

# **Economic Growth and Development in South Korea**

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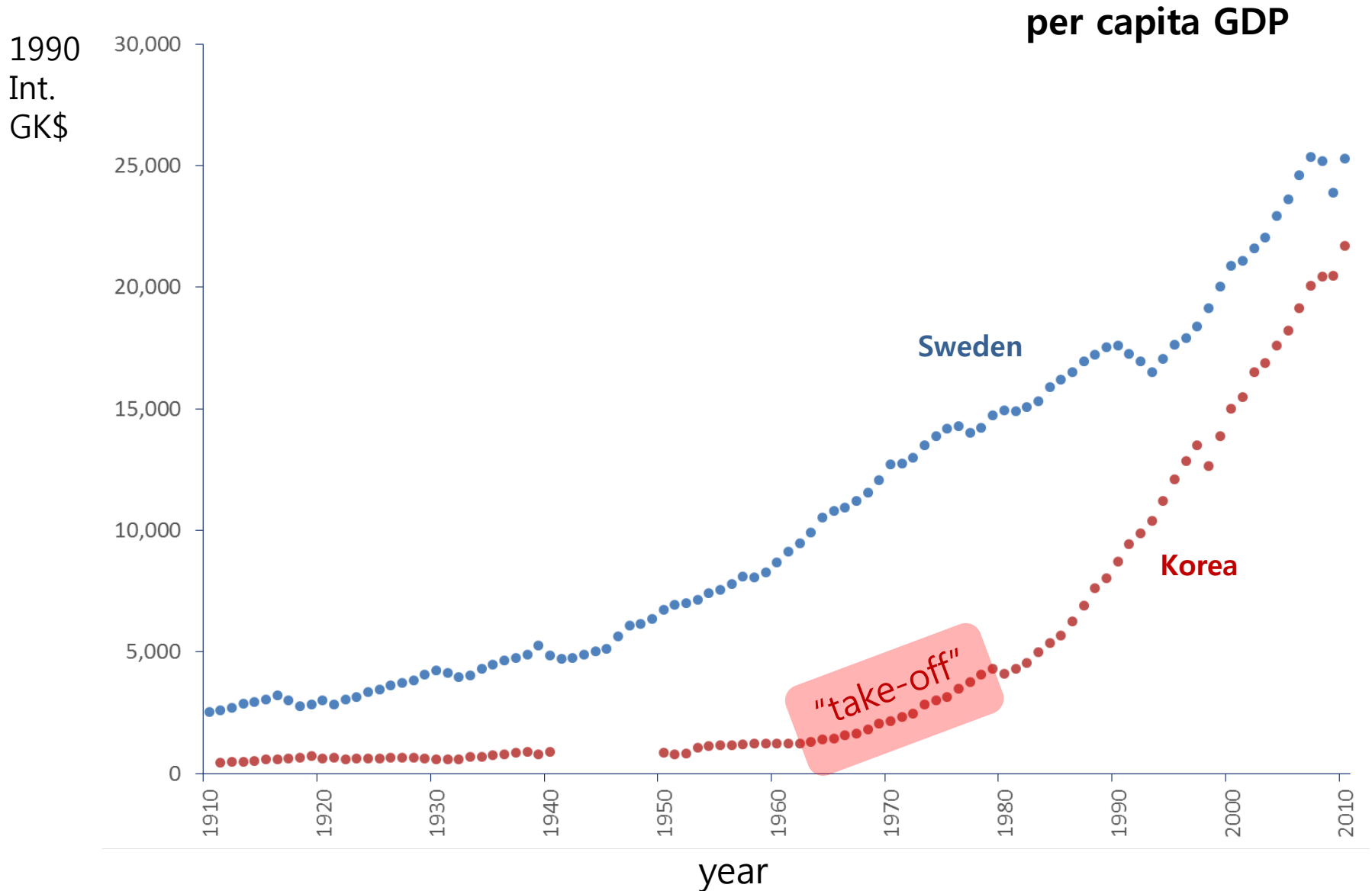
# Maddison Project

- 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

- South Korea: 1911-1940, 1950-2010
  - Korea under Japanese rule from 1911 to 1940
  - not available during WWII and just after liberation
- Sweden: 1800-2010
  - 1550-1950 from Schön and Krantz (2012), "Swedish Historical National Accounts 1560-2010"
  - 1950-2010 from Total Economy Database (Conference Board)

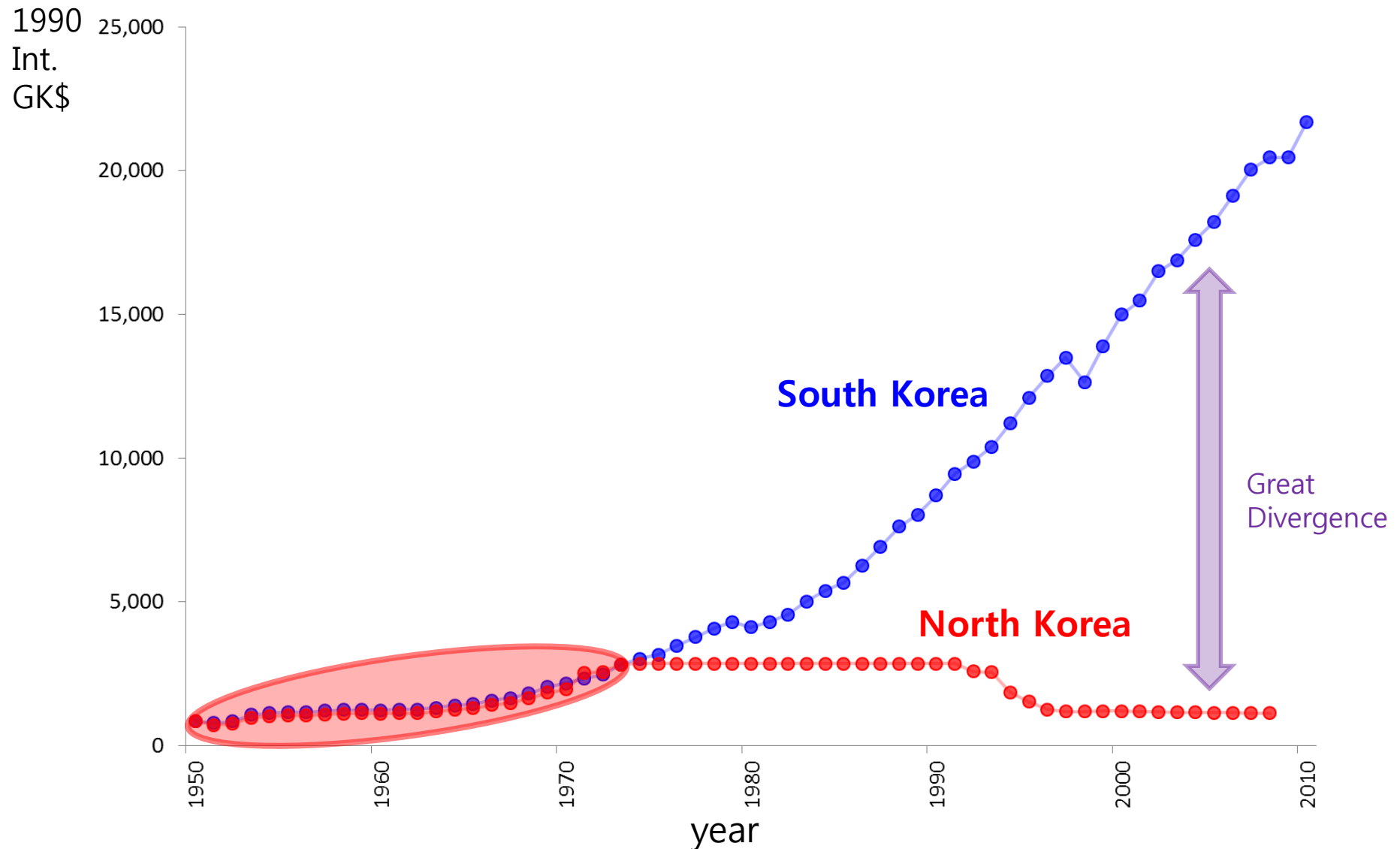
# Comparison



# Typical explanation

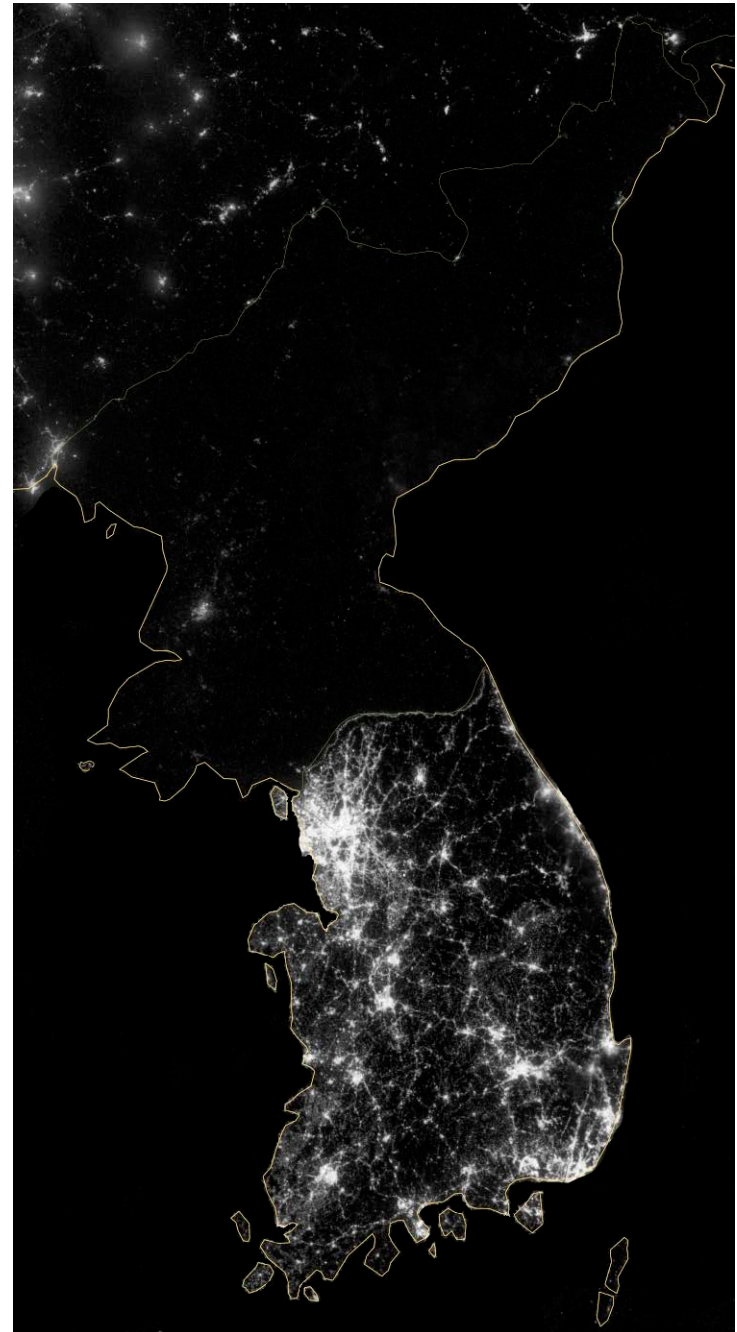
- Geographical and ethnic characteristics
  - geopolitical location  
(far east, peninsula, between China and Japan)
  - blood or temper
  - traditional culture
- Hard to explain failures in North Korea
  - shares the peninsula
  - shares genes
  - shares history and culture

# South Korea & North Korea, 1950-2010



# Contrast

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



# Precondition for Economic Growth

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



# 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

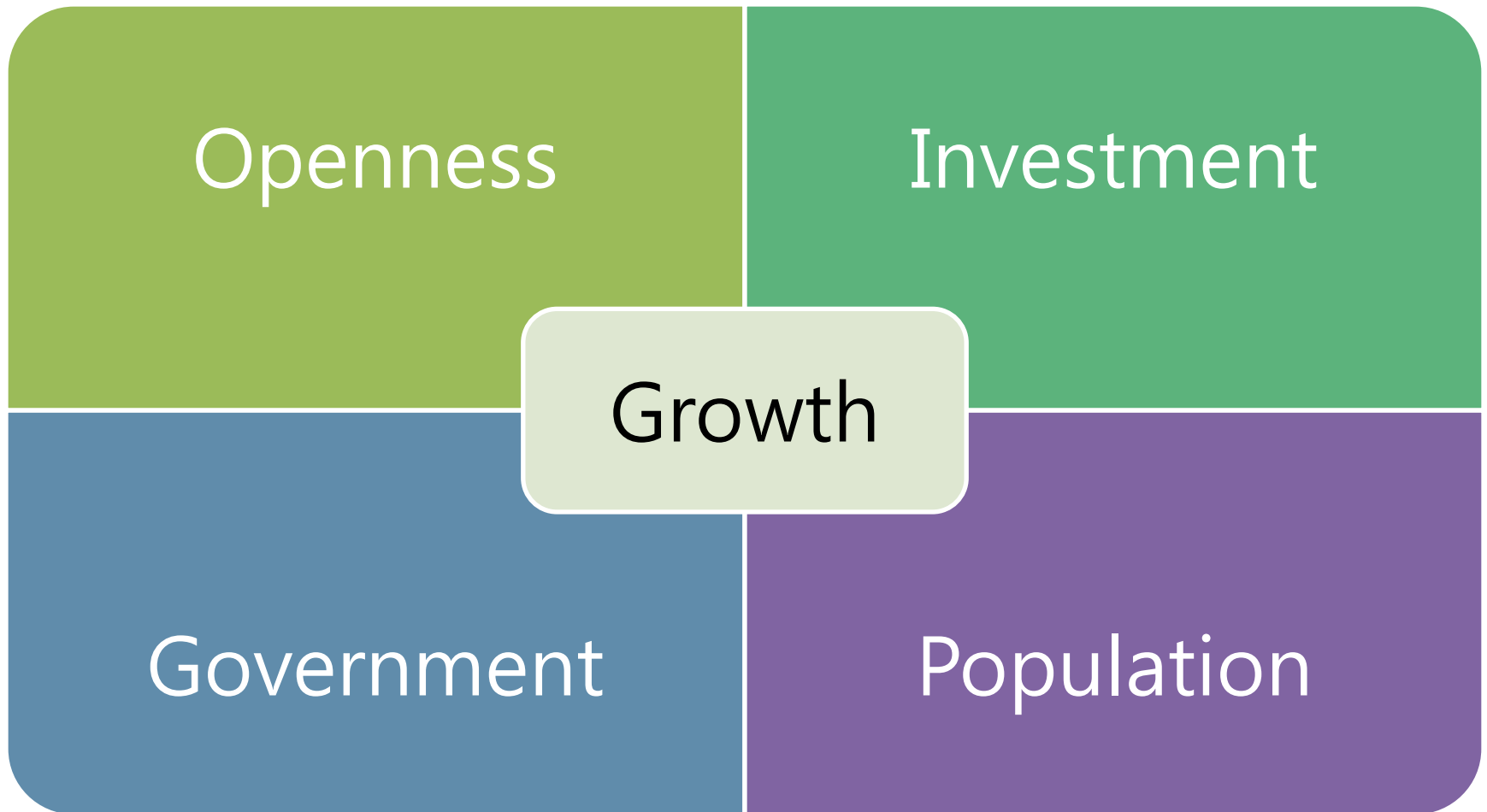
# In the 1950s

- 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

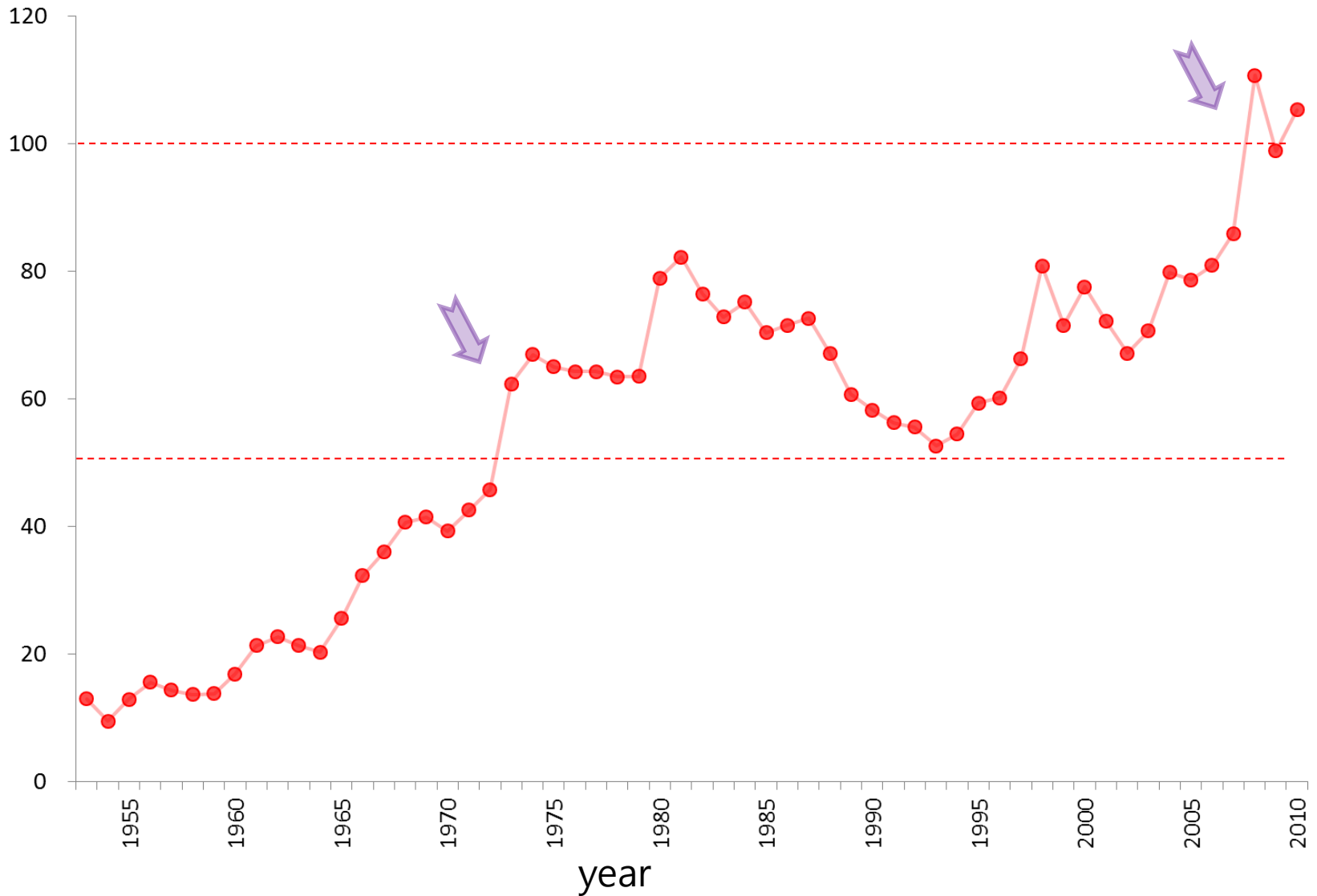
- Free Export Zones
  - Originally, two cities: Masan (1970), Iri (1973)
  - Free Trade Zone in 2000
  - Masan, Kunsan, Taebul, Tonghae, Yulch'on, Kimje, Ulsan in 2014
  - \* Iksan (Iri) was released in 2010

# Export "Myth"

- Annual Exports
    - In 1964, \$100million
    - In 1970, \$1billion
    - In 1977, \$10billion
    - In 1995, \$100billion
    - In 2011, \$500billion
- (Trade volume \$ 1 trillion)



# Trade/GNI ratio



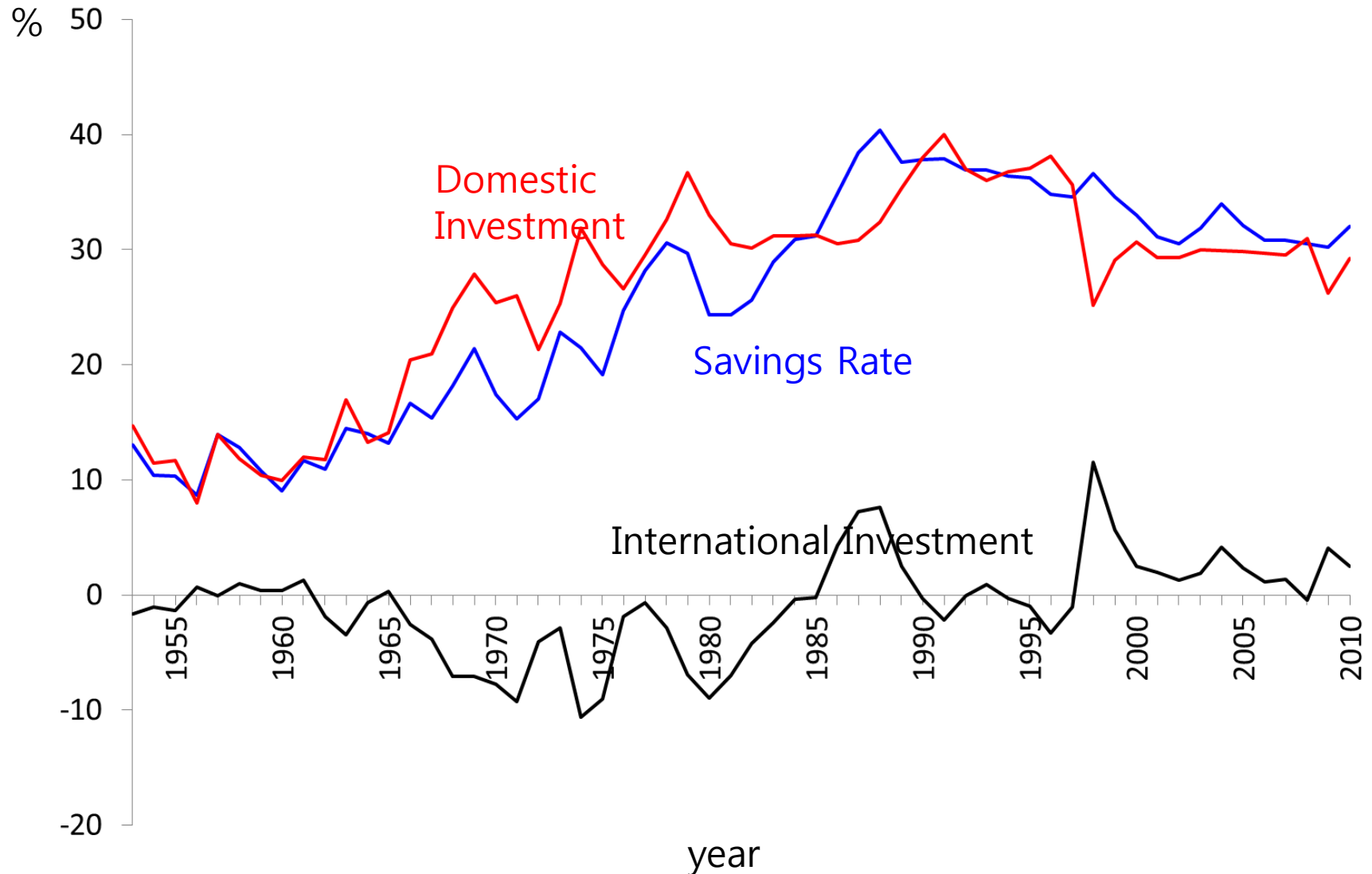
# Free Trade

- Multilateral
  - GATT member since 1967
  - WTO member since 1994
- Bilateral Trade (Free Trade Agreement; FTA)
  - Effectuation: Chile(2004), Singapore(2006), EFTA(2006), ASEAN(2007), India(2010), EU(2011), Peru(2011), United States(2012) and Turkey(2013) Australia(2014), Canada(2015)
  - Agreement: Colombia(2012), China(2014), New Zealand (2014), Vietnam(2014)
  - Under Negotiations: Indonesia, China, Korea-China-Japan, RCEP

## **Factor 2) : Investment**

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

# 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
  - Economic Planning Board (EPB) since 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

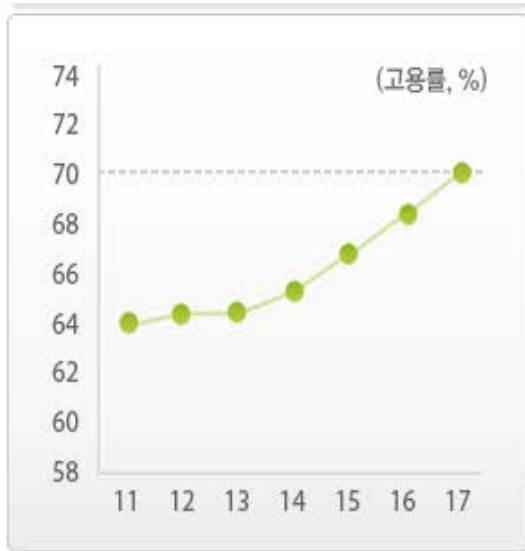
- The 1st plan: 1962-66
- The 2nd: 1967-71
- The 3rd: 1972-76
- The 4th: 1977-81
- The 5th: 1982-86
- The 6th: 1987-91
- The 7th: 1992-96

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

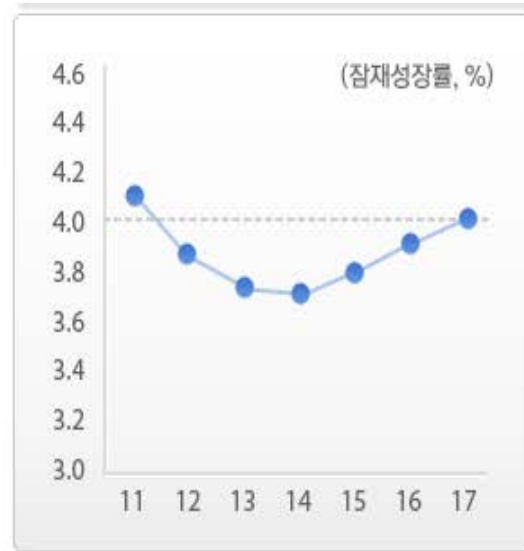
70% Employment rate

4% Economic growth

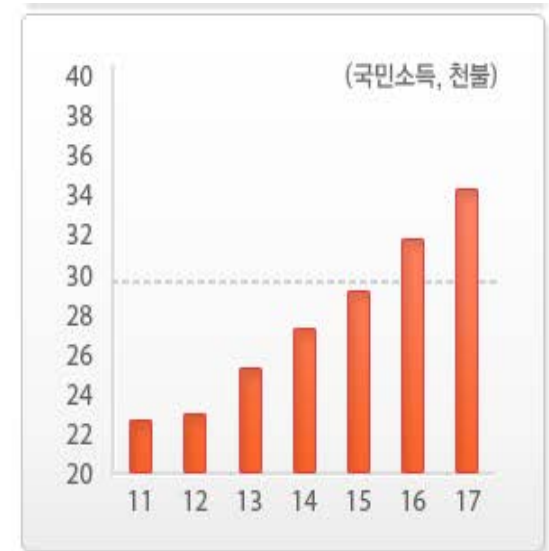
\$40,000 per capita income



(Employment rate, %)



(Potential growth rate, %)



(Per capita income, \$1,000)

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

# Saemaeul Movement

- “New Village” Movement since 1970
  - Increase of rural household income
  - Improvement of rural living environment
  - Government invested 51% of the total fund
- 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
  - emergence of the middle class  
(demanding democracy)

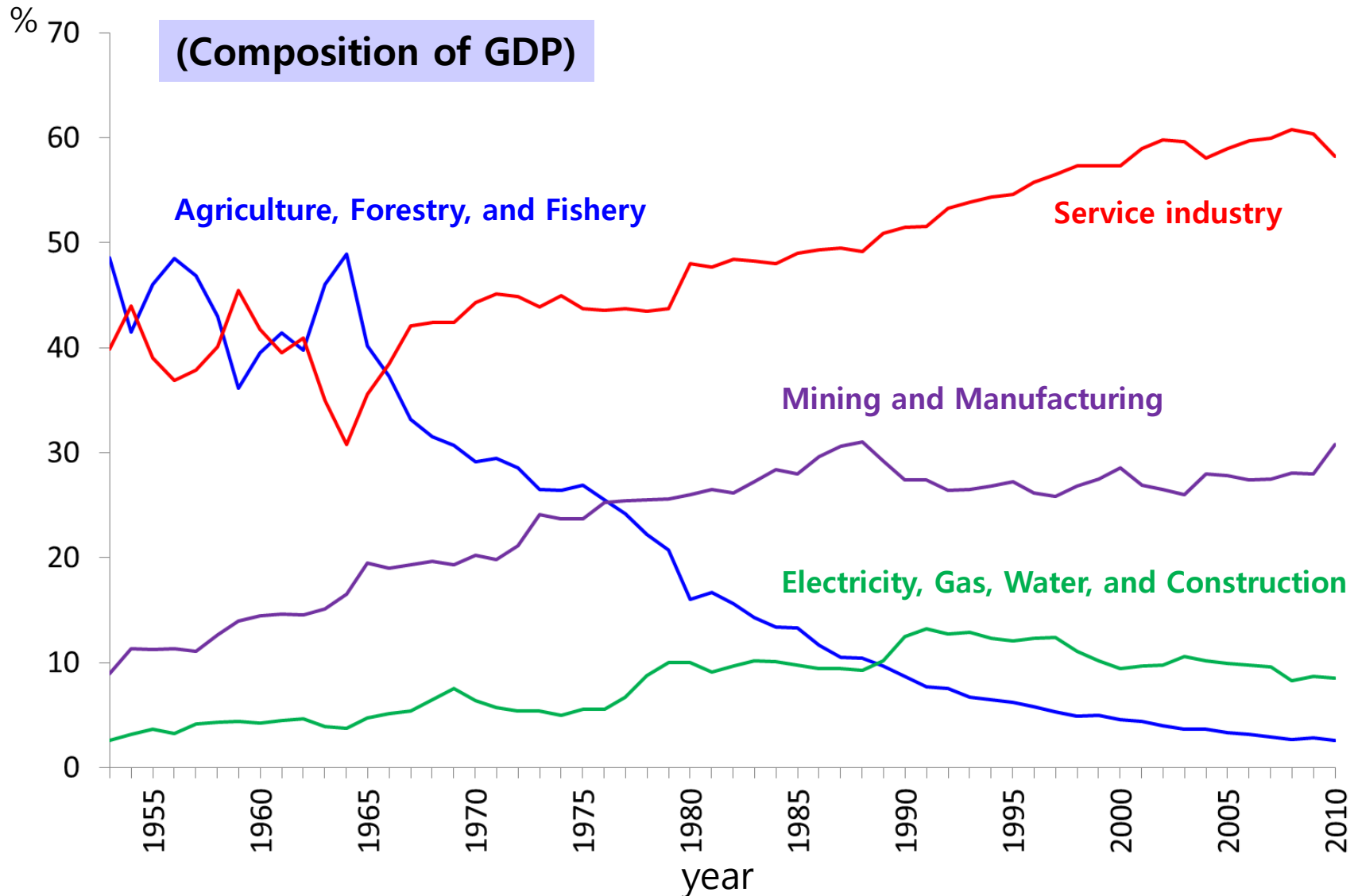
# Human Capital

- Educational revolution
  - Compulsory Education since 1950s
  - President Rhee, Syngman , "royal message on education"(教育立國)
- Low illiteracy rate
  - 77.8% in 1945
  - 1.7% (virtually 0%) at the present day
- 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

# Result 1) : Changes of Industrial Structure



## Result 2)

- 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%

GT: Gross tonnage

# Automobiles

Asan



Czech



Turkey

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 ↕	Country/Region ↕	2013 ↕
—	World	1607.2
1	 People's Republic of China	779.0
-	 European Union	165.6
2	 Japan	110.6
3	 United States	87.0
4	 India	81.2
5	 Russia	69.4
6	 South Korea	66.0
7	 Germany	42.6
8	 Turkey	34.7
9	 Brazil	34.2
10	 Ukraine	32.8

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 Optronics		
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%

# 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

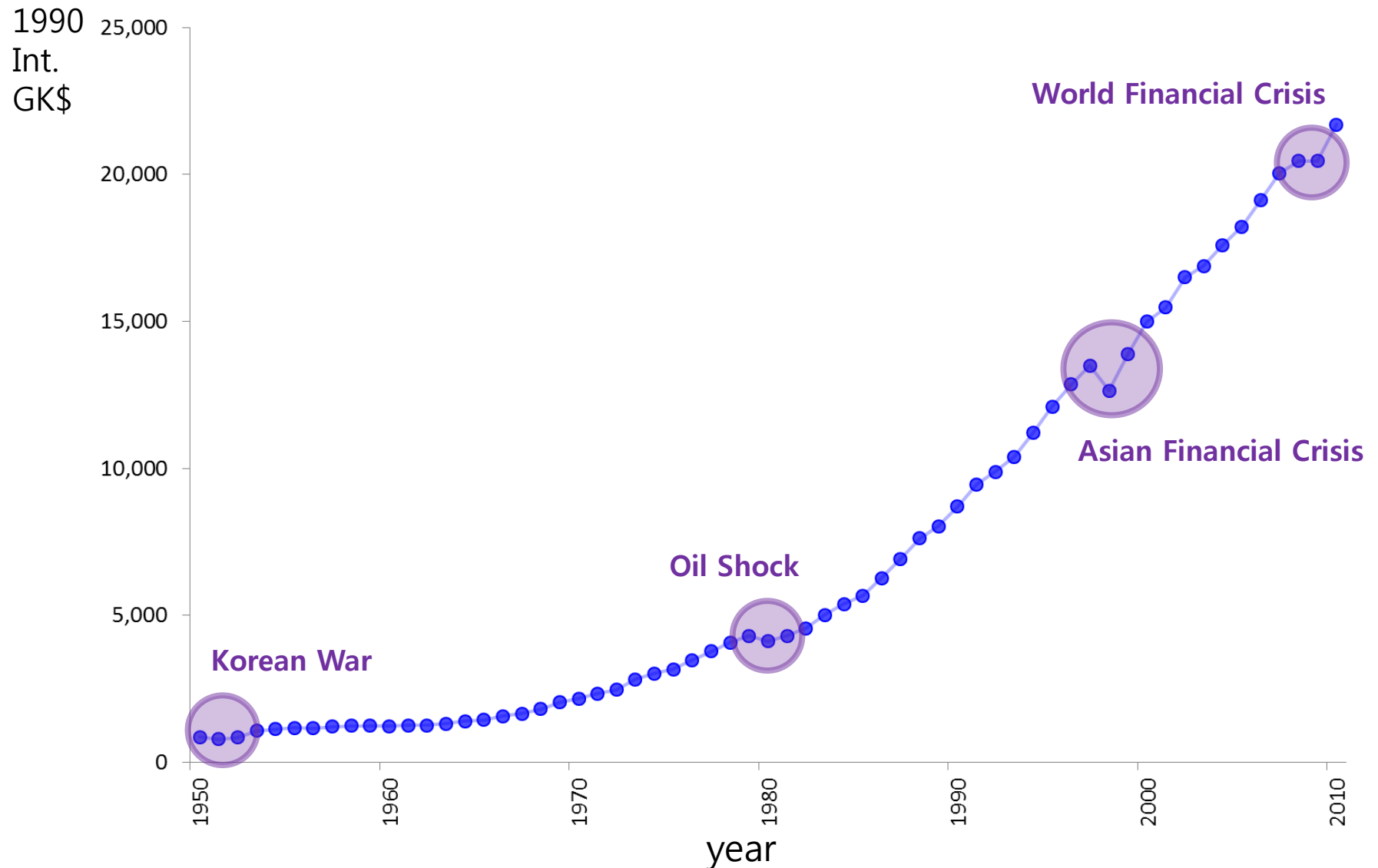
## **Result 3)**

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

# Overcoming Crises of Korean Economy

- crises of Korean economy
  - most of crises were exogenous
- overcame crises in a short time






# 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>[1]</sup>	3,945,932	Sep 2014 <sup>[1]</sup>
2	 Japan	1,261,103	Jan 2015 <sup>[2]</sup>
3	 Saudi Arabia	734,500	Jan 2015 <sup>[3]</sup>
4	 Switzerland	585,463	Jan 2015 <sup>[4]</sup>
5	 Taiwan	420,788	Jan 2015 <sup>[5]</sup>
6	 Brazil	362,547	Feb 2015 <sup>[6]</sup>
7	 South Korea	362,186	Jan 2015 <sup>[7]</sup>
8	 Russia	352,900	Mar 20, 2015 <sup>[8][9][10]</sup>
9	 India	339,992	Mar 20, 2015 <sup>[11][12]</sup>

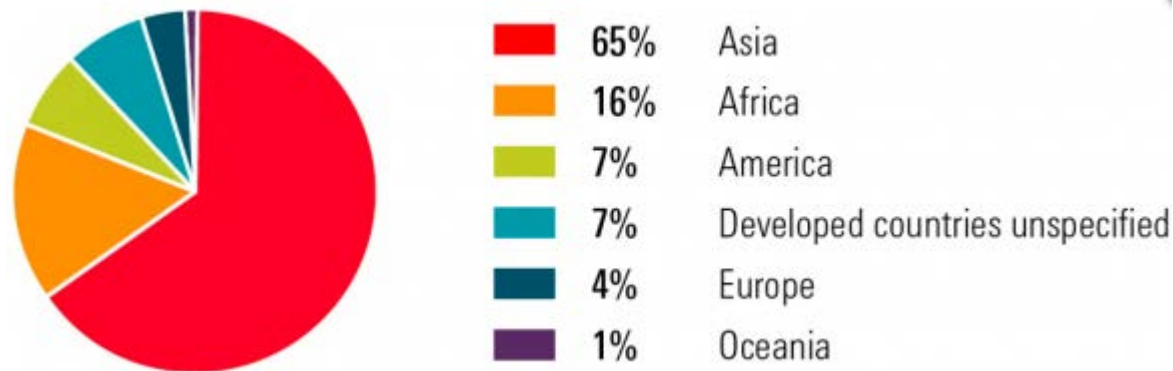
Korea's foreign exchange reserve  
(\$100million)



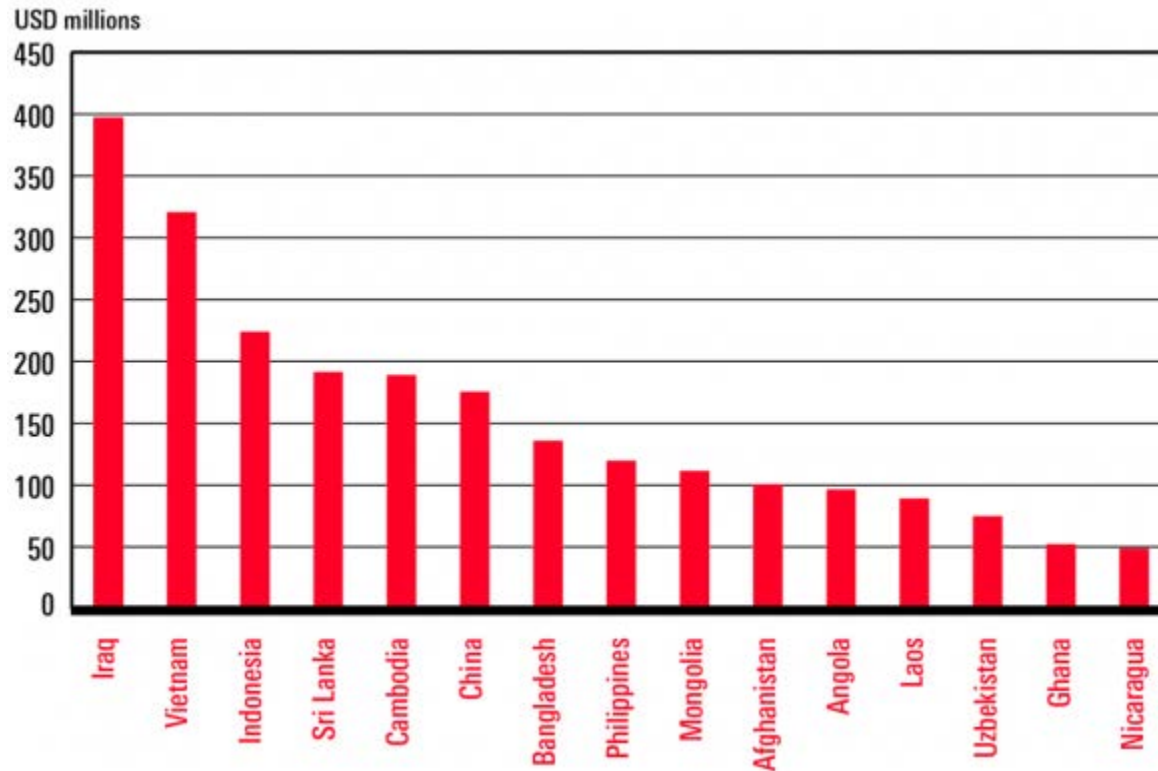
# Developed country, or not?

- OECD member since 1996
  - Organization for Economic Cooperation and Development
- DAC member since 2009
  - Development Assistance Committee
- KOICA was established in 1991
  - Korea International Cooperation Agency
- G20 (Group of 20)
  - 2010 G-20 Seoul summit

# 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 economically active population
  - transition to multicultural society

# 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)
  - problem of tax increase