Korea's Economic Success: How Can We Account for?

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Contents

I. Key Question and Answer

Key Question

- Over the past half century Korea has achieved a remarkable economic success. The key question is: how do we account for this success?

Answer

- Broadly speaking, six major factors have been responsible for this success.

1. Market-based Economy
2. Outward-looking Development Strategy
3. Human Resource Development
4. Technology Development
5. Macroeconomic Stability
6. Korea-U.S. Alliance

II. Development to Date at a Glance

Growth in GDP

- Korea's nominal per capita GDP in 1962: $104
  → the same in 2010: $20,756 (a 200-fold increase)
- Korea's per capita GDP in 2000 prices in 1962: $1,176
  → the same in 2010: $16,372 (a 14-fold increase)
- Korea's GDP in 2010: $1,014.4 billion → 15th largest in the world
  → Average annual growth rate (1962-2010): 6.9%
- With such rapid growth, Korea has become one of the some 13 countries that have sustained high growth over 25 years or more since World War II. (Commission on Growth and Development, *The Growth Report: Strategies for Sustained Growth and Inclusive Development*, The World Bank, 2008)

	1962(A)	1970	1980	1990	2000	2010(B)	B/A
GDP (US$ billion, nominal)	2.7	8.9	63.8	263.8	533.4	1,014.4	376
GDP (US$ billion in 2000 prices)	31.1	63.6	128.0	295.6	533.4	800.2	26
Per Capita GDP (US$, nominal)	104	279	1,674	6,153	11,347	20,757	200
Per Capita GDP (US$ in 2000 prices)	1,176	1,974	3,358	6,895	11,347	16,372	14

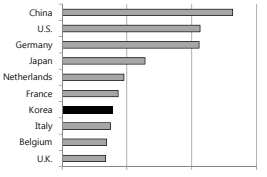
Source: World Bank, World Development Indicators (WDI)

II. Development to Date at a Glance

The World's 7th Largest Exporter

- In 2010, Korea became the world's 7th largest exporter with 3% global market share.
  - Korea's exports are, for the most part, industrial manufactured goods (97.5% of the total exports).
- In terms of total trade including imports, Korea is the 9th largest trading country in the world.

2010 International Trade Exports
(Current $US Billion)



Source: World Bank, WDI

Korea's Export Structure Shift (%)

	1962	1972	1980	1990	2000	2010
Primary Commodity	72.3	11.1	7.7	5.0	2.8	2.5
Industrial Products	27.7	88.9	92.3	95.0	97.2	97.5
Light Industry	-	67.4	48.4	38.5	16.2	6.3
Heavy-Chemical Industry	-	21.5	43.9	56.6	81.0	91.2
IT	-	-	-	14.4	32.0	27.1
Others	-	-	-	42.2	49.0	64.1

Source: Korea International Trade Association

II. Development to Date at a Glance

Change in Top 10 Export Items: 1961 vs. 2010

- From minerals and seafood products to semiconductors and other sophisticated manufactured products.

1961

	Item	Amount (US$ Million)
1	Iron ore	5.3
2	Tungsten	5.1
3	Silk	2.7
4	Anthracite Coal	2.4
5	Squid	2.3
6	Fresh Fish	1.9
7	Graphite	1.7
8	Plywood	1.4
9	Grain	1.4
10	Swine Bristles	1.2

2010

	Item	Amount (US$ Million)
1	Semiconductor	51,464
2	Ship	47,112
3	Mobile Phone	37,567
4	Petroleum Prod.	31,862
5	Automobile	31,782
6	Display Panel	29,577
7	Automobile Parts	18,963
8	Plastic Prod.	16,462
9	Organic/ Inorganic Compounds	14,448
10	Home Appliances	13,618

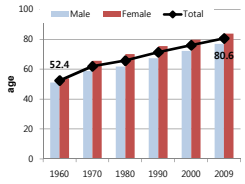
Sources: 1961 data from *The Korean Economy: Six Decades of Growth and Development* (KDI, 2010), and 2010 data from Statistics Korea

II. Development to Date at a Glance

Social Development

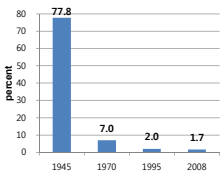
- Over the past 50 years, Korea has achieved not only economic success but also social progress in many areas.
  - Increase in life expectancy
    - ✓ Average life expectancy rose from 52.4 in 1960 to 80.6 in 2009
  - Total elimination of illiteracy
    - ✓ Korea's illiteracy rate in 1945 was close to 80% and now it is virtually eliminated

Life Expectancy



Source: Korean Statistical Information Service, www.kosis.kr

Illiteracy Rate



Source: Korean Statistical Information Service

II. Development to Date at a Glance

Social Development

- Improvement in gender equality
  - ✓ According to the UNDP, Korea has achieved significant advance in gender equality ahead of many advanced countries in the West.

UNDP Gender Inequality Index

Rank	1	2	10	12	**20**	21	32	37
Country	Netherlands	Denmark	Singapore	Japan	**Korea**	Portugal	U.K.	U.S.
Index	0.174	0.209	0.255	0.273	**0.310**	0.310	0.355	0.400

Source: UNDP Human Development Report 2010

- Progress in democracy
  - ✓ Korea has also achieved a democracy to a degree comparable to many Western countries

Democracy Index 2010

Rank	1	14	17	19	**20**	22	29	31	36	37	40	136	167
Country	Norway	Germany	U.S.	U.K.	**South Korea**	Japan	Italy	France	Taiwan	Israel	India	China	North Korea
Index	9.8	8.38	8.18	8.16	**8.11**	8.08	7.83	7.77	7.52	7.48	7.28	3.14	1.08
Type of Democracy	Full Democracy						Flawed Democracy					Authoritarian Regime	

Source: Economist Intelligence Unit

III. Six Driving Forces of Economic Success

III-1. Market-based Economy

III-2. Outward-looking Development Strategy

III-3. Human Resource Development

III-4. Technology Development

III-5. Macroeconomic Stability

III-6. Korea-U.S. Alliance

III-1. Market-based Economy

- In the early post-World War II era, many Asian nations adopted either communist or socialist economies.

- Considering its many merits, Korea chose, however, a market-based economy.
  - A market-based economy guarantees private property and freedom in economic activities.
  - Thanks to these key attributes, the market-based economy is, on the whole, superior to the socialist economy in several important respects:
    a. Strong incentive for work and entrepreneurship
    b. Competition among market participants leading to high productivity, and
    c. Speedy adoption of innovations

III-1. Market-based Economy

- Korea's first constitution adopted in 1948, however, had many restrictions on the operation of a market economy such as government monopoly in conducting foreign trade and exploiting key natural resources.
- These restrictions were, however, largely removed through the series of policy reforms implemented in the1950s and 1960s.
- The adoption of a market-based economy has enabled the South Korean economy to outperform the North Korean economy over time.

Per Capita GDP: South and North Korea (Current US$, US$ Billion)

	1962 (A)	1970	1980	1990	2000	2010 (B)	(B)/(A)
S. Korea per capita GDP	104	279	1,674	6,153	11,347	20,757	200
N. Korea per capita GDP	176*	279*	783*	1152	735	937	5
S. Korea GDP	2.7	8.9	63.8	263.8	533.4	1,014.5	376
N. Korea GDP*	2.0*	4.0*	13.5*	23.2	16.8	28.2	14

Sources: South Korea Data from World Bank, World Development Indicators. North Korea Data from Statistics Korea and Jin Park, *North Korea's Fiscal Status* (KDI Policy Study, 1994)
* North Korea's GDP figures are not available for 1962, 1970, and 1980 periods. For those periods only North Korea's GNPs are available.

III-2. Outward-looking Development Strategy

- In the early 1960s, when Korea embarked on economic development, an inward-looking development strategy based on import substitution was highly popular in the developing world, thanks to the advocacy of such strategy by many influential economists, e.g. Raul Prebisch and Hans Singer.
- Initially, Korea opted, however, for an outward-looking development strategy that emphasized the growth of exports. Thus, economic growth in the earlier periods owed much to growth in exports.

Export and GDP Growth (%)

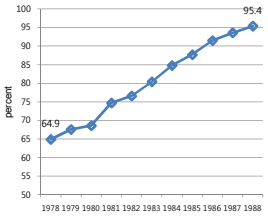
	1961~70	1971~80	1981~90	1991~2000	2001~2010	Average
Export Growth Rate	29.0	21.7	11.2	15.6	12.2	17.5
GDP Growth Rate	8.3	7.3	8.7	6.2	4.2	6.9

- In theory as well as empirically, an outward-looking development strategy has several advantages over an inward-looking development strategy:
  a. Specialization based on comparative advantage
  b. Economy of scale through access to overseas markets
  c. Continuous improvement in productivity under competitive pressure
  d. Rapid innovation through learning and adopting advanced foreign technologies

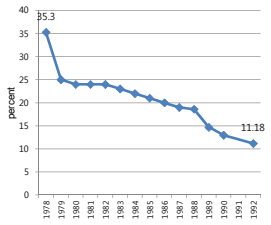
III-2. Outward-looking Development Strategy

- Korea's outward-looking development strategy evolved in several stages:
  - In the early 1960s and 1970s, the emphasis was placed on the export promotion.
  - Beginning in the 1980s, the scope of this strategy was expanded to embrace the liberalization of imports, particularly manufactured goods.

Import Liberalization Ratios in the 1980s



Average Tariff Rates in the 1980s



Source: *The Korean Economy: Six Decades of Growth and Development* (KDI, 2010)

III-2. Outward-looking Development Strategy

- With the end of the Cold War in 1989 and in the following years, the outward-looking development strategy was vigorously pursued to make use of new market opportunities in the former socialist economies.
- With the rapid growth of the emerging market economies subsequently, the same strategy was pursued even more vigorously to make use of opportunities in these markets.

- There is little question that over time Korea's outward-looking strategy has paid handsome dividends in terms of a high economic growth and rapid internationalization of Korea and its society.

Comparison of GDP Growth Rate between Countries with Outward-looking Development and Countries with Inward-looking Development (1961-1995)

Countries with Outward-looking Development	Average Annual GDP Growth rate (%)
	1961-1995
Korea	8.06
Singapore	8.75
Hong Kong	8.40
Thailand	7.79
Malaysia	7.18

Countries with Inward-looking Development	Average Annual GDP Growth rate (%)
	1961-1995
Argentina	2.58
Mexico	4.61
Peru	3.22
Pakistan	5.88
India	5.06

Source: World Bank, WDI

III-3. Human Resource Development

- Especially since the 1950s, Theodore Schultz and other economists have noted the critical role of human capital for rapid economic growth.
- In retrospect, Korea has done well by consistently emphasizing the growth of human capital as an important part of its development efforts.
- For this policy, Korea owes much to its Confucian cultural tradition that places a very high value on education.

Compulsory Primary Education and Draft-deferment during the Korean War

- Korea's adherence to this cultural tradition was best manifested in the Korean War period (1950-1953).
  - In 1950 the Korean war broke out, but the Korean government still implemented a universal compulsory primary education as had been planned. At that time, Korea's per capita GDP was no higher than those of many least developed countries in the world today.
  - Although the war was waged right on the Korean soil, draft-deferment was given to full-time college and university students.
  - In addition, the government gave exemptions to those who obtained admissions to foreign colleges and universities from military service obligations.

III-3. Human Resource Development

Progress in Primary Education

- Thanks to the implementation of universal compulsory education at the primary level, the percentage of school aged Korean children enrolled in primary schools reached the level of developed countries by 1965.
- Today, the percentage exceeds those in the developed countries.

Percentage of Primary School Enrollment (%)

	Korea	Asia	Africa	South America	Europe	Developing Countries	Developed Countries	World
1965	92.0	60.3	36.0	64.6	92.3	54.6	91.5	66.5
1990	100	80.5	52.2	87.1	88.9	76.5	91.6	79.0

Source: Korean Educational Development Institute, Statistical Yearbook of Korea, 1965-2010

Secondary Education

- Reflecting the implementation of universal compulsory education at the primary level in 1950, Korea's demand for secondary education greatly increased in the 1960s and 1970s.
- Middle school education also has become compulsory since 1985.
- Today, the percentages of enrollment in middle- and high school- aged population have reached nearly 98% and 93% respectively.

Percentage of Secondary Education Enrollment (%)

	1966	1970	1975	1980	1985	1990	1995	2000	2005	2010
Middle School	41.4	50.9	71.6	73.3	82	91.6	93.5	95	94.6	97.6
High School	26.4	27.9	40.8	48.8	64.2	79.4	82.9	89.4	91	92.4

Source: Korean Educational Development Institute, Statistical Yearbook of Korea, 1965-2010

III-3. Human Resource Development

Tertiary Education

- It was estimated in 1945, the year when Korea was liberated from the Japanese colonial rule, there were no more than 8,000 Koreans who had received any degree of college and university education, amounting to less than 0.03% of the total population.
- In the subsequent years, Koreans' demand for higher education exploded in large measure due to changes in social structure brought about by the land reforms implemented in 1948-50.
- In the late 1970s and early 1980s, there was a tremendous increase in the number of students seeking admissions to colleges and universities.
- In response to this demand, the government allowed not only many institutions to be opened but also enrollment quotas to be increased.

Number of Tertiary Institutions and Students

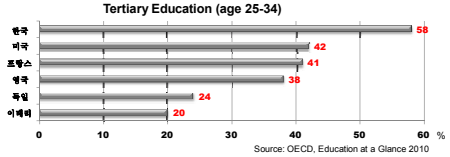
	1965	1970	1980	1990	2000	2010
Colleges and Universities	70	71	85	107	161	179
Students	107,230	146,414	402,979	1,040,166	1,665,398	2,028,841

Sources: Korea Educational Development Institute, *Korean Education Series*

III-3. Human Resource Development

- In recent years, some 83% of high school graduates go on to colleges and universities. The percentage of the population aged 25-34 that has received college and university education is currently more than 58% far exceeding the level in all advanced countries.
- Given these high percentages, it will not be long before the level of education for the general population in Korea will become the highest in the world.

Tertiary Education (age 25-34)



Source: OECD, Education at a Glance 2010

- The rapid increase in the number of college and university graduates over the past two decades or more has greatly facilitated the transformation of the national economy from labor-intensive manufacturing to technology-intensive manufacturing.
- However, this increase has started to aggravate unemployment among college and university graduates as well.

III-3. Human Resource Development

Expenditures on Education by Public and Private Sectors

- According to the OECD report, Korea's education expenditure as a percentage of GDP ranked 2nd among OECD countries in 2008.
- However, these expenditures fail to include large amount of additional expenditures the average Korean family spends for educational activities being carried out outside schools.

Expenditure on Educational Institutions as a Percentage of GDP by Source of Fund (2008)

Rank	Country	Source of Fund		
		Public	Private	Total
1	Iceland	7.2	0.7	7.9
2	**Korea**	**4.7**	**2.8**	**7.6**
3	Israel	5.9	1.4	7.3
5	U.S.	5.1	2.1	7.2
28	Spain	4.5	0.6	5.1
29	Japan	3.3	1.7	4.9
30	Italy	4.5	0.3	4.8
OECD Average		**5.0**	**0.9**	**5.9**

Source: OECD Education at a glance 2011

- If these expenditures are included, the total amount of expenditures that Korea spent on education in 2008 is estimated at approximately 9.6% of its GDP, which exceeds the amount spent by any OECD country.

III-4. Technology Development

- Simon Kuznets and Robert Solow et al. have noted the critical importance of technological development in modern economic growth.

Government Policy on Technological Development

- The Korean government has understood the importance of technology from early on.
  - In 1966, four years after the nation launched its first 5-year plan, the government established KIST (Korea Institute of Science and Technology).
  - In 1967, the government established an independent Ministry of Science and Technology to coordinate all the science and technology policies within the government.
  - In 1971, KAIST (Korea Advanced Institute of Science & Technology) was launched to increase domestically trained scientists and researchers.
  - In 1974, the Daeduck Research Complex was formed to accelerate the development of indigenous technologies.

Promoting Technological Development in the Private Sector

- In the early 1980s, the government decided to encourage R&D capacities in the private sector as well by allowing generous tax incentives:

III-4. Technology Development

a. Cooperate tax deduction for investment in research equipment and facilities
b. Tax deduction for income set aside for research funds
c. Exemption of import tariff on R&D equipment

- In addition, the government allowed exemption from military service obligations for full time researchers.
- This policy resulted in a rapid increase in the number of research institutions in the private sector - from 53 in 1981 to 14,474 in 2007.
- The number of researchers per million people also increased from 66 in 1963 to 5,966 in 2007, surpassing the similar numbers in Germany (3,532), France (3,496), U.K. (4,182) and the U.S. (4,663) in the same year.

Number of Research Institutions

	1981	1983	1988	1993	1998	2003	2007
Total Number	53	122	604	1,069	3,760	9,810	14,474

Number of Researchers per million people

	1963	1966	1973	1977	1981	1983	1988	1993	1998	2003	2007
Total Number	66	102	179	352	535	804	1,560	2,236	2,887	4,141	5,966

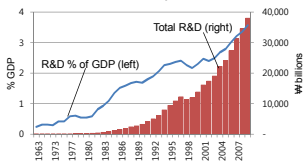
Source: *Korea's Science and Technology over the Past Four Decades* (Ministry of Science and Technology, 2008)

III-4. Technology Development

R&D Expenditures and Results

- Korea's R&D expenditures as percentage of GDP has significantly grown from 0.5% in 1980 to 3.5% in 2009. This is targeted to increase to 5% by 2012.
- Until the early 1980s, Korea's R&D efforts were concentrated for the most part in "reverse engineering" in fields including ship-building, automobile, steel, and semiconductor.
- In the late 1980s and early 1990s, Korea began to acquire world class indigenous technologies in areas including IT, nano, bio, environment and energy technologies.
- Over the past decade and half, the number of triadic patents acquired by Korean individual and organizations has rapidly increased placing Korea in the 5th place after the U.S., Japan, Germany, and France.

Korea's R&D Expenditures



Source: Korean Statistical Information Service, www.kosis.kr

Number of Triadic Patents Granted

	1995 (A)	2003	2005	2007	2008 (B)	B/A
U.S.	12,269	14,834	15,391	15,283	14,828	1.2
Japan	9,588	13,913	13,899	14,518	14,126	1.5
Germany	4,886	5,486	5,812	6,167	6,027	1.2
France	1,974	2,288	2,421	2,475	2,430	1.2
Korea	328	1,723	2,166	2,302	2,135	6.5
U.K	1,580	1,664	1,663	1,681	1,658	1.0

Source: OECD, Main Science and Technology Indicators, 2010

III-4. Technology Development

Contributions to Overall Growth

- In the 1985-2000 period, technological development appears to have contributed to the overall growth of the Korean economy more significantly than that of other countries in comparable periods.
- It is also significant to note that the percentage shares contributed by technological progress have risen significantly since 1985.

Source of Growth: Korea, Japan, and the U.S.

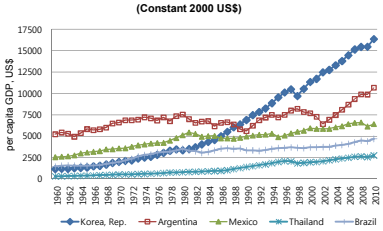
	Korea						Japan	U.S.
	1963~1970	1970~1979	1980~1985	1985~1990	1990~1995	1995~2000	1953~1971	1929~1982
GDP Growth (%)	7.4 (100)	7 (100)	7.13 (100)	9.9 (100)	7.21 (100)	4.04 (100)	8.81 (100)	3.02 (100)
Total Factor Inputs (%p)	**4.35**	**4.23**	**4.13**	**5.67**	**4.53**	**1.51**	**3.95**	**1.91**
Labor Input (Share %)	3.67 (50)	3.06 (44)	2.74 (38)	3.18 (32)	2.8 (39)	0.34 (8)	1.85 (21)	1.34 (44)
Capital Input (Share %)	0.68 (9)	1.17 (17)	1.39 (19)	2.49 (25)	1.73 (24)	1.16 (29)	2.1 (24)	0.57 (19)
Total Factor Productivity (%p)	**3.05**	**2.77**	**3**	**4.23**	**2.68**	**2.54**	**4.86**	**1.11**
Reallocation of Inputs (Share %)	0.25 (3)	0.55 (8)	0.52 (7)	0.55 (6)	0.06 (1)	−0.04 (−1)	0.95 (11)	0.23 (8)
Scale Effects (Share %)	1.16 (16)	1.24 (18)	1.2 (17)	1.83 (18)	1.45 (20)	0.33 (8)	1.94 (22)	0.26 (9)
Technology Progress (Share %)	**1.64 (22)**	**0.99 (14)**	**0.7 (10)**	**2.13 (22)**	**2.19 (30)**	**2.24 (55)**	**1.97 (22)**	**0.66 (22)**

Source: Dong-suk Kim et al. *Analysis of the Source of Korea's Economic Growth : 1963~2000* (KDI, 2002)

III-4. Technology Development

- Michael Spence, a 2001 Nobel laureate in Economics, has pointed out many emerging economies have failed to overcome the "middle income trap" due to their inability to carry out structural shifts with the help of new technologies.
- Korea has been an exception in this regard.

"Middle Income Trap"
(Constant 2000 US$)



Source: Michael Spence, *The Evolving Structure of the American Economy and the Employment Challenge* (CFR, 2011)

Average R&D Expenditure
(% GDP)

	1996~2007
Korea	2.55
Argentina	0.44
Mexico	0.39
Thailand	0.22
Brazil	0.97

Source: World Bank, WDI

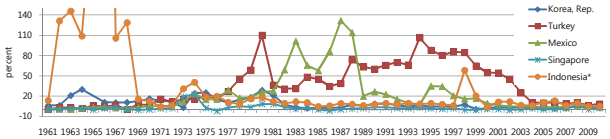
III-5. Macroeconomic Stability

- Recent studies on economic growth have highlighted macroeconomic stability as an important ingredient for sustained growth.
- Without this stability, an economy suffers from inefficiency in resource allocation due to inflationary "noises," distortions in income distribution, and higher risk and uncertainty facing investors.

Price Stability

- In the 1960s and 1970s, Korea's record in price stability was not very distinguishable. But, its record in maintaining a low level of inflation ever since has been remarkable.
  - In the 1960-70 period, inflation measured by annual rise in consumer prices was around 15%.
  - The rate of inflation has been about 3% on the average since the early 1980s.

Trend of Annual Rates of Inflation in Korea, Singapore, Indonesia, Mexico and Turkey : 1961-2010



Source: World Bank, WDI
* Inflation Rate in Indonesia for 1965 is 306.76% and 1966 is 1,136.25%.

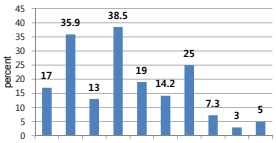
III-5. Macroeconomic Stability

- The price stability that Korea has achieved since the 1980s is much owed to the successes in fiscal and monetary policies.

Fiscal Policy

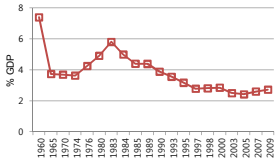
- In 1979, the Korean government began to implement tight fiscal policies.
- In 1982, It adopted a zero-based budgeting in spite of strong political opposition internally.
  - Under this policy initiative, chronic sources of fiscal deficits such as rice price support program and military spending were drastically curtailed in spite of strong political opposition.

Annual Increase in Government Purchase Price of Rice



Source: Ministry of Food, Agriculture, Forestry and Fisheries

Military Expenditures as Percent of GDP

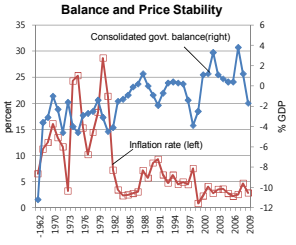


Source: Defense White Paper 2010

III-5. Macroeconomic Stability

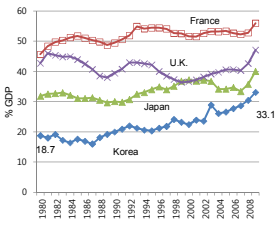
- These measures led to positive balances in consolidated central government budget for most of the years since 1985, except for the 1988-1991 post-democracy era, the 1997-1998 Asian financial crisis, and the current global financial crisis.
- Thanks to the strong fiscal discipline introduced in the early 1980s, Korea's government expenditure as percentage of GDP have remained below 35% level. This is low comparable to that of many developed countries.

Korea's Consolidated Government Balance and Price Stability



Source: World Bank, WDI

Government Expenditures as Percent of GDP



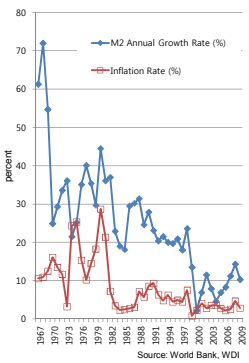
Source: IMF, World Economic Outlook Database

III-5. Macroeconomic Stability

Monetary Policy

- As noted, inflation was very high in Korea in the 1960s and 1970s. By the early 1980s, inflation was brought under control. This was achieved largely by a drastic reduction in the growth of money supply.
- Control over the growth of money supply was possible largely due to two major policy changes:
  a. Drastic reduction in policy preference loans that had been provided for investment in the heavy and chemical industries favored by the government
  b. Adoption of a monetary policy emphasizing inflation targeting

M2 Supply and Inflation Rate



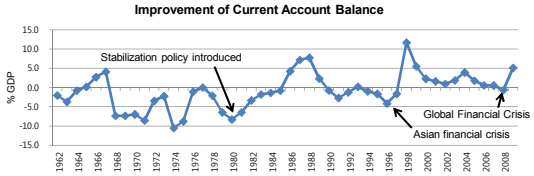
Source: World Bank, WDI

III-5. Macroeconomic Stability

External Balance

- In the 1960s and 1970s, Korea's current account balance was in deficit in most years. This situation greatly improved in the 1980s thanks to the successful stabilization policy noted above.
- Korea's current account deficits worsened in the early 1990s leading to a major external crisis that hit the country in 1997-1998.
- Since then, current account has been in surplus except briefly during the beginning of the global financial crisis that started in 2008.

Improvement of Current Account Balance



Source: World Bank, WDI

III-6. Korea-U.S. Alliance

Korea-U.S. Alliance and Economic Growth

- Although not often recognized, the Korea-U.S. alliance has significantly contributed to Korea's economic success over the past half century.
- This contribution can best be analyzed under the following headings:
  1. Peace and Security
  2. Direct U.S. Aid
  3. Human Resource Development
  4. Policy Advice
  5. Assistance in Economic Crises
  6. Access to Global Markets

III-6. Korea-U.S. Alliance

1. Peace and security

- Since the end of the Korean War in 1953, the Korea-US alliance has maintained peace and security on the Korean Peninsula as well as in neighboring areas.
- Without such peace and security, Korea's economic progress over the past 50 years could not have been achieved.
- The close Korea-US alliance has enabled Korea to maintain peace and security at a relatively small cost.
  - Maximum % of GDP that South Korea has spent on its defense since 1960 has never exceeded 6%, and in recent years, this percentage has been lowered to below 3%.
  - This small percentage of GDP has been in sharp contrast to the case of North Korea that has spent approximately 21%-30% of its GDP over the past 50 years.

Military Expenditures: North and South Korea (hundred million US$, %)

		1965	1970	1975	1980	1985	1990	1995	2000	2005
S.Korea	Expenditure	1.1	3.2	9.6	37	43	96.8	150.9	162.4	211.2
	% GDP	3.6	3.7	4.5	5.8	4.5	3.6	2.9	2.8	2.6
N.Korea*	Expenditure	6.1	9.9	20.2	33.9	35	49.6	62.4	50	N/A
	% GDP	26.1	24.9	21.6	25.1	23.1	21.4	28	29.8	N/A

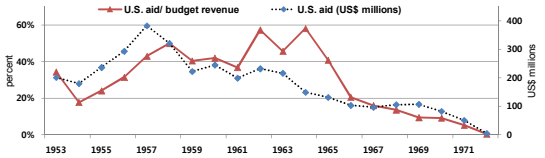
Sources: Military Expenditures from Defense White Paper and GNI from Bank of Korea
* North Korea's GDP figures are not available for the above periods so that North Korea's GNI is used instead of GDP.

31

III-6. Korea-U.S. Alliance

2. Direct U.S. Aid

- In the 1950s and 1960s, the U.S. helped Korea recover from the damages of the Korean War through many forms of direct aid.
  - The U.S. aid was given, however, mostly in kind (grain and other food stuff).
  - These were sold in the domestic market, and the proceeds were donated to the Korean government in support of its budget. The value of the proceeds typically accounted for some 40%-60% of the total budget revenue in the late 1950s and early 1960s.
- Without such US government aid, Korea would have experienced great difficulties launching economic development in the early years.



Source: Anne O. Krueger, *The Developmental Role of the Foreign Sector and Aid*, Harvard University Press, 1979

32

III-6. Korea-U.S. Alliance

3. Human Resource Development

- The U.S. also contributed enormously to Korea's economic development by facilitating Korea's efforts for human capital formation.

a. Military Officer and Civil Servant Training
  - Between 1950 and 1972, some 32,000 Korean military officers were invited to the U.S. for short-term training entirely on U.S. expense.
  - These officers obtained military skills as well as modern managerial know-how.
  - On return to Korea, they contributed not only to the modernization of Korean armed forces but Korea's economic development as well.
  - Their civil engineering skills contributed to Korea's success in overseas construction projects in the 1960s and 1970s.
  - In 1952-1960, the U.S. government also invited some 5,400 Korean civil servants, professors, and other professionals to the U.S. for training in various fields.
  - This also went far in upgrading Korea's technical base.

U.S.-assisted Training during Developing Period

	Period	Number of Trainees
Military Officers	1950-72	31,900
Civilians	1951-60	5,423

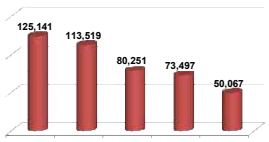
Source: Sung-hoon Cho, *The Development of the Korea-U.S. Alliance* (Ministry of Defense, 2008)

33

III-6. Korea-U.S. Alliance

b. Korean Students in the U.S.
  - Following the end of the Korean War, a large number of Korean students began to go abroad to the U.S. for advanced studies.
  - Many of them were given generous scholarships by U.S. institutions and foundations.
  - In 1943-2009, some 38,000 Koreans received PhD overseas of which nearly 57% earned their doctorates in the U.S. institutions.
  - In 2009, Korean students studying in the U.S. numbered about 114,000. This was only 12,000 less than the number of students from China.
  - Such a large number of Korean students would not have chosen to study in the U.S. but for the close relationship between the two countries. Currently, most of these students pay their own ways.

Korean Students in the U.S. (in all levels of education, 2009)



Source: U.S. Department of Homeland Security

Number of Overseas PhDs: 1943-2009

From	Number of Doctorates	Percent
U.S.	21,494	57%
Japan	6,209	16%
Germany	2,898	8%
U.K.	1,638	4%
France	1,615	4%
China	1,095	3%

Source: National Research Foundation of Korea

34

III-6. Korea-U.S. Alliance

4. Policy Advice

- Although largely forgotten, in the 1960s USAID and other government officials provided policy advice to their Korean counterparts.
- U.S. officials have also provided policy advice on other occasions as well.

5. Assistance in Economic Crises

- In 1980, when Korea faced the height of the second oil crisis, the U.S. was instrumental in securing an IMF standby credit.
- During the 1997-1998 Asian financial crisis, the US government together with the Federal Reserve played a key role in arranging the refinancing of Korea's short-term debt owed to G7 countries.
- Similarly, in the 2008 global financial crisis, the U.S. offered a $30 billion currency swap in order to prevent Korea's liquidity shortage in its foreign reserve.

6. Access to Global Markets

- In the early1970s, the U.S. greatly facilitated Korea's implementation of an outward-looking development strategy by allowing Korea a full access to the U.S. market.
- The US also helped Korea reestablish diplomatic relationship with Japan in 1965.
- The U.S. also helped Korea accede to the membership of GATT in 1967.

35

IV. Concluding Remarks

■ The six factors reviewed above continue to be strong points of the Korean economy. However, they cannot be readily utilized without modification in meeting new challenges facing Korea today in a new global environment.

1. The market economy under which Korea operates should be further strengthened. In this regard, the most urgent priorities today are: (a) increasing factor mobility in all markets, and (b) revamping the rule of law.

2. The concept of the outward-looking strategy should be further expanded so as to encompass the opening of all domestic markets including those for services.

3. Korea's record of developing human resources has been remarkable. But, today, Korea should consider what should be done in the face of low birth rates and increasing life expectancy. In addition, Korea should upgrade the quality of high education.

36

IV. Concluding Remarks

4. Korea has also done well in developing new technologies, but when competitive pressure in the global markets is ever increasing, as it is today, Korea should do well by redoubling its efforts to develop new technologies and innovations in all fronts.

5. Korea's record in managing macroeconomic stability can be given a high mark, but social and political environments of Korea seems to be turning out less favorable than before. The nation is increasingly challenged by the rise of populism. Korea's political leaders should have courage to resist ever growing populism.

6. The Korea-U.S. alliance has served the interest of both Korea and the U.S. However, in the face of rising China and other emerging countries, Korea should be creative in forging new strategic relationships with these countries as well.

37

Thank You

38