

# **Korean economy: Past and Present**

Young-Jun Cho  
Assistant Professor, PhD in Economics  
The Academy of Korean Studies  
[cho06@aks.ac.kr](mailto:cho06@aks.ac.kr)

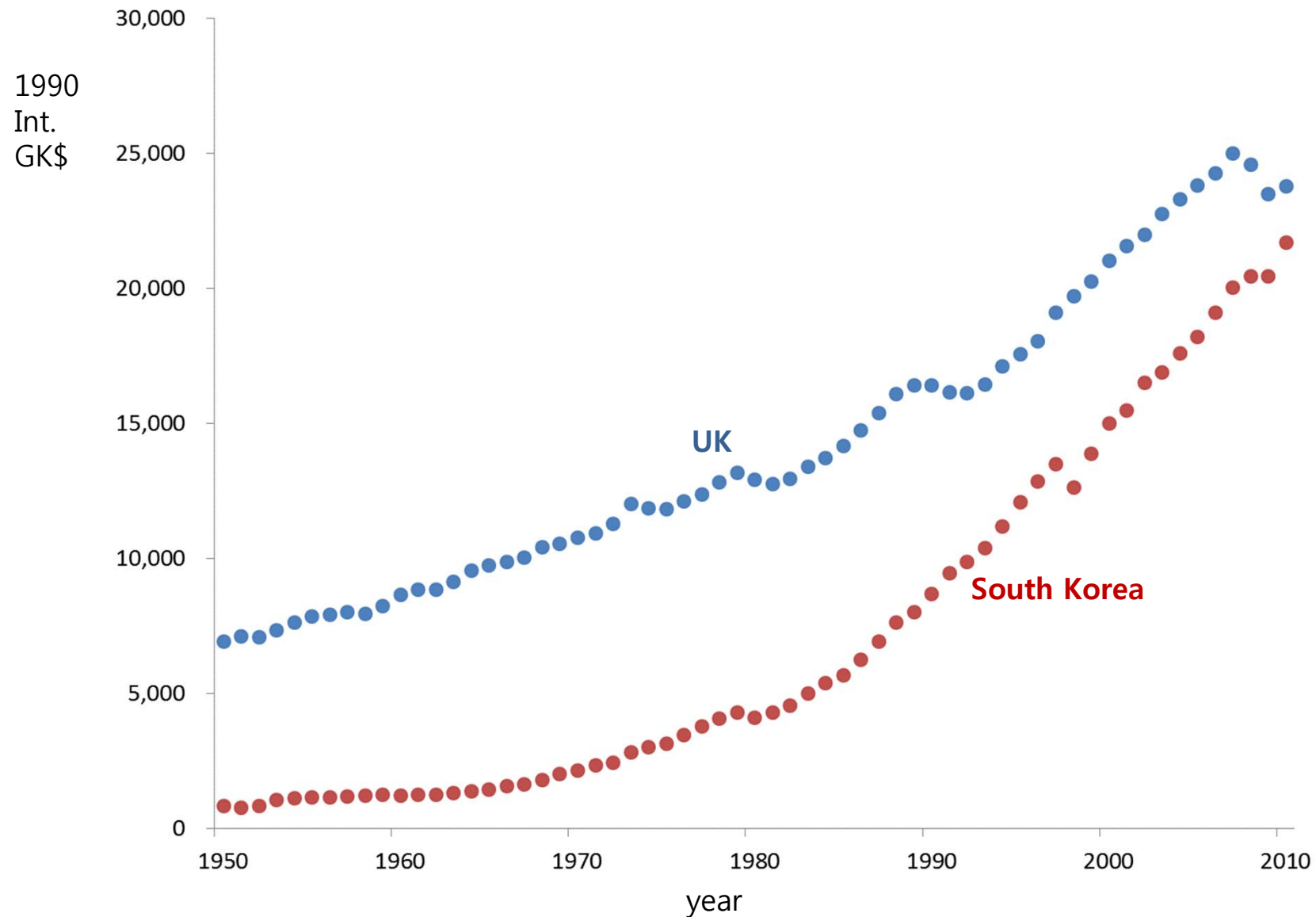
# Maddison Project

- Angus Maddison (1926-2010)
  - a British economist
- Compilation of the long-term economic statistics in the world
  - per capita GDP
  - 1990 international Geary–Khamis dollar
  - <http://www.ggdcd.net/maddison>

## **Economic Statistics on South Korea and UK**

- South Korea: 1911-1940, 1950-2010
  - Korea(Joseon) under Japanese rule from 1910 to 1945
  - not available during WWII and just after liberation
- UK: 1800-2010
  - The best estimates available in the world
  - Partially estimated before 1800
  - Broadberry(2011), leading research

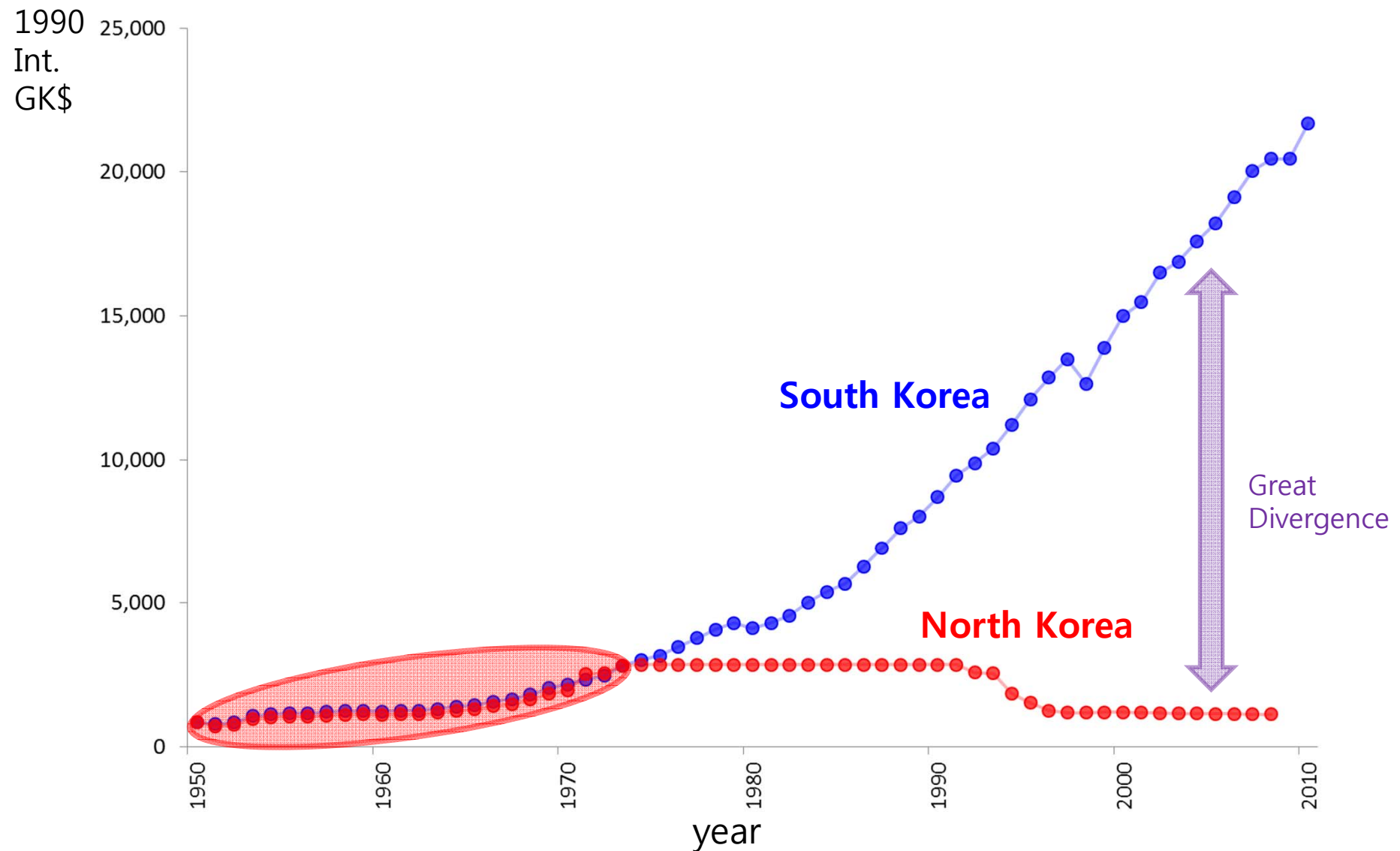
# GDP per capita in South Korea and UK



# Typical explanation

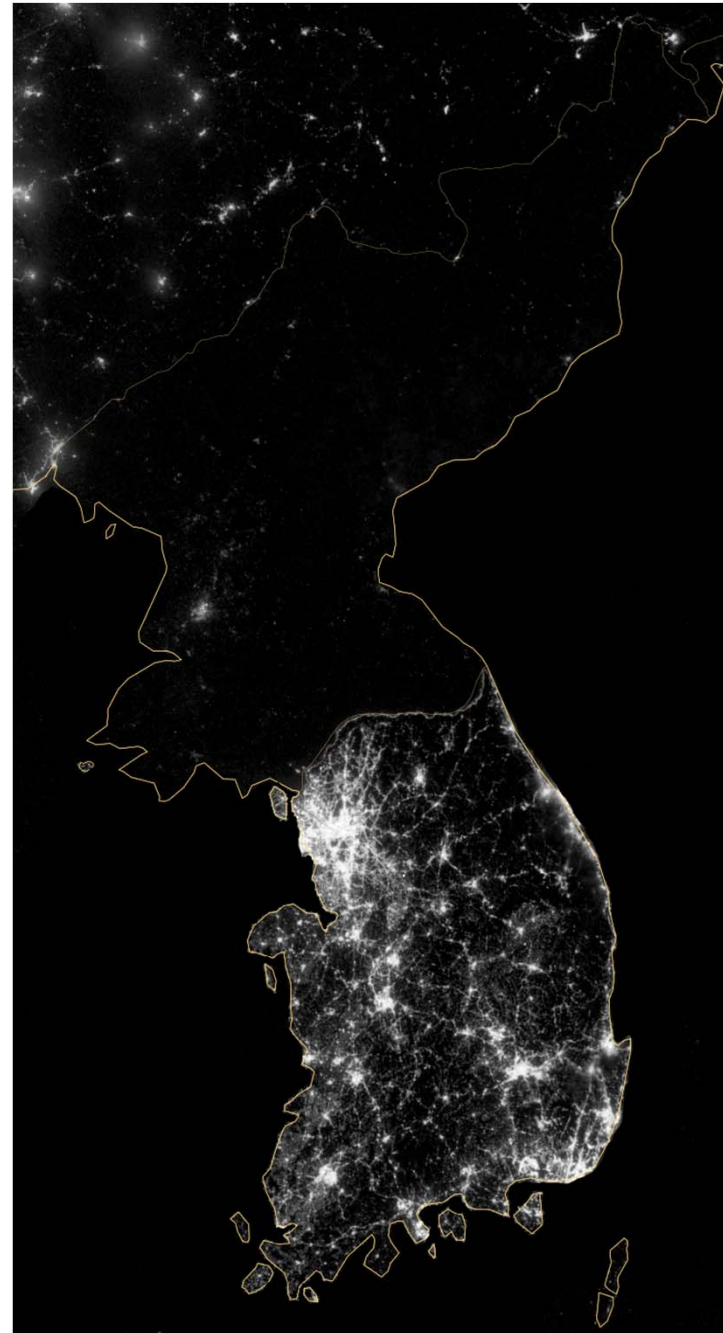
- Geographical and ethnic characteristics
  - geopolitical location  
(far east, peninsula, between China and Japan)
  - blood or temper
  - traditional culture
- Hard to explain failures in North Korea
  - shares the peninsula
  - shares genes
  - shares history and culture

# South Korea & North Korea, 1950-2010



# Contrast

- Korean peninsula  
at night  
(NASA satellite picture,  
2012)



# Precondition for Economic Growth

- The issue of institution
  - South Korea: market economy, open economy
  - North Korea: command economy, closed economy
- South Korea chose “market economy”
  - economic system determines the potential growth



# Is it a miracle?

- 'The Miracle' on the Han River?
  - "Koreans in the South have worked their fingers to the bone to create the industrial country that we now see." (Bruce Cumings)
- A part of the East Asian Miracle
  - NICs (newly industrializing countries)
  - Four Asian Tigers, or Asian Dragons
  - Singapore, Hong Kong, Taiwan, South Korea

# The Stages of Economic Growth

- From the 1950s to the Early 1960s
  - recovery after the Korean War
  - foreign aid
- From the mid-1960s to the 1970s
  - rapid growth
- After 1980s
  - current account surplus
  - realization of democracy
  - overcoming economic crises

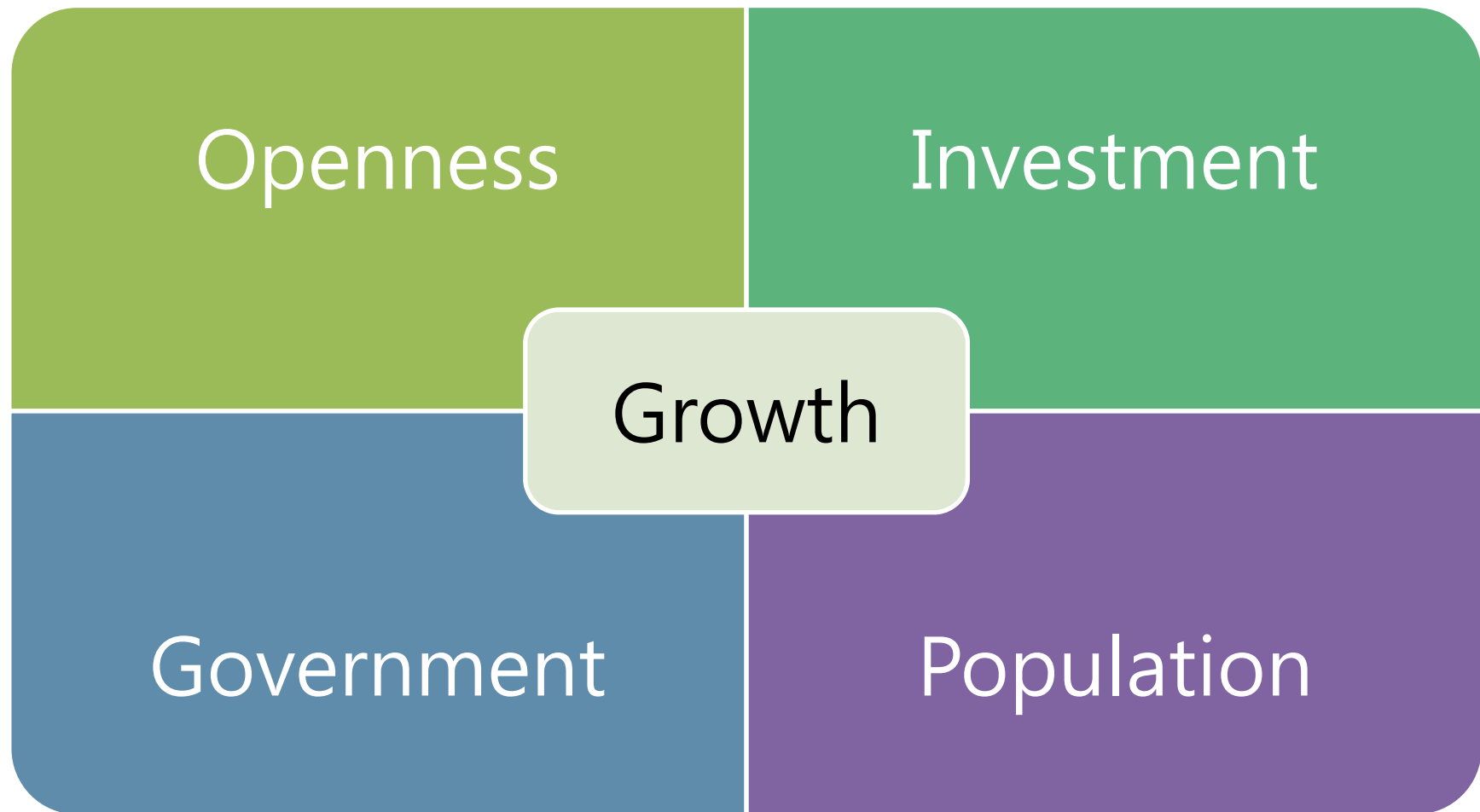
## **In the 1950s**

- Economic recovery and reconstruction
  - Foreign aid  
(United Nations, United States, and so on)
- Import substitution strategy
  - three kinds of “white” industry: flour milling, sugar refining, cotton spinning
  - typical growth model in developing countries at that time

# The Change in the 1960s

- Policy Change
  - export-oriented strategies  
(EOI: Export Oriented Industrialization)
  - heavy and chemical industry
- Rapid economic growth
  - From 1963 to 1979
  - Korean economy annually grew over 8%

# The Factors of Economic Growth



## **Factor 1) : Openness**

- Export-Oriented Industrialization
  - breakthrough strategy
  - decision made by the government and the big company
- Enlarged Meeting for Export Promotion
  - monthly meetings (1965-1979)
  - president Park Chung-hee participated in 147-of the total 152-meetings

# Factor 1) : Openness

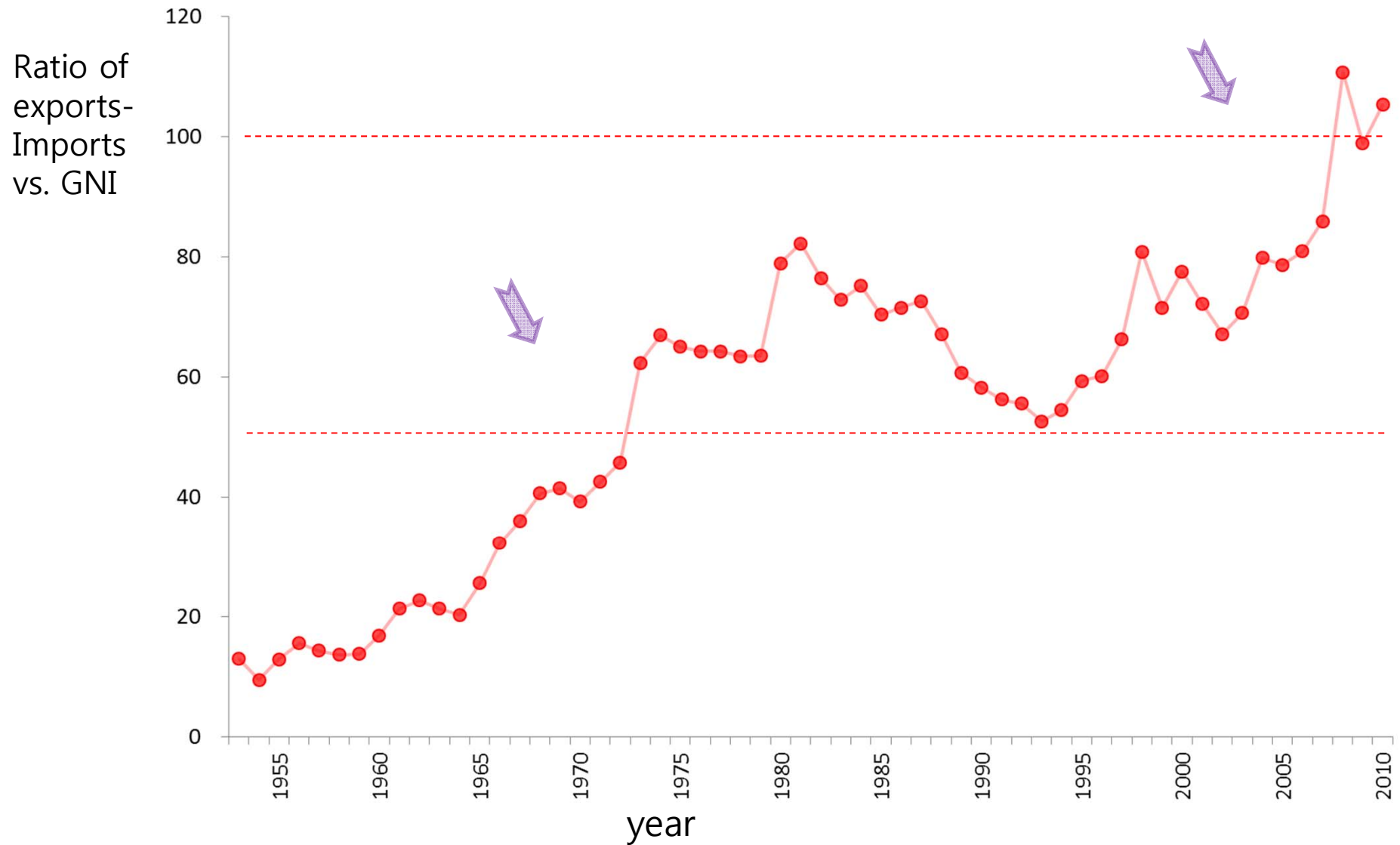
- Free Export Zones
  - Originally, two cities: Masan (1970), Iri (1973)
  - Free Trade Zone in 2000
  - Masan, Kunsan, Taebul, Tonghae, Yulch'on, Kimje, Ulsan
    - \* Iksan (Iri) was released in 2010

# Export "Myth"

- Annual Exports
    - In 1964, \$100million
    - In 1970, \$1billion
    - In 1977, \$10billion
    - In 1995, \$100billion
    - In 2011, \$500billion
- (Trade volume \$ 1 trillion achieved 9<sup>th</sup> in the world)



# Ratio of Dependency on Foreign Trade



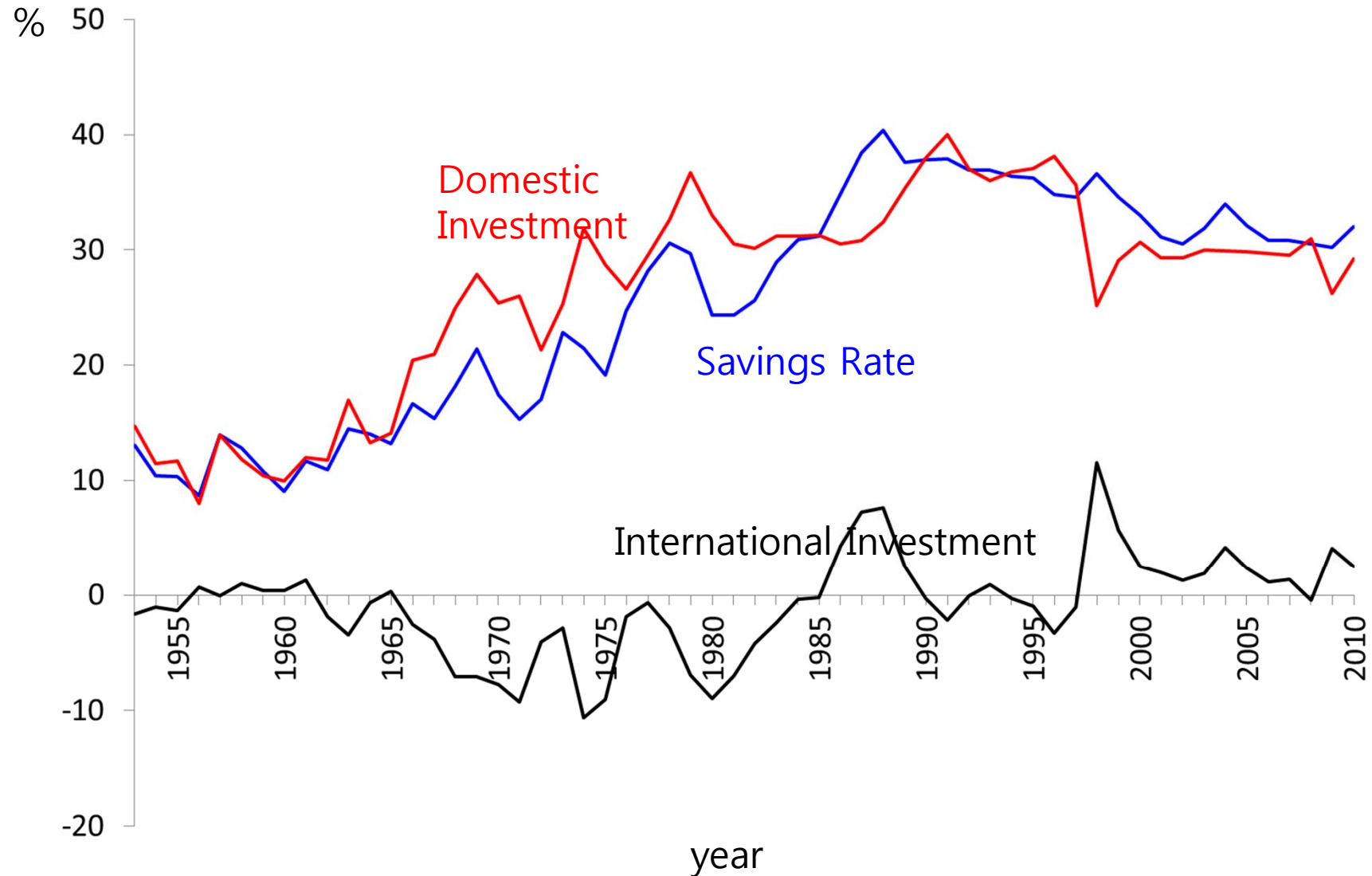
# Free Trade

- Multilateral
  - GATT(1967)
  - WTO(1994)
- Bilateral Trade (Free Trade Agreement; FTA)
  - Effectuation(14): Chile(2004), Singapore(2006), EFTA(2006), ASEAN(2007), India(2010), EU(2011), Peru(2011), United States(2012), Turkey(2013), Australia(2014), Canada, China, New Zealand, Vietnam(2015)
  - Agreement(1): Colombia(2012)

## **Factor 2) : Investment**

- High Investment Rate
  - high rate of savings facilitated investment
  - most domestic savings (+ foreign aid & loan)
- International investments
  - Before 1985: Minus (-)
  - After 1985: Plus (+)

# Savings Rate & Investment Rate



## Factor 3) : The Government

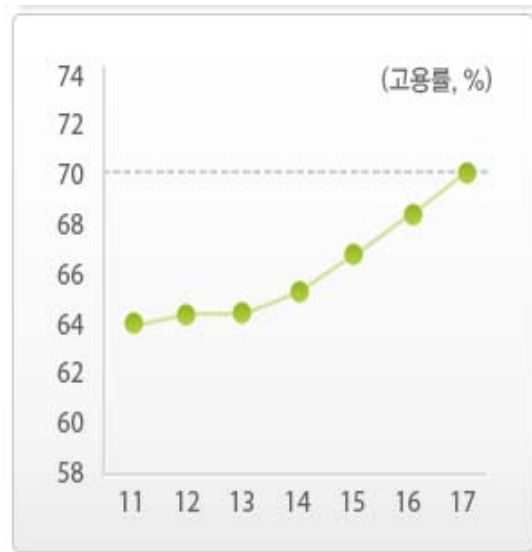
- Developmental state
  - leadership of president Park Chung-hee?
  - developmental dictatorship
  - nationalism : 'self-supporting economy' and 'modernization of our fatherland'
- Role of the government
  - Planning Board(1948)→Enlargement Board(1955)  
→ Economic Planning Board (1961)
  - Enlarged Meeting for Export Promotion
  - Report of Monthly Economic Trend  
(1965.1-1979.9, a total of 137 reports)

# **Five-year's Planning of Economic Development**

- The 1st plan: 1962-66
- The 2nd: 1967-71
- The 3rd: 1972-76
- The 4th: 1977-81
- The 5th: 1982-86
- The 6th: 1987-91
- The 7th: 1992-96

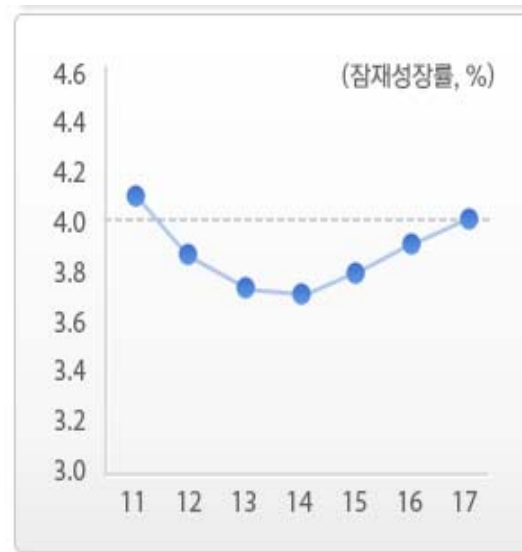
# Three-year's Planning of Economic Innovation: 2014-17

70% Employment rate



(Employment rate, %)

4% Economic growth



(Potential growth rate, %)

\$40,000 per capita income



(Per capita income, \$1,000)

(Economic innovation portals, <http://www.economy.go.kr>)

# Saemaeul Movement

- “New Village” Movement since 1970
  - Government invested 51% of the total fund, with the rest invested by farmers
  - Increase of rural household income
  - Improvement of rural living environment
- Green Revolution
  - high-yielding rice variety, “T’ong-il”



## **Factor 4) : Population**

- Population transition
  - increase in economically active population
- Structural change of employment
  - from agriculture to non-agriculture
  - rural to urban migration
  - mechanization of farming
  - emergence of the middle class → demand for democratization

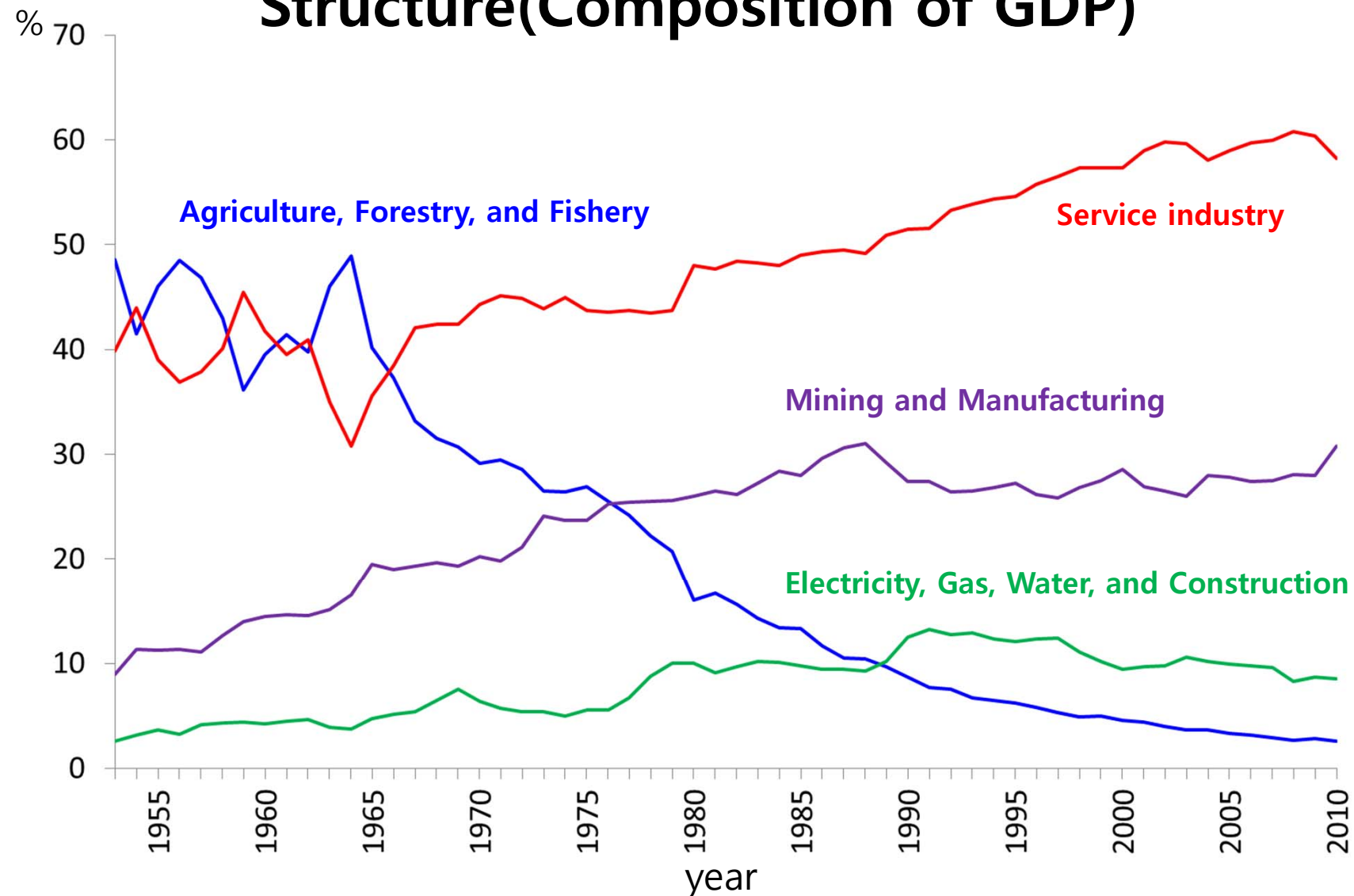
# Human Capital

- Educational revolution: Compulsory Education(elementary school) since 1950s
  - President Rhee, Syngman's education policy under a catchphrase: "Education will help build a nation"
- Lower Rate of illiteracy
  - 77.8% in 1945
  - 1.7% (virtually 0%) at the present day
- High Educational fever
  - college entrance rate: 70-80%
  - looking down on vocational education

# **The Result of Korean Economy's Rapid Growth**

- 1) Changes of Industrial Structure
- 2) Strengthened Competitiveness of Major Industries
- 3) Democratization after Industrialization

# The Result of Korea Economy's Rapid Growth 1) : Changes of Industrial Structure(Composition of GDP)



# **The Result of Korea Economy's Rapid Growth Result 2): Strengthened World-class Competitiveness of major Industries**

- Shipbuilding
- Automobiles
- Steel
- Oil refining
- Electronics
- Construction

# Shipbuilding



Hyundai Heavy Industries

World shipbuilding market share by countries (2012)<sup>[21]</sup>

Rank	Country	Combined GT	%
1	 China	67,000,000	45%
2	 South Korea	53,000,000	29%
3	 Japan	28,000,000	18%
4	 Philippines	6,000,000	1%
5	 European Union	4,500,000	1%
	Rest of the world	11,000,000	6%

World shipbuilding market share by countries (Q1 2015)<sup>[26]</sup>

Rank	Country	Compensated GT	%
1	 South Korea	2,310,000	41.0%
2	 Japan	1,620,000	28.9%
3	 China	1,350,000	24.0%
	Rest of the world	340,000	6.1%

GT: Gross tonnage

# Automobiles

Asan



Turkey



Czech



Russia

**Hyundai Motor Company**

Rank ↕	Country/Region ↕	2013 [2] ↕
—	World	87,663,968
1	China	22,116,825
—	European Union	16,183,846
2	United States	11,066,432
3	Japan	9,630,181
4	Germany <sup>[21]</sup>	5,718,222
5	South Korea	4,521,429
6	India	3,880,938
7	Brazil	3,712,380
8	Mexico	3,052,395
9	Thailand	2,457,057
10	Canada	2,379,806

# Steel

**Crude steel production (million metric tons):**

Rank (2014) ⇅	Country/Region ⇅	2014 ⇅
—	World	1670.1
1	 People's Republic of China	822.70
-	 European Union	169.30
2	 Japan	110.67
3	 United States	88.17
4	 India	87.29
5	 South Korea	71.54
6	 Russia	71.46
7	 Germany	42.94
8	 Turkey	34.04
9	 Brazil	33.90
10	 Ukraine	27.17

**Top steel net exporters in 2013<sup>[7]</sup>**

Rank	Country	Mt
1	China	46.8
2	Japan	37.1
3	Ukraine	23.0
4	Russia	17.1
5	South Korea	9.9
-	European Union <sup>[8]</sup>	7.9
6	Brazil	4.4
7	Taiwan	3.8
7	Belgium	3.8
9	Austria	3.7
10	Turkey	2.8
11	Netherlands	2.6
11	Slovakia	2.6
13	India	2.3



**POSCO Specialty Steel**



# Oil refining



## World's largest refineries

Name of Refinery	Location	Barrels per Day
Jamnagar Refinery (Reliance Industries)	Jamnagar, India	1,240,000
SK Energy	Ulsan, South Korea	1,120,000
Paraguana Refinery Complex (PDVSA)	Paraguana, Falcon, Venezuela	940,000
GS Caltex Yeosu Refinery (GS Caltex)	Yeosu, South Korea	730,000
S-Oil Onsan Refinery (S-Oil)	Ulsan, South Korea	670,000
ExxonMobil	Singapore	605,000
Port Arthur Refinery (Motiva Enterprises)	Port Arthur, Texas, USA	600,250
Baytown Refinery (ExxonMobil)	Baytown, TX, USA	560,500
Ras Tanura Refinery (Saudi Aramco)	Saudi Arabia	550,000
Garyville Refinery (Marathon Petroleum)	Garyville, LA, USA	522,000

SK Energy



# Electronics: Semiconductors

## Samsung Electronics

Rank 2013	Rank 2012	Company	Country of origin	Revenue (million \$ USD)	2013/2012 changes	Market share
1	1	Intel Corporation(1)	USA	46 960	-1.0%	14.8%
2	2	Samsung Electronics(2)	South Korea	33 456	+7.0%	10.5%
3	3	Qualcomm	USA	17 341	+31.6%	5.5%
4	10	Micron Technology(3)	USA	14 168	+109.2%	4.5%
5	7	SK Hynix	South Korea	13 335	+48.7%	4.2%
6	5	Toshiba Semiconductor	Japan	12 459	+11.9%	3.9%
7	4	Texas Instruments	USA	11 379	-5.5%	3.6%
8	9	Broadcom	USA	8 121	+3.5%	2.6%
9	8	STMicroelectronics	France  Italy	8 076	-4.9%	2.5%
10	6	Renesas Electronics(4)	Japan	7 822	-15.3%	2.5%

# Electronics: Liquid Crystal Display



LG Display

LCD glass panel suppliers			
Panel type	Company	Remarks	major TV makers
IPS-Pro	Panasonic	Solely for LCD TV markets and known as IPS Alpha Technology Ltd. <sup>[15]</sup>	Panasonic, Hitachi, Toshiba
H-IPS & P-IPS	LG Display		LG, Philips, BenQ
S-IPS	Hannstar	They also produce other type of TFT panels such as TN for OEM markets such as mobile, monitor, automotive, portable AV and industrial panels.	
	Chunghwa Picture Tubes, Ltd.		
	AU Optonics		
S-MVA	Chi Mei Optoelectronics		
S-PVA	S-LCD (Samsung/Sony joint venture)		Samsung, Sony
AFFS	Samsung	For small and medium size special projects.	
ASV	Sharp Corporation	LCD TV and mobile markets	Sharp, Sony
MVA	Sharp Corporation	Solely for LED LCD TV markets	Sharp

# Electronics: Mobile Phones



Galaxy S6

Top Five Worldwide Total Mobile Phone Vendors, 2013			
Rank	Manufacturer	Gartner <sup>[22]</sup>	IDC <sup>[23]</sup>
1	Samsung	24.6%	24.5%
2	Nokia	13.9%	13.8%
3	Apple Inc.	8.3%	8.4%
4	LG	3.8%	3.8%
5	ZTE	3.3%	-
5	Huawei	-	3.0%
	Others	34.0%	46.4%

Market share of top-five worldwide mobile phone vendors, Q2 2015		
Rank	Manufacturer	Strategy Analytics report <sup>[21]</sup>
1	Samsung	20.5%
2	Apple Inc.	10.9%
3	Huawei	7.0%
4	Microsoft	6.4%
5	Xiaomi	4.6%
	Others	50.6%

# Construction

Division	Comprehensive Evaluation of Global Competitiveness of the Construction Industries in Each Nation					
	2013년		2012년		2011년	
Ranking	Nation	Score	Nation	Score	Nation	Score
1	U.S.A.	100.0	U.S.A.	100.0	U.S.A.	100.0
2	China	77.2	China	88.0	China	91.4
3	Germany	73.5	Germany	78.0	Italy	81.1
4	France	68.1	Italy	76.5	U.K.	79.1
5	Spain	67.9	Austria	75.4	Germany	79.0
6	U.K.	67.9	Spain	74.7	France	77.9
7	S. Korea	67.8	S. Korea	73.8	Netherlands	76.2
8	Italy	67.0	France	73.6	Australia	74.8
9	Japan	65.4	U.K.	72.9	S. Korea	73.7
10	Austria	64.6	Japan	71.6	Belgium	73.5

# **The Result of Korea Economy's Rapid Growth Result 3)**

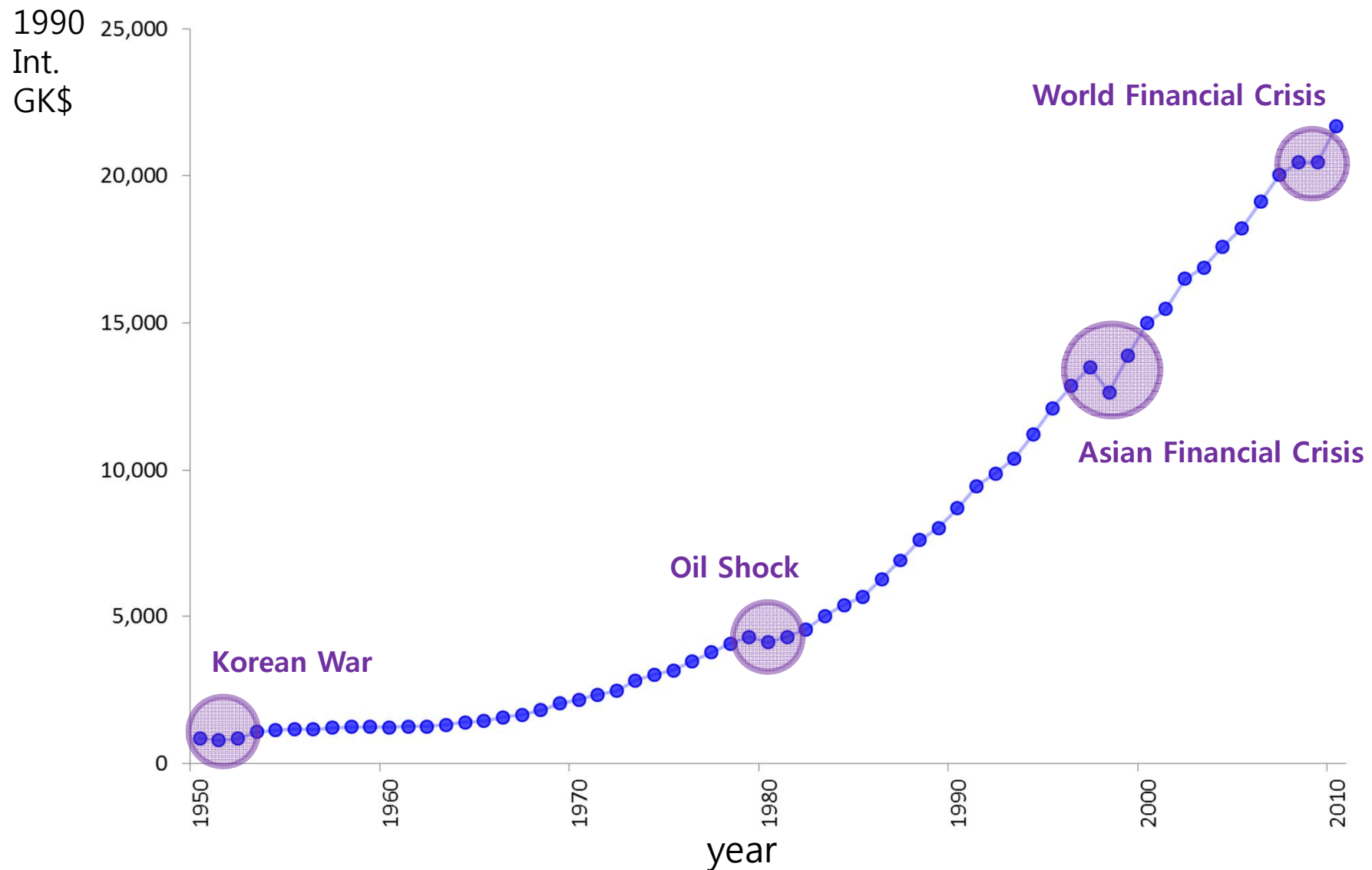
## **Democratization after Industrialization**

- Korea that accomplished both Industrialization and Democratization
  - six decades of growth and development
  - democratization after industrialization
  - a direct presidential election in 1987

# Overcoming Crises of Korean Economy

- Haven't there been crises of Korean economy since the period of rapid growth up until now?
  - most of crises were exogenous
- If there had been crisis, how has the nation overcome them?






# Crises of Korean Economy in the Process of Growth





# Cases of the 1997 Asian Financial Crisis












Currency	Exchange rate (per US\$1) <sup>[47]</sup>		Change
	June 1997	July 1998	
 Thai baht	24.5	41	▼ 40.2%
 Indonesian rupiah	2,380	14,150	▼ 83.2%
 Philippine peso	26.3	42	▼ 37.4%
 Malaysian ringgit	2.5	4.1	▼ 39.0%
 South Korean won	850	1,290	▼ 34.1%

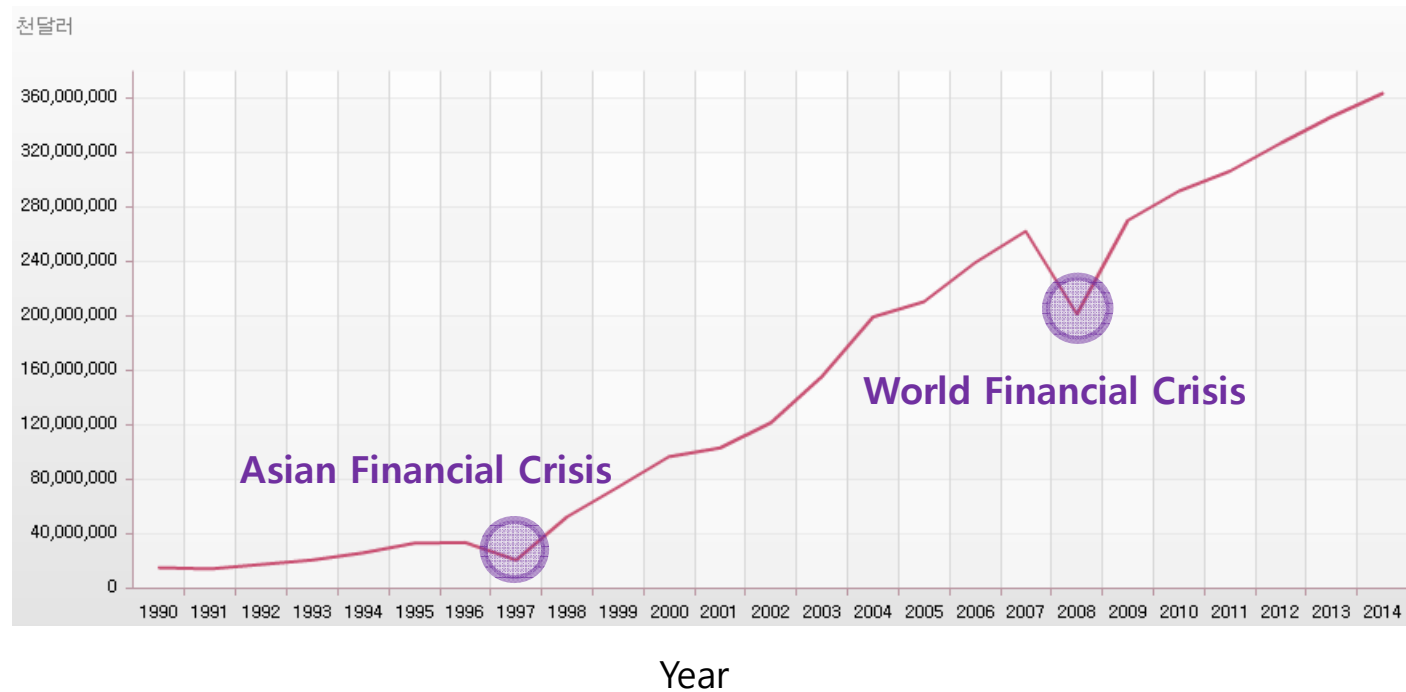
Country	GNP (US\$1 billion) <sup>[47]</sup>		Change
	June 1997	July 1998	
 Thailand	170	102	▼ 40.0%
 Indonesia	205	34	▼ 83.4%
 Philippines	75	47	▼ 37.3%
 Malaysia	90	55	▼ 38.9%
 South Korea	430	283	▼ 34.2%

# After Asian Financial Crisis

- Corporate Restructuring
  - Improved corporate governance
- Arranging Financial Market
  - Foreign financial institutions
- Foreign Exchange Holding

Rank ⇅	Country ⇅	Foreign exchange reserves (Millions of US\$) ⇅	Figures as of ⇅
1	 China <sup>[4]</sup>	3,200,000	March 2016 <sup>[1]</sup>
2	 Japan	1,248,107	Jan 2016 <sup>[2]</sup>
-	 ASEAN	754,287	~2016 (sum of references listed here)
-	 Europe (Eurozone)	720,159	Jan 2016 <sup>[3]</sup>
3	 Switzerland	604,911	Jan 2016 <sup>[4]</sup>
4	 Saudi Arabia	602,032	Jan 2016 <sup>[5][6][7]</sup>
5	 Republic of China (Taiwan)	425,978	Jan 2016 <sup>[5][8][9]</sup>
6	 Russia	386,900	Mar 18, 2016 <sup>[10][11][12]</sup>
7	 South Korea	365,760	Feb 2016 <sup>[5][13][14]</sup>

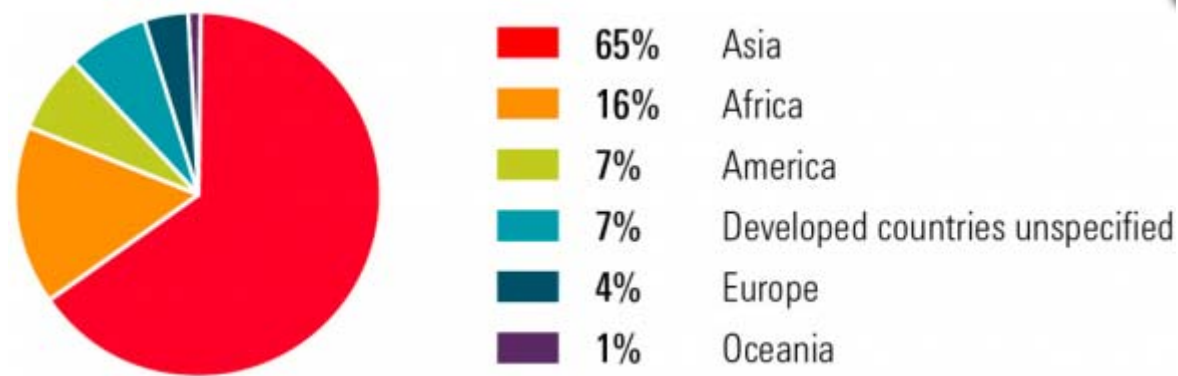
Korea's foreign exchange reserve  
(\$100million)



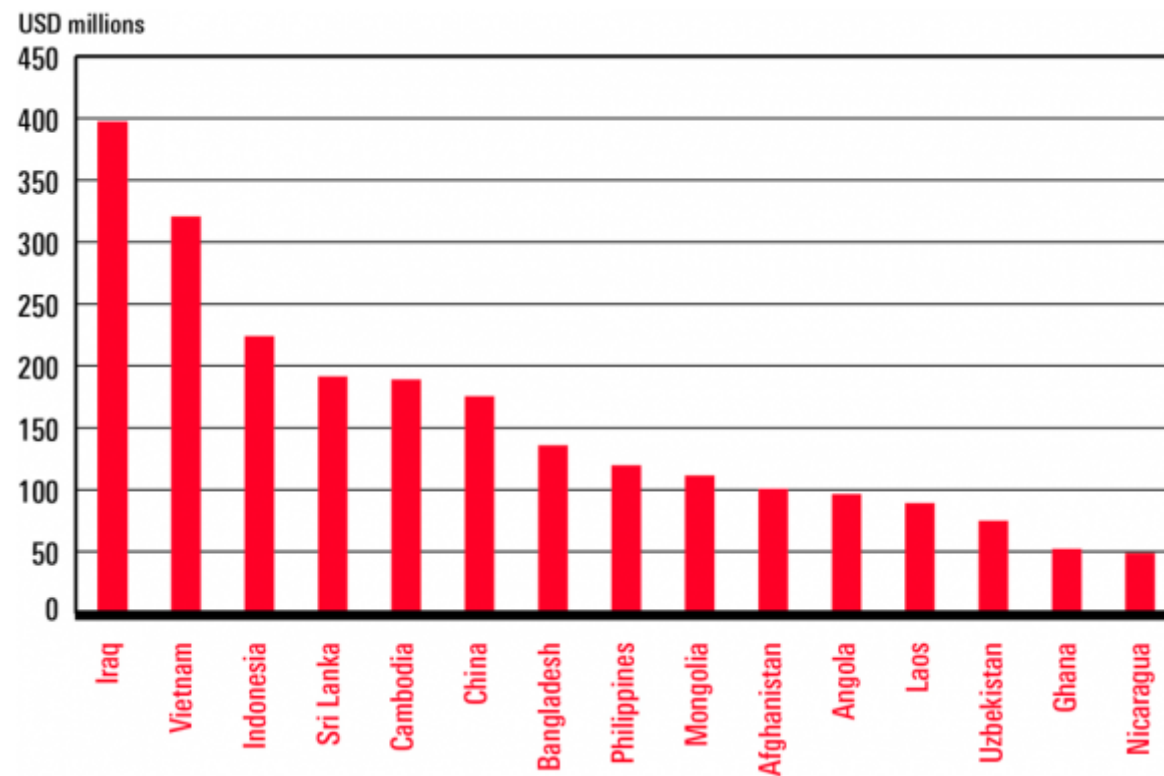
# The way to the Developed country?

- OECD(1996)
- DAC(2009)
  - From a recipient to a donor
- KOICA(1991)
- Group of 20 countries(G20)
  - G-20 Seoul summit(2010)

# Korean ODA by region (2010)



# Top Recipient Countries (sum 2000-2009)



# Pending Issues

- Divided country
  - national defense (nuclear threat, provocations, national defense expenditure, etc.)
  - reunification (possibility, cost, etc.)
- Population transition
  - low fertility rate and population ageing
  - decrease in working population & increase in expense for the elderly
  - transition to multicultural society(Beyond the Homogenous Nation Myth)

# Pending Issues

- Social integration
  - Polarization (inequality of income distribution)
  - social conflicts (ideology, region, etc.)
  - growth first? distribution first?
- Social safety net
  - toward a welfare state(universal/selective)
  - How to secure financial resources and increase tax revenue