B has collected sufficient revenues enough to send a group of officials to foreign countries for short-term English training every year.
- Central 3 : That's a problem! Despite that both of them belong to the same regional government, financial situation is quite different. How to resolve this issue of financial disparity?

Intergovernmental Fiscal Relations



Financial Equalization System

- Revenue Sharing
 - ✓ Policy tool for equalizing financial gap both between central and local governments and among local governments
 - ✓ 19.24% of national tax revenue is allocated for local governments
- How to
 - ✓ Fiscal Gap of each LG = Standard Fiscal Needs of each LG - Standard Fiscal Revenue of each LG
 - ✓ Sum of Fiscal Gap × Adjustment Rate (about 0.85)

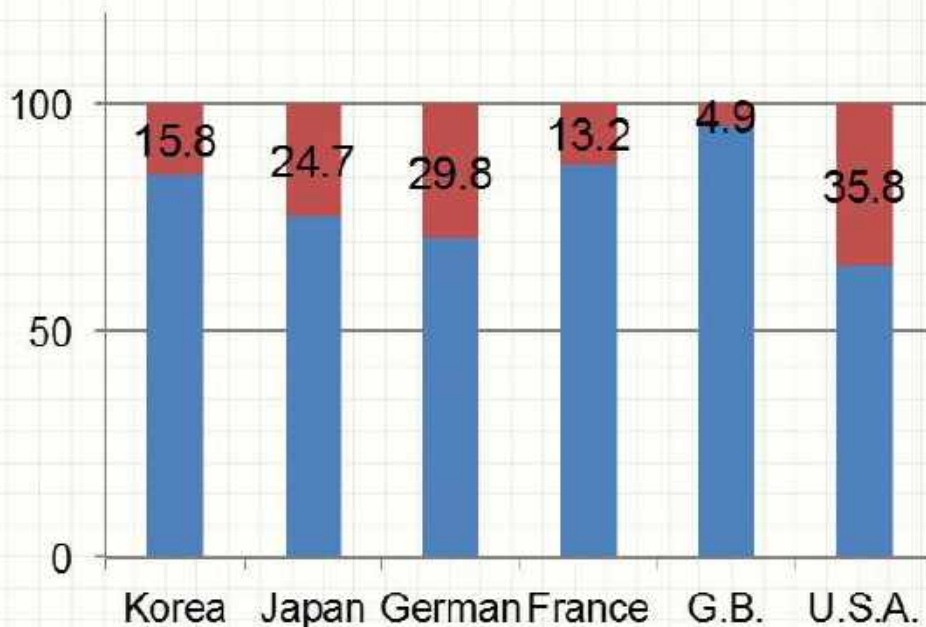
Dialogue 5

- Councilor : We need to allocate funds to Village A for improving the water supply facility that is asked by the residents of the Village A.
- Executive : I have recognized the problem of water supply facility in Village A. However we have no money for it.
- Councilor : I know there are some funds for community health this year. We can use it.
- Executive : I am sorry to say that we can not use that fund this time because regional government do not allow it. We have to follow the direction of the regional government. It is for health care, not for water supply.

Dialogue 6

- Professor 1 : Does financial resource matter for local democracy?
- Professor 2 : Yes, financial resource is important factor to development of local government?
- Professor 1 : But there are so many cases to show that poor local government made a success, while rich local government went into financial difficulties.
- Professor 3 : It is true. There exist financial disparities among local governments. While central government needs to minimize it, local governments should try to overcome the given situation by themselves.

Tax Revenue by National vs Local Govts





Lessons & Implications

Issues in Local Self-government?

- Democracy or Efficiency
 - Introducing local self-government system aims at **increasing democracy at local level although it decreases efficiency in government operation.**
 - Key is to achieve a **consensus** among people on the proper level of local autonomy
 - Level of autonomy is closely related to **history, culture and current state of nation**

Issues in Local Self-government?

- **Financial Disparity**
 - There exist financial differences among local governments
 - Central government has some kind of financial equalizing system among local governments.
 - If central government plays a big role in finance, autonomy of local government decreases.
 - If central government decreases its role in finance, difference in financial resources among local governments increases.

Summary of Korean Case

- Local self-government was introduced as a fruit of democratic movement in 1990s.
- Decentralization level is insufficient because central government still keeps control over local governments.
- Local Government still needs more power and financial resources.
- Local governments and central governments are conflict in some aspects and cooperate each other in other aspects.
- While some poor local government made a success, some rich government went into financial difficulties.

Lessons & Implications

- Local self-government can be a way to develop democracy. Consolidating democracy takes time and needs institutional foundations.
- Mutual understanding and efforts are required to establish better governance
- Capacity building of government officials at both central and local levels are important.
- Nurturing citizenship is also important for better governance.
- Financial resources are always limited everywhere. Although financial resource is important to development of local government, it is not a sufficient condition for local democracy.

Q & A

Lecture 6



Human Resource Development & Management

Mr. Park, Kyung-Bae

Vice President

Korea Institute for Development Strategy

He received Master degrees in public policy and public administration in UK and English literature in Korea.

Since he started his career in public sector, he has served in the Central Officials Training Institute for about 30 years as a professor until 2011. After his service for the government, he is taking several responsibilities in different organizations utilizing his knowledge and experience like an advisor to Korea International Cooperation Agency, a professor emeritus in KDS, board member of International Association of Schools, Institutes of Administration and International Institute of Administrative Science, a commissioner of audit at the Eastern Regional Organization for Public Administration etc.

“Public Human Resource Management & Development in Korea”

2016



By Prof. Park Kyung-Bae

Vice President
Korea Institute for Development Strategy

Professor Emeritus
National HRD Institute (Former COTI)
Ministry of Personnel Management

Contents

- I. Korea at a Glance
- II. Overview of the Government of Korea
- III. Overview of Korea's Public Service System
- IV. Economic Development and Public HR Policy
- V. Public Service Education and Training

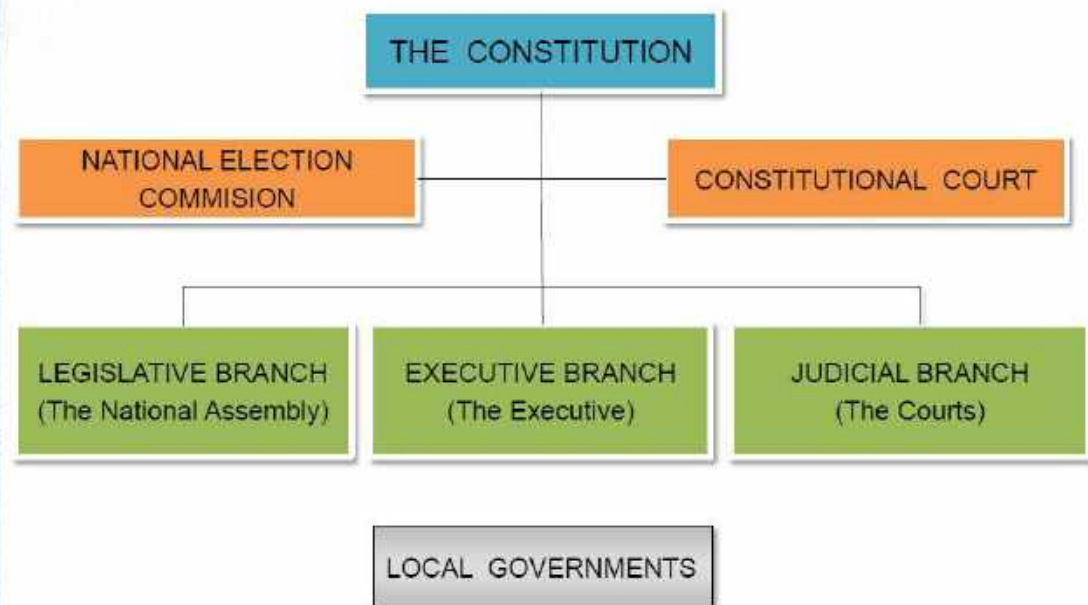
I. Country Profile: The Republic of Korea

- Capital (largest city): Seoul
- Population: 50 million (2015)
- Official Language: Korean
 - Illiteracy rate: 2.1%
- Religions: Christian 29.2% (Protestant 18.3%, Roman Catholic 10.9%), Buddhist 22.8%, other or unknown 1.0%, none 46.9%
- GDP: \$1.435 trillion (11th largest in the world in 2015)
 - GDP per Capita: \$28,338 ('15)
- Central Government Budget: \$320 billion ('16)
- Local Government Total Budget: \$143 billion ('15)
- Export ('15): \$526.9 billion (6th largest in the world)
 - Ships, petrochemicals, semiconductors, automobiles, wireless telecommunications equipment, computers, steel
- Import ('15): \$ 436.5 billion
- Life Expectancy: Male: 76.95 ('15), Female: 83.34 ('15)
 - ※ Average: 80.04



II. Overview of the Government of Korea

Government of the Republic of Korea



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Legislative Branch

- Unicameral System (National Assembly)
- 300 Members of Parliament (4-year term)
 - 246: Elected through popular, direct vote
 - 54: Elected through proportional allotment among political parties
- 16 Standing Committees
- 2 Special Committees (Budget & Accounts, Ethics)

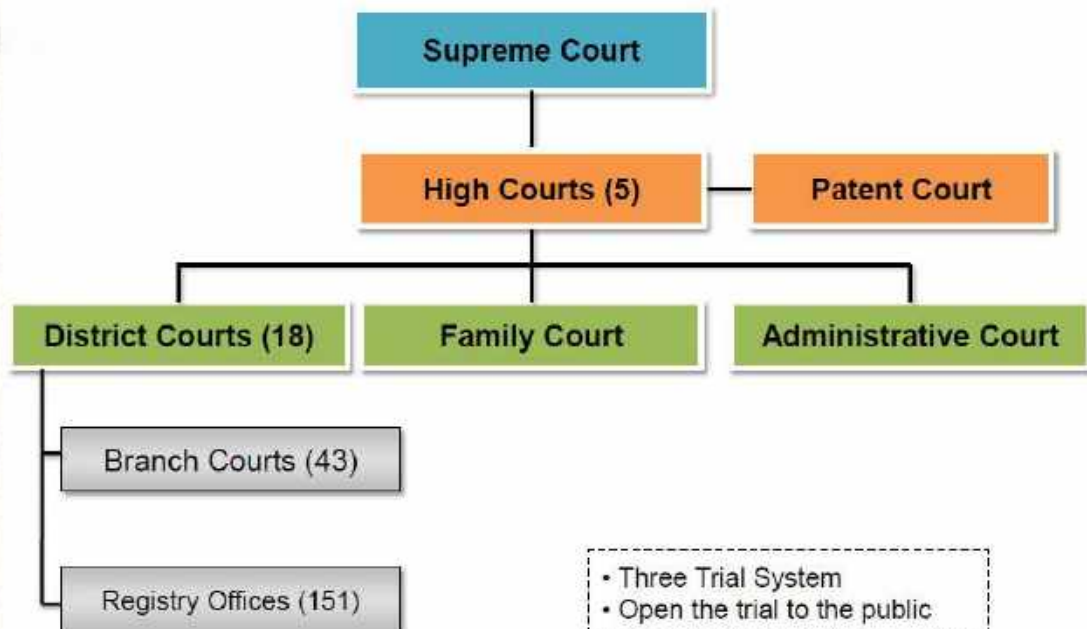
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Major Functions of the National Assembly

- Deliberation and decisions on bills and national budgets
- Inspection of state affairs
- Consent to the ratification of pacts and treaties on commerce or peace
- Declaration of war
- Consent to the appointment of the Prime Minister, the Chief Justice, Justices of the Supreme Court

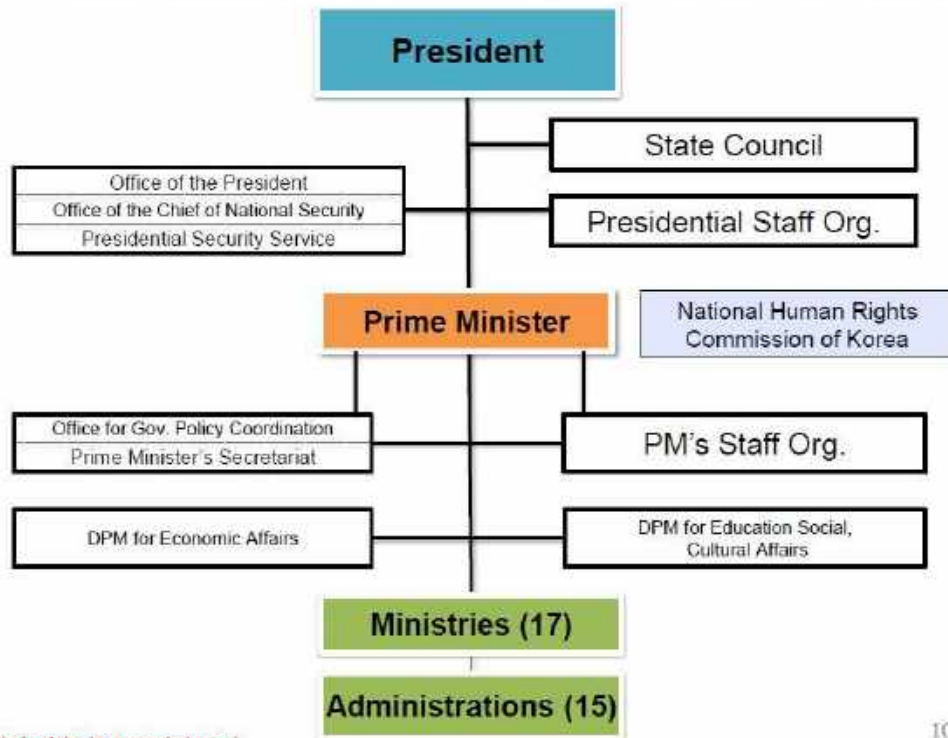
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Judicial Branch



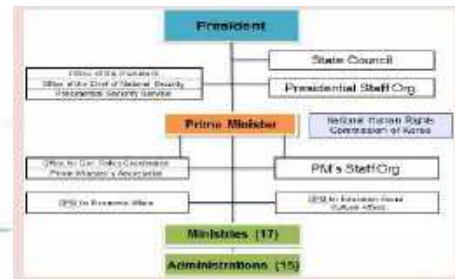
9

The Executive Branch



*English title is provisional

10



President

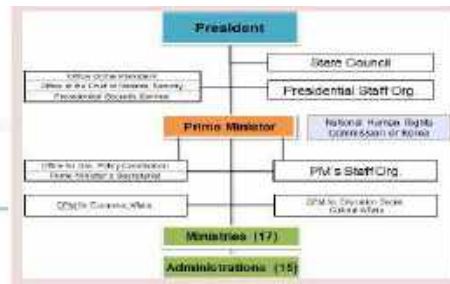
- Head of the Nation
 - Head of the Executive Branch
 - Commander-in-Chief of the Armed Forces
- * 5 year single term, cannot be reelected

Office of the President
Office of the Chief of National Security
Presidential Security Service

- Supervised by a Ministerial Level Head Respectively

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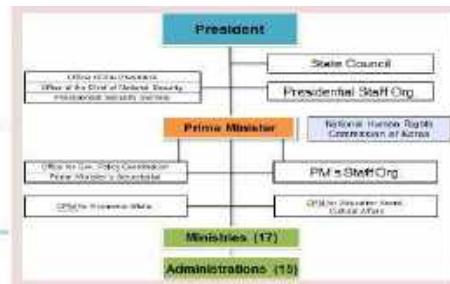
The State Council (Cabinet)



- Chairperson (the President), Vice Chair (the Prime Minister), & 15-30 Ministers constitute the Council
- Deliberates major policies and laws
- Final coordination in the executive branch
- Regular meetings once a week

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Presidential Staff Agencies



- National Intelligence Service
- Board of Audit and Inspection
- Korea Communications Commission

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Prime Minister

- No. 2 in the executive branch
- Appointed by the President with the consent of the National Assembly
- Coordinates and controls policies
- Makes recommendations for Presidential appointments and removal of Cabinet members



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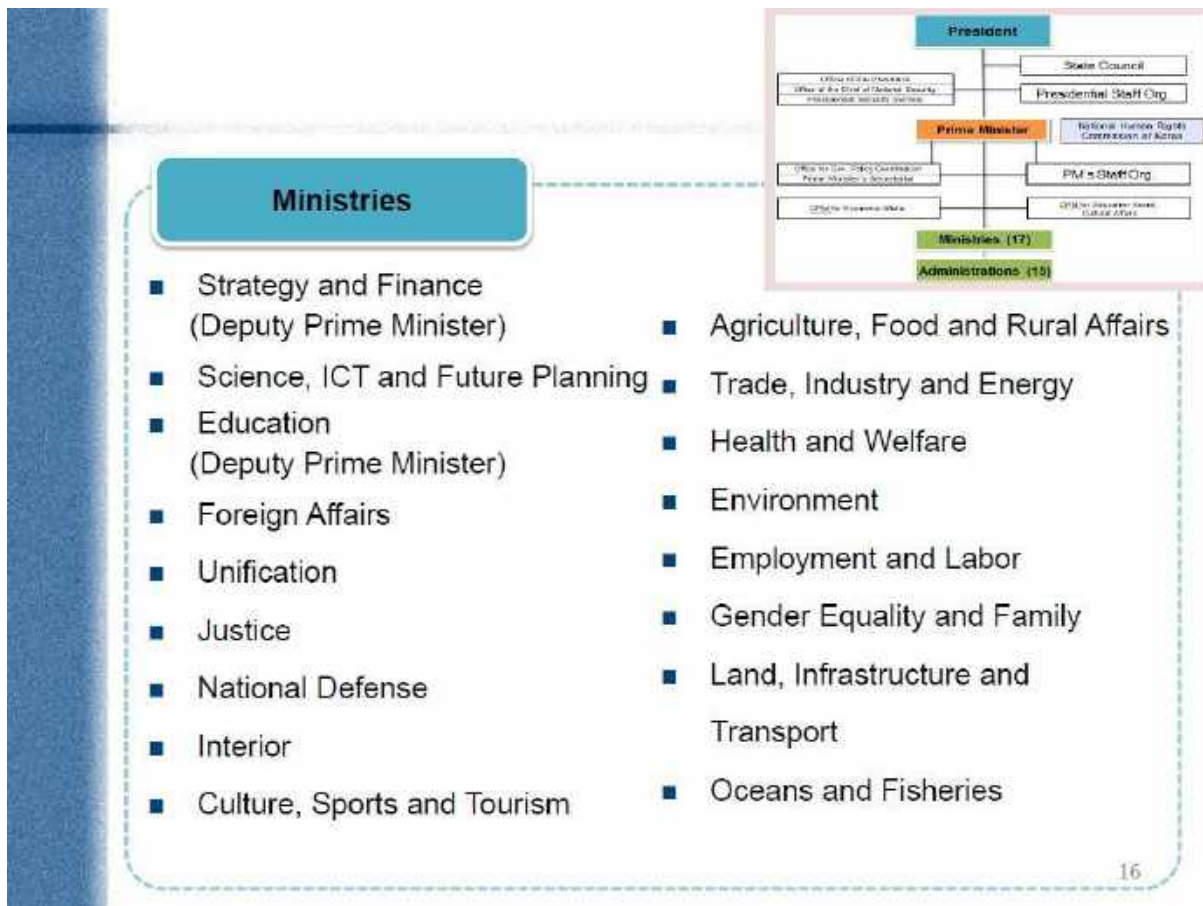
Prime Minister Staff Agencies

- Ministry of Government Legislation (V.M.L)
- Ministry of Patriots and Veterans Affairs (V.M.L)
- Ministry of Food and Drug Safety (V.M.L)
- Korea Fair Trade Commission (M.L)
- Financial Services Commission (M.L)
- Anti-Corruption & Civil Rights Commission of Korea (M.L)
- Nuclear Safety and Security Commission (V.M.L)
- Ministry of Public Safety and Security (M.L)
- Ministry of Personnel Management (V.M.L)



*English title is provisional

15



The Ministry of Science, ICT and Future Planning

- The Ministry of Science, ICT and Future Planning was formed by Park Geun-hye Government.
- The Ministry is tasked to lead the emergence of creative economy in tandem with new paradigm.

→ A creative Economy :

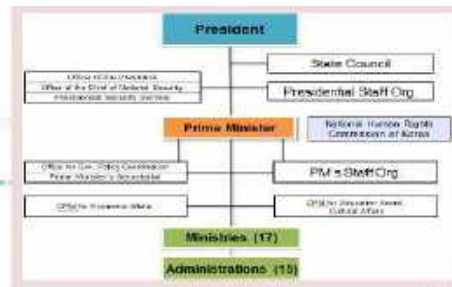
- The Convergence of Science and Technology with Industry (ICT Industry)
- The Fusion of Culture with Industry
- The Blossoming of Creativity

Administrations

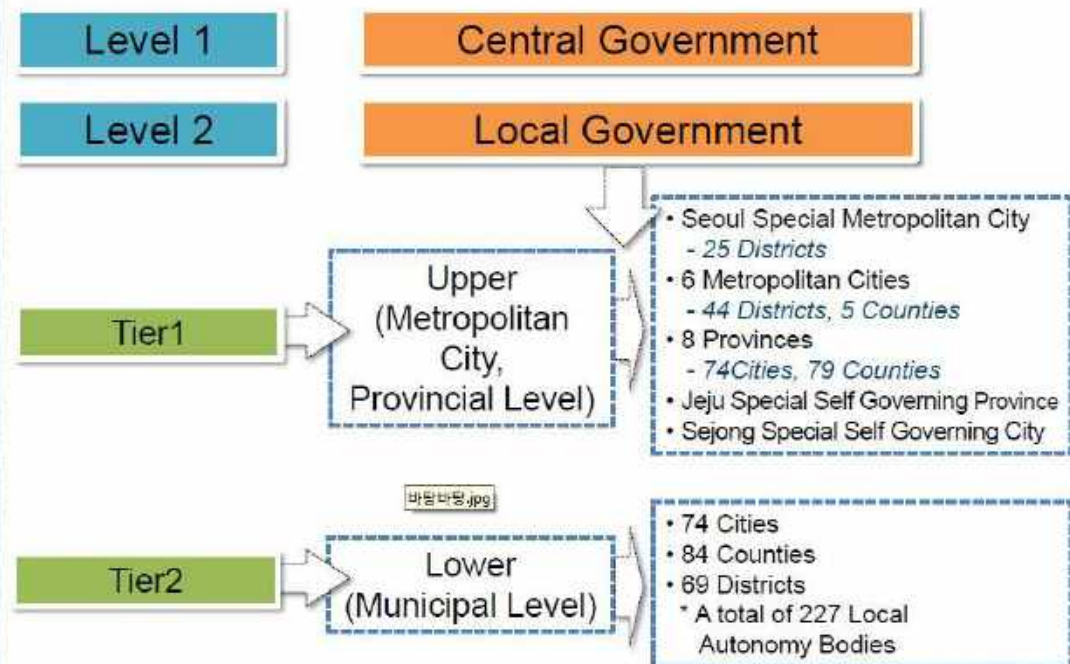
- National Tax Service
- Korea Customs Service
- Public Procurement Service
- Statistics Korea
- Supreme Prosecutor's Office
- Military Manpower Admin.
- Defense Acquisition Program Admin.
- Korean National Police Agency
- Cultural Heritage Admin.
- Rural Development Admin.
- Korea Forest Service
- Small and Medium Business Admin.
- Korea Intellectual Property Office
- Korea Meteorological Admin.
- Multifunctional Administrative City Construction Agency

*English title is provisional

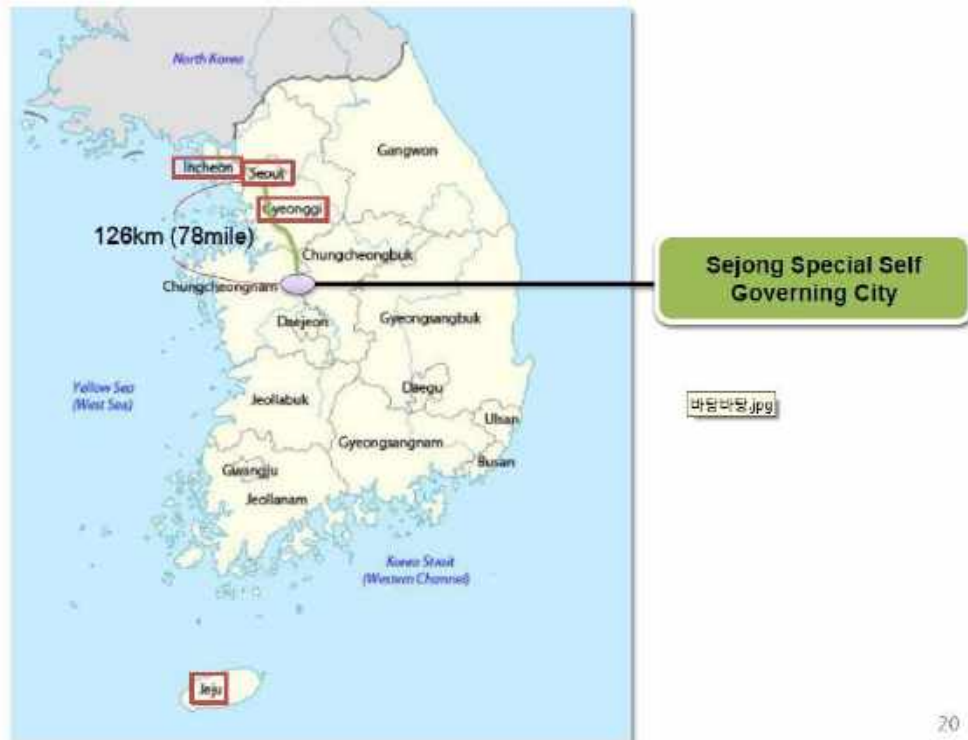
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Levels of Government



Korean Government's Decentralization Project



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Distinctions between Central and Local Public Officials

	Central Government	Local Government
Appointment	<ul style="list-style-type: none"> The President, Minister Chairman of the Legislative, Judicial, etc. 	<ul style="list-style-type: none"> Head of local Government
Expenditure	<ul style="list-style-type: none"> National revenue 	<ul style="list-style-type: none"> Local revenue
Work place	<ul style="list-style-type: none"> Central Govn't Agencies Assembly, Court, etc. 	<ul style="list-style-type: none"> Local Government
Duties	<ul style="list-style-type: none"> National administration 	<ul style="list-style-type: none"> Local autonomous affairs
Related law	<ul style="list-style-type: none"> State Public Officials Act 	<ul style="list-style-type: none"> Local Public Officials Act
Numbers	<ul style="list-style-type: none"> 634,051 	<ul style="list-style-type: none"> 357,492

- Same remuneration system for the central & local public officials
- Special regional allowances for the public officials working at island, remote place, border area, etc.

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Institutions of the Local Governments



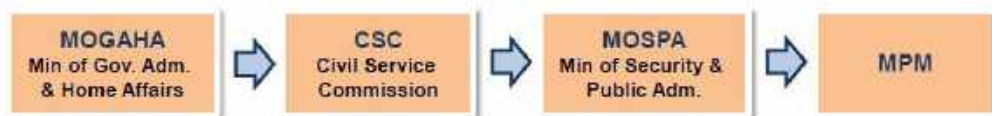
III. Overview of Korea's Public Service System

II. Overview of Korea's Public Service System

Ministry of Personnel Management (MPM)

- Responsible for
 - Human Resource Development
 - Human Resource Management
 - Public Service Ethics

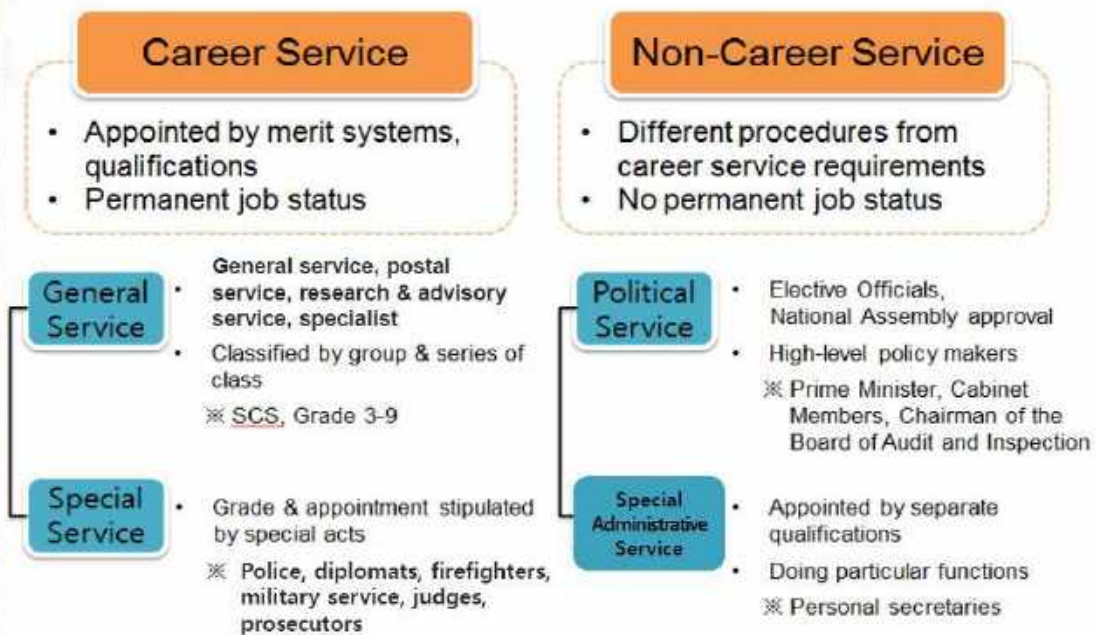
- MPM is a central personnel management agency under the Prime Minister



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II. Overview of Korea's Public Service System

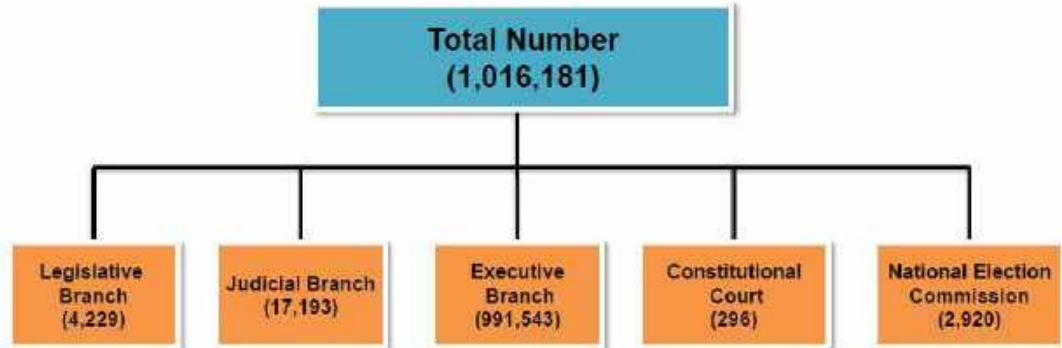
Classification of Public Officials



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Number of Public Officials

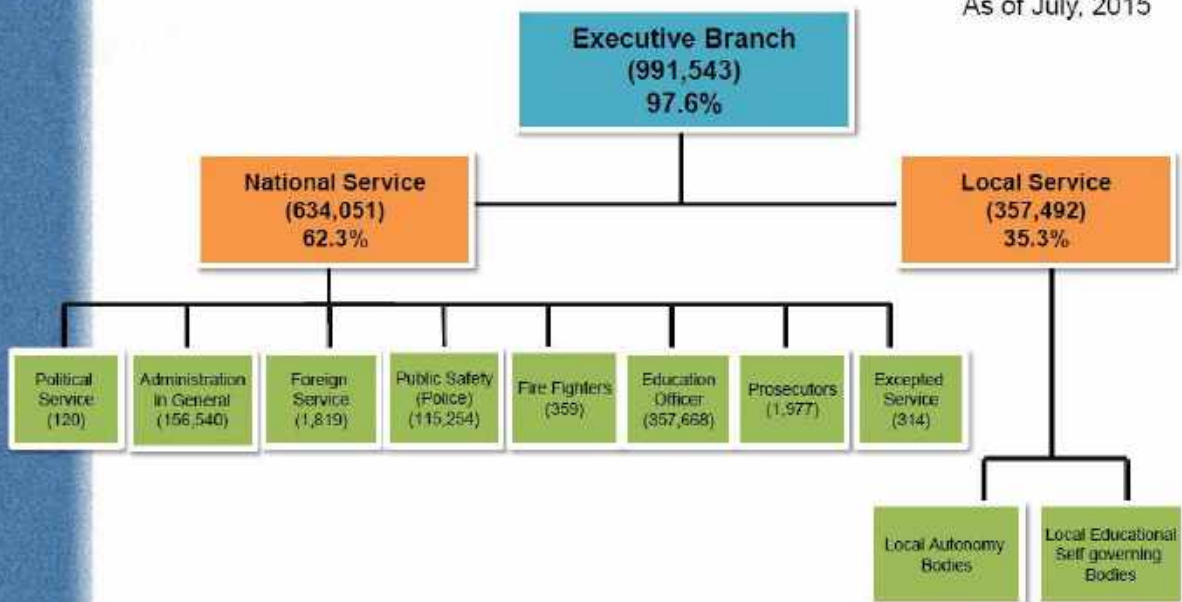
As of July, 2015



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Number of Public Officials in the Executive Branch

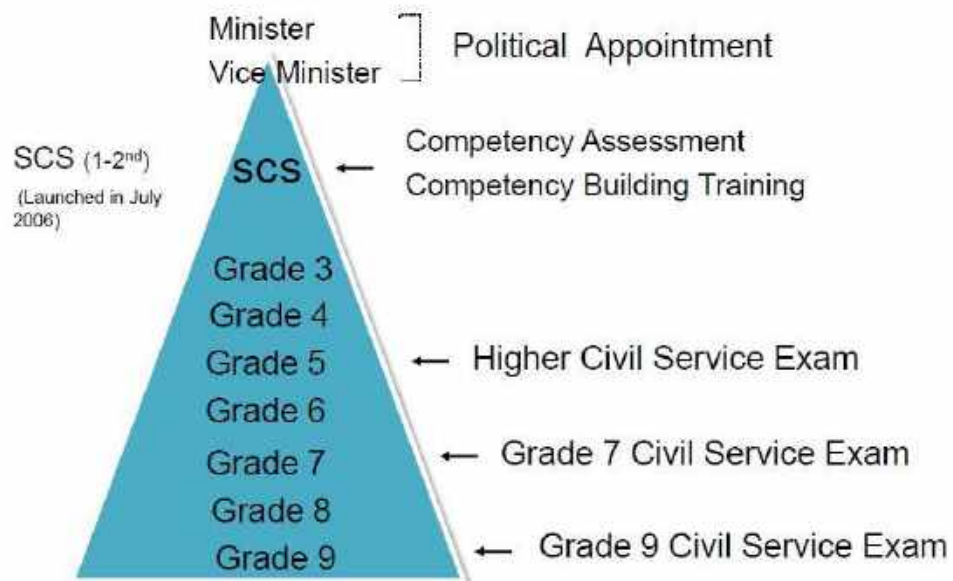
As of July, 2015



Note: Members of Armed Forces & National Intelligence Service not included

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Rank and Hierarchy



* SCS: Senior Civil Service

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General Service Classification

■ Vertical Classification

■ Horizontal Classification

Class A	Deputy Minister
Class B	Director General
Grade 3/4	Division Director
Grade 4/5	Deputy Director Assistant Director
Grades 6-9	General Staff

- Occupational Groups (3)
 - Administration Service Groups
 - Technical Service Groups
 - Management & Operation Service
- Series of Classes (54)
- Sub-series

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Types of Recruitment (1)

Open Competition Recruitment

- No restrictions for applications, admissions solely based on exam results
- Open Competitive Entrance Exam for G5, G7, G9 (once a year)
- Open competition exams are administered by MPM.

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Types of Recruitment (2)

Recruitment of those with private careers

- Requiring qualifications (degree, license, expertise) or work experience needed for the specialized positions
- Recruitment exams administered by each Ministry when needed
- G5 recruitment exam for those with private careers integrated into and administered by MPM
- Recruitment of those with private careers will be expanded to G7 positions (Computerization, Legal Affairs and Tax Affairs)

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Recruitment Plan (Year 2016)

Type	No. to be selected	Series	Handicapped	Low Income Family
G5	Higher Civil Service Exam.	344	General Management(143): - Nationwide(116), Regional(27) Economics & Finance(78), Legal Affairs(5), Educational Service(12), Education Administration(12) ..	
	Candidates for diplomat	36		
G7		807	General Mgt.(207), Taxation(278), Customs(20), Prison Officer(34), Mechanics(17), Foreign Affairs(26)	General Mgt.(20), Taxation(22),
G9		4,120	General Mgt.(215): - Nationwide(89), Regional(126) Post Office(156), Correction(92), Prosecutor(340), Immigration(50)	General Mgt.(9) Post Office(13) ..
				General Mgt.(7) Correction(3), Prosecutor(10), Immigration(1) ..

※ Total: 5,307

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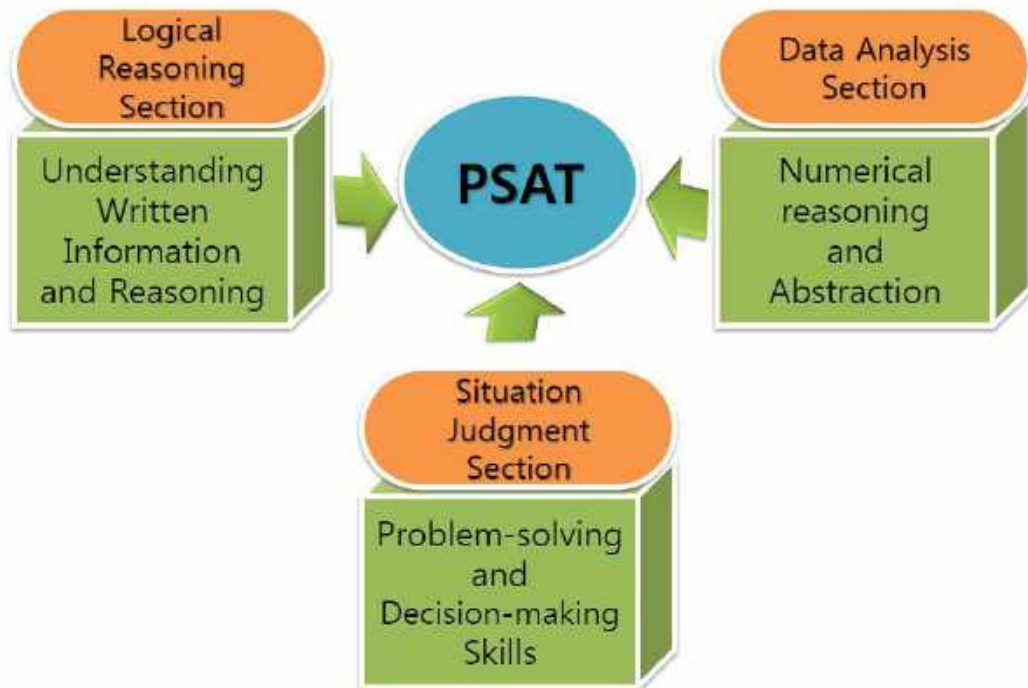
Open competition exam

Grade	Method of test	Subject*
G5	1 st exam (multi choice test)	<ul style="list-style-type: none"> · PSAT (Public Service Aptitude Test) · English test (required) · Korean history exam (required since 2012) · Constitutional Law (Pass/Non Pass)
	2 nd exam (essay test)	<ul style="list-style-type: none"> · Administrative law, Public Administration, Economics, Politics · Optional subject (1)
	3 rd exam (interview)	<ul style="list-style-type: none"> · Presentation · Group discussion · Individual interview
G7 & 9	1 st exam (multi choice test)	<ul style="list-style-type: none"> · (G7) Korean, English, Korean history, Constitutional law, Administrative law, Public Administration, Economics · (G9) Korean, Korean history, English · Optional subjects (2)
	2 nd exam (interview)	<ul style="list-style-type: none"> · (G7) Presentation · Individual interview

* This table only shows subjects in general service exam

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Overview of PSAT (Public Service Aptitude Test)



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Promotion Overview

- Promotion to Grade 4 or Lower (G4/5-8)

Performance Evaluation	70%
Seniority (Length of Service)	30%
Yearly Individual Learning Hours (Since 2007)	100 hours or more

- Promotion to G5
 - Examination may be required in some ministries
- Promotion to the Senior Civil Service
 - Screened by Ministerial Promotion Committee (Promotion to 63)
 - Review by SCS Appointment Committee is required for promotion to SCS
 - Seniority, Performance, Competency Building, Training, and Competency Assessment (SCS)

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Service Years for Promotion

Minimum Period

Grade 4→3	3
Grade 5→4	4
Grade 6→5	3.5
Grade 7→6	2
Grade 8→7	2
Grade 9→8	1.5

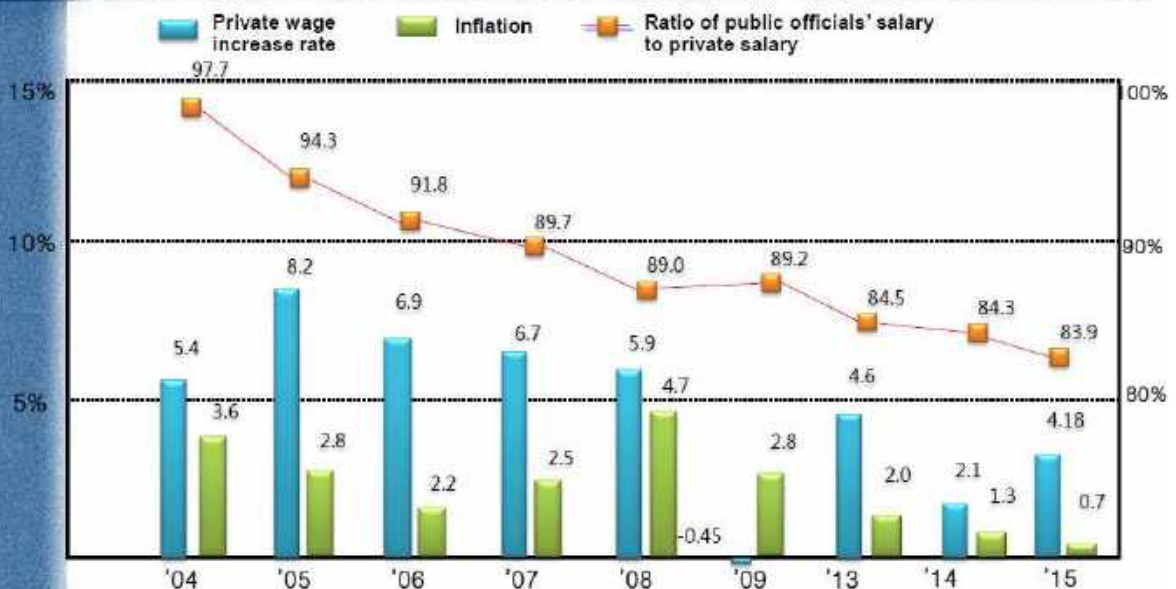
Actual Period for Promotion

Grade	Joined the Government as G5 officer	Joined the Government as G7 officer	Joined the Government as G9 officer
S.C.S	21.2 years	28.2 years	32.9 years
Grade 4	9.2 years	22.1 years	30.6 years
Grade 5		14.6 years	25.2 years
Grade 7			11.7 years

(Source: Former MOSPA, 2014)

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Private Pay Access Rate



• The ratio of public officials' salaries to private sector salaries: 83.7%('12), 84.5%('13), 84.3%('14), 83.9%('15)

* Criteria: Companies with over 100 full-time employees

• Public officials' wage increase rate: 3.5%('12) → 2.8%('13) → 1.7%('14) → 3.8%('15) → 3.0%('16)

* G9: 3.6%

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Remuneration for Government Employees in 2016

(Monthly remuneration, Unit: USD)

Grade Service Years	G1	G2	G3	G4	G5	G6	G7	G8	G9
1	3,023	2,721	2,455	2,104	1,880	1,551	1,392	1,241	1,120
2	3,129	2,822	2,546	2,190	1,956	1,623	1,455	1,301	1,173
3	3,238	2,925	2,640	2,278	2,035	1,698	1,523	1,365	1,228
4	3,349	3,028	2,734	2,367	2,117	1,774	1,593	1,430	1,288
5	3,463	3,133	2,830	2,457	2,201	1,852	1,666	1,497	1,350
6	3,578	3,238	2,926	2,549	2,287	1,933	1,741	1,566	1,414
7	3,695	3,344	3,024	2,641	2,374	2,013	1,817	1,636	1,476
8	3,813	3,450	3,122	2,734	2,463	2,094	1,893	1,702	1,537
9	3,932	3,557	3,221	2,827	2,551	2,176	1,965	1,766	1,595
10	4,052	3,664	3,320	2,920	2,641	2,252	2,034	1,826	1,651
Max	5,195	4,777	4,405	3,933	3,647	3,225	2,919	2,645	2,422

(Source: Ministry of Personnel Management, 2016)⁴¹

Pay Structure

1. Performance Bonus Program

- Application: Grade 5 and below
- Form of payment: a lump-sum bonus based on **Performance Evaluations**
- Bonus amount
 - Bonuses are calculated by multiplying the standard basic salary by the performance bonus rate
- Performance Bonus Rate
 - **S (top 20%)** **172.5 % or more** (of standard base salary)
 - **A (20-60%)** **125 %**
 - **B (60-90%)** **85 %**
 - **C (Others)** **0 %**

※ High Performers (2%): Additional Bonus(50%) of Performance Bonus

Pay Structure

2. Performance-based Annual Salary

- Application: Members of SCS and G3-4 Officials (Division Directors), G4 Officers, G5 (Unit Directors)
- Components of pay
 - Fixed pay: minimum and maximum range for each grade is calculated by base monthly salary and allowances.
 - Variable pay: 4 pay rate categories are decided by a performance appraisal based on **Performance Agreement**.
- Performance Pay Increase Rate

● S (top 20%)	7 % (of standard basic salary)
● A (30%)	5 %
● B (40%)	3 %
● C (10%)	0 %

※ High Performers (2%): Additional Performance Pay (50% of Performance Pay Increase)

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Working Conditions

- Working Hours
 - 9 a.m. to 6 p.m. Monday through Friday
 - 5 day Workweek System since July 1, 2005
- Public Holidays(15 days)
 - New Year's Day, Lunar New Year's Day (3), Independence Movement Day (March 1), Children's Day, Buddha's Birthday, Memorial Day, Independence Day, Autumn Harvest Day (3), National Foundation Day, Hangeul Proclamation Day, and Christmas, etc.

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Leave System

- **Annual Leave**
 - Up to 21 days a year depending on the length of service (paid vacation)
- **Sick Leave**
 - Up to 2 months a year
 - Up to 6 months in the event the illness is job related
 - After sick leave, employee may obtain a leave of absence
- **Official Leave**
 - When subpoenaed before a court or a gov't agency
 - In case of natural disaster, etc.
- **Special Leave**
 - Family events such as funerals, marriage (2-7 days)
 - 90 days for maternity
- **Sabbath Leave**
 - One month
 - Accumulation of unused leave

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Leave of Absence

- **Mandatory Leave of Absence**
 - Serious health problem, military service, missing (disaster), etc.
- **Leave of Absence by Permission**
 - Temporary employment at international institution, foreign government, university or research institute
 - Study, health problem, child care, etc.
- ❖ **New policy :**
 - Temporary employment by the private sector for up to 2 years
 - Company : Small, medium-sized and big enterprises
 - Eligibility : Grade 3-8 officers
 - Childcare leave :
 - Counted for promotion and career (one year)
 - Nursery allowance
 - Parental Leave (one year -> three years)



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Retirement

Retirement Age : 60

- Teachers: 62
- University lecturers: 65

Honorary Retirement

- For those who have worked more than 20 years and voluntarily retire more than 1 year prior to retirement age
- Paid Honorary Retirement Allowance
- Honorary Special Promotion is allowed.

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Outline of Pension System

Coverage

- All public officials in the central and local governments, including judges, policemen, postal service workers and public school teachers
- Elective officials are not eligible

Contributions

- Contribution Rates: 8.0% (Public officials) + 8.0% (Government)

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Outline of Pension System (Cont.)

1) Retirement Pension

- Eligibility: At the age of 60 with at least 20 years of contributions
 - * At the age of 65 for new entrants from 2010
- Period of Pension Base: Final 3-year Average Salary (until 2009)
=> Career Average Salary (2010-)
- Pension Formula: Career Average Salary \times Service years
(up to 33 years) \times (1.9 \Rightarrow 1.7 by 2035)
- Pension Indexation: Consumer's Price Index
(Frozen from 2016 through 2020)
 - * A retiree may choose a Lump Sum Payment instead of monthly Retirement Pension.

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Outline of Pension System (Cont.)

2) Survivor's Pension

- Eligibility: Surviving dependants include the spouse, children and the parents of the insured person or pensioner
 - * Survivor benefits are excluded or terminated in the event of the following conditions:
A spouse who remarries after retirement, the pensioner's divorcee, and children over 18 years old except for the disabled
- Pension Formula
 - 60% of the Retirement Pension

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Public Officials' Service

- **Public Service Ethics Act**
 - Registration and Disclosure of Property (Chapter II)
 - Sale or Trust of Stocks (C. II-2)
 - Report on Gifts (C. III)
 - Restriction on Employment of Retired Officials (C. IV)

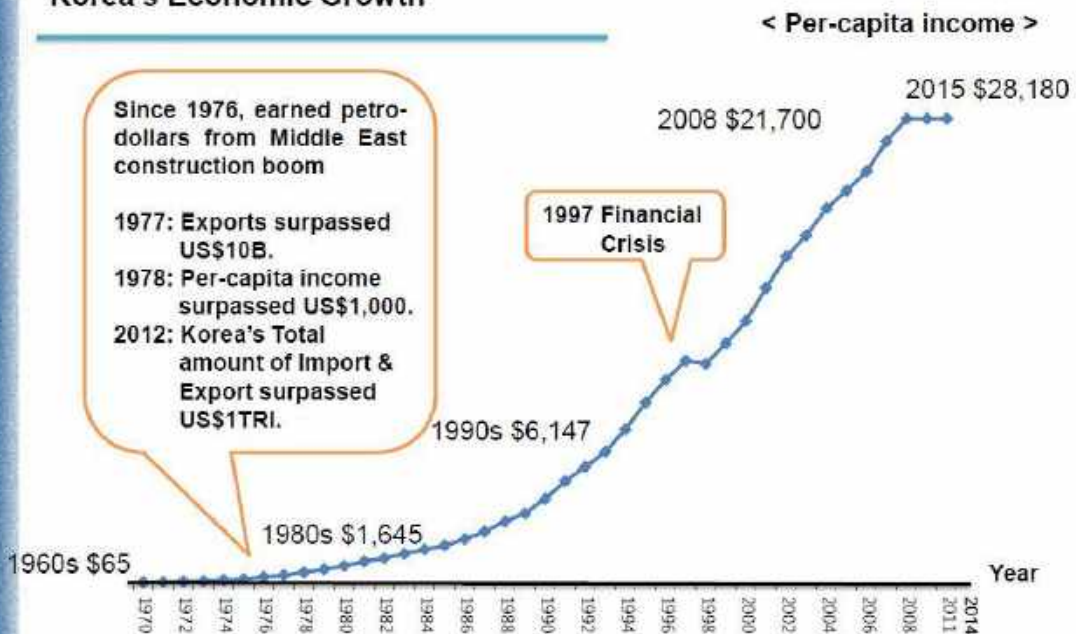
IV. Economic Development and Public HR Policy

Public HR Policy

- Government Role in Economic Development Process
- Academic Background of Central Government Employees
- Emerging Challenges
- Korea's Strengths
- Public Human Resource Management
 - Strengthening Openness & Competition
- Public Service Education & Training

Government Role in Economic Development Process

Korea's Economic Growth



Increase in Korea's Per-capita Income

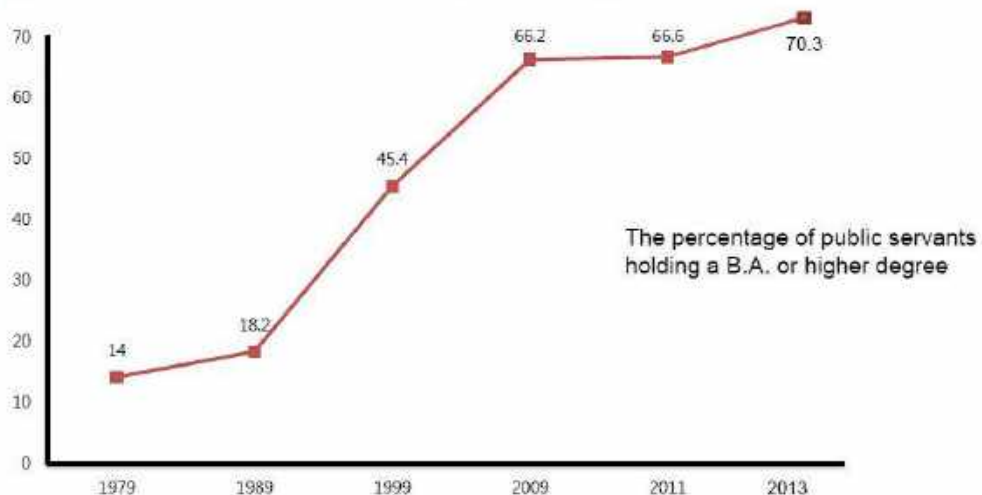
Government Role in Economic Development Process

The Role of Government & Public Servants



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Academic Background of the Central Government Employees



Academic Background

- Middle School : 2.1%
- High School or Two year college : 13.8%
- Four year university : 48.4%
- Graduate School or Higher : 21.9%

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General Information on Korea Government Employees as of 2013

- Average Age : 43.2 years old
- Forty years or older : 64.1%
- Average Service Years : 16.8 years
- Average Number of Children : 1.9 persons
- Those who own their houses : 67.9%
- Percentage of Female Employees : 41.4%
- School Teacher : 67.9%

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Emerging Challenges (Creative Economy)



"People are the nucleus of a creative economy. We live in an age where a single individual can raise the value of an entire nation and even help in rescuing the economy."

New opportunities to serve their country will be opened to numerous talented Koreans thriving across the global village. And to those who are equally enabled at the home front, efforts will be enhanced to allow them to become convergence leaders imbued with creativity and passion as pillars of a future Korea."

※ Excerpt from President Park Geun-hye's Inauguration Speech

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Korea's Strengths

A Passion for Learning and Education, A Will of Iron



Kim Yu-na
Olympic Figure
Skating Champion

"In the wake of my father's business failure, our family was too poor to buy me a pair of figure skates. With no exclusive skating rink available for me, we managed to rent a skating rink every night and I practiced without skipping even a day."

- Unwavering spirit in the midst of extreme difficulties
- Sheer determination & endurance
- Ability of Korean youngsters to overcome obstacles and challenges with a "can-do" spirit and a passion to excel

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Strengthening Openness and Competition in the Public Service

1

Increased Employment of Outstanding Talent and Experts from both the private and public sectors through the **Open Position System** and the **Job Posting System**

2

Promoting Diversity

- Grade 5 & 7 Recruitment of those with private careers
- Diversification of Recruiting Channels
- Improvement of Test Methods
- Strengthening Affirmative Action

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Strengthening Openness and Competition in the Public Service

1

Increased Employment of Outstanding Talent and Experts from both the private and public sectors through the **Open Position System** and the **Job Posting System**

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Strengthening Affirmative Action (1)

Gender

- When the ratio of selected males/females is less than 30%, additional acceptance is made
- *Currently, women civil servants' rate: 42%

The Disabled

- Open Competitive Recruitment for G7 & 9
 - 3% or more of new employees for the disabled
 - ※ 3.26% (2014)
- Special employment of the severely disabled since 2008
 - More than 30 new positions ('15)

Lower Income Group

- Open Competitive Recruitment for G9 since 2009
- 2% of the new positions for lower income bracket

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Strengthening Affirmative Action (2)

Local School Graduates

- For G5 open recruitment, pre-set target quota of 20% of positions for local school graduates.
- For G7 : 30%

Internship Program For Local Talents

- Recommended by local universities / high schools
→ Selection (written test, interview) → 1 yr / 6 month internship → Evaluation → Appointed as G7 / G9 civil servants
- For G7 : 105 persons, G9: 150 persons ('15)

Valiant Citizens who sacrificed their lives

- Additional Points to their spouses, children (G6 or below Entrance Examination)



While promoting diversity in the public service, strengthened Affirmative Action leads to social integration.

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V. Public Service Education and Training

65

1. Korean Experiences in Public Officials Education & Training (E&T)

1) Historical Change of Public Service Education & Training (E&T)

◆ 1st period: 1949-1960 (Introduction Period)

- Founded and named the “National Officials Training Institute (March 1949) : The Present Central Officials Training Institute (COTI)
 - in accordance with the Prime Minister's order

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1. Korean Experiences in Public Officials Education & Training (E&T) (Cont.)

◆ 2nd period: 1961-1980 (Settle-down Period)

- The Public Service Education and Training Act promulgated. (1961)
- Education and Training Division established in the former Ministry of Government Administration. (1961)
- NOTI was reorganized and renamed 'COTI'
- Training records were considered in evaluation of public officials' performance for the promotion.
- Overseas Training Programs launched. (1977)
 - Long-term and short-term programs
- Professional and Technical Training Institutes under Central Government Agencies established.
- Local Government Training Institutes established

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1. Korean Experiences in Public Officials Education & Training (E&T) (Cont.)

◆ 3rd period: 1981-2002 (Expansion Period)

- The 5 Year Public Service Education and Training Development Plan drafted and implemented. (1982)
 - Training before appointment(placement) for newly recruited officers
 - Training prior to promotion
 - Public Training Institutes filled by qualified lecturers
- One Year Senior Executive Program launched. (1993)

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1. Korean Experiences in Public Officials Education & Training (E&T) (Cont.)

◆ 4th period: 2003-present (Maturation Period)

- The Public Human Resource Management Planning formulated. (2006)
 - Enhanced linkage between Training and Personnel Management
- Advanced Training Methods such as Action Learning Training Method introduced. (2006)
- Individual Learning (Training) Hours System launched. (2007)
 - Training records considered in evaluation of public officials' performance for the promotion have become accounted.
 - Required to fulfill specified individual learning (training) hours yearly as a part of requirements for promotion (G4-9 officials)
 - Education and Training mandated as a joint responsibility of the officer and his or her supervisor.

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1. Korean Experiences in Public Officials Education & Training (E&T) (Cont.)

Decade	Major Subjects	Features
1980's	<ul style="list-style-type: none"> • Specialized Training was expanded to keep public officials proficient in their skills 	<ul style="list-style-type: none"> ▪ Public Service Training System was consolidated
1990's	<ul style="list-style-type: none"> • Customer Satisfaction • Dealing with and Resolving Petitions • Globalization, Strengthening of International Competitiveness • Business Mind-set • Market Mechanism 	<ul style="list-style-type: none"> ▪ Emphasis was given to keeping pace with globalization
2000's	<ul style="list-style-type: none"> • Good governance • Building Transparent Administrative Management System 	<ul style="list-style-type: none"> ▪ Action Plan ▪ Customized program ▪ Participatory and Experiential Training ▪ Cyber Training introduced

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2. Legal and Institutional Framework

1) Statutory and Regulatory Basis

- State(Local) Public Officials Act
- State (Local)Public Officials Education and Training Act
- Enforcement Decree on State(Local) Public Officials Education and Training

< Article 50, State Public Officials Act >

- In order to cultivate knowledge, techniques and abilities for application to the duties in charge, all public officials and probationary public officials shall undergo education and training under conditions as prescribed by acts and subordinate statutes.

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2. Legal and Institutional Framework (Cont.)

2) Major Objectives

- To instill public service ethics into the minds of all public officials as servants of all citizens so that they can better serve the people
- To improve public officials' skills and capabilities to perform their job well

3) Central Personnel Management Agency

- The Minister of Ministry of Personnel Management (MPM) exercises overall planning and coordination with regard to public officials education and training by obtaining cooperation for each agency

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2. Legal and Institutional Framework (Cont.)

4) Training Principles

- based on the Public Officials Education and Training Act
- All the career service employees must undertake grade level basic (foundation) training programs before promotion or appointment (placement).
- All the public officials are encouraged to take specialized training programs to increase their knowledge and skills to carry out their functions effectively in their respective fields.
- Training is a joint responsibility of the officer and his or her supervisor. (Individual Development Plan & Performance Agreement)
- Training should meet needs of individuals and be aligned with the organization's goals and objectives.

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2. Legal and Institutional Framework (Cont.)

5) Self-directed On-going Learning

- based on the Enforcement Decree on Public Officials Education and Training Act

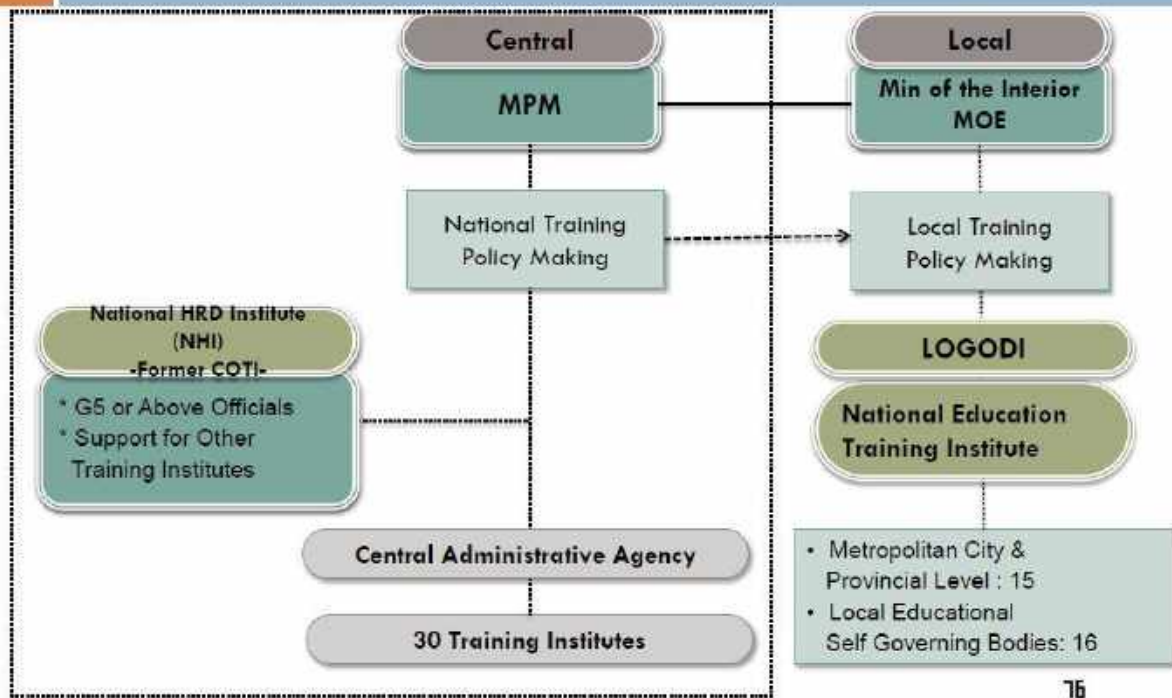
- G4 - 9 Officers
 - Individual Development Plan
 - Compulsory Individual Learning (Training) Hours: 100 hrs or more yearly
 - Work-related
 - 40% or more of learning (training) hours
 - directly related to job functions and responsibilities
 - at the institutions (Public / Private HRD Centers, Gov.t' Agency, Internet) designated by his or her Ministry or Agency
 - Self-Development
 - 60% of learning (training) hours
 - Support Job Performance
 - May not be related to job functions

※ Promotion to G4 or Lower (G4/5-8)
 - Performance Evaluation : 70%
 - Seniority (Length of Service) : 30 %
 - Compulsory Individual Learning Hours (Since 2007) : 100 hours or more

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2. Legal and Institutional Framework (Cont.)

6) Training Policy Making and Training Institutions



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3. Classification of Education and Training (Cont.)

2) Types of Training Programs Classified by Contents

- Based on the Enforcement Decree on Public Service Education and Training

Training Programs	Providers
<ul style="list-style-type: none"> • Basic (General, Foundation, Grade-based) Courses 	<ul style="list-style-type: none"> • Public Service HRD Centers
<ul style="list-style-type: none"> • Specialized (Professional) Courses 	<ul style="list-style-type: none"> • Workshops(Courses) organized by his or her agency • Public Service HRD Centers • Domestic or overseas institutions commissioned by government agency
<ul style="list-style-type: none"> • Other Courses <ul style="list-style-type: none"> - Civil Service Ethics Training - Training on Government Policy (National Agenda) - OJT / Orientation - Individual Learning / Research Activities 	<ul style="list-style-type: none"> • Workshops • Public Service HRD Centers • Private Sector HRD Centers • Individual Learning

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3. Classification of Education and Training (Cont.)

3) Training Programs Categorized by Providers

Providers	Descriptions	Types of Training Programs
Public Service HRD Centers	<ul style="list-style-type: none"> - Central Officials Training Institute - Ministerial HRD Centers 	<ul style="list-style-type: none"> - General (Basic, Foundation) Courses - Specialized Courses - Other Courses
Respective Government Agencies	<ul style="list-style-type: none"> - Training at Office - Performance-related Courses - Cultural Subjects - Workshops on Specific Areas 	<ul style="list-style-type: none"> - Professional and Specific Fields - Public Service Core Values and Civil Service Ethics Training
Institutions Commissioned by Government Agencies (Consignment Training)	<ul style="list-style-type: none"> - Courses and Programs offered by domestic and overseas Institutions 	<ul style="list-style-type: none"> - Overseas Fellowship Program - Domestic Fellowship Program

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3. Classification of Education and Training(Cont.)

4) General (Basic, Foundation) Training Program

Fostering Public Service Ethics and Sense of Dedication while increasing the Essential Knowledge and Competency relevant to their Grade Levels and Responsibilities

○ Program

- **Senior Executive Program**
 - Senior Civil Service (Bureau Directors in the Central Government)
- **SCS Candidate Development Program**
 - Division Directors (G3 – 4)
- **Division Director Leadership School**
 - Division Directors (G3–G4)
- **Division Director Candidate Development Program**
 - G4 Deputy (Assistant) Directors
- **Initial Entry Officials Course (G5) & Newly Promoted Managers Course (G5)**
 - Prospective G5 Officers
- **Newly Recruited Staff Program**
 - New Grade 7 and 9 Personnel

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3. Classification of Education and Training(Cont.)

5) Specialized Training Program

Enhancing the productivity and capability of public officials by providing specific competencies development program appropriate to the challenges of the ever-changing environment

- Objectives**
- ✦ To train professional public servants
 - ✦ To keep public servants proficient and up-to-date in their assigned fields

○ Courses

< National Government Level >

- | | |
|-----------------------------------|--|
| ■ Economy Democratization | ■ Social Conflict Management |
| ■ Self-Esteem as Public Officials | ■ Future Foresight and Managing for the Future |
| ■ National Security | ■ Green Growth |
| ■ FTA | ■ HRD Professionals |
| ■ Positive Psychology | ■ Legislation |
| ■ Creativity School | ■ Budgeting and Planning |
| ■ Leadership Development | |

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3. Classification of Education and Training(Cont.)

< Local Government Level >

- | | |
|-------------------------------------|---|
| ■ National Agenda | ■ Leadership of Head of Local Autonomy Body |
| ■ Promotion of Tourism | ■ Customer Satisfaction |
| ■ Statistics | ■ Planning |
| ■ Local Tax Law (Act) | ■ Presentation |
| ■ Local Tax Affairs | ■ Public Relations and Marketing |
| ■ Organization Personnel Management | ■ Multi-cultural Society |
| ■ Investment Promotion | ■ Urban Planning and Design |
| ■ Local Autonomy Law (Act) | ■ Public Health |
| ■ Local Council Affairs | ■ Water Management |
| ■ Producing a good report papers | ■ Land Reparation |
| ■ Women Leadership | ■ HRD Professionals |
| ■ Speech and Interview | ■ Informatization / Computer |

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3. Classification of Education and Training(Cont.)

6) National Agenda Forum/ Workshop

To serve as a forum for Korean officials in their pursuit of change and creativity as Korea moves towards advanced-country status

Features

- To share and spread the nation's vision, the philosophy and goals of the administration
- To allow high-ranking officials such as ministers, vice ministers, and SCS members to share ideas in public policy management
- To create strategies responding to critical issues facing the nation
- Utilizing weekend time



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3. Classification of Education and Training(Cont.)

7) Global Competency Development Program

To empower Korean officials with global competency to lead Korea as a global actor

Objective

- To help public servants to become globally competent

Programs

- Advanced Integration Program for Overseas Study
(In three foreign languages: English, Chinese, and Japanese)
- International Negotiation Program
- Global Leadership Development Program



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3. Classification of Education and Training(Cont.)

8) Online Program

To provide access to e-Learning courses at any time and any place for clients

e-Learning Center

-  Offering open and autonomous training
-  Sharing NHI(COTI)'s online system and courseware programs with about 130 institutions
-  Providing consulting services and technical assistance
-  Employing blended format training (in residence + online training)

Programs

-  NHI(COTI) offers 132 programs
-  Areas
 - ✓ Government Tasks
 - ✓ Administrative Law, System and Practices
 - ✓ Cultural Subjects



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3. Classification of Education and Training(Cont.)

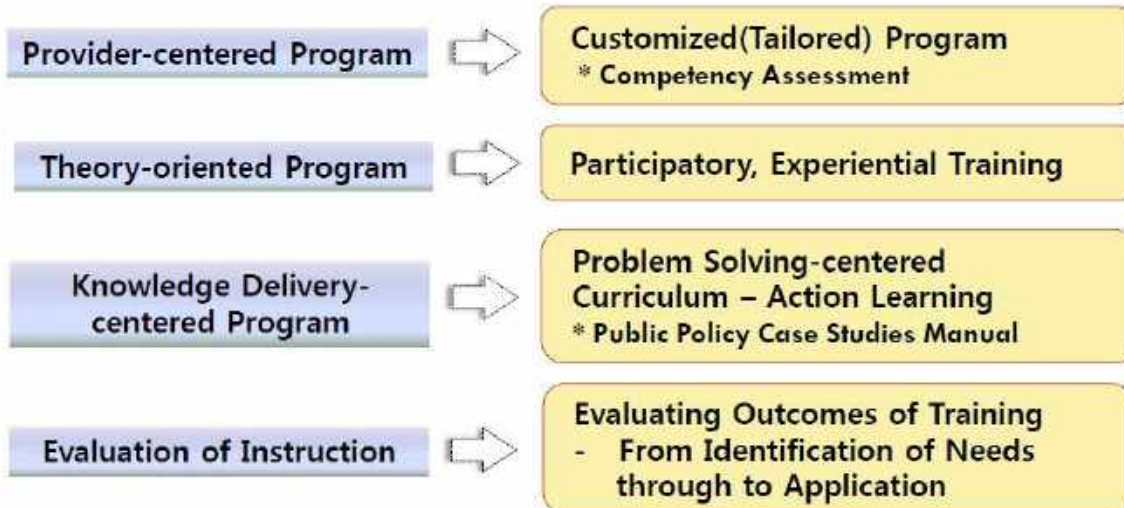
9) International Programs for Foreign Officials

Foreign Officials' Participation in International Programs Leads to Global Cooperation

Customized Programs for Single Countries	Official Development Assistance (ODA) Program	Program in Association with International Organization
--	---	--

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4. Recent Approaches to Training by Public Sector Training Institutes



d1

5. Assistance to and Cooperation with HRD Center

NHI(COTI) serves as a support center for other HRD centers while strengthening cooperation and building networks

Activities

- 👤 Sharing HRD information among HRD centers
- 👤 Distributing materials and journals
- 👤 Providing a database of highly qualified teaching resources
- 👤 Hosting contests and coordinating annual meetings
- 👤 Hosting a private and public sector HRD exposition



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Thank you!

- kukkyo@naver.com
- If you have any questions, feel free to email me.

Lecture 7



E-Government & Government 3.0

Dr. Lee, Nagyoen

Consultant

United Nations Asian and Pacific Training Centre for Information and
Communication Technology for Development

He has been serving for the United Nations Asian and Pacific Training Centre for Information and Communication Technology for Development as a consultant and instructor for e-Government projects since 2008. He teaches the ICT-related subjects for policy makers and government officials at the national and local government levels for the implementation of ICT-based applications.

Furthermore, he has been contributed to develop ICT in Korea and abroad implementing a lot of valuable projects.

As representative cases for the international development cooperation projects, he introduced a national identity (ID) system, building on a successful experience of comprehensive voter list database for the 9th parliament election of Bangladesh held in December, 2008 and conducted a preliminary study for PKI frameworks, guidelines and a working model in Ethiopia in cooperation with the concerned national governments as a consultant of multilateral organizations.

Korea e-Government and Government 3.0 (Smart Government)

Nag Yeon Lee, Ph.D.

Centre on Integrated Rural Development for Asia and the Pacific, CIRDAF, February 25, 2016

Korea e-Government overview and Best practices

- This module provides background knowledge on the basic concepts and key elements of e-Government. It gives an overview of the evolution of Korea e-government, its content and its applications, with particular reference to best practices.
- Topics include:
 - ✓ Session 1: Overview of Korea e-Government
 - ✓ Session 2: Korea e-Government best practices
 - ✓ Session 3: Government 3.0 (Smart government)
 - ✓ Session 4: Questions and Answers

Session 1 : Overview of Korea e-Government

e-Government Definition

e-Government can be broadly defined as the application of Information and Communication Technology (ICT)

- e-Government is generally defined as being “the use of digital technologies to transform government operations in order to improve effectiveness, efficiency, and service delivery”

(Source: Mark A. Forman, “Using it to transform the effectiveness and efficiency of government”, June 2005)

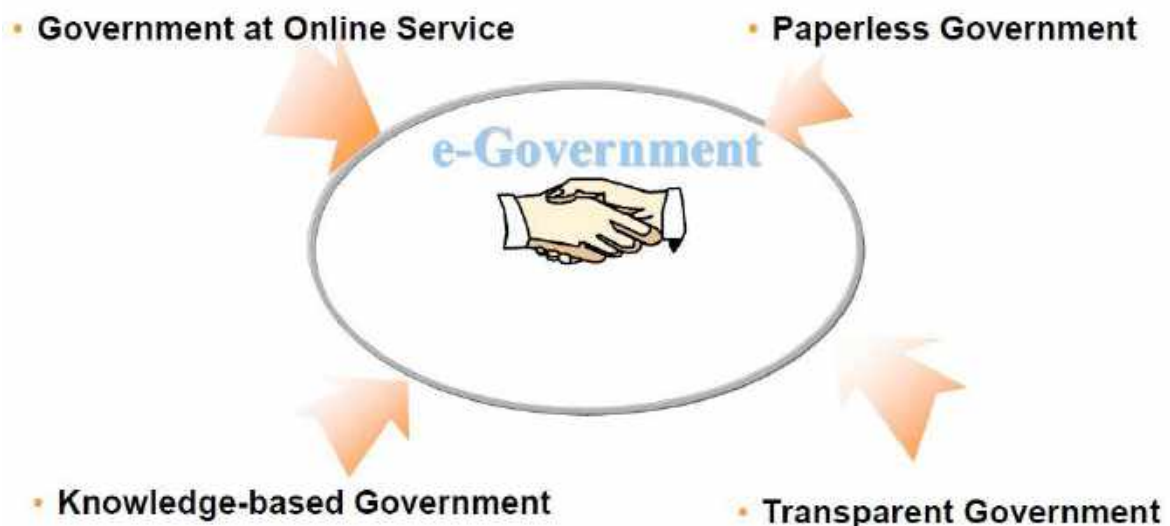
- e-Government is *not a single event in short period of time* but a long-term evolutionary process of transforming government to focus on citizen services.

e-Government Definition (Continued)

- Establish the high level of e-government roadmap (top-down design) with bottom-up detail implementation approach.
- The purpose of e-government is a *more effective* delivery of government services to citizens.
- The more services are *available online* and the greater the usage of these services, the greater will be the impact of e-government.
- E-government requires a critical mass of e-Citizens and e-Businesses to *generate sustainable impact* beyond internal efficiency and transparency of government.

e-Government Definition (Continued)

What is e-Government ?



e-Government Definition (Continued)

- Implement programs aimed at improved accessibility and affordability of online and mobile content and ICT.

- The following four objectives can be achieved when e-Government project implement successfully:
 - Government at on-line service
 - Paperless government
 - Knowledge-based government
 - Transparent government
 - Service-oriented government

Korea e-Government overview

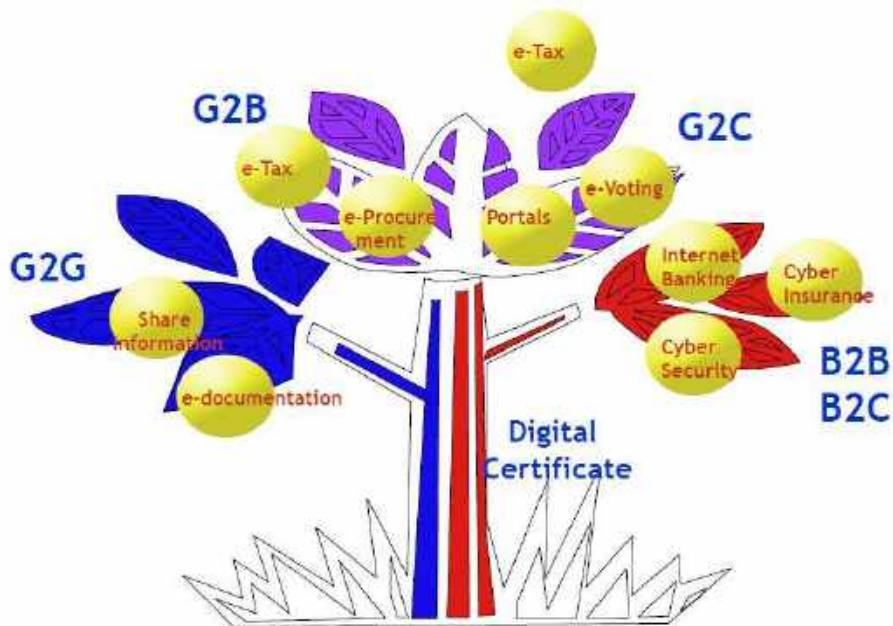
e-Government consists of three major tasks;

- a) Innovating Citizen Services(G2C)** : G2C providing information, services, and other tasks to citizens

- b) Innovating Business Services(G2B)** : G2B facilitating any of the range of relationships and interactions between government and businesses.

- c) Innovating the way Government works(G2G)** : G2G supporting information sharing and collaboration within and between government agencies.

Model of e-Government



Infrastructure (PKI, Datacenter, Legislation)

(Source: e-government, KAIST, July, 2008)

Korea e-Government overview Front Office Delivery (G2C)

A. Government to Citizen Services(G2C)

This single window on-line G2C portal can provide the following citizen services;

- Processing and issuance of various permits/ authorizations and certificates
- Information on legislative/administrative notices and relevant laws
- Payment services, including tax refunds and social welfare payments
- Opportunity to participate in government administration by requesting public hearings and casting electronic votes

Korea e-Government Overview

Front Office Delivery (G2C) - Continued

- **Integrated tax System**
Electronic tax services such as filing, payment and tax return through an online single window.
- **Integrated Insurance Service**
Social insurance information web portal service based on integrated database of 4 social insurances; Health, national pension, employment, and accident compensation.
- **Resident registration system (NID)**
Resident system effectively manage including registration and track of resident citizen.
- **Real-estate information management system**
On-line land-related services and online issuance of land registration ledger.
- **Vehicle administration system**
Vehicle-related administrative services such as registration, delivery, inspection and scrapping of cars.

Korea e-Government Overview

Front Office Delivery (G2B)

B. Innovating Business Services (G2B)

- The G2B service will provide one-stop e-government service to businesses including Corporate citizen administrative affairs, industrial information and other additional services.
- Electronic transaction services such as procurements, bids and so on.
- Payment services for various taxes and public charges.

Korea e-Government overview

Front Office Delivery (G2B) - Continued

- **Integrated e-procurement System**
Single window government procurement system making all procurements related processes electronically such as registration, tender, contract and payment for entire process through the Internet.
- **e-Custom system**
Streamline customs administration in the import and export industry and establish effective smuggling interdiction.
- **e-Commerce.**
The tasks that support the buying and selling of goods and services, and interactions among those tasks.

Korea e-Government Overview

Back Office Delivery (G2G)

C. Innovating the way government works(G2G)

(Back-Office Delivery)

Productivity and efficiency of Government

- The reporting systems of central and local governments are connected, resulting in increased accuracy.
- There is information sharing among agencies in terms of documents and knowledge management.
- Government agencies exchange idea and resources through electronic documents.
- Collaborative decision-making is made possible through video conferencing.
- Database sharing among agencies to improve efficiency work procedures.

Korea e-Government Overview

Back Office Delivery (G2G) - Continued

The following are examples G2G services in Korea.

- Integrated National Finance Information System:
Real-time management of national fiscal activities.
- Local e-Government Information System :
Construction of informatization for 232 Local governments administrative affairs.
- Education Information System and e-Learning:
Nationwide information network among schools.
- Government e-Document Exchange :
E-processing of preparation, approval, distribution and storage of all governmental documents.
 - ❑ Establishing electronic work process
 - ❑ Electronic document processing
 - ❑ Knowledge management system

1).Korea e-Government Implementation Background

Strategic Tool for Government Innovation

- The world is using e-Gov't for public sector reforms and service innovation
 - The Obama administration emphasized "connecting" and "empowering" the whole U.S through technology and innovation (The Clinton administration focused on "recreating" government)
 - OECD emphasized the importance of "government" over "e"
- ICT and e-Gov't are core strategic tools supporting innovation
 - Increase administrative efficiency and transparency
 - Provide information and services to the people and businesses anywhere anytime
 - Expand channels for participating in policy making for citizens

Utilizing ICT as Opportunity for Economic Development

- **1975 Korea commenced digitization of public administration under President Park Jung-Hee's order**
 - Recognizing the benefits of information efficiency led by the development of ICT as a challenge for Korea's economic development the government of Korea began to aggressively pursue transformation into a knowledge information powerhouse.

2). History of e-Government

Stages	Period	classification	Major Actions
Inception	1978~1987	Implementing Administrative Computerization	<ul style="list-style-type: none"> ■ The first & 2nd administrative computerization project
	1987~1996	Building Administrative Computer Networks	<ul style="list-style-type: none"> ■ The first & 2nd National Basic Information System computer networks project
Foundation	1997~2000	Promoting informatization	<ul style="list-style-type: none"> ■ Building the foundation for high-speed information and communications <ul style="list-style-type: none"> - Building 144 regional optical transport network nationally ■ Informatization on unit business or function <ul style="list-style-type: none"> - procurement, passport, patent, customs etc
Launch	2001~2002	11 major tasks for e-Government	<ul style="list-style-type: none"> ■ pan-ministry 11 major tasks such as e-civil service, e-procurement ■ partial & limited convergence among unit businesses
Diffusion	2003~2007	31 major tasks for e-Government	<ul style="list-style-type: none"> ■ Execution of 31 e-Government Project ■ Amendment of e-Government Acts (2007.1)
Maturity	2008~	Expansion of convergence & sharing	<ul style="list-style-type: none"> ■ Implementation of e-Government focused on usage and convergence <ul style="list-style-type: none"> - Expansion of linked convergence into public & private sector ■ Unification of implementation system for national informatization and e-Government

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3). Related Legal Framework

<p>e-Government</p> <ul style="list-style-type: none"> ● Framework Act on National Informatization, e-Government Act, Office Management Regulation, Law on Processing Civil Affairs, Law on Resident Registration, Act on Public Records Management, Information Disclosure Act
<p>Information Usage Enabling Environment</p> <ul style="list-style-type: none"> ● Digital Signature Act, Framework Act on e-Commerce, Act on Promotion of e-Trade, Act on Internet Address Resource
<p>Prevention of Negative Effects of Informatization</p> <ul style="list-style-type: none"> ● Act on Promotion of Information and Communications Network Utilization and Information Protection, etc, Act on Personal Information Protection, Use and Protection of Credit Information Act, Protection of Communication Secrets Act, Act on the Protection of Information and Communications Infrastructure
<p>Sustained Development of IT and Industry</p> <ul style="list-style-type: none"> ● Framework Act on Telecommunications, Act on the Protection, Use, etc of Location Information, Framework Act on Electronic Commerce, Electronic Financial Transaction Act, Software Industry Promotion Act, e-Learning Industry Development Act, Framework Act on the Promotion of Cultural Industries

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4). e-Government Budget

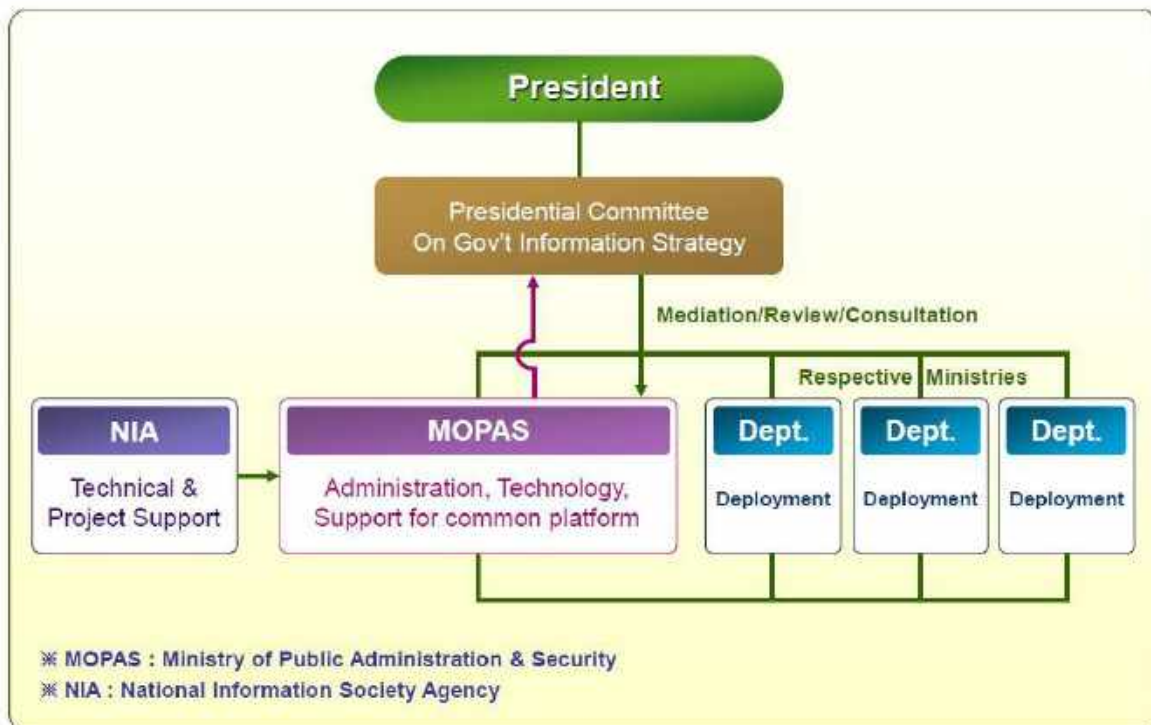
	2002	2005	2010	2011
Budget	12,155	20,272	22,203	21,948
Fund	7,053	8,780	10,892	11,075
Total	19,208	29,052	33,095	33,023

(Unit: KRW 100 million)

- Built early e-Government foundation form government budget and the Information and Telecommunication Promotion Fund
- Around 10 years of continued investment into informatization (1% of State Finance Budget) 
- The ministry in charge of e-Government (MOPAS) set aside a separate budget for horizontal projects involving multiple ministries (prevent duplicative investment and effectively carry out horizontal projects)

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5). Organization



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6). Major Outcomes

	Before	After
Services to the People <ul style="list-style-type: none"> ● Customs Clearance Service (export clearance) ● Patent Service (examination period) 	<ul style="list-style-type: none"> ● 1+days ● 36 month(1997) 	<ul style="list-style-type: none"> ● 2-min ● 9.8 month(2006)
Efficient Public Administration <ul style="list-style-type: none"> ● e-Procurement (No. of contract per employee) ● e-Document distribution 	<ul style="list-style-type: none"> ● 179(1997) ● 78.1%(2002) 	<ul style="list-style-type: none"> ● 890(2008) ● 100%(2010)
International Recognition <ul style="list-style-type: none"> ● UN e-Government development index ● UN Public Service Awards 	<ul style="list-style-type: none"> ● 15 rank(2001) ● 0 	<ul style="list-style-type: none"> ● 1 rank(2010 & 2012 & 2014) ● 5 winner(2003, 2007, 2011)

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Session 2 : Korea e-Government Best practices

Korea's Journey to e-Government

Achieving the World's Best e-Government

International Awards	Model Cases Selection	International Certification
HANARO <ul style="list-style-type: none"> Shared use of administration info 1st prize by e-challenge (2010) 	HOMETAX <ul style="list-style-type: none"> Comprehensive Tax service Good practice of e-Tax by OECD (2006) 	g2b <ul style="list-style-type: none"> e-Procurement services Int'l Standard by UN/CEFACT (2005)
INVIL <ul style="list-style-type: none"> Internet village 1st Public Service Awards by UN(2011) 	MINWON24 <ul style="list-style-type: none"> Internet Civil Services Best Website by YAHOO (2002) 	KIPORO <ul style="list-style-type: none"> e-Patent services ISO 20000 (2006)
NCIA <ul style="list-style-type: none"> Gov't Data Center Data center received excellency Award by future Gov (2010) 	e-people <ul style="list-style-type: none"> Petition and discussion portal Top 10 e-Gov by World e-Gov forum (2007) 	UNIPASS <ul style="list-style-type: none"> e-Customs clearance services ISO 20000 (2006) ISO 9001 (2009)

1. Online Civil Service (G4C)

- Number of documents and visits have decreased through online civil services

Civil information inquiry, petition & application, document inquiry and issuance, etc.



Civil information inquiry and application

- Online information services for up to 4,969 inquiries
- Online application statistics : 410 inquiries(2005) ▶ 3,020 inquiries(2010)
- ※ Online business registration, tax payment and its certificates, factory registration, etc.

Online document inquiry and issuance

- Issuance statistics : 8 inquiries(2005) ▶ 1,208 inquiries(2010)
- * Awarded the 2011 UNPSA - Improving transparency, accountability and responsiveness in the public service

Online Civil Services (G4C) (Continued)

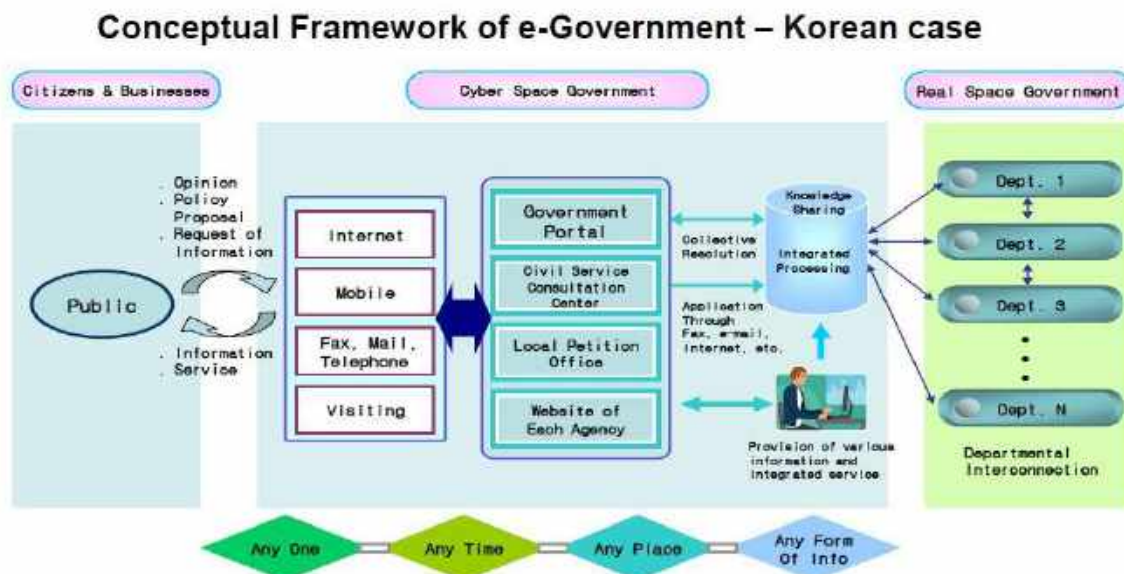
Introduction

- Innovating Citizen services(G2C)
- Innovating Business services(G2B)
- Innovating the way government works(G2G)

- Multi-channel access with single window, the type of integrated services provided, and the back-end side of each departmental level connection and data integration.

- This diagram could provide a good understanding of what we are targeting for the G2C and G2B as an overview of e-Government before we start to introduce each detail application.

Online Civil Services(Continued)



* Source: e-Government Roadmap of Republic of Korea by Presidential Committee of Government Innovation and Decentralization.

Online Civil Services(Continued)

On-Line Citizen Service(G2C portal)

Introduction

Why we need G2C portal?

The problem of inefficiency in government administration was caused by the separate operation of major national database such as residents, lands, vehicles, Tax, etc.

- Citizens were required to make redundant registrations and go through a lot of paper works for certificate application paying multiple visits to government agencies.
- G2C portal provides various services, including issuance of various certificates, electronic payment, and dissemination of government information.

Online Civil Services(Continued)

There are many examples of G2C portals reshaping the service delivery processes of governments. Although individual agency or ministry websites are still important, it has now been generally accepted that G2C portals are becoming the preferred online format for governments to present their informational and service offerings to constituents.

- G4C Portal (Minwon 24) in the Republic of Korea
- Singapore's eCitizen Portal
- How about your country?. What is the name of portal?.

2. Integrated Tax System

Introduction

The consolidated online tax system is to facilitate the use of the Home Tax Service(HTS) in a more convenient way to take all proceedings related to tax notices, tax reference, tax payments. The on-line tax system consists of Income tax, Corporation tax, value added tax, property tax, and other taxes.

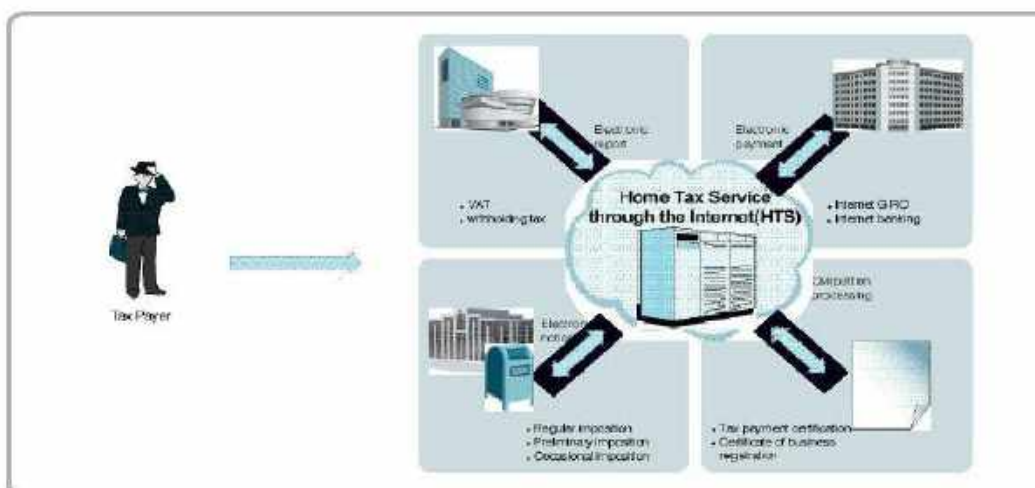
The objectives to integrated tax system is to

- increase tax revenue
- prevent anti-corruption
- increase voluntary tax payment by tax payers
- establish advanced tax administration
- make fast and accurate public service.

2. Integrated Tax System(Continued)

Electronic tax services such as filing, payment and tax return through an online single window

Concept of System



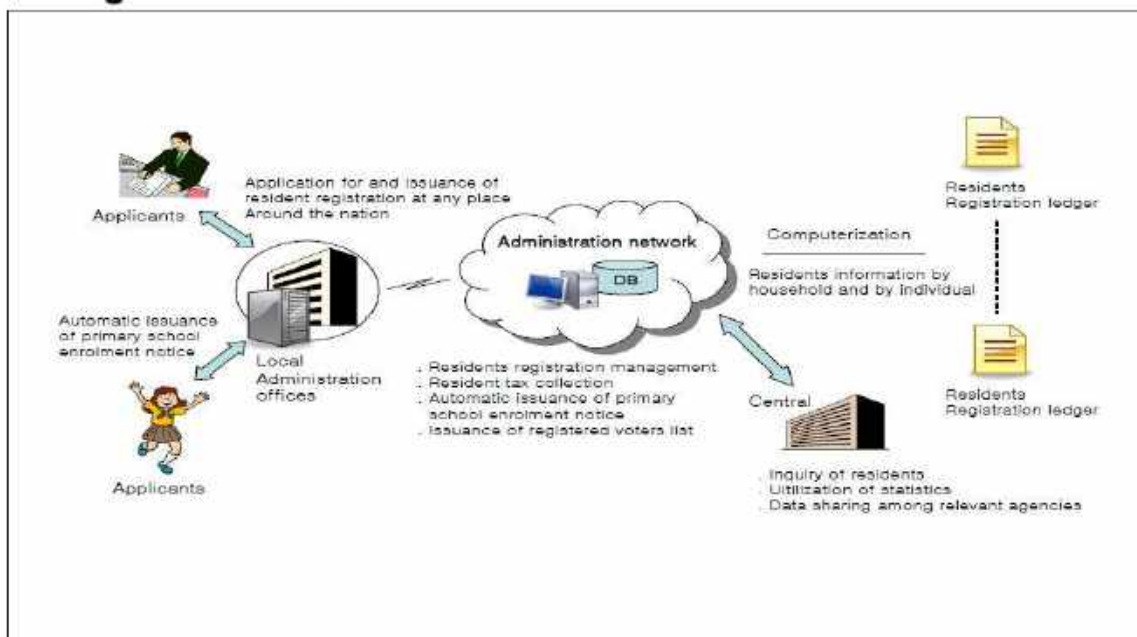
3. Residents Registration System(Continued)

Residents Registration (National ID card) Applications

- Residential registration management used to involve manual recording of resident's information on ledgers and tracking other related information such as registration, change and expiration. This process has been extremely inefficient and recovery of the information was not possible once ledgers were damaged or lost. In particular, changing address took more than three days.
- National ID system will help Government to know the exact number of population, effective management of resident, and provide national security.

3. Residents Registration System(Continued)

Registration ID card



3. Residents Registration System(Continued)

Residents Registration National ID card

Outcomes :

As shown the above diagram administration network system can provide the following major services;

- Residents registration management
- Residents tax collection
- Automatic issuance of primary school enrollment notice.
- Issuance of registered voter's list

Processing time for a single request dropped to an average of one minute from more than 20 minutes in the past. This has greatly improved the operational efficiency and quality of services.

Information systems are now interconnected throughout the nation so that citizens living in one district can apply for issuance of certified copies or copies of residents registration in other district offices. Changes in address are automatically applied to national pension, health insurance, vehicle registration, and driver's licenses

3. Residents Registration System(Continued)

Residents Registration ID card (Continued)

Application Areas

- Government National Security and Social Service
- Crime Detection and Prevention
- Health Care / Welfare / Education
- Immigration Services
- Military service history
- e-Commerce (Counter-Hacking, Telecom.)
- Finance and Banking
- Payment System etc.

3. Residents Registration System (Continued)

Residents Registration ID card (Continued) Smart Card

National ID card (Smart Card) can store following info. items

- Personal Information (Address, Age, Sex, Phone, E-mail ...)
- Driving record
- Medical record (Blood Type, Allergy, Insurance ...)
- Seal, Signature, Picture
- Fingerprint, and more...



National ID card can combine many different kinds of certifications

- Driver's License
- Medical Insurance Card
- Social Security Card, Bank Card and more...

4. Integrated e-Procurement System

Innovating Business services

Government to Business(G2B) includes interactions and transactions between government and businesses.

Integrated e-Procurement System

- The e-Procurement system (KONEPS) of the Public Procurement Service of Korea, is an online system for companies that enables quick and convenient processing of all public procurement related administrative procedures, including bidding, contracts, payment, and product delivery.
- Linked to 67 systems, this system is servicing as a hub for electronic procurement through the provision of one-stop and non-stop services. As present, some 35,000 public organizations and 160,000 companies are using the system, while more than 180,000 individual are visiting the portal every day.

e-Procurement : KONEPS

- Bidding procedures are now processed online in a one-stop process

In 2009, over 70% of Korea's total public procurement (122 billion USD) was conducted through KONEPS

* Users: 191,000 businesses and 41,000 agencies



* Korea received UN Public Service Award (PSA) in 2003 and was introduced as a best practice model for transparency enhancement by OECD

Enhanced Efficiency

- Information on all public biddings
- One-time registration for bidding for all agencies and bidding documents submitted online
- Saves USD8.1B worth of transaction costs annually

Enhanced Transparency

- Bidding and contract information open
- Real-time checking of procurement processing
- Reduced face-to-face meeting by work procedure automation

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4. Integrated e-Procurement System(Continued)

Integrated e-Procurement System (www.g2b.go.kr)

Single window government procurement system for entire process via the Internet

Concept of System



4. Integrated e-Procurement System(Continued)

Provides an “end-to-end” electronic procurement service where all procurement processes are conducted on-line, serving as a single window for public procurement

- Procurement information including receipt of purchase requests, public announcement of biddings, award of contracts and contract status is provided real-time on the Internet.
- The procurement EDI system was implemented in three phases from 1997 to 2001. The Public Procurement Service is now fully equipped to carry out electronic procurement services.
- The world’s largest cyber market with a transaction volume of USD 75 billion in 2010

5. e-Custom System

Customs Applications System

- Importers/exporters needed to appear in customs houses and financial institutions to clear their goods, pay customs duty and apply for tax Refunds.
- Clearance, surveillance and control over airports and sea ports were not systematic and were good enough to satisfy customer’s basic needs but caused inconvenience.
- The objective to build e-Custom are a) to establish information systems that streamline customs administration, b) to establish effective smuggling interdiction, c) to reduce logistics costs in the import and export industry and to improve the quality of services offered.
- Clearance procedures such as import/export reports, entry into port, and cargo management data are all computerized.

5. e-Custom System(Continued)

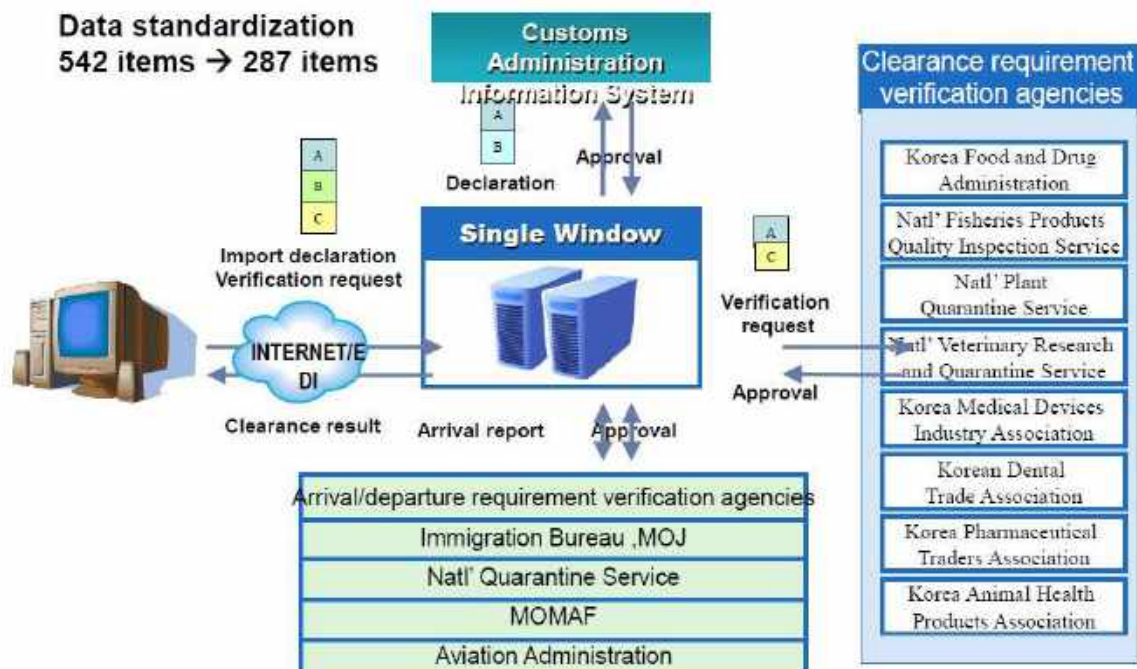
Customs Application System

- Establish one-stop business process solution through standardization of import / export process and digitalization of various documents



Customs Major systems

Single Window



6. Integrated Finance System

Innovating the way government work Integrated Finance System

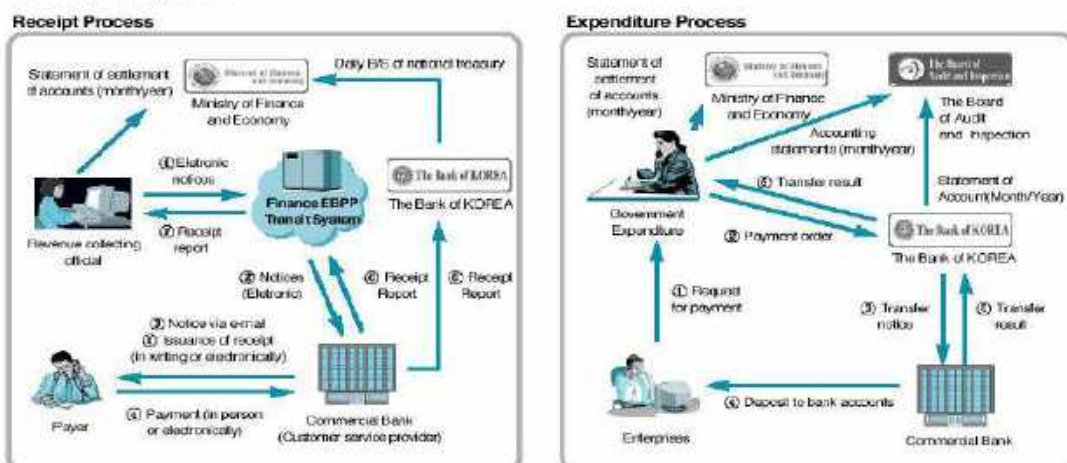
- In the banking sector, Local banks have introduced computer systems and established networks interconnecting headquarters and branches from the mid-1970s to 1985.
- As part of the National Basic Information System project, the inter-bank financial information system was deployed, enabling customers to enjoy inter-bank financial transactions.
- Non-banking financial institutions such as securities firms, insurance firms and investment banks were also interconnected.

6. Integrated Finance System(Continued)

Integrated Finance Information System

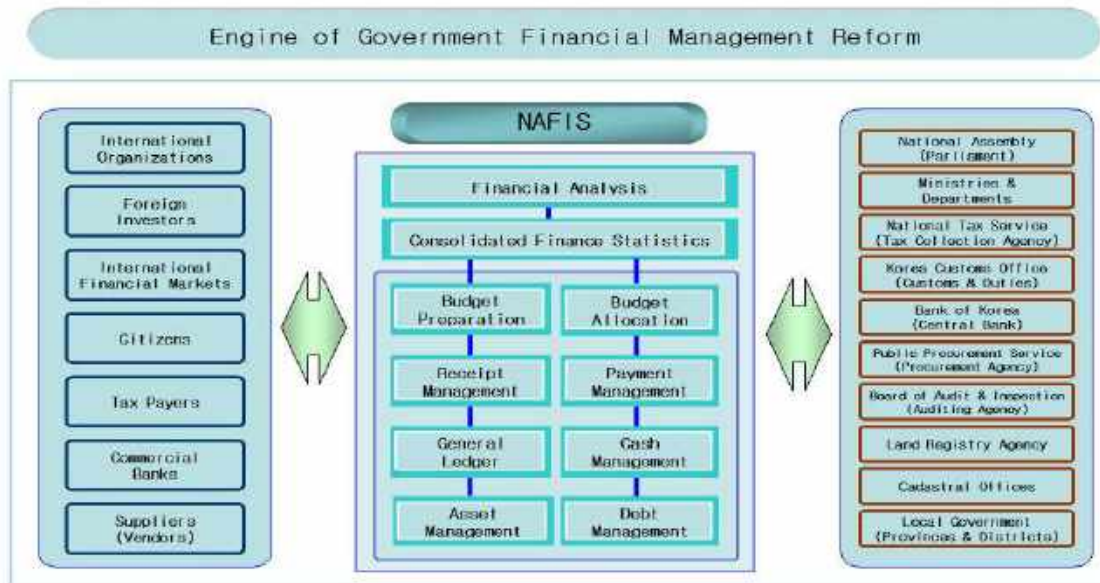
- Real-time management of national fiscal activities
- Interconnecting 23 finance-related systems that are operating independently in various government agencies

Concept of System



6. Integrated Finance System(Continued)

Integrated Finance Information System



6. Integrated Finance System(Continued)

Integrated Finance Information System

In the government financial management sector it was necessary to interconnect all financial information systems. This integrated financial system called as NAFIS and its main functionalities of the system explained below;

NAFIS mainly consists of the following 10 modules;

1. **Budget Preparation and Budget Allocation Module** are in charge of all budgeting processes of the government.
2. **Receipt and Payment Management Module** are in charge of tax and non-tax revenue collection and public expenditure respectively.
3. **General Ledger Module** is in charge of recording all accounting transactions, year-end closing, and fiscal reporting of each government entity.

6. Integrated Finance System(Continued)

1) Integrated Finance Information System

4. **Cash Management Module** is in charge of cash forecasting, cash allocation, and idle cash operation by a central bank.
5. **Asset Management and Debt Management Module** are in charge of national property management such as land, buildings, airplanes, ship, etc., and country risk management respectively.
6. **Consolidated Finance Statistics Module** is in charge of creating a nation's fiscal reports by consolidating all financial information of the government organizations.
7. **Financial Analysis Module** is in charge of macroeconomic forecasting & simulation, financial index analysis, and performance measurement. More importantly, the system interfaces to other internal and external systems.
8. **Financial index analysis and performance measurement**
9. **Consolidated Financial system for Central/Local government**

7. e-Government Infrastructure

The previous section focused on ICT applications that can be developed by individual agencies or at the ministerial level.

- It is important to note that these applications must be integrated in order to provide integrated government services.
- In this connection, this section addresses the following:
 - ✓ Government integrated computing and data centre
 - ✓ e-Government standardization
 - ✓ e-Government shared services
 - ✓ e-Community centres

Governmental IDC

Separately managed information systems are consolidated by establishing NCIA

Information systems of government agencies integrated and managed together



Seamless & Flawless Operation Achieved

- Stable integrated IT management for 24 / 7
- Monthly system failure time : 67min ▶ 5.4 sec.



IT Management Improved

- 67% of employees licensed for ITIL (IT Infra. Lib.)
- Number of systems managed per person : 1.8 ▶ 13



Security Environment Consolidated

- 8-layer protection / 4-step analysis against intrusion
- Cyber attack / intrusion detection system equipped
- Dual system for natural disaster relief

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7. e-Government Infrastructure(Continued)

National Computing & Information Resources Center: Overview

- The National Computing and Information Agency(NCIA) has been established as a national backup system for information resources. This project is aimed at strengthening the whole-of-government management of ICT to promote joint use of resources for improving efficiency.
- The Center 1 and Center 2 operate an integrated information system for a total of 48 government agencies.
 - ✓ The first center was built in October 2005 in Daejeon, co-locating the information systems of 24 government agencies.
 - ✓ The second center was completely built in July 2007 in Gwangju, accommodating the information systems of 24 other agencies.
 - ✓ The two centers are distantly located to duplicate each other for double backup and recovery.

7. e-Government Infrastructure(Continued)

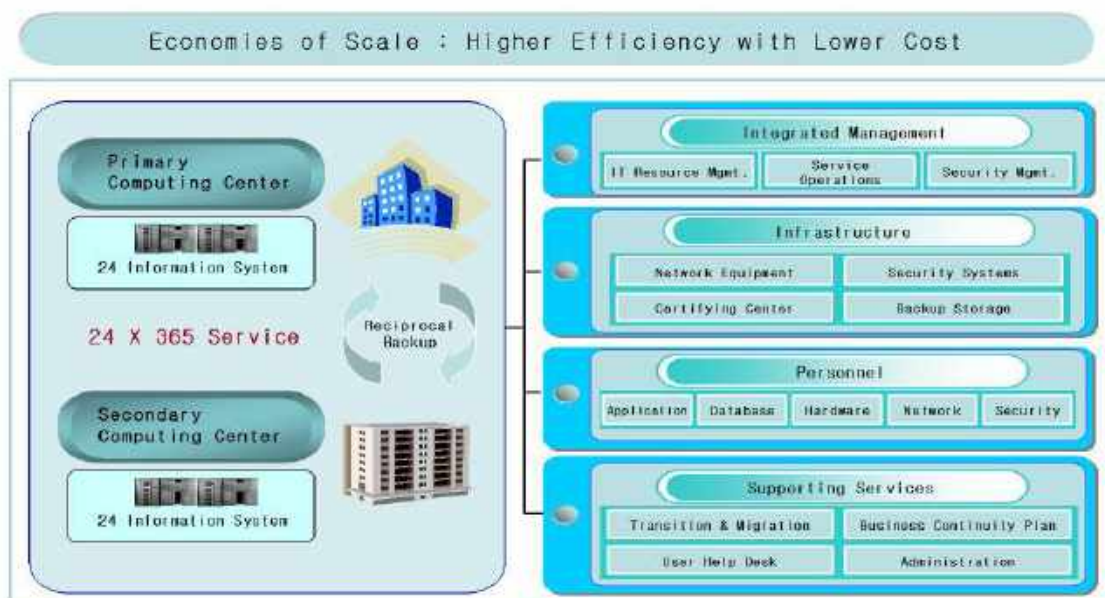
National Computing & Information Resources Center: Architecture

- The integrated IT architecture covers four major areas
 - 1) integrated management, which consists of IT resources, service operations and security management;
 - 2) infrastructure for network equipment, backup storage and security systems;
 - 3) a Technical Engineer (human resources) for each area including Application, Database, Hardware and Network; and
 - 4) support for each area through a help desk and administration services.

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7. e-Government Infrastructure(Continued)

National Computing & Information Resources Center



7. e-Government Infrastructure(Continued)

Resources Center

Top-class reliability through integrated system management.

- The security and stability of e-Government operation is assured with world-class systems management and a standardized professional operation services.

Standardized Operation management

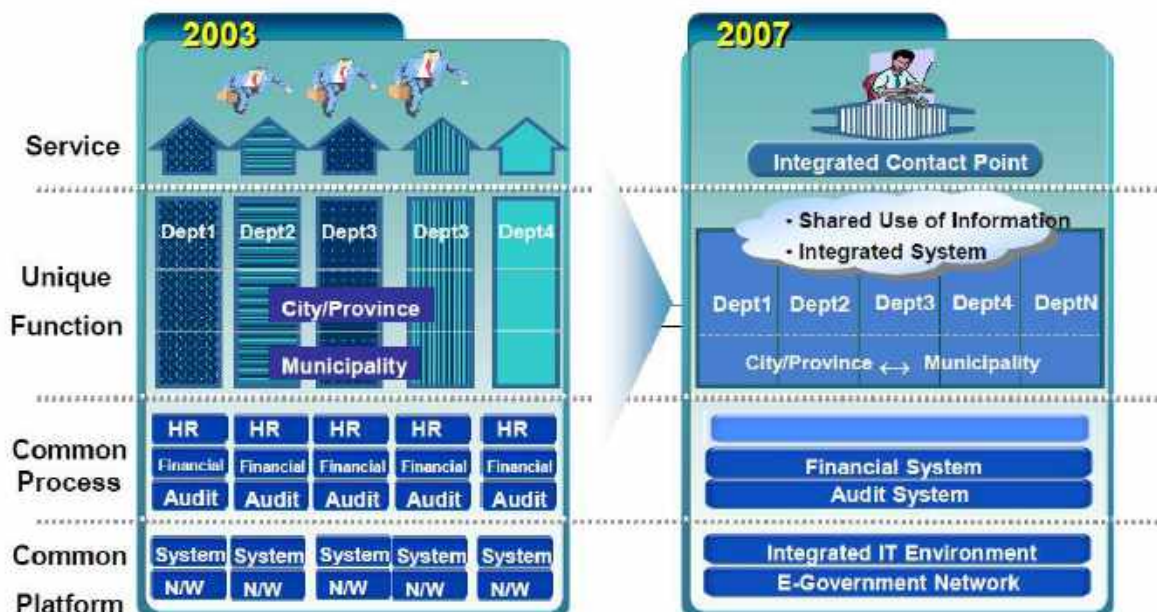
- The system operation rate is enhanced by periodic checkups to prevent failures.
- Professional manpower is available to rapidly deal with system breakdowns. In addition, security is reinforced by periodic hacking exercises, vulnerability checkups, and crisis management team operation.

No service interruption

- Continuity has been guaranteed by the successful transfer of major systems, such as the electronic custom clearance system, electronic citizen petition system, and resident registration system without interruption of the service.

7. e-Government Infrastructure(Continued)

Towards an Integrated System of Government



7. e-Government Infrastructure(Continued)

e-Community Centres

- The Republic of Korea's Information Network Village (INV) project aims to achieve balanced development across the nation by building Internet communication networks in remote areas such as farming and fishing villages.
- Bridging the digital divide and boosting up the local economy
- Through the INV project, direct transactions between rural villages and urban cities are fostered.
- The first 25 INVs were built in 2002. A total of 363 INVs have been established and operated since the first 25 INVs were built in 2002.
- **The INV won the 2011 United Nations Public Service Award (UNPSA).**

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Information Network Villages

- **IT infrastructure established and IT education provided to rural regions**

363 e-villages established, creating IT friendly environment in rural regions

IT Infrastructure Established

- High speed internet subscription rate : **9.1% ▶ 66.5%**
- 6,297 PCs provided to schools, local governments, public agencies, information network villages
- PC penetration rate : **37.3% ▶ 72.1%**

Online Commerce Vitalized

- Selling local specialties through online : **\$3M('06) ▶ \$20M('10)**
- Local specific contents, web portal, shopping, and community services provided
- * **Awarded the 2011 UNPSA**
 - Fostering participation in public policy-making decisions through innovative mechanisms

Session 3 : Government 3.0

(Open Government / Smart Government)

1. IT- Paradigm Shift

Industrial (Automatic) Society	Information Society	Knowledge Based Society	Intelligent Society
Computerized Step 1980-1994	Cyber Korea (On-Line age) Information Super-Highway 1995-2002	Broadband IT Korea Integration Age 2003-2007	U-Korea Ubiquitous age BCN (Broadband convergence Network) 2007-
DB Build	Internet Spread	Channel, Service Integration	Human, Devices, Computer Integration
Individual Service	On-Line Service	Seamless Service	Self-Rule Service
Data Depository	Information Spread	Information Share/ Knowledge Creation	Device intelligent

2. Paradigm shift on government operation

	Government 1.0 (Informatization) Industrial Society	Government 2.0 (e-Government) Information Society	Government 3.0 (Smart/Agile Gov't) Intelligent Society
Operation	Government-oriented Many-stop services	Citizen-oriented One-stop service	Individual-oriented Personalized service
Core Value	Efficiency	Democracy	Greater Democracy
Participation	Government initiated	Limited disclosure and participation	Active disclosure (participation, open, share, communicate, collaborate)
Administrative Service Delivery	One-way	Two-way	Two-way Personalized
Method (Channel)	Personal visit	Internet	Mobile internet (Smartphone)

The role of ICT in Sustainable Development for e-Government

- Mobile Technology
- Social Media
- Big / Open Government Data
- Cloud Computing

3. What is Government 3.0 ?

- Citizen centered government innovation
- Apply & Diffuse core values to all areas of governing
 (Open, share, Communicate, Collaborate)
- Provide customized services to citizen
- Create jobs and support creative economy

Vision of Government 3.0

Vision	Citizen Happiness			
Goals	Provide customized services		Creation of jobs and growth engines	
Strategies	Transparent	Competent	Service-oriented	
Values	Openness	Sharing	Communication	Collaboration



4. Smart Government

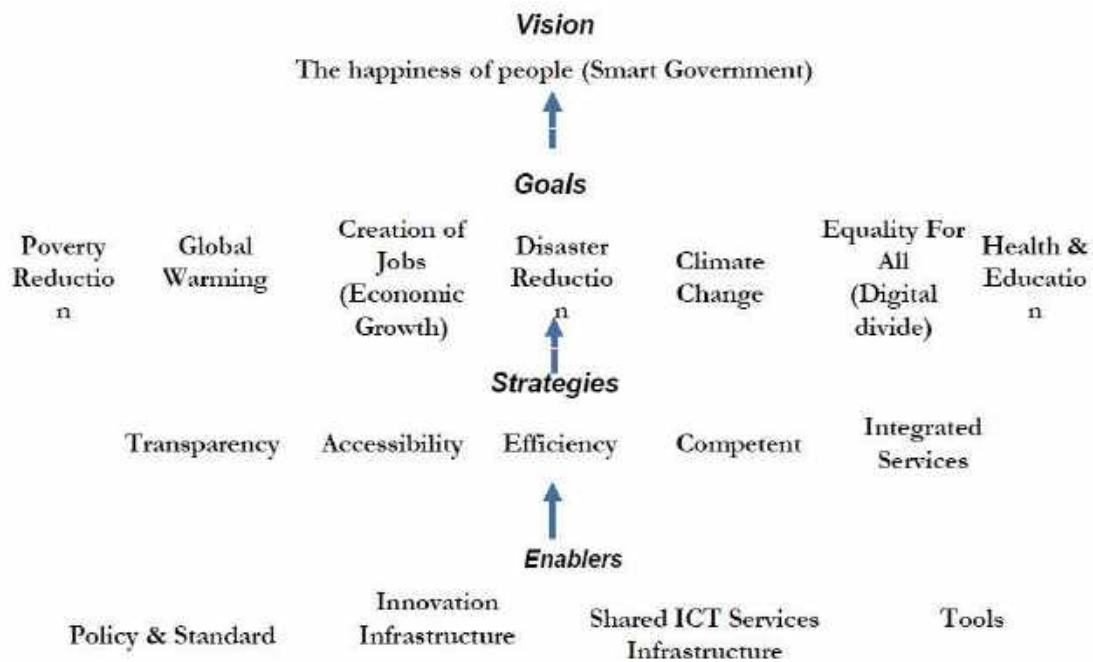
- “Smart government integrates information, communication and operational technologies to planning, management and operations across multiple domains, process areas and jurisdictions to generate sustainable public value,” said Andrea Di Maio, Managing vice president at Gartner.
- **The SMART Government Project will support the Government in achieving its vision and leveraging the ICT sector as a key driver of growth(Create jobs and creative economy), competitiveness, and improved governance.** The project will promote better governance through the use of ICT-based tools to enhance the accessibility, transparency, and efficiency of public services. Improved public services using ICT will contribute to improving shared prosperity and eliminating extreme poverty.

Smart Government - Elements

Key elements for SMART Government can be identified as

- (1) National Enterprise Architecture to enhance interoperability,
to eliminate overlapping projects, and to support reuse**
- (2) Government Cloud, to serve as a whole-of- government infrastructure to achieve cost efficiency on technology investments, and improve accessibility and flexibility,**
- (3) Innovation support program to enable the co-creation of services and applications and**
- (4) Digitization of property registration certificates to support ongoing reforms.**

Sustainable Development for Smart Government



5. Strategies and 10 Tasks

- | | |
|-----------------------------|---|
| Transparent Government | <ol style="list-style-type: none"> 1. Ensuring citizen's right to know through information disclosure 2. Active Civil use of public data 3. Strengthening public-private partnerships and collaboration |
| Competent Government | <ol style="list-style-type: none"> 4. Removal of barriers in government 5. Improvement of government operation for better communication and collaboration 6. Scientific administration with use of big data |
| Service-oriented Government | <ol style="list-style-type: none"> 7. Integrated provision of customized services 8. Strengthening one-stop services for business 9. Improved access to services for the information poor 10. Developing new services using emerging ICTs |

6. Information Disclosure

Paradigm shift from 'Provider' to 'Citizen' oriented

Passive disclosure → active disclosure

Extended of advance disclosure for major police/programs

Original text / whole process / citizen oriented disclosure.

Freedom of Information Act, revision(effective 2013.11.7)

Information disclosure status

Disclosure rate : 95% (330,000 requests → 310,000 disclosed

(2007) 90.8% → (2009) 91.4% → (2013) 95%

Central portal for information disclosure(Ref: www.open.go.kr)

Advance Disclosure Examples

Theme	current	Improvement
Medical costs	info on 6 services not covered by national health insurance (ultrasonography, endoscopy, etc)	Expansion to Info on 10 services including MRI, implant → Costs Comparison, savings
Wage arrears	non-disclosure of wage arrears info	Disclosure of info on CEOs with arrears over 20m KRW (name, addr, arrears amount)
Municipalities' order plan contract info	private contracts over 10m KRW	Disclosure of entire process incl. plan, contractor selection, contract change, payment, inspection, wages
Vehicle history info	Disclosure of vehicle info including accident info	additional info disclosure incl. mileage, instances of submergence, of used cars
Kindergarden Cost info.	disclosure of total cost only (no details on govt, parental burden proportion)	Disclosure of cost details (parental burden, after school activities, etc) → more parental choice of kindergardens

7. Opening Public Data

Importance of opening public data

- paradigm shift towards data driven smart society
- Creating new values through convergence, mash up of data

What is opening public data?

- by opening digital public data to citizens
- ① ensure right to use public data
- ② create new service and business

Status of opening public data

Currently gov't(central, municipalities) & public sector organizations hold 21,087 DBs, 3,395 are 'open' (open rate : 16%)

Opening public data based on a 5 years roadmap

Each organization designates 3-5 years DBs , open the data (agency level)
Focus resources and creation jobs efforts on 13 strategic areas

Meteorology

expand 7 DBs incl. typhoon DB, climate DB → 2,200 jobs

Geo, transport

open 204 more DBs incl. indoor spatial DB → 66,000 jobs

Patent

open 10 more DBs incl. overseas patent DB → 6,800 jobs

Public policy

open 6 more DBs incl. world law DB → 386 jobs

→ Research shows 150,000 jobs to be created by 2017

open 6,075 more DBs within 5 yrs : 3,395 → 9,470

☞ open rate of public data : 16% ('13.8) → 45% ('17)

Session 4. Questions and Answers

THANK YOU

[Field Study 1]

■ Saemaul Museum

Saemaul Undong Movement is a movement seeking community development and modernization. Of all things, it is a movement to escape from poverty. This is not limited to individual lifestyles and living conditions, but encompasses the whole community. Under the situation of severe poverty after the war, the only possible breakthrough was the awakening and participation of people. The government proposed Saemaul Undong Movement in rural communities to inspire the people and lead them into the progress of rural communities to escape poverty.



The museum was founded in 1983 on the area of 1,745m² in Seongnam, Gyunggi-do to promote this success case of Korea.



[Field Study 2]

■ Chungnam Agricultural Research & Extension Services Agricultural Exhibition Center

It was originally founded in 1910 under the name of the Gongju Seed and Nursery Station and changed the name of the organization to the current one in 1998.

The CNARES tries to play an important role in realizing the vision and the strategy on agricultural technology. The center have mainly focused on developing the technology for high quality, low cost and consumers-oriented products.

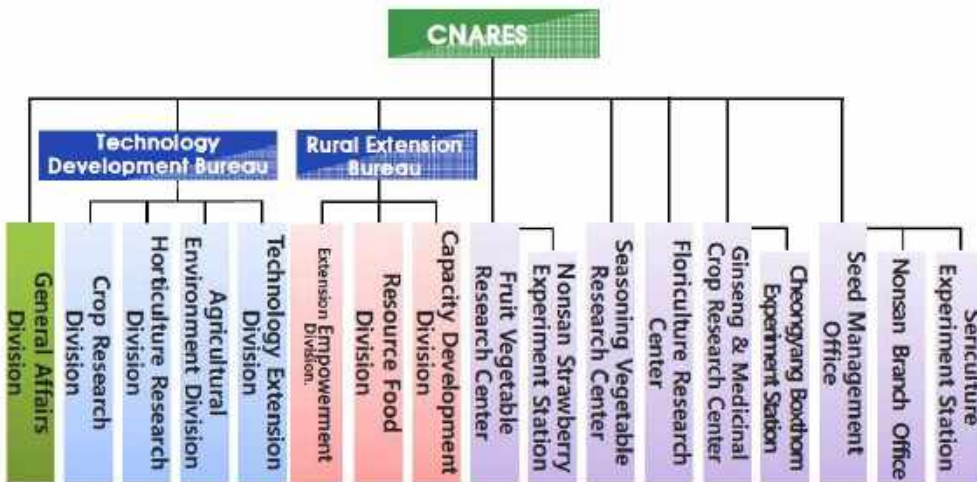
The main fuctions of the CNARES are to develop and improve the agricultural technology that can compete with maor advanced countries, provide trainings to farmers. The CNARES is one of most successful agricultural technology centers among others in Korea.





General Status

– Organization (2 Bureaus, 8 Divisions, 5 R&D Centers & Office, 4 Stations)



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

General Status – Workforce & Budget

● Workforce

Class.	Total	Researchers	Extension officials	Administratives & Technicians	Professional Consultants
Total	175	93	30	50	2
General Affairs Division	18		1	17	
Technology Development Bureau	54	42	11	1	
Rural Extension Service Bureau	38	10	18	8	2
Research Centers & Office (including Stations)	65	41		24	

● Budget: 50,205 million won (\$50 million dollars)



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

General Status– Missions of CNARES

- Research & development and distribution of agricultural scientific technology
- Stable supply of national food and strengthening of competitiveness of agro-food industry
- Education and training to foster farmers' study groups and agricultural professionals
- Welfare of famers and revitalization of rural communities



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Major Achievements of Year 2014

- Development and propagation of cultivars customized to respond to FTA

Development and propagation of cultivars to respond to climate change, consumers' trends and FTAs

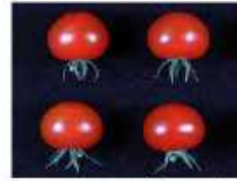
- (Breeding of cultivars) selection and breeding of superior cultivars adaptable to Chungnam: 8 crops 24 cultivars
 - Rice: 4, Barley: 4, Mushroom: 1, Tomato: 2, Boxthron: 1, Chrysanthemum: 9, Lily: 2, Garlic: 1
- (Propagation of cultivars) production and propagation of disease-free and superior seedlings (cultivars)
 - Propagation of superior cultivars including Samgwang cultivar: 5,349 tons (74% of the total amount)
 - Propagation of new superior cultivars adaptable to Chungnam area: 14 crops including Lily (1.02 million seedlings)



<new cultivar of lily>



<new cultivar of oyster mushroom>



<new cultivar of cherry tomato>



CHUNGCHÉONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Major Achievements of Year 2014

- application of farming techniques & patent application

Solving of on-site technical difficulties: 62 cases, patent application: 5 cases, policy proposal: 4 cases

- (farming techniques) 62 cases including effective control of c
 - through seed soaking before seed disinfection
- (patent application) 5 cases including control agent against bacterial soft rot on Chinese cabbage, development of liquid-type natural seasonings
- (policy proposal) 4 cases including Aerial control of Ricania sp.



<control effect of bacterial soft rot>



<pest control effect of bacterial soft rot >



<liquid natural seasonings>



CHUNGCHÉONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Major Achievements of Year 2014

– establishment of regional circulation-based local food system

Improve farmer's incomes through extension of convergence technology by combing agricultural product processing with farming experience programs

- (Support for venture farmers) promotion of food processing by farmers, nurturing of for 32 venture famers
- (Local food) 32 tourism products combined with local culture
- (Succession of local food culture) 5 places to promote the consumption of local food combined with school meal programs



<workshop to promote agricultural product processing >



<branding of local food>



<education on local food in affiliation with school meal programs>



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Major Achievements of Year 2014

– fostering of professional farmers

Nurturing of professionals to lead Three Agricultural Innovations and Creative Agriculture

- (Farmers' Education) offer capacity strengthening training programs for leaders of Three Agricultural Innovations to 17,500 persons
- Professional Education (1,754), Three Agricultural Innovations College/ Farmers' College-4-H College(1,063), Regional leaders (14,455)
- (Farmers' Learning Groups) foster leaders of technology innovation and creative farming
- Rural leaders (10,182 persons), Living Condition Improving Committee (13,892), 4-H(10,349)



<Farmers' College>



<Three Agricultural Innovation College>

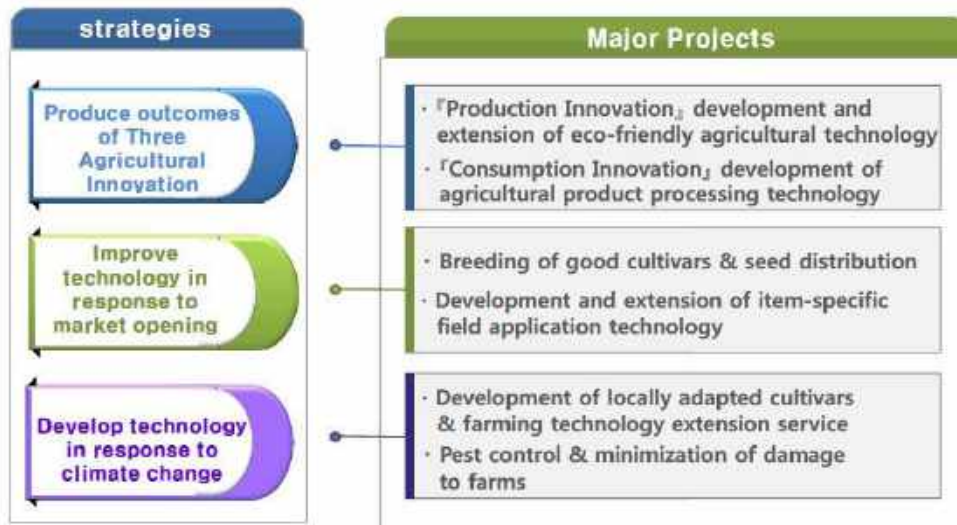


< Professional Education for farmers >



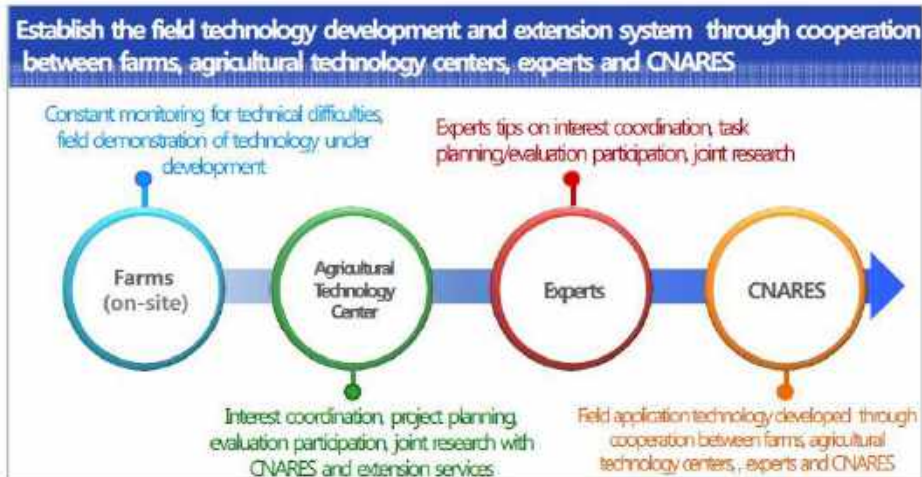
CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Major Projects of Year 2015



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Promotion Directions of Year 2015



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Three Agricultural Innovations

What are three agricultural innovations?

In recognition that agriculture industry, rural villages, farmers & fishermen are the cornerstones of all industries and people's lives, "Three Agricultural Innovations" aims to realize a sustainable agricultural industry and rural societies for mutual benefits of rural people, consumers and urban dwellers by innovating the whole processes and policies of production, consumption and distribution of agriculture and fishery products.



CHUNGCHÉONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Backgrounds for Three Agricultural Innovations?

"A prospering rural community is the prerequisite for becoming an advanced country" – starting point for Three Agricultural Innovations

- The agriculture and fishery policies started in earnest after the market opening in 1980s.
 - '93~'07: 221 trillion won (equivalent to \$204 billion) (Civic Government: 57, People's Government: 45, Participatory Government: 119)
 - [Lee Myung-Bak and Park Guen-Hye's governments: 6th Industrialization: with focus on distribution structure improvement (no detailed investment and loan plans)]
 - "Pouring water into a broken pot" → increasing debts of rural households, weakened self sufficiency of rural people, etc.
- The previous fragmented subsidy policies focusing on hardware had many limitations to overcome the real problems of the rural industry and community.
- ➔ A sustainable growth of the rural industry and community is possible when farmers and fishermen become not the object but the subject of administration.

Three agricultural innovations are designed to build a sustainable rural industry and a livable rural community by allowing rural people to take the lead in agricultural governance in efforts to innovate the whole processes of production, distribution and consumption.



CHUNGCHÉONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

1st Phase of Three Agricultural Innovations

Outline

- (Period) 2011 ~ 2014 (4 years)
- (Projects) 5 Strategic Sectors (production of environmentally friendly agricultural products, establishment of local food system, building of 'Hope Village,' promotion of urban-rural exchange, fostering of local leadership)
- (Budget) 4,309 trillion won (\$3.98 billion)
 - ※ 5 divisions, 18 TF teams, 30 core projects
- 2011 → confirmation of basic plans, reporting to residents, consensus building
- 2012 → establishment of cooperative system for governance, expanding of residents' agreement, strengthening of on-site practice
- 2013 → visible acceleration of three agricultural innovations, private initiatives, sector-specific achievements
- 2014 → completion of 1st phase, setting up the vision and development strategy for 2nd phase



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Achievements of 1st Phase of Three Agricultural Innovations

Outcomes

- Three Agricultural Innovations was pursued as a core project of the 5th elected Chungnam provincial government, setting a milestone to change the public awareness.
 - highlight the importance of the long-neglected rural industry and community.
- Establishment of collaborative governance by setting up 5 divisions and 18 TF teams for Three Agricultural Innovations
 - Paradigm shift from hardware, administration leadership, exogenous growth, and external competitiveness strengthening, to software, public-private partnership, Endogenous growth, regional solidarity strengthening
- Identifying and nurturing of innovation leaders through the operation of 3 Agricultural Innovations College and 4-H College,
 - Revitalizing the rural industry and community and secure a new growth engine



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Implementation Plans for 2nd Phase of Three Agricultural Innovations

Outline

- (Period) 2015 ~ 2018 (4 years)
 - (Projects) 5 core sectors (production, distribution, consumption, localization, capacity innovation)
 - (Budget) 5.0789 trillion won (\$4.702 billion)
 - ※ 9 divisions/7 teams, 15 strategic tasks, 50 essential projects
- Reflect the basic ideology and core values of the fifth-elected provincial government ⇒ supplementation of strategies
 - [Market Policy] full-time and commercial farmers-oriented organization, scaling and specialization
 - [Local Policy] adaption to small & medium-sized farms and aged farming population, coexistence policy, collaboration · differentiation
 - Shift of focus: hardware ⇒ software
 - Change of implementation system: 9 divisions/ 7 teams
 - shift from business to task-oriented implementation system, strengthened accountability of the concerned departments.

Tree-structure based on feasibility →

"Establishment of task-specific achievement model"



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Implementation Plans for 2nd Phase of Three Agricultural Innovations

Production Innovation

- We strive to nurture a sustainable rural industry and future-oriented agriculture and fishery products through continuous pursuit of environment friendly and high quality 'production innovation.'

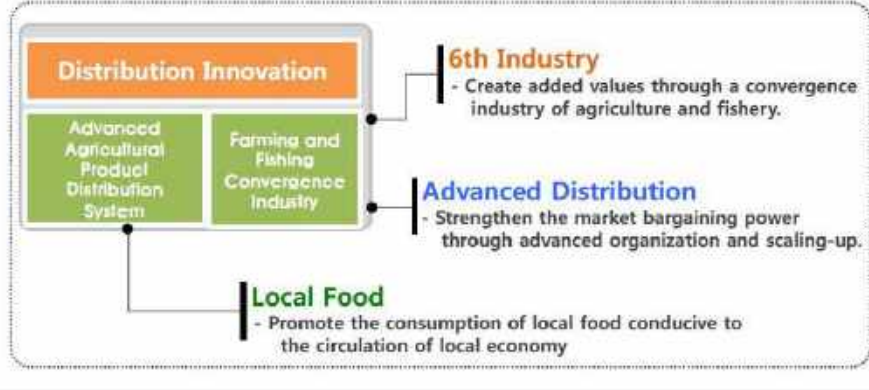


CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Implementation Plans for 2nd Phase of Three Agricultural Innovations

Distribution Innovation

- Through **distribution innovation**, we strive to establish an advanced distribution system to ensure that farmers deserve fair prices for their quality products and to intensively nurture a high-value added convergence industry of agriculture and fishery.

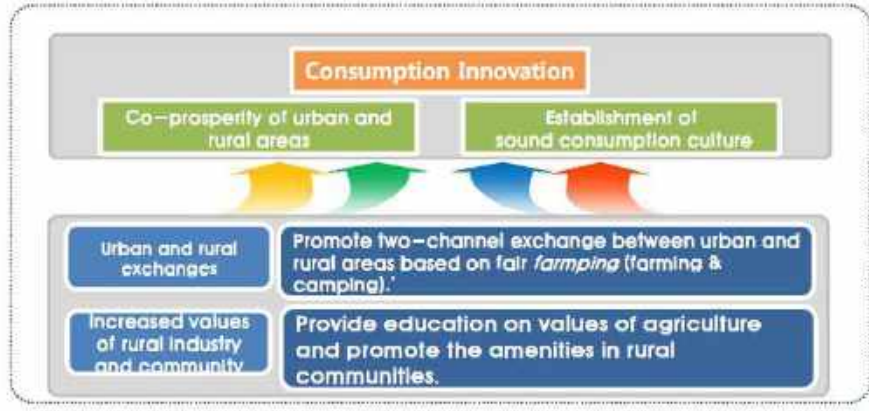


CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Implementation Plans for 2nd Phase of Three Agricultural Innovations

Consumption Innovation

- Through "Consumption Innovation," we strive to pursue mutual prosperity of the urban and rural areas and establish a sound consumption culture by raising the awareness of values of agriculture and fishery industries and rural community.

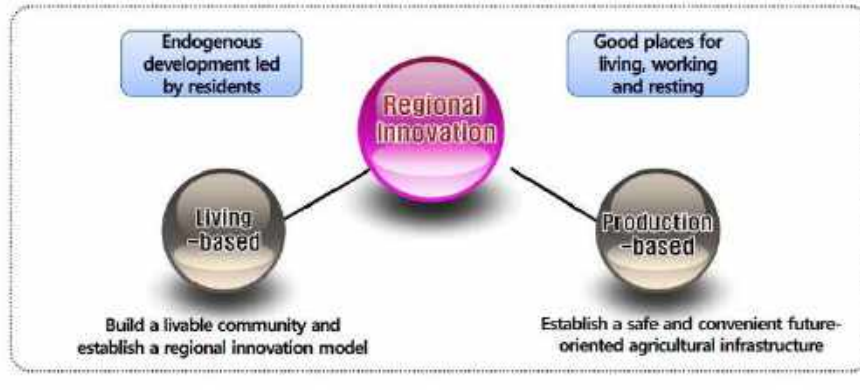


CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Implementation Plans for 2nd Phase of Three Agricultural Innovations

Regional Innovation

- We will actively pursue regional innovation to build a good living place, workplace and resting place by creating 'Home Village' under leadership of residents and establishing a safe and convenient future-oriented agricultural infrastructure.

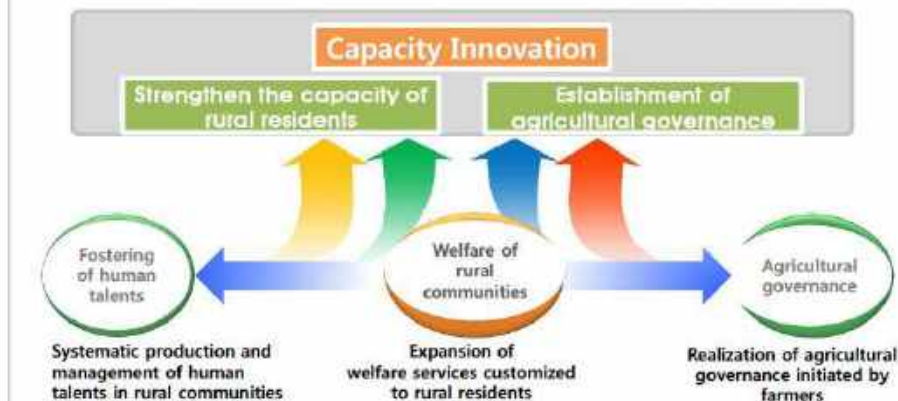


CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

Implementation Plans for 2nd Phase of Three Agricultural Innovations

Capacity Innovation

- By strengthening the capacity of rural residents, we strive to implement a new agricultural governance system in which farmers and fishermen take the leading roles.



CHUNGCHEONGNAM-DO AGRICULTURAL RESEARCH AND EXTENSION SERVICES(CNARES)

■ Nonsan Strawberry Experiment Station


The principal objective of Nonsan Strawberry Experiment Station (NSES) is to carry out strawberry research and development to increase the income of strawberry farmers and stabilize production. NSES research aims at virus free plant propagation, improvement of postharvest storage processes. Emphasis is given to practical research to ease the plight of strawberry farmers. Thus, NSES will develop new technologies to increase strawberry production and produce better quality strawberries.



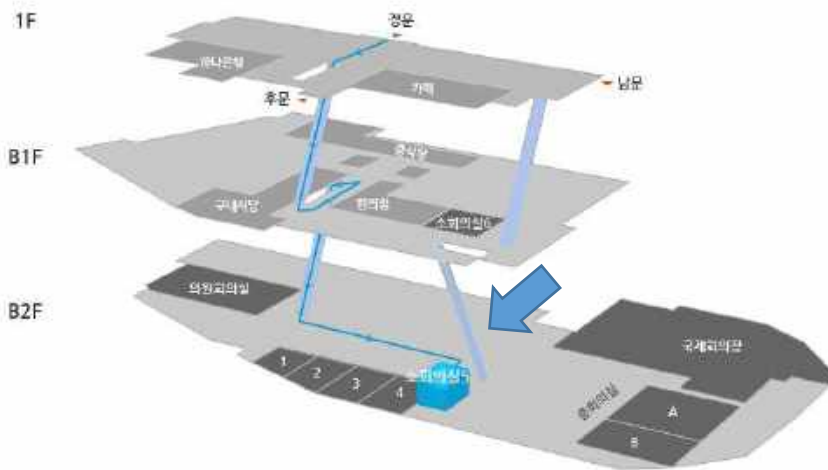
V. General Information

► Venue

[Lecture 1 /2 /4 /5 /6 /7]

Venue: Room 5 (B2F) 

Korea Chamber of Commerce and Industry (KCCI)



Address: 39 Sejongdaero Jung-gu Seoul

Website: <http://english.korcham.net/nChamEng/Service/Main/appl/Main.asp>

[Study Visit 1]

Semaundong Center

627, Youngdong-daero, Gangnam-gu, Seoul

Tel: +82-2-2600-3600(3603)

<http://www.saemaul.com/eng>

[Study Visit 2]

- Chungnam Agricultural Technology Center

<http://www.cnnongup.net/html/en/>

- Agriculture Exhibition Center:

http://www.cnnongup.net/html/kr/info/info_05_03.html

- Strawberry Experiment Station

<http://strawberry.cnnongup.net/html/strawberry/>

► Accomodation

You are entitled to a hotel accommodation at the Fraser Place Hotel. The reservation of a room (Superior) will be made under your name.

The reservation includes complementary internet service during your stay and the Buffet Breakfast for one person (06:30–10:30 AM). Any other charges made during your stay at the hotel (i.e. mini bar) must be borne by the participant. The hotel may ask for your credit card at the Check-in counter as a deposit to the room which will be cancelled immediately after the Check-out. Should you need any assistance, please contact our programme coordinator.

- ※ **Note** : Please bring personal amenities like **toothpaste, toothbrush and razor etc.** According to the relevant Korean Government regulations, it will not be provided in the Hotel.

► Meals

The meals will be provided from Monday(22nd Feb.) Breakfast to Saturday Breakfast(27th Feb.).

During the programme, separate menus for vegetarians will be provided.

- ※ **Note** : The programme has only regular and vegetarian menus for the participants.



▶ Transportation

Incheon International Airport (ICN) ⇔ Fraser Place Hotel **Nam Dae Mun**



When you exit the airport through the Passenger Terminal on the 1st Floor, you will immediately see several bus stops.

Please walk towards the bus stops labeled 5B or 12A (marked above) where you can take the KAL Limousine Bus No. 6005.

The bus runs every 35 minutes from the ICN to Fraser Place Hotel, and it stops right in front of the hotel. It takes about 80 minutes.

The tickets are sold at the airport terminal for KRW 15,000. For your convenience, **please have KRW 15,000 ready** in cash before queuing at the bus stop (Currency exchange booths available at ICN).



※Note : Please make sure to **get off** at the Fraser Place **Namdaemun** Seoul not Central Seoul.

Please make sure to keep the receipt of the bus ticket for the reimbursement and a ticket to the Airport from the Hotel after the training programme.



► Programme contact

For any assistance during the programme, please contact:

- Jace. YJ, CHOI

Programme manager in charge (M: 82-10-5896-2101)

- Kum-Hee, Yoo

Administrative coordinator (M: 82-10-3690-9274)

