



2012 MOSF-KDI International Conference:

*Changes in Industrial Landscape and
the Future of Service Economy*

Globalization and Structural Changes in Korean Manufacturing

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Korea's Leading Think Tank



CONTENTS



1. New Trends in Manufacturing
2. Industrialization and Structural Changes in Korea
3. Globalization and Structural Changes in Korea
4. Entry, Exit, and Aggregate Productivity Growth

Part-01

| New Trends in Manufacturing



From Mass Production to Mass Customization

➤ **Mass customization** is defined as “producing goods and services to meet individual customer’s needs with near mass production efficiency” (Tseng and Jiao 1996).

✓ Traditionally, **mass production** demonstrates an advantage in high-volume production, where the actual volume can defray the costs of huge investments in equipment, tooling, engineering, and training.

✓ On the other hand, **satisfying each individual customer’s needs** can often be translated into **higher value**.

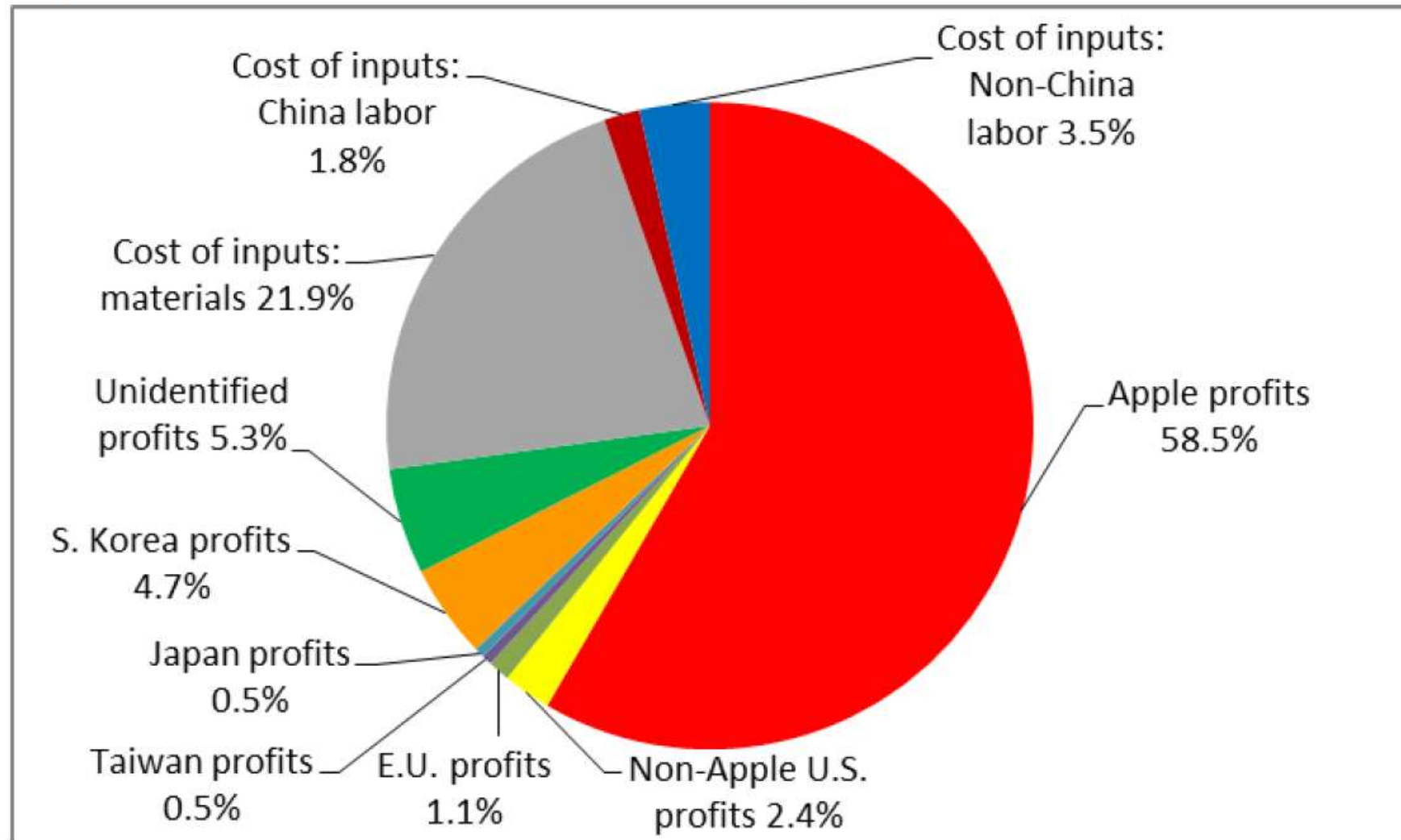
✓ With the **increasing flexibility** built into modern manufacturing systems **and programmability** in computing and communication technologies, companies with low to medium production volumes can gain an edge over competitors by implementing **mass customization**.

Manufacturing and Global Value Chains

- International production, trade and investment are increasingly organized within so-called **global value chains**, with a strong trend towards the international dispersion of value chain activities such as design, production, marketing, distribution, etc. (Koen de Backer, 2012)
 - ✓ As labor-intensive, low value-added activities have increasingly been relocated, the number of manufacturing jobs in emerging countries has significantly expanded. This growth is sometimes perceived to have come at the expense of **job losses in OECD manufacturing industries**.
 - ✓ Imports have become increasingly important for exports. This has significant implications **how countries should look at national competitiveness in manufacturing**.

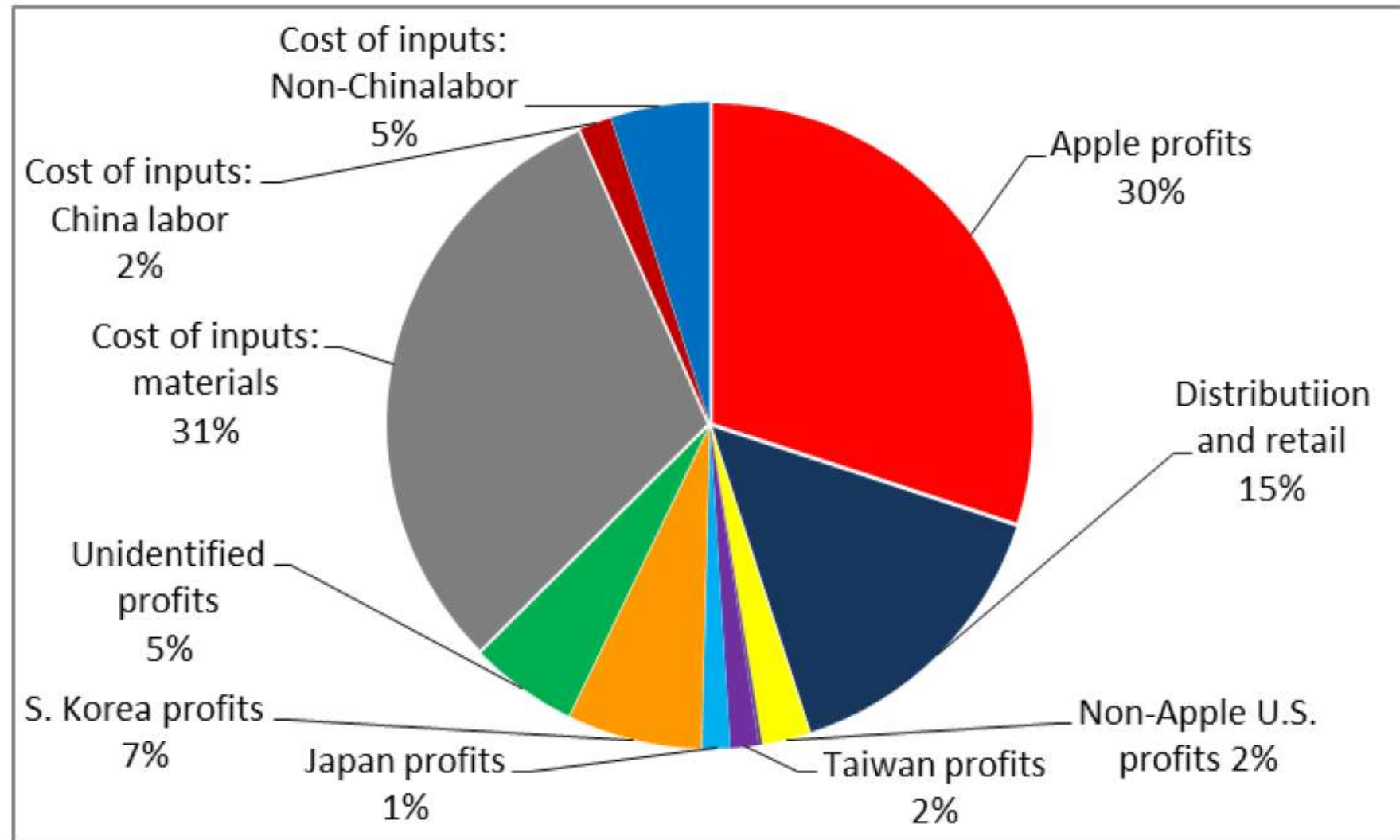
Capturing Value in Global Networks: Apple's iPad and iPhone (Kraemer, Linden, and Dedrick, 2011)

Figure 1. Distribution of value for iPhone, 2010



Capturing Value in Global Networks: Apple's iPad and iPhone (Kraemer, Linden, and Dedrick, 2011)

Figure 2. Distribution of value for iPad



Samsung Mobile Price in India 2012

127



This list of Samsung mobile price in India includes best price of 64 models of Samsung. The Samsung phone prices have been collected from 9 online stores in India and only the best price is shown here. We have included the picture of the models to help you quickly decide a model to buy. The latest list was last updated on **2012 21st October**. *All prices are in Indian Rupees*. Some of the most popular deals amongst Samsung Mobile Phones are :

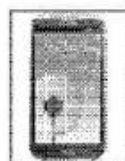
[Samsung Galaxy Y Duos Price](#) | [Samsung Galaxy Y Price](#) | [Samsung Galaxy Note Price](#) | [Samsung Champ Deluxe Duos Price](#)

KDI

Samsung mobile price list 2012 (with 64 models and pictures)



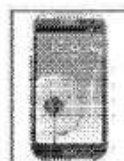
Samsung Galaxy
Note 2
₹ 35,420



Samsung Galaxy S3
I9300 32GB
₹ 34,868



Samsung Galaxy
Note 10.1
₹ 34,500



Samsung Galaxy S3
₹ 32,108



Samsung Galaxy
Tab 2 10.1
₹ 31,790



Samsung Galaxy
Beam
₹ 27,750



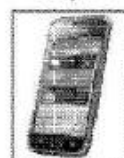
Samsung Galaxy
Note
₹ 26,999



Samsung Galaxy
Tab 750
₹ 26,990



Samsung Galaxy S2
I9100
₹ 23,828



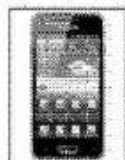
Samsung Galaxy S
I9000
₹ 21,088



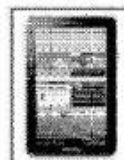
Samsung Galaxy
Tab 730
₹ 19,975



Samsung Galaxy S
Plus I9001
₹ 19,699



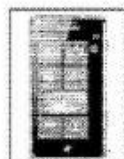
Samsung Galaxy S
Advance I9070
₹ 18,750



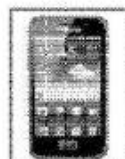
Samsung Galaxy
Tab 2 P3100 (WiFi /
3G / 16GB)
₹ 18,041



Samsung Galaxy S
Duos
₹ 15,999



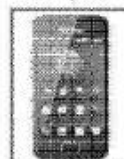
Samsung Omnia M



Samsung Galaxy
Ace Plus S7500



Samsung Wave 3
S8600



Samsung Galaxy
Ace Duos



Samsung Galaxy
Ace Duos S6802

Samsung Galaxy Note 2 (35,420 rupees) ^{KDI}



Samsung Galaxy S3 (34,868 rupees)



Samsung C3312 (3,490 rupees)

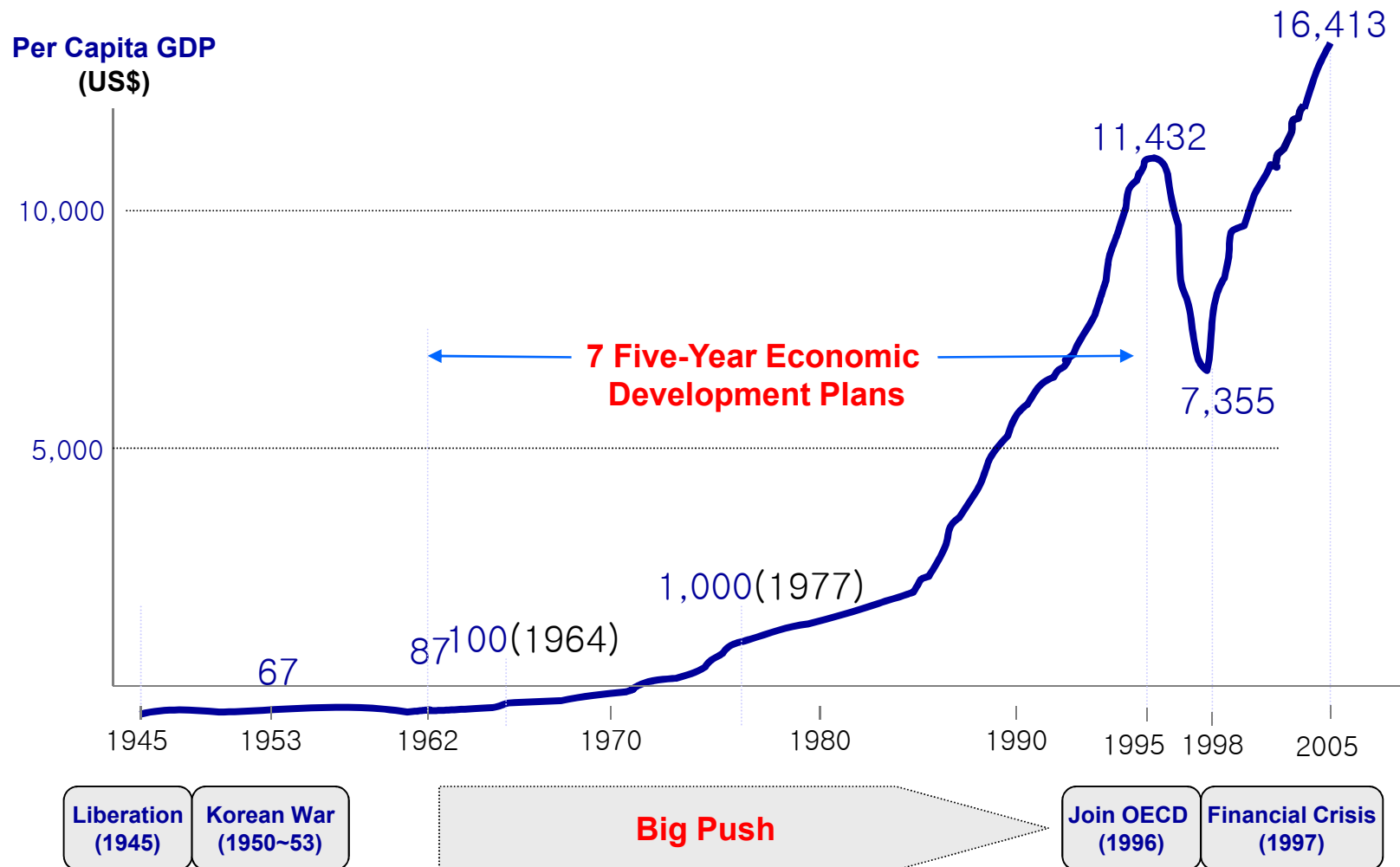


Samsung Guru E1081 (875 rupees)



Part-02 | Industrialization and Structural Changes in Korea

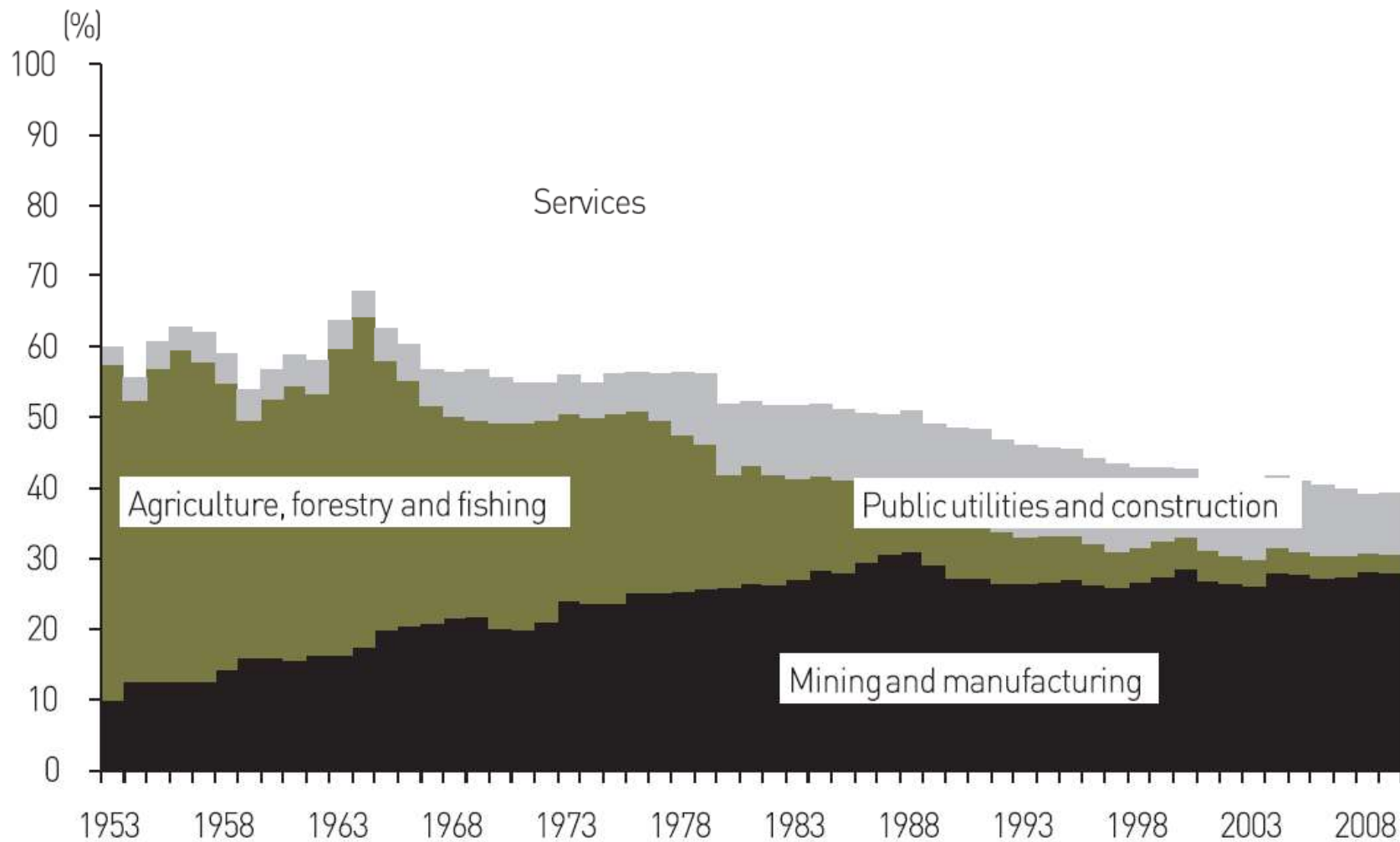




□ Korea over the Last 5 Decades

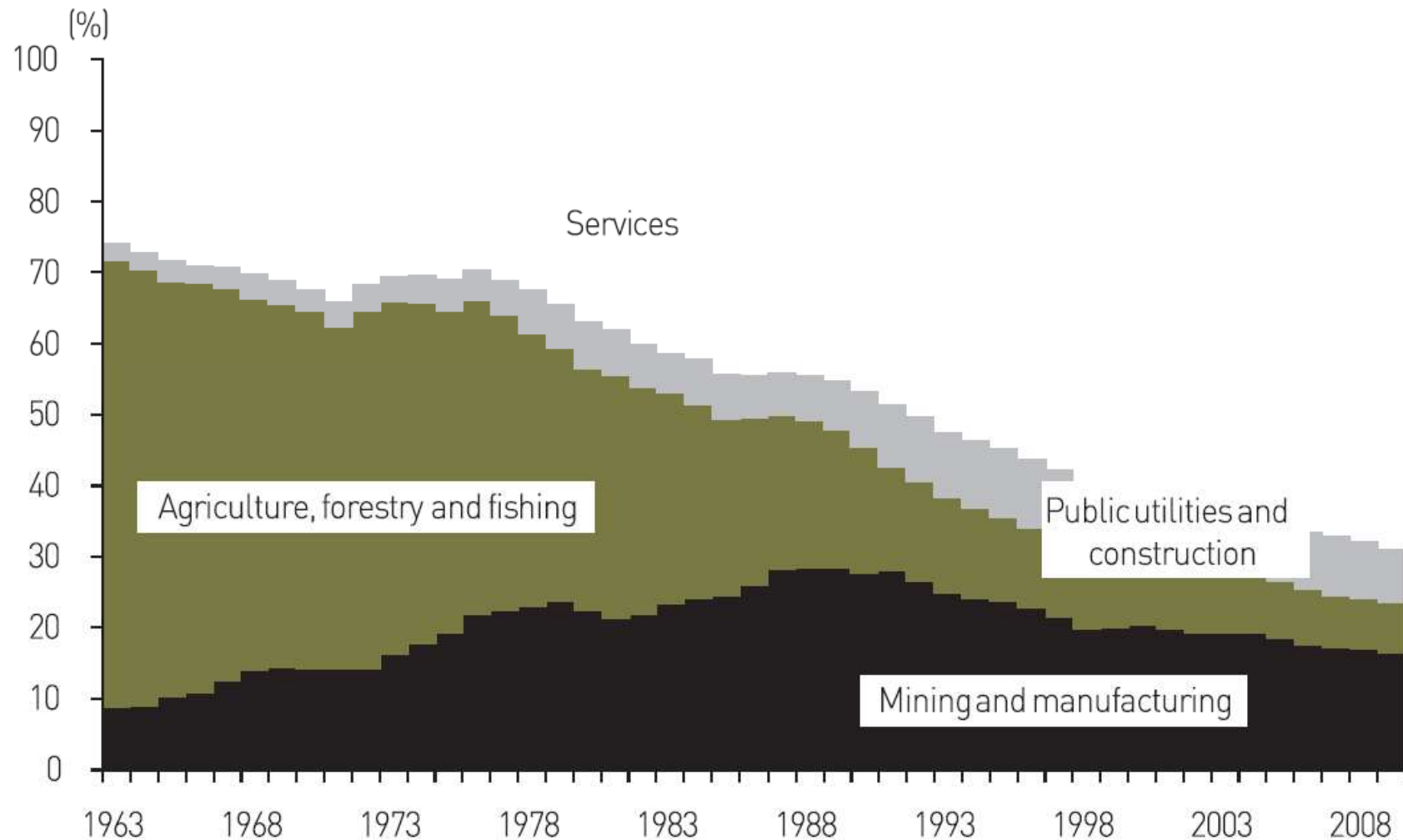
	1961	2010
Per Capita GNI (USD)	82	20,759
Commodity Exports (USD)	41 mil.	433 bil.
Employment Share (%) Agriculture, Forestry & Fish. Mining & Manufacturing	63.0 (1963) 8.7 (1963)	4.9 17.8 <i>27.6 ('90)</i>
Life Expectancy	55.3 (1960)	80.5 ('09)
Enrollment Rate (%) Senior High Schools Universities/Colleges	29.3 (1970) 9.0 (1970)	92.5 69.6

Industrialization: GDP share



Note: Services include public utilities and construction.
Source: Bank of Korea (<http://ecos.bok.or.kr>).

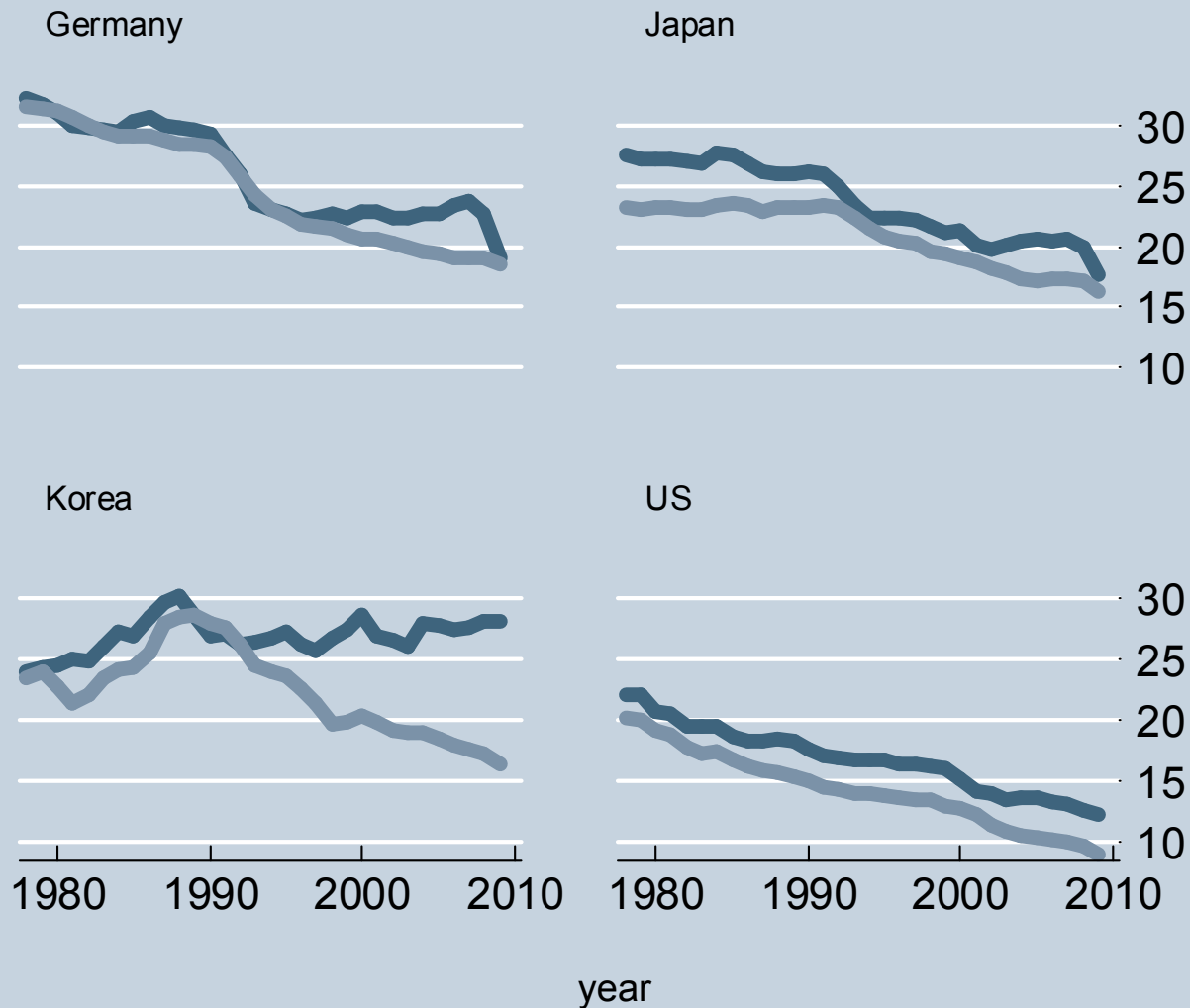
Industrialization: Employment share



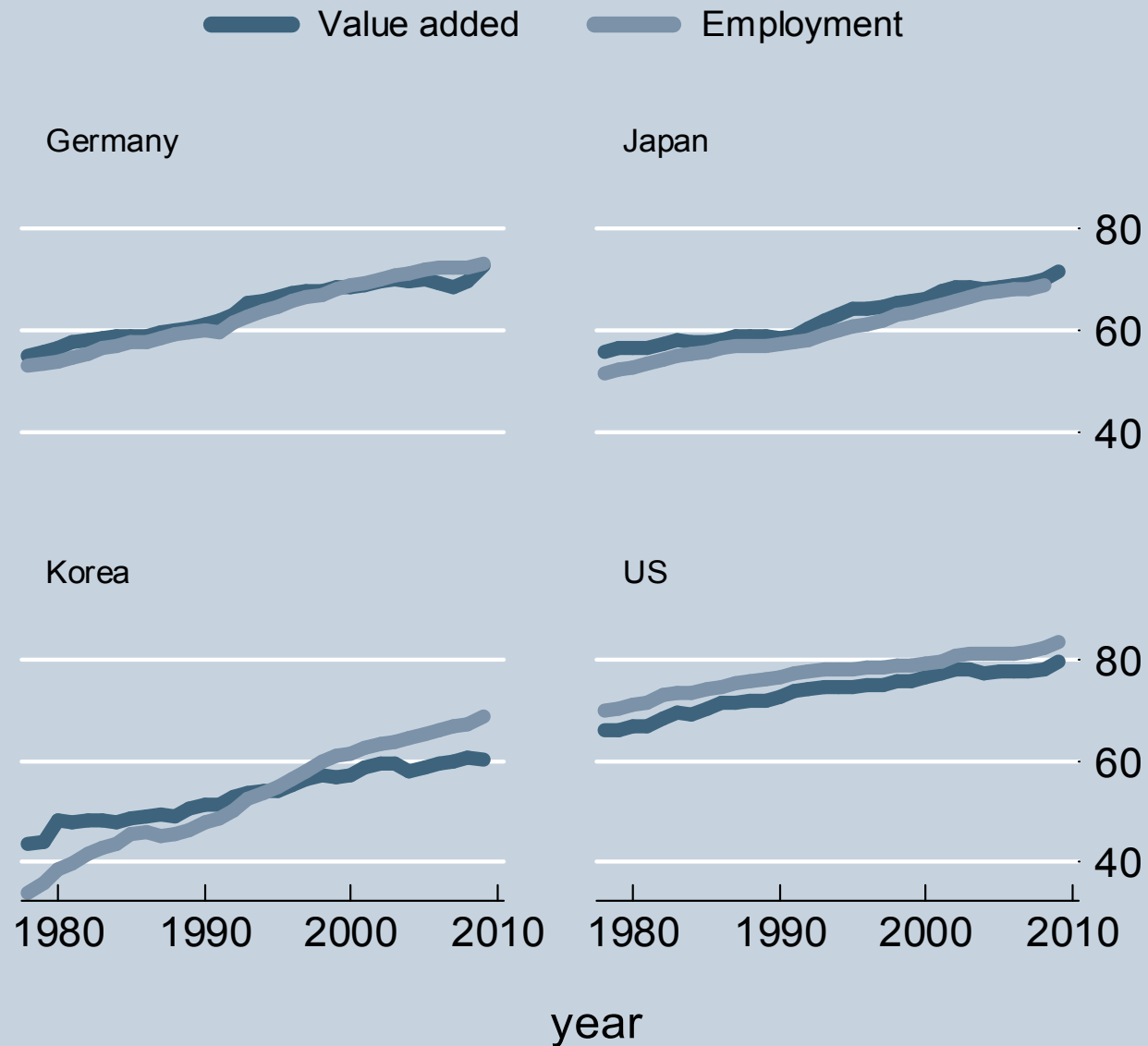
Source: National Statistical Office (<http://www.kosis.kr>).

Manufacturing Share relative to Total Economy

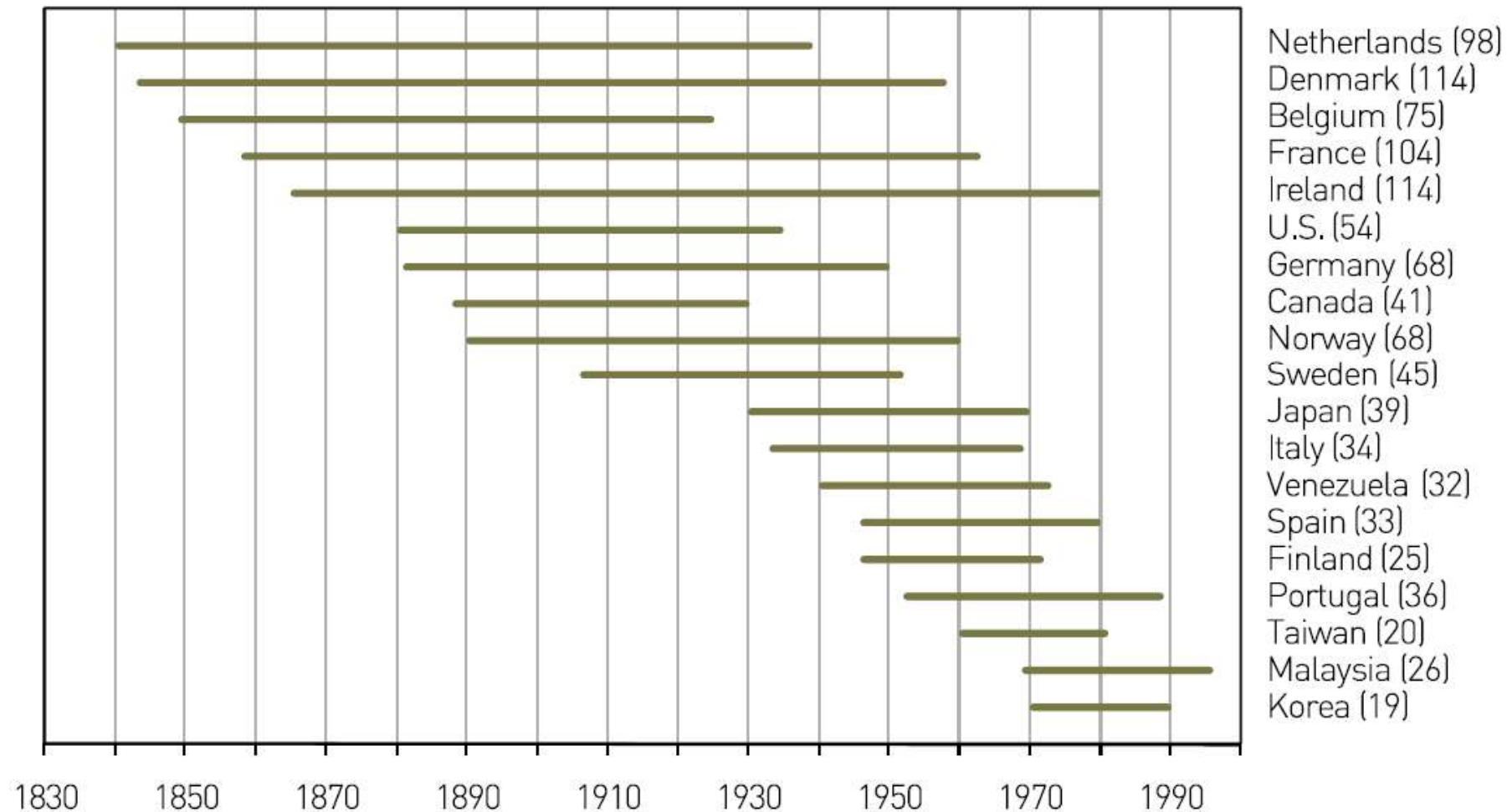
Value added Employment



Service Sector relative to Total Economy

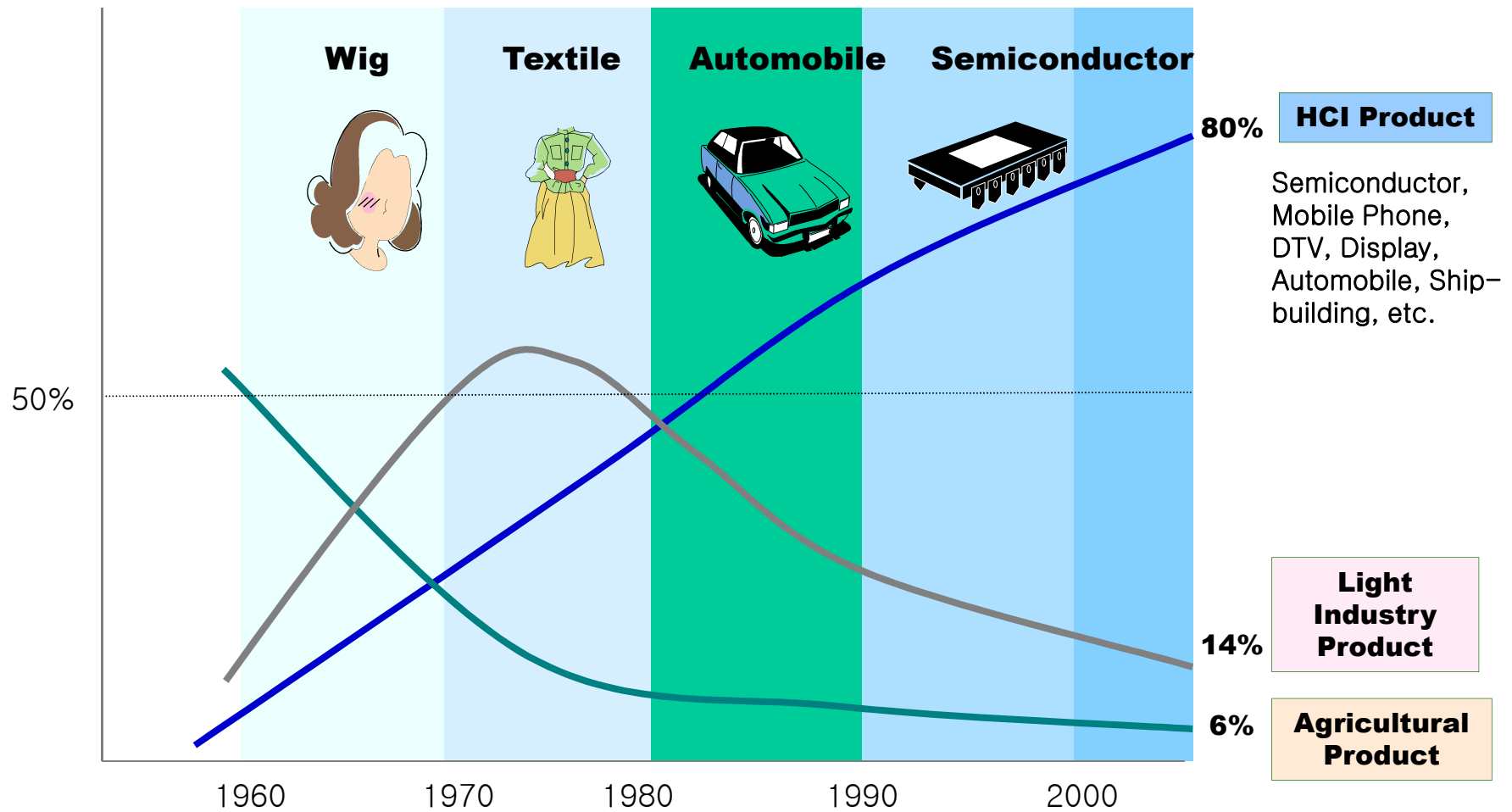


Industrialization: How Long Did It Take?

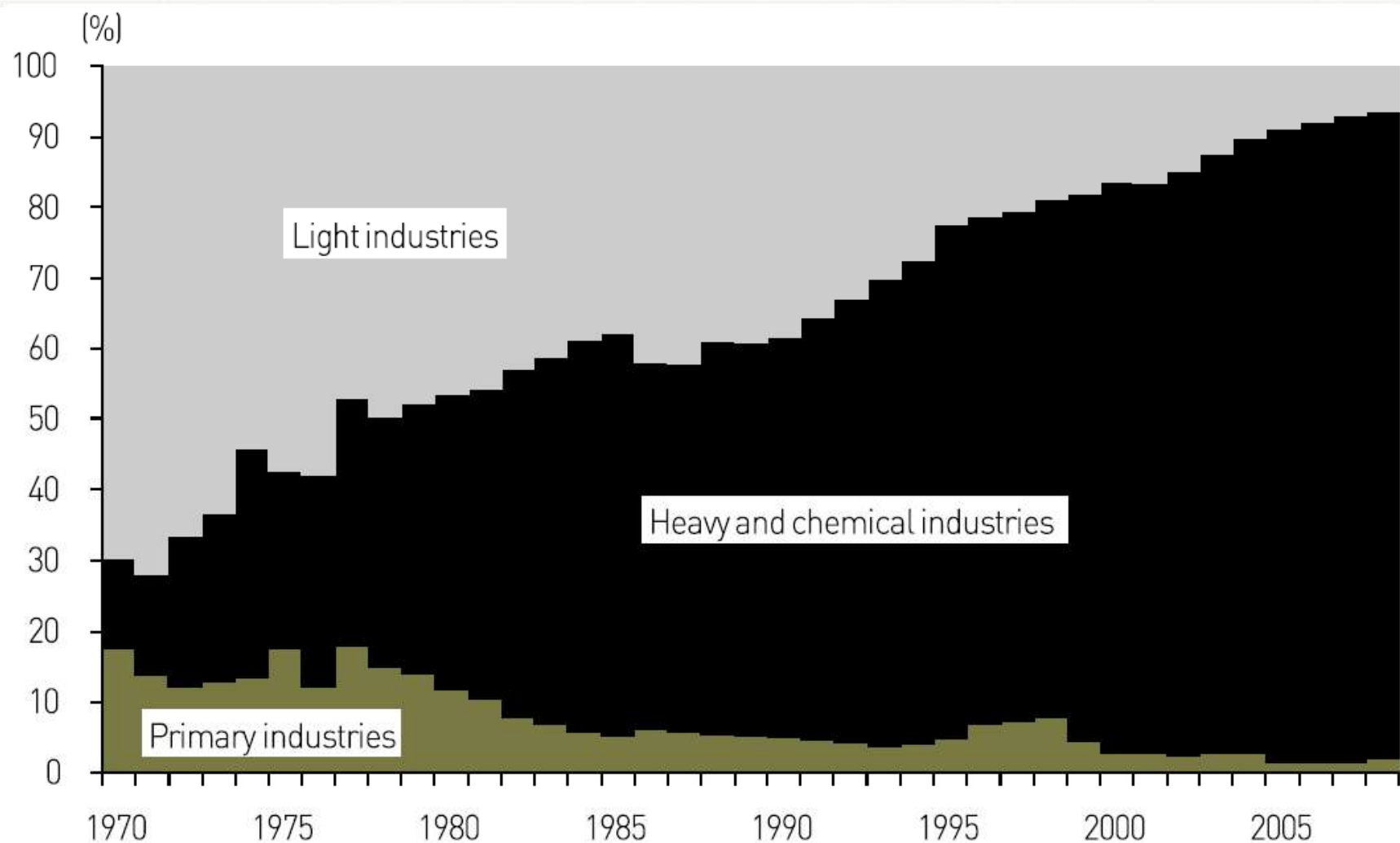


Note: The numbers in parentheses indicate the length of the industrialization period in years.
Source: Junggho Yoo (1997).

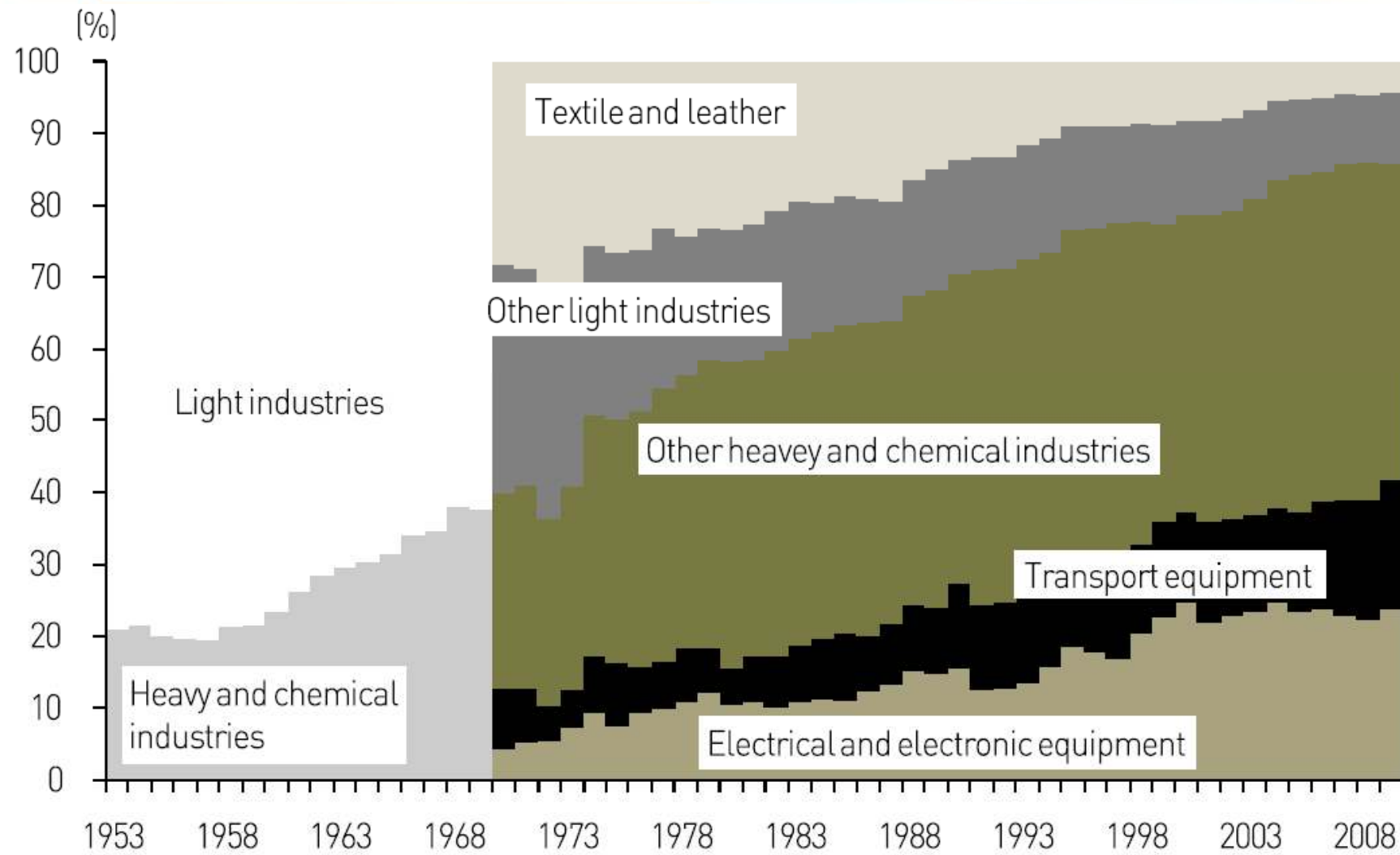
Changes in Export Commodity Profile



Export Structure



Manufacturing Structure



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

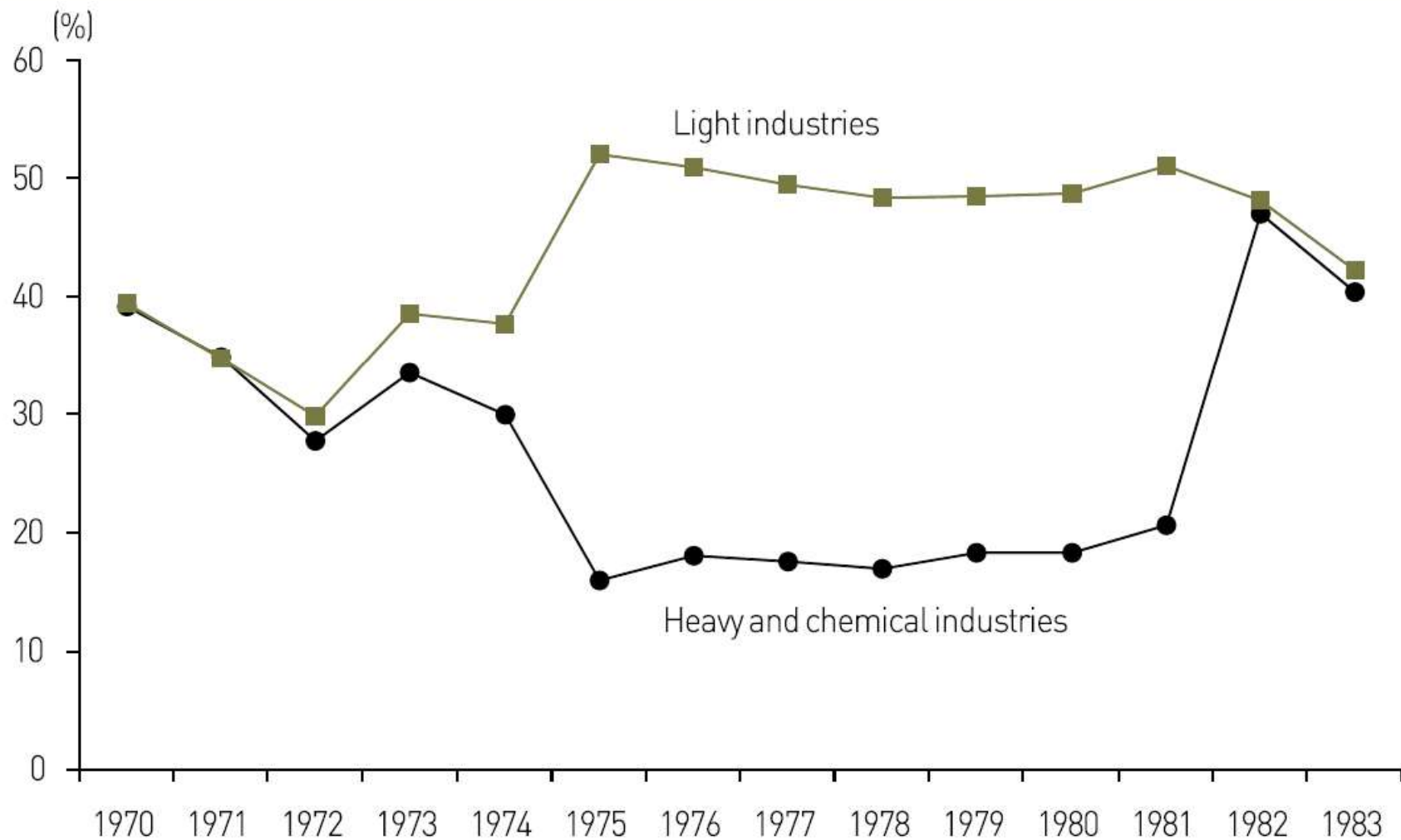
- IP for Export Promotion
- IP in a Rapid Evolution
- IP with Effective Monitoring and Evaluation
- IP as a Public-Private Partnership

- One of the poorest country in the world
- Pursued import-substitution industrialization
 - “Three white” industries etc.
 - Limited by the small size of domestic market
- Dependent on foreign aid
 - 50% of government expenditure, 70% of import
 - Domestic currency overvalued, import regulated
 - Lack of foreign currency for investment

- First 5-year economic development plan (1962-)
 - To end the vicious circle of poverty
- Rapid export expansion started
 - Three devaluations triggered export expansion
- Export drive by strong export promotion policy
 - Export targets (1962), monthly export promotion meetings (1964), Korea Trade Promotion Agency (KOTRA, 1962)
 - Comprehensive Export Promotion Program (1964)
 - Subsidies, tax incentives, credit incentives, tariff rebates ...
 - All abolished by the 1980s (too costly; countervailing duties)

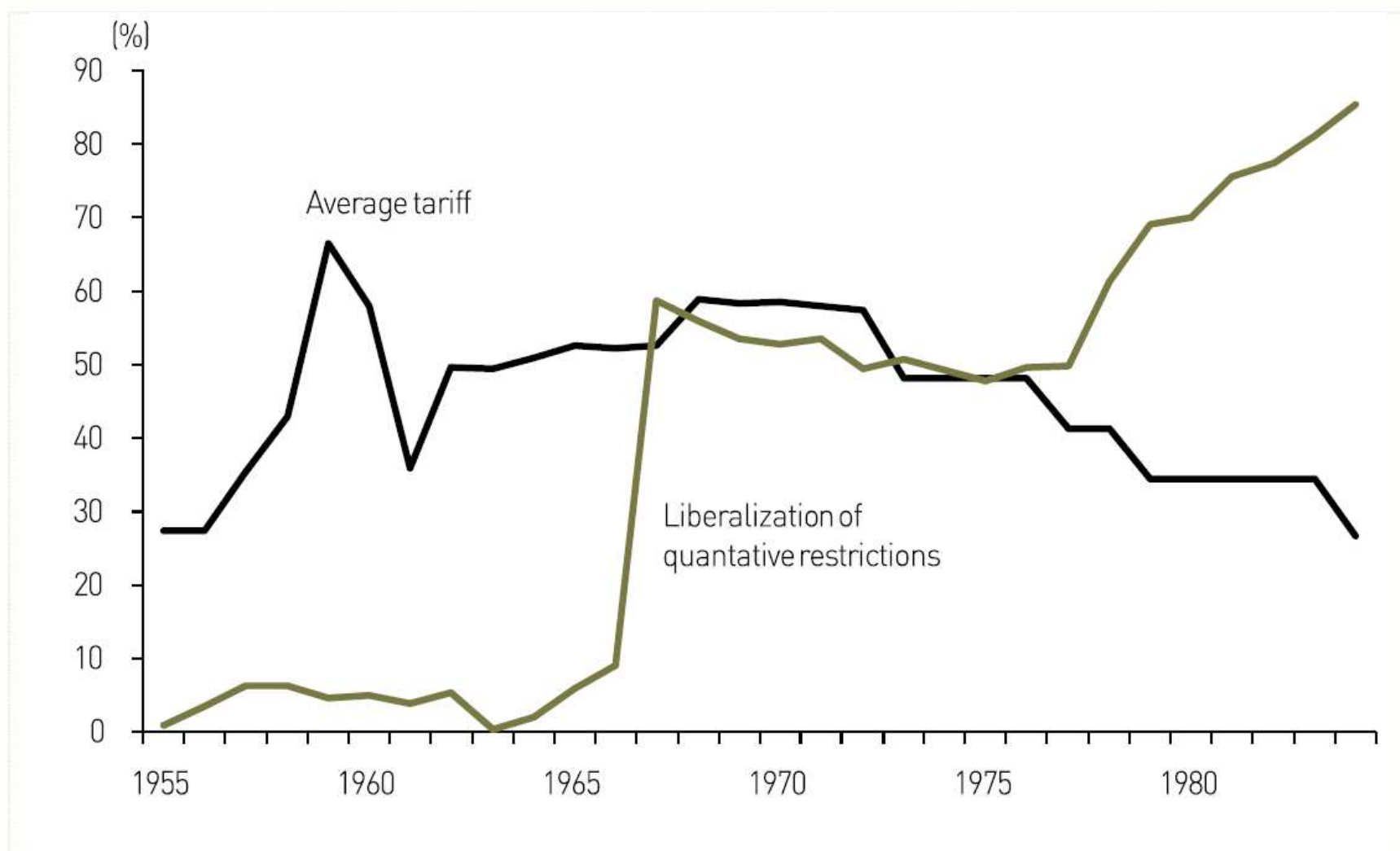
- Government-led HCI promotion
 - To promote the defense industry for self-defense
 - To catch up Japan in HCIs
 - To respond to increased protectionism in light industries
 - To achieve import-substitution in capital goods
- Top-down approach towards private firms
 - Long-term policy loans at preferential rates with tax benefits
 - Public investment in human capital and infrastructure
 - Giving favors to large enterprise groups (“Chaebol”)
- Temporary import-substitution measures to protect HCIs

Marginal effective tax rates on corporate income



Source: Tae-won Kwack (1985), Recited from Jungho Yoo (1991).

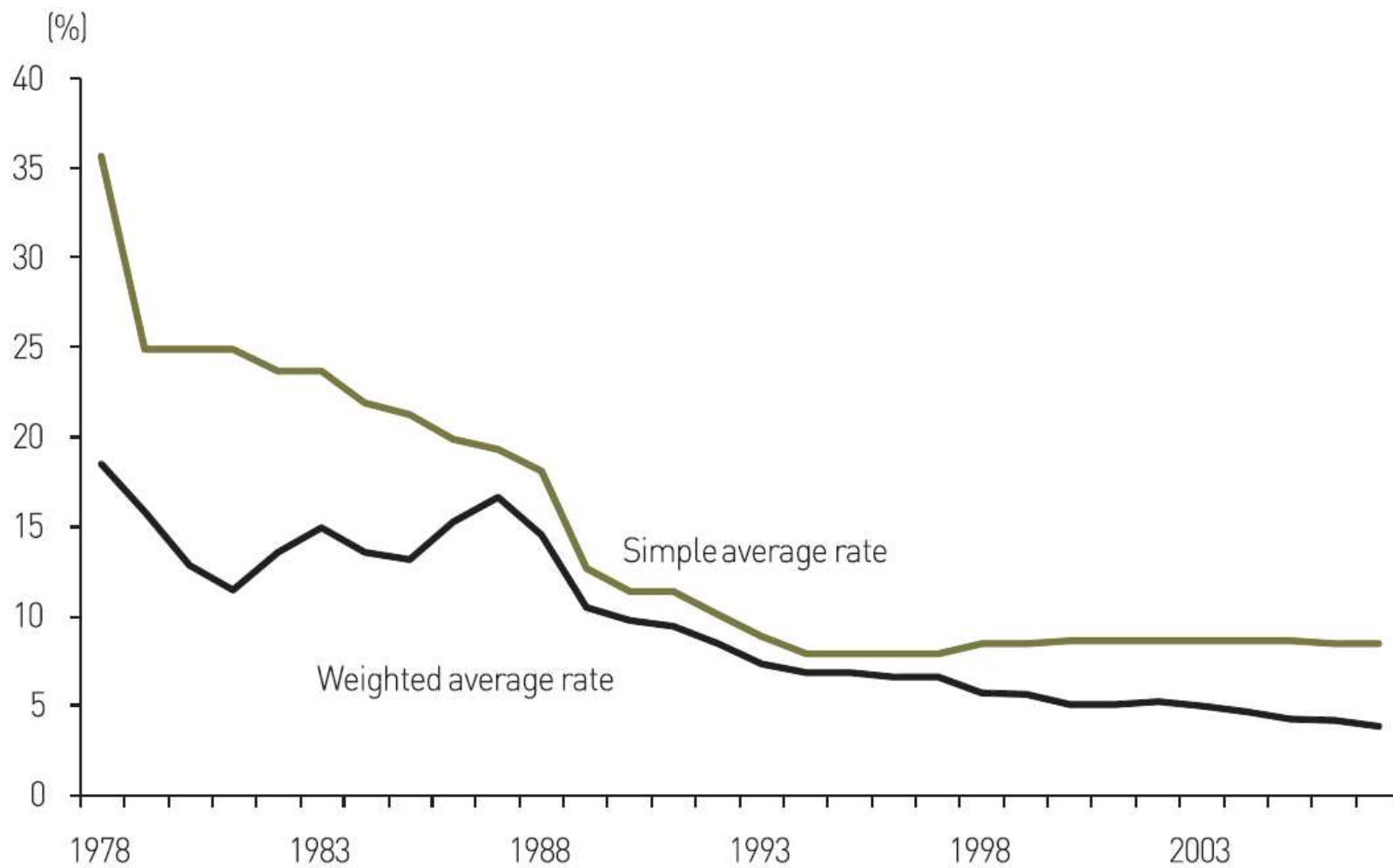
Import liberalization



Source: Kwang Suk Kim (1991).

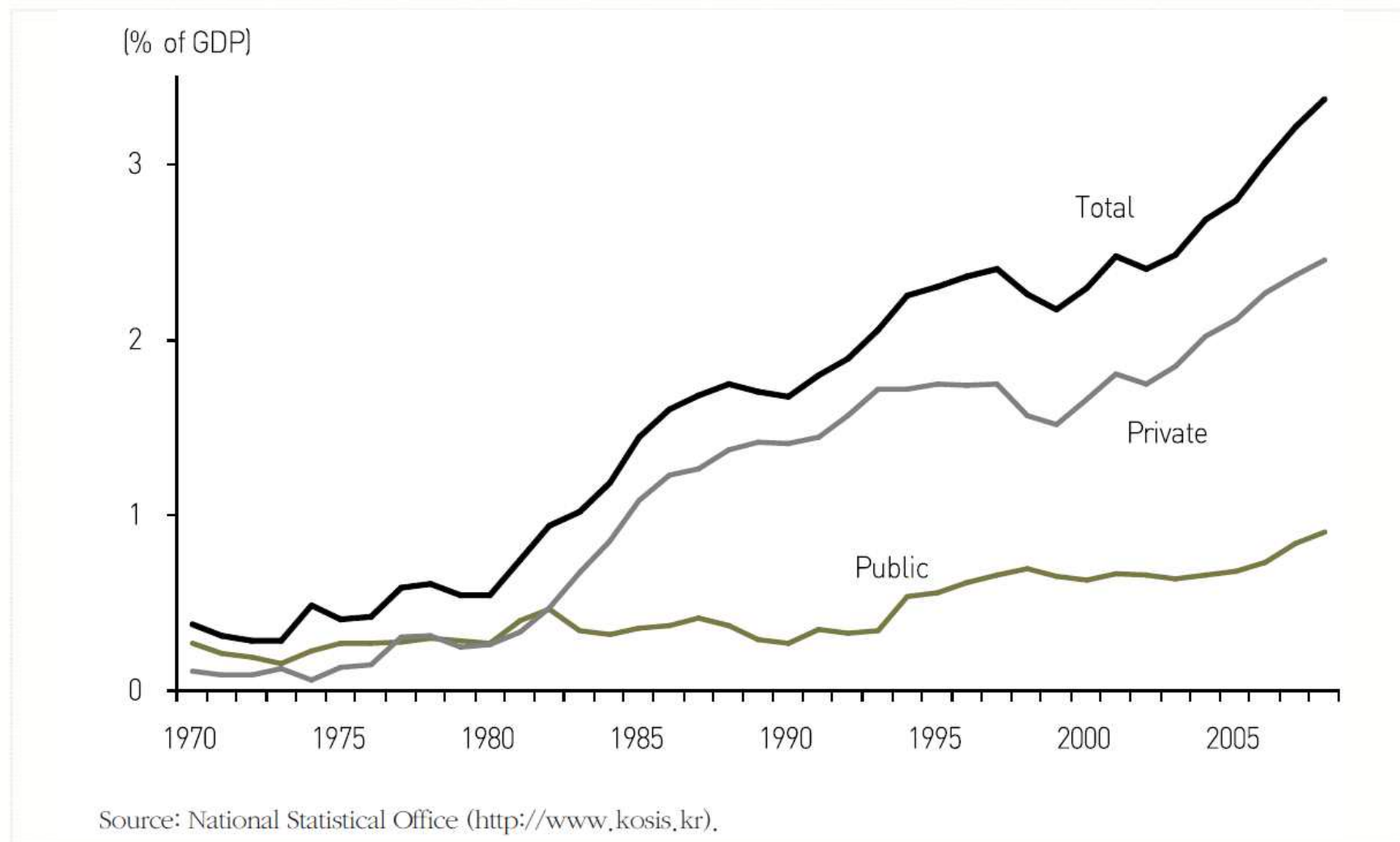
- Drastic change in policy directions
 - From growth to stability
 - From government-led to private-sector-led
- Macroeconomic stabilization
 - Comprehensive Economic Stabilization Program (1979)
- Industrial rationalization
- Financial liberalization
- Market opening

Korea's tariff rates (1978-2007)



Source: APEC (<http://www.apectariff.org>).

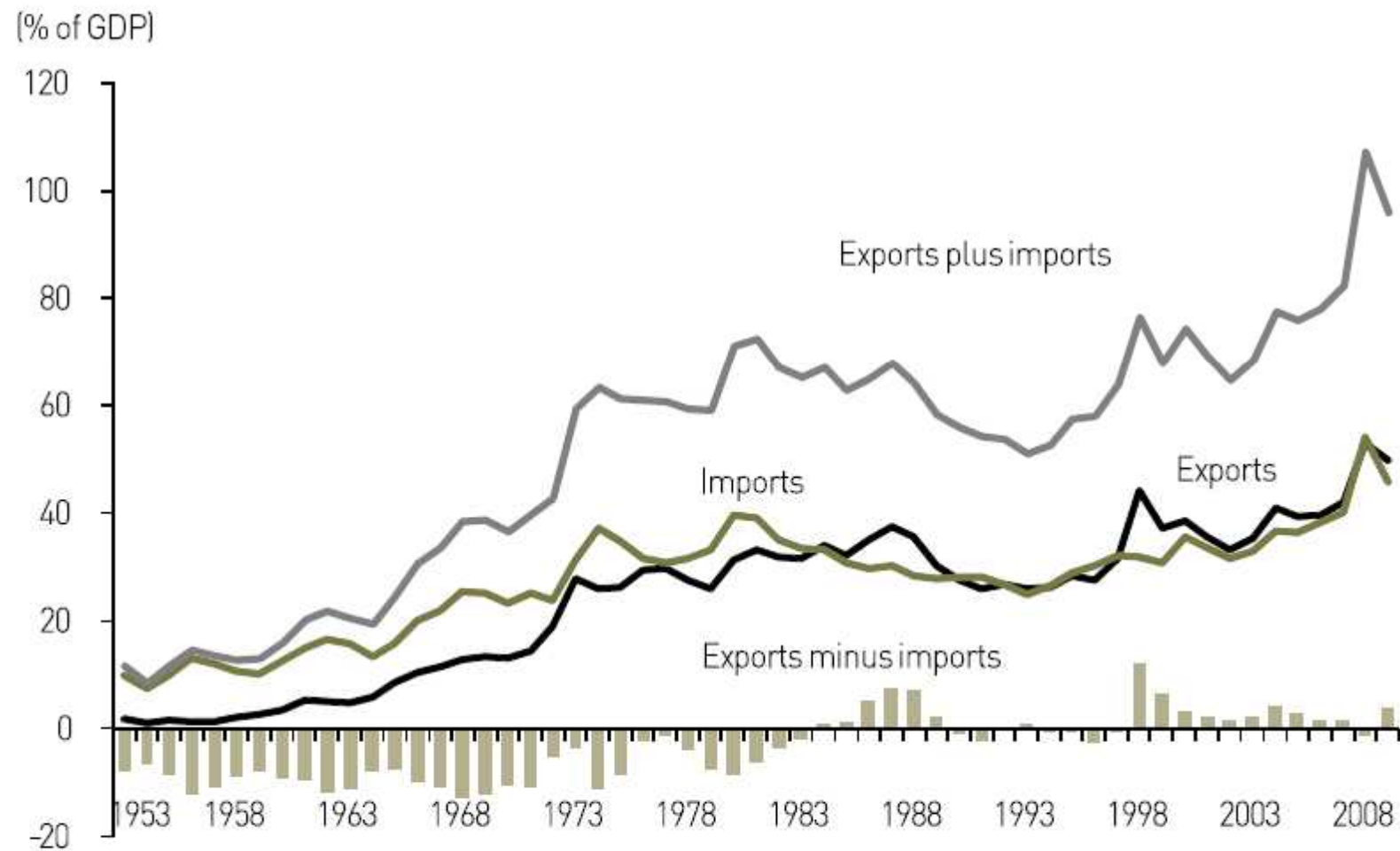
Trend in R&D expenditure



Part-03 | Globalization and Structural
Changes in Korea

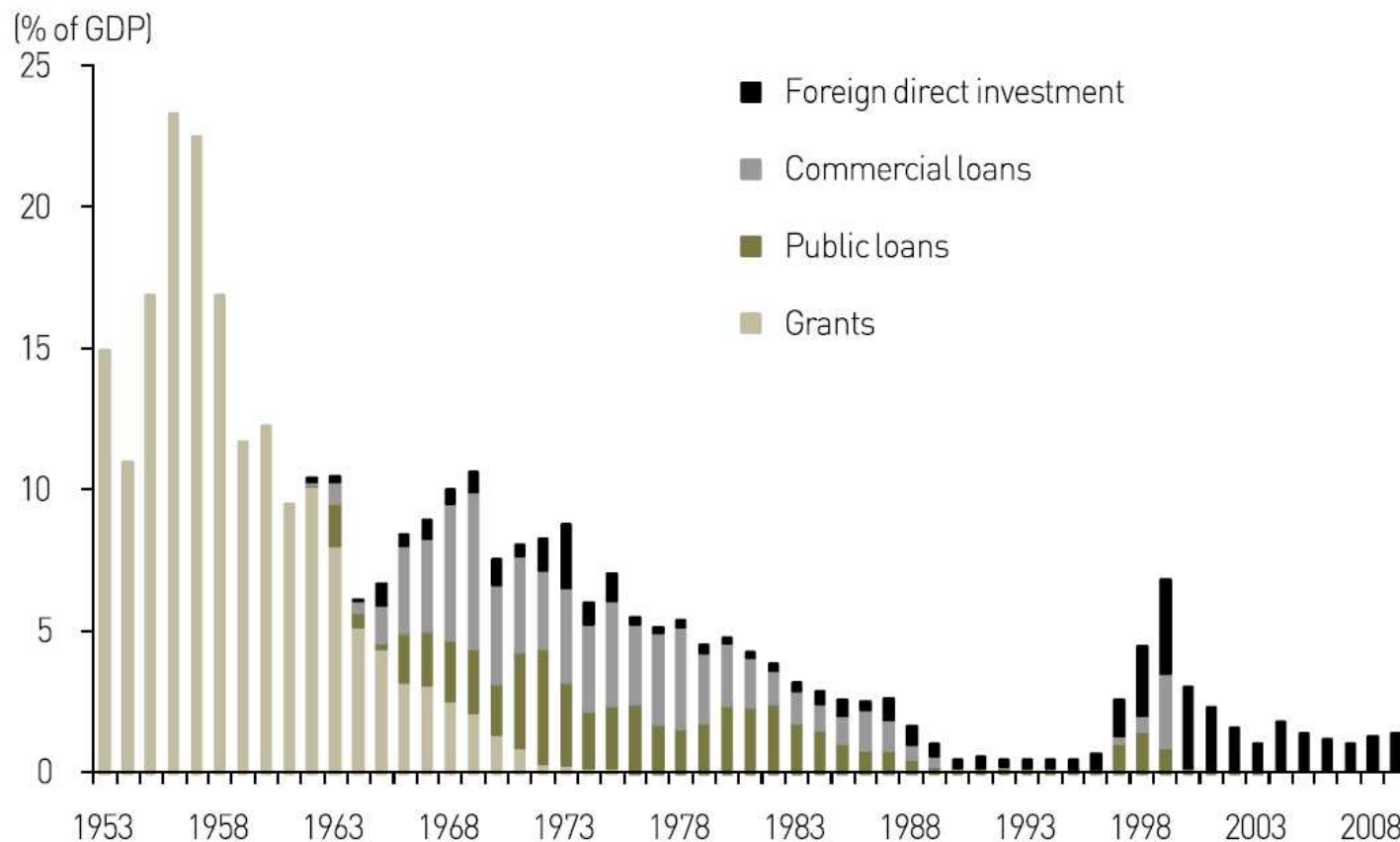


Exports and Imports (1953-2009)



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

Inflows of grants, loans, and FDI (1953-2009)



- Sources: 1) Among grants, financial aid from U.S and international organizations are from Bank of Korea, *Economic Statistics Yearbook*, 1984, p.245, and reparation payments from Japan are from Economic Planning Board, *Whitepaper on Reparation Payments*, 1976, p.29.
- 2) Commercial and public loans (1962-1965) are from Ministry of Finance, *Thirty-Year History of Fiscal and Financial Policies*, 1978, p.97.
- 3) Commercial and public loans (1966-2007), foreign direct investment and GDP are from Bank of Korea (<http://ecos.bok.or.kr>).

FDI Position of OECD Countries

Figure B.3.3. Outward FDI position of OECD countries as a percentage of GDP

2002

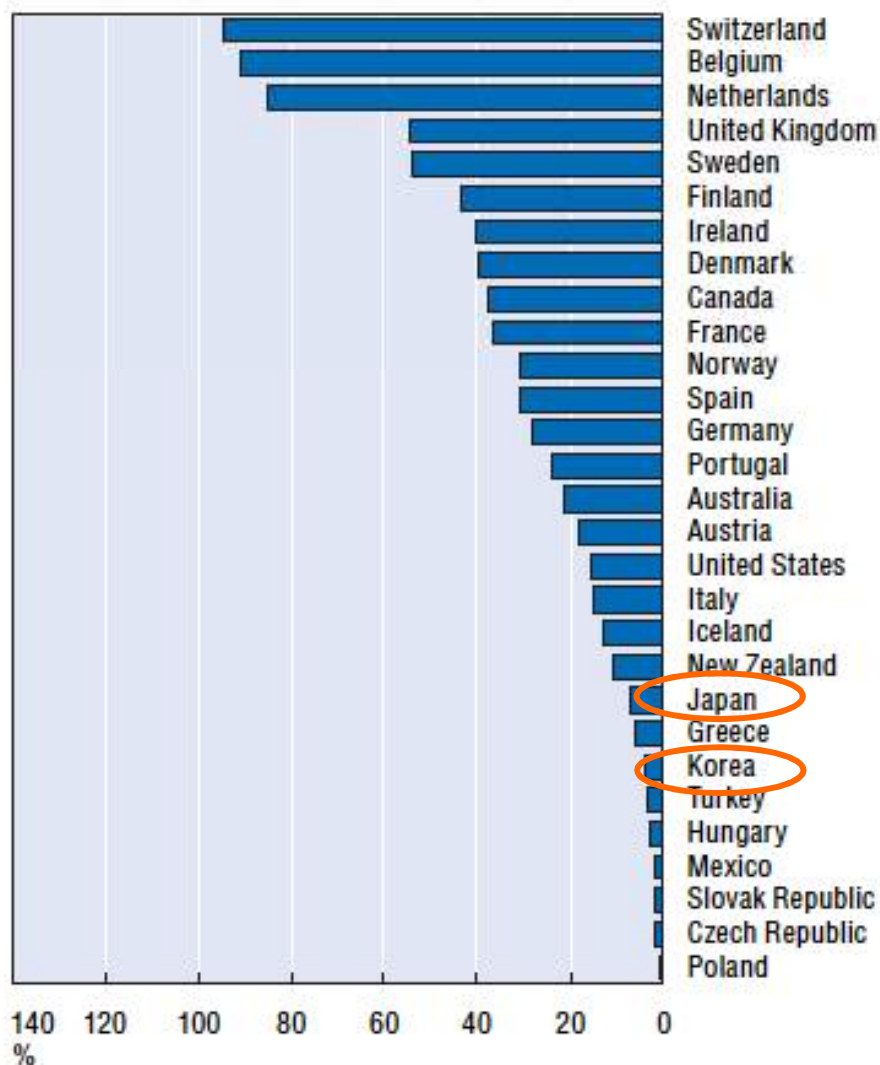
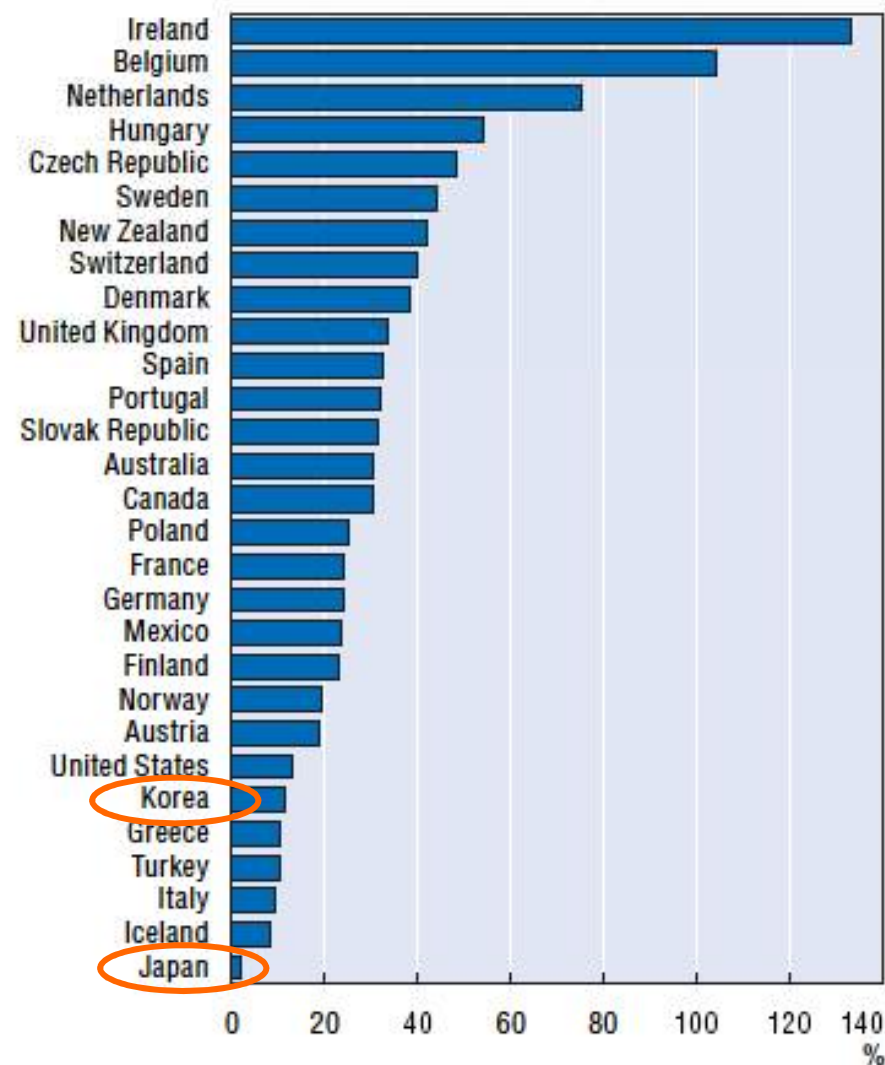


Figure B.3.4. Inward FDI position of OECD countries as a percentage of GDP

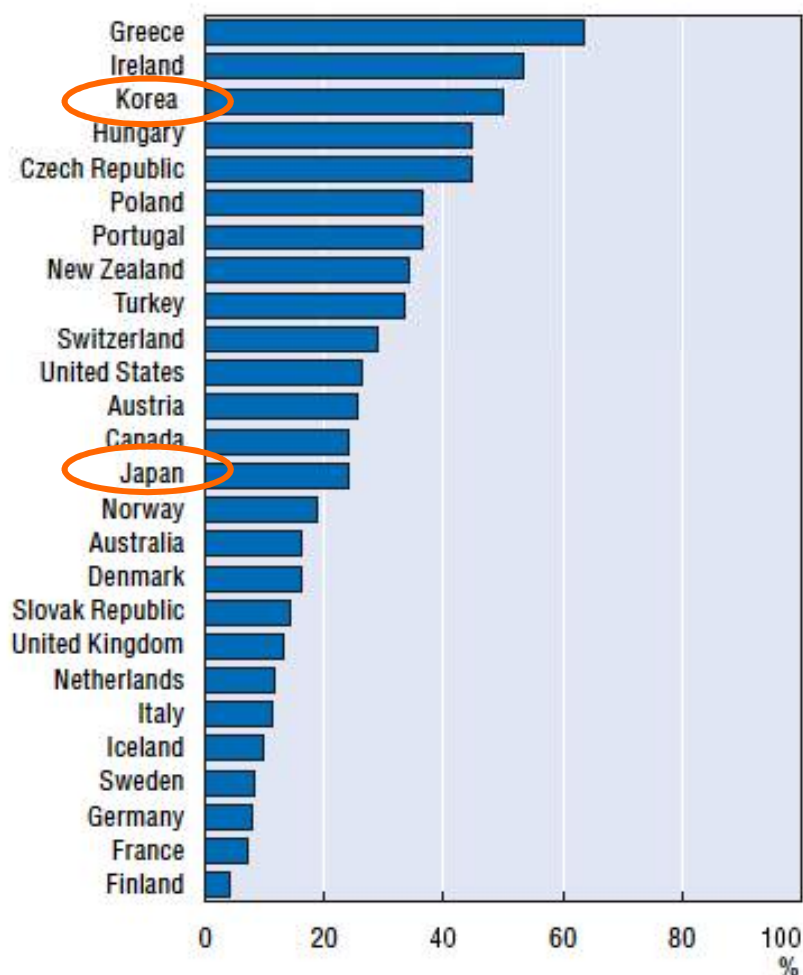
2002



FDI to non-OECD countries

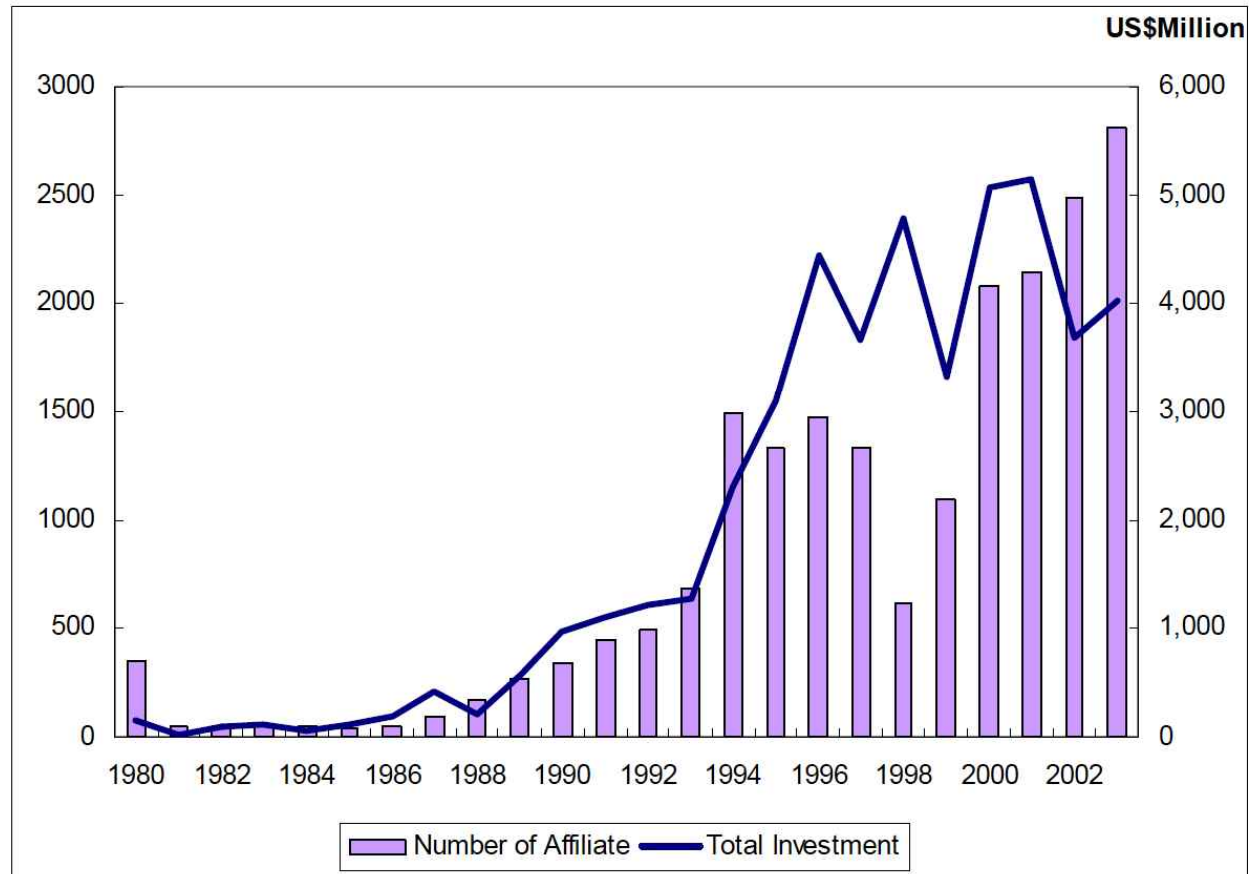
Figure B.8.4. OECD¹ outward investment to non-OECD countries as a percentage of total outward FDI stocks

2002²



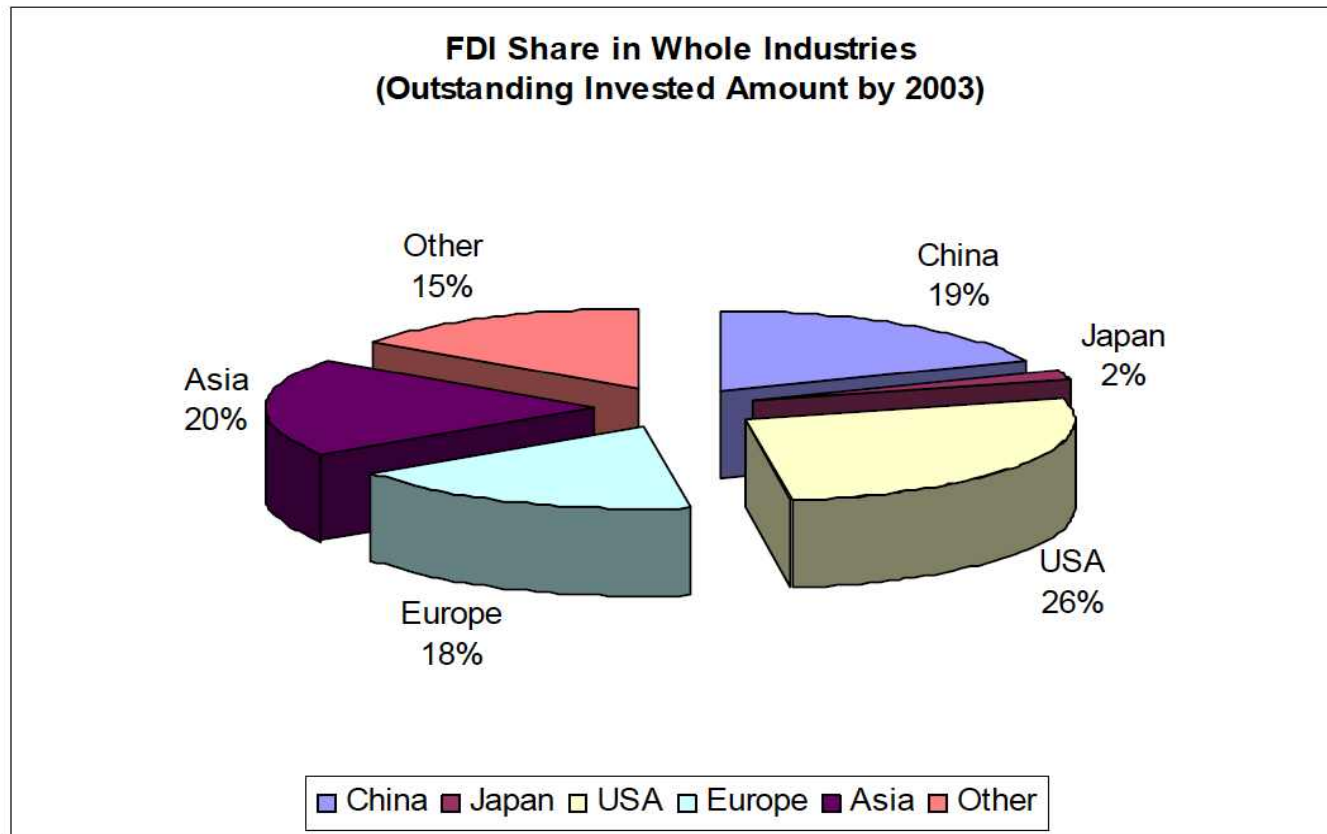
Recent Surge in Outbound FDI

<Figure 3.1> Outbound FDI for Korea



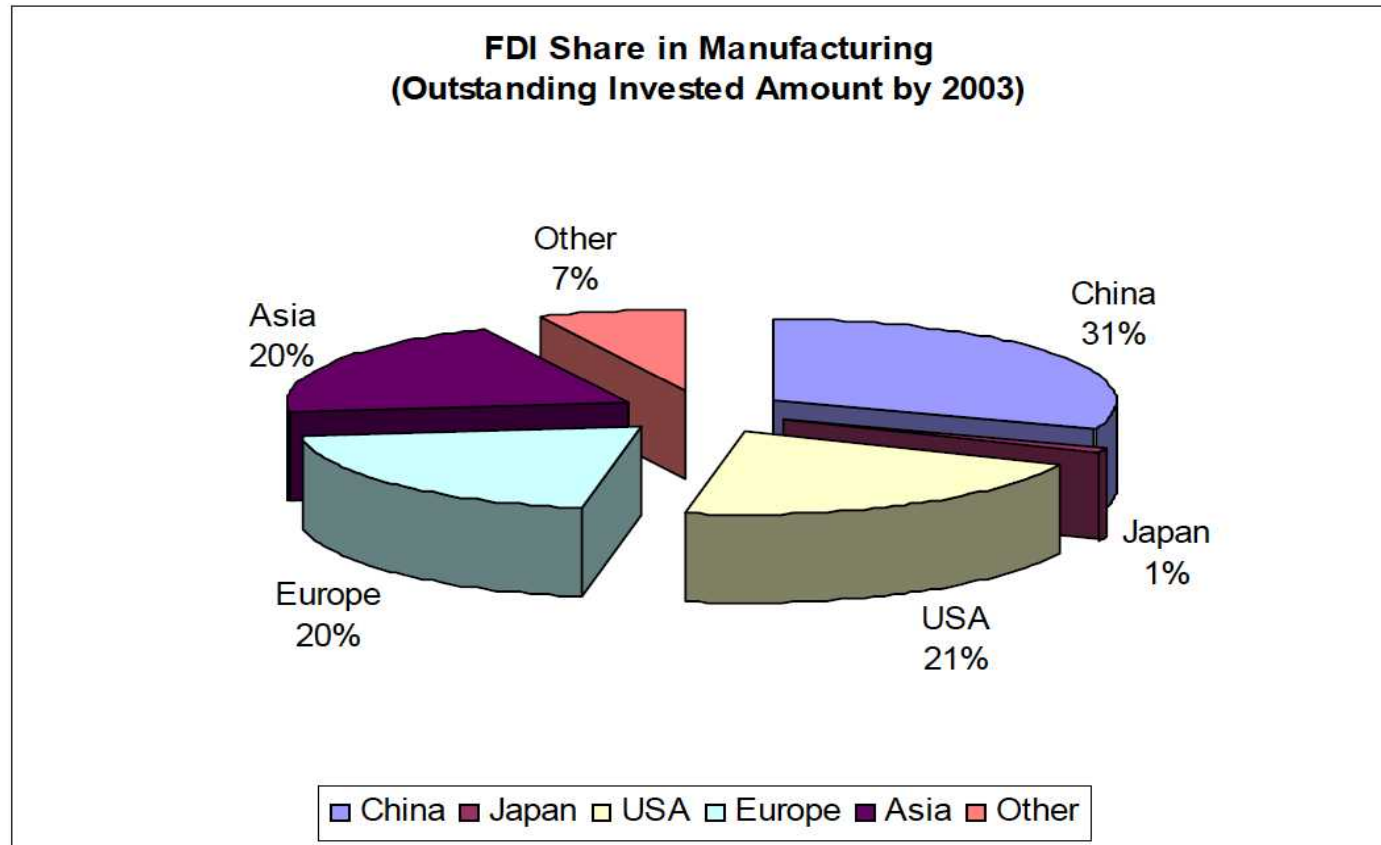
Composition of Outbound FDI (by Destination)

<Figure 3.2> Outbound FDI for Korea, by Destination

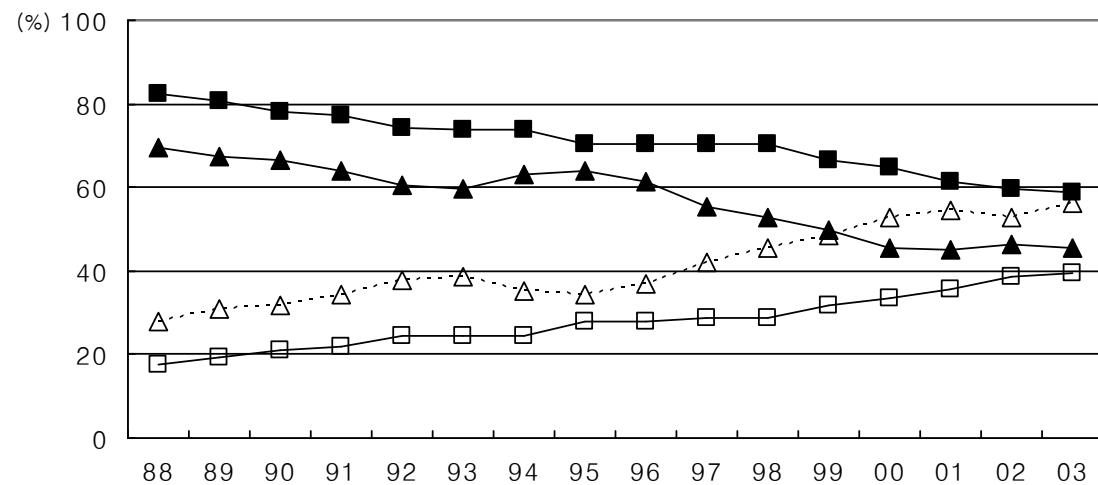


Composition of Outbound FDI (by Destination)

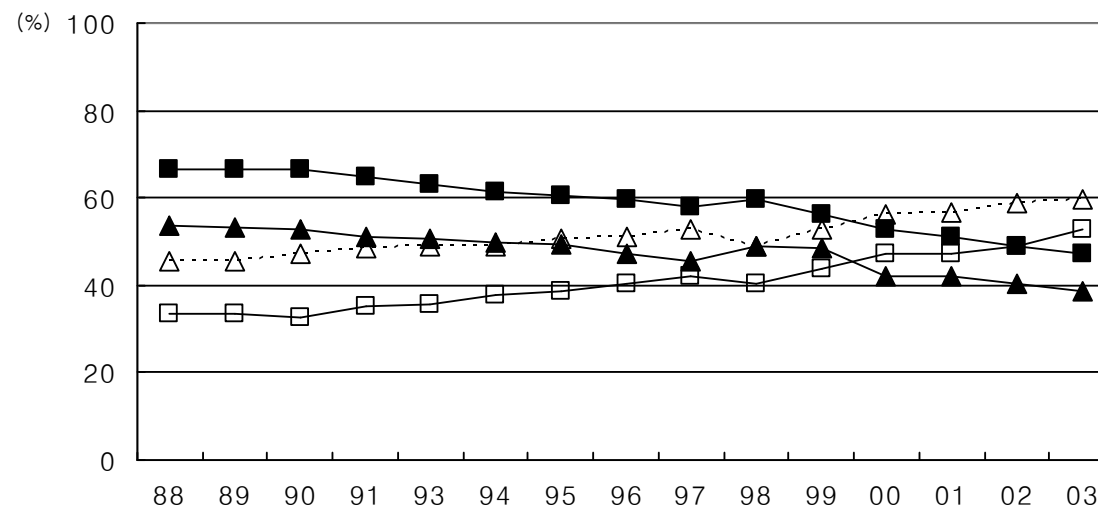
<Figure 3.3> Korea Outbound FDI in Manufacturing, by Destination



Trend in import share of final and intermediate goods by region



Korea

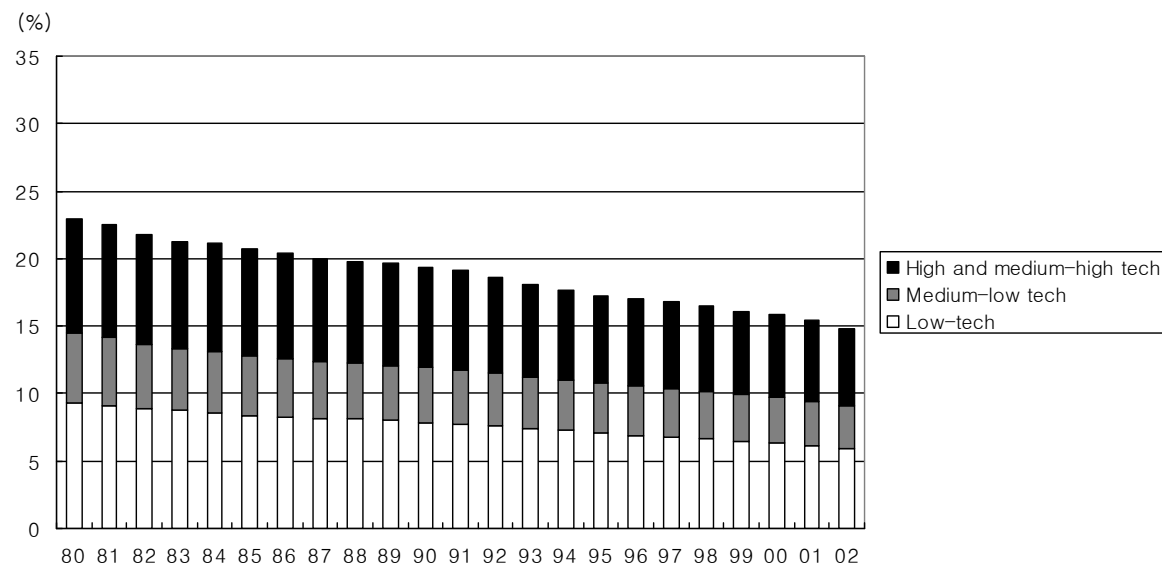


Japan

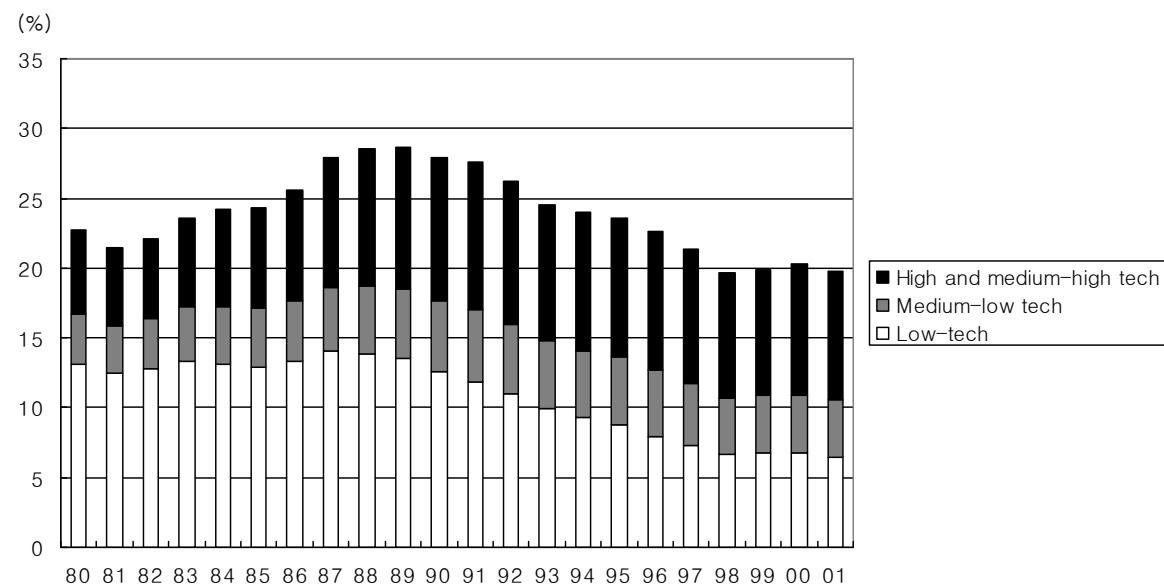
- Intermediate goods from non-OECD countries
- Intermediate goods from OECD countries
- △·· Final goods from non-OECD countries
- ▲— Final goods from OECD countries

Source: Pain (2006)

Trend in employment share of manufacturing industry (by technology level)



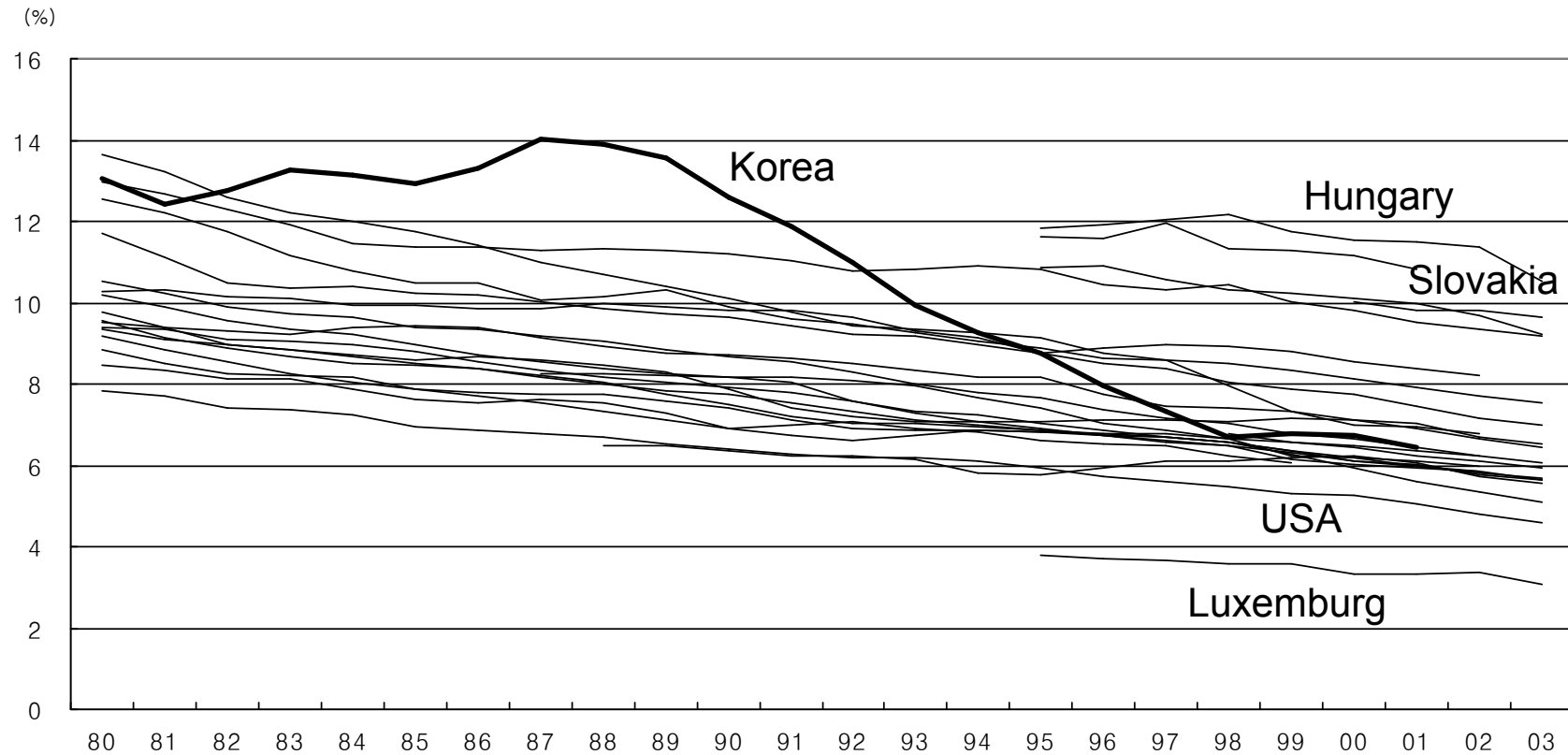
G7



Korea

Source: OECD STAN Indicators database, 2005

Trend in employment share of OECD countries by sector: Low-tech manufacturing industry



Source: *OECD STAN Indicators database, 2005*

- Links between integration and productivity growth:
 - Plants in an industry with a **higher growth rate of FDI inflows** over the previous 3 years tend to have **faster productivity growth** over the following 3 years.
 - Industry-level **trade** and **FDI outflows** also have positive spillover effects on individual plants' productivity growth.
- The nature of international integration matters:
 - Integration with more advanced economies could have larger benefits.

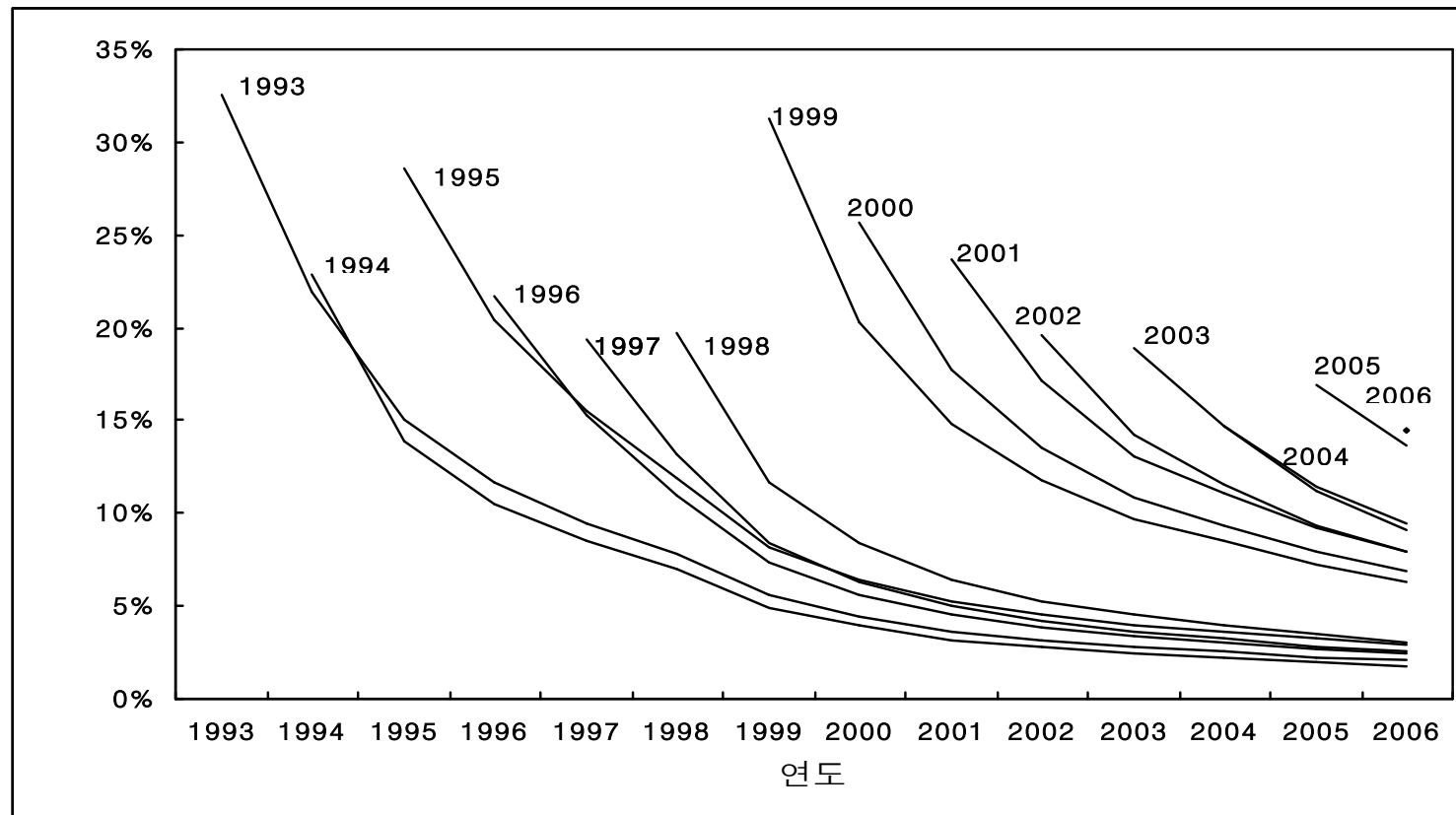
- **Intra-regional trade in East Asia** grew remarkably since the 1990s. While overall trade with the rest of the world roughly doubled in this period, intra-regional trade in East Asia more than tripled.
- The main factor behind increased intra-regional trade in East Asia was the **trade in intermediate goods through outsourcing** and the international fragmentation of production.
- Reflecting the fact that **outsourcing to Asia (particularly to China)** has a negative impact on the demand for workers with lower education and a positive impact on the demand for workers with higher education, relative wage shares of workers by educational attainment have changed substantially both in Japan and Korea.
- Although the overall effects of outsourcing have been insignificant in Korea partly because a substantial part of Korean outsourcing remained directed towards Japan, **labor demand in Korea would shift away from less-skilled workers towards more-skilled workers if outsourcing to China increased and outsourcing to Japan decreased in the future.**

Part-04 | Entry, Exit, and Aggregate Productivity Growth



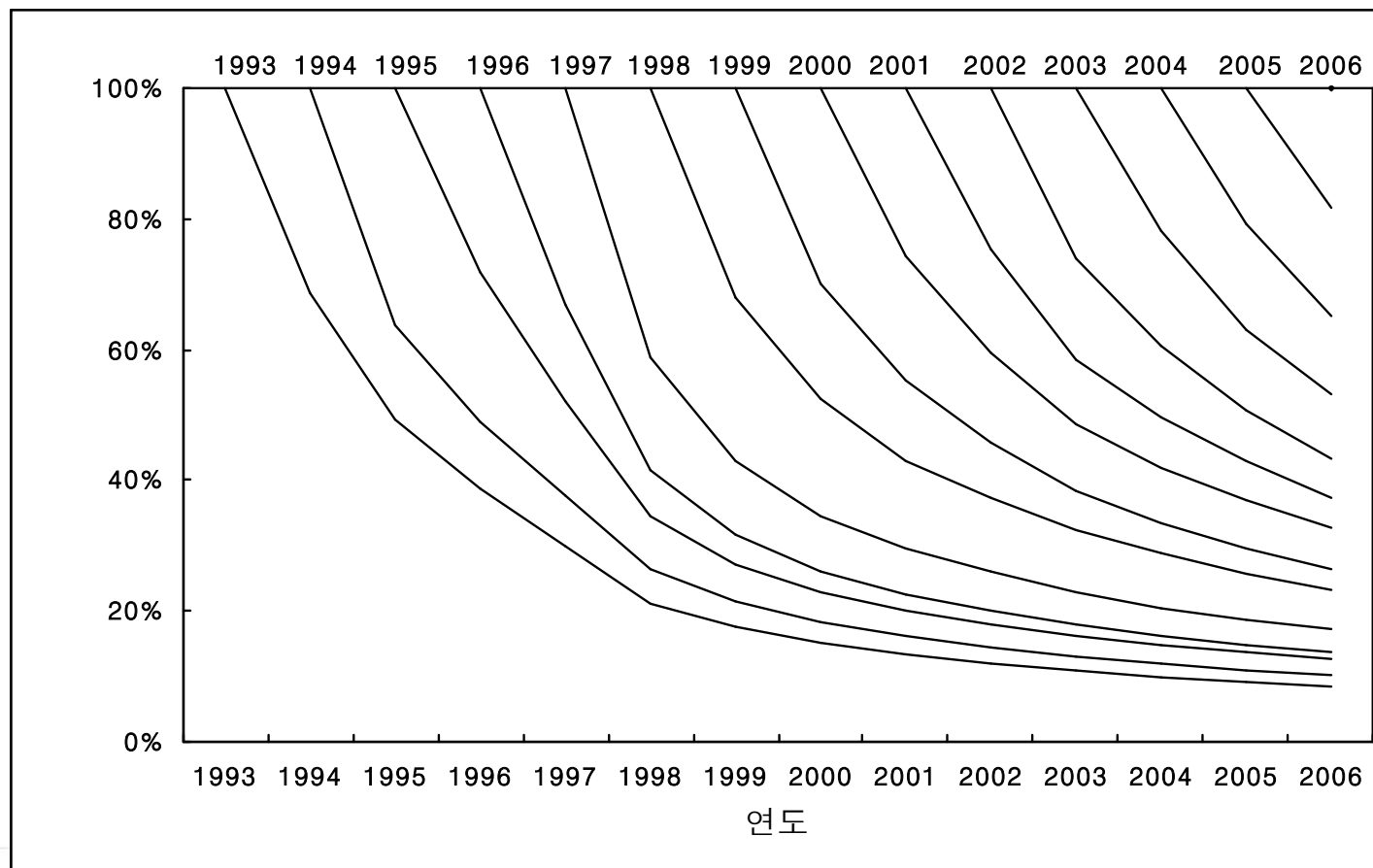
Firm Dynamics in Korean Manufacturing

Share of Entry Cohorts (by # of establishments)



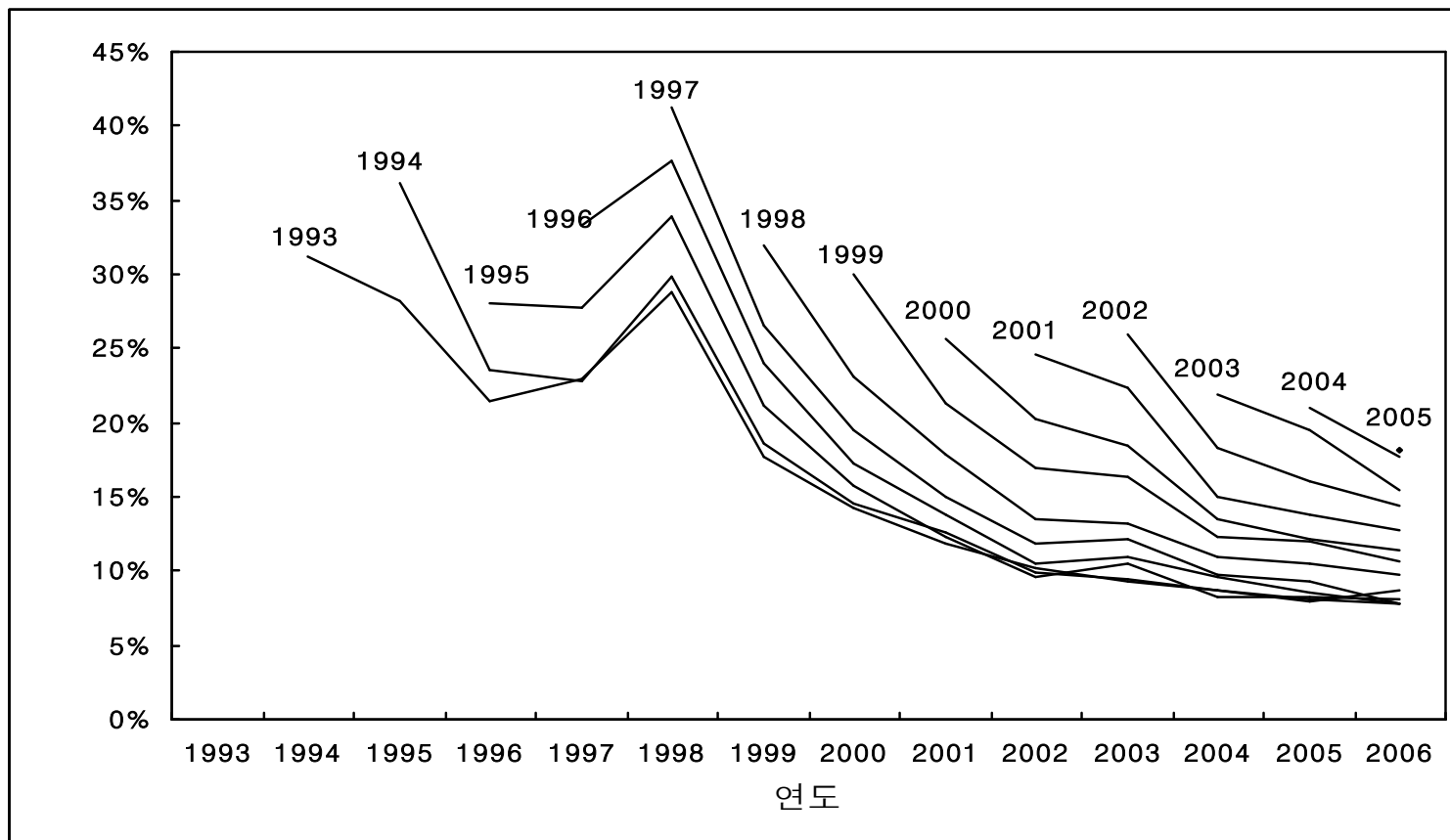
Firm Dynamics in Korean Manufacturing

Survival Rate of Entry Cohorts



Firm Dynamics in Korean Manufacturing

Hazard Rate of Entry Cohorts



자료: 통계청 광공업통계조사 미시데이터

Japan and Korea

■ Similarities

- Export-oriented growth
- Strong manufacturing (but weak tertiary sector?)
- Aging population
- Increasing competition from emerging economies (especially from China)

■ Differences

- Different size
- Distance to frontier
- Latecomer's advantage
- Speed of recovery
- Different challenges

Micro Data: Japan

- **Main Data Source: *Census of Manufactures***
 - Coverage: All plants in the manufacturing sector (with 4 or more employees)
 - Information: Shipments, number of employees, book value of tangible fixed assets, wage bill, intermediate materials, etc.
 - Plant-level, not firm-level
- **Additional Data Sources**
 - *Establishment and Enterprise Census*: Larger coverage of establishments, but fewer items covered
 - *Basic Survey of Japanese Business Structure and Activities* : Firm-level data since 1991

Micro Data: Korea

- **Main Data Source: *Mining and Manufacturing Survey***
 - Coverage: All plants with five or more employees in the mining and manufacturing industries
 - Information: Plant-level information on output, inputs, and a variety of additional items, including the plant ID, the regional code, and the industry code assigned to each plant based on its major product. Similar to *Census of Manufactures* of Japan
 - Plant-level, not firm level
- **Additional Data Sources**
 - *Census on Establishments*: Larger coverage of establishments, but fewer items covered
 - *Survey of Business Activities*: Firm-level data since 2005

Analysis of Productivity Dynamics

- Panel data based on *Census of Manufactures* (Japan, 1985-2005) and *Mining and Manufacturing Survey* (Korea, 1985-2003).

➤ Calculation of TFP at the plant level

- Following Good, Nadiri and Sickles (1997) and Aw, Chen and Roberts (2001), we measured each plant's TFP level in comparison with the industry average TFP level.
- Aggregation at industry level (54 manufacturing sectors in Japan; 34 manufacturing sectors in Korea)

$$\ln TFP_{f,t} = (\ln Q_{f,t} - \overline{\ln Q_t}) - \sum_{i=1}^n \frac{1}{2} (S_{i,f,t} + \overline{S_{i,t}}) (\ln X_{i,f,t} - \overline{\ln X_{i,t}}) \text{ for } t = 0,$$

and

$$\begin{aligned} \ln TFP_{f,t} = & (\ln Q_{f,t} - \overline{\ln Q_t}) - \sum_{i=1}^n \frac{1}{2} (S_{i,f,t} + \overline{S_{i,t}}) (\ln X_{i,f,t} - \overline{\ln X_{i,t}}) \\ & + \sum_{s=1}^t (\overline{\ln Q_s} - \overline{\ln Q_{s-1}}) - \sum_{s=1}^t \sum_{i=1}^n \frac{1}{2} (\overline{S_{i,s}} + \overline{S_{i,s-1}}) (\overline{\ln X_{i,s}} - \overline{\ln X_{i,s-1}}) \text{ for } t \geq 1. \end{aligned}$$

Productivity Dynamics Decomposition

- We define the industry TFP level in year t as:

$$\ln TFP_t = \sum_{f=1}^n \theta_{f,t} \ln TFP_{f,t}$$

- We can decompose changes in industry average TFP levels into the sum of the following four factors (Foster, Haltiwanger and Krizan, 2001):

➤ Within effect:

$$\sum_{f \in S} \theta_{f,t-\tau} \Delta \ln TFP_{f,t}$$

➤ Between effect:

$$\sum_{f \in S} \Delta \theta_{f,t} (\ln TFP_{f,t-\tau} - \overline{\ln TFP_{t-\tau}})$$

➤ Covariance effect:

$$\sum_{f \in S} \Delta \theta_{f,t} \Delta \ln TFP_{f,t}$$

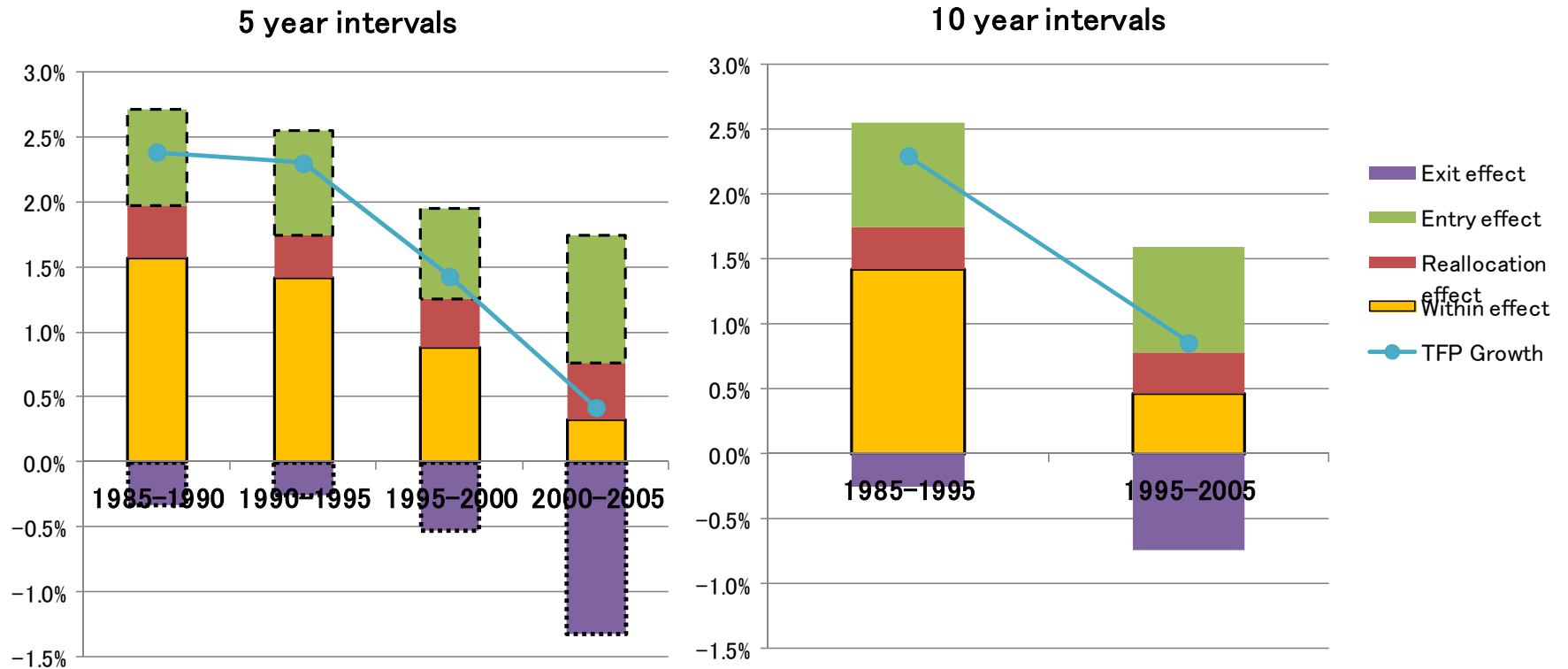
➤ Entry effect:

$$\sum_{f \in N} \theta_{f,t} (\ln TFP_{f,t} - \overline{\ln TFP_{t-\tau}})$$

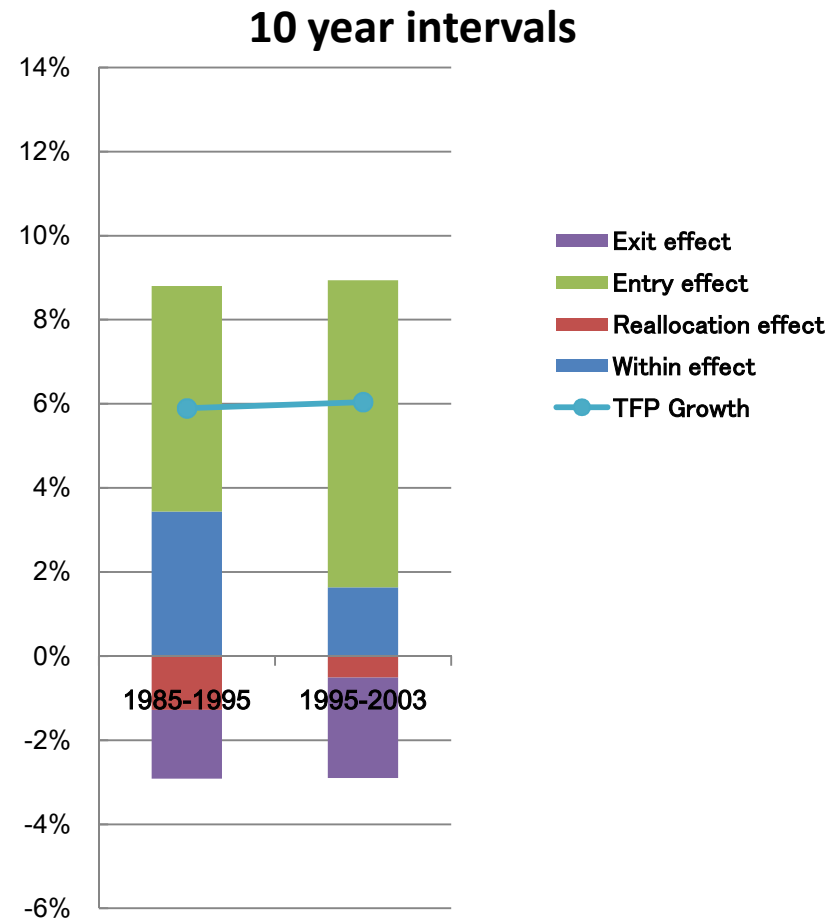
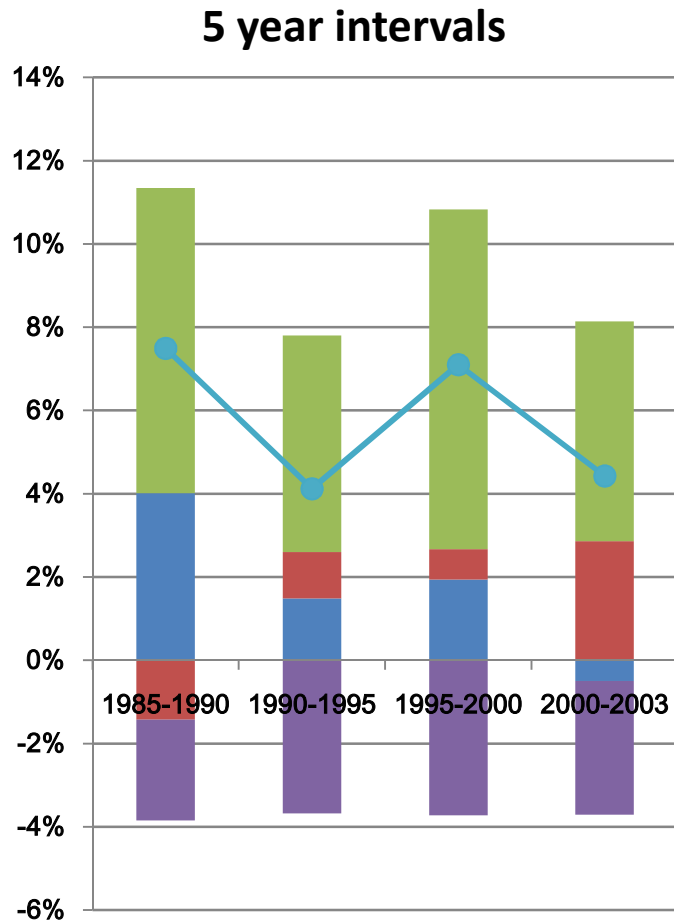
➤ Exit effect:

$$\sum_{f \in X} \theta_{f,t-\tau} (\overline{\ln TFP_{t-\tau}} - \ln TFP_{f,t-\tau})$$

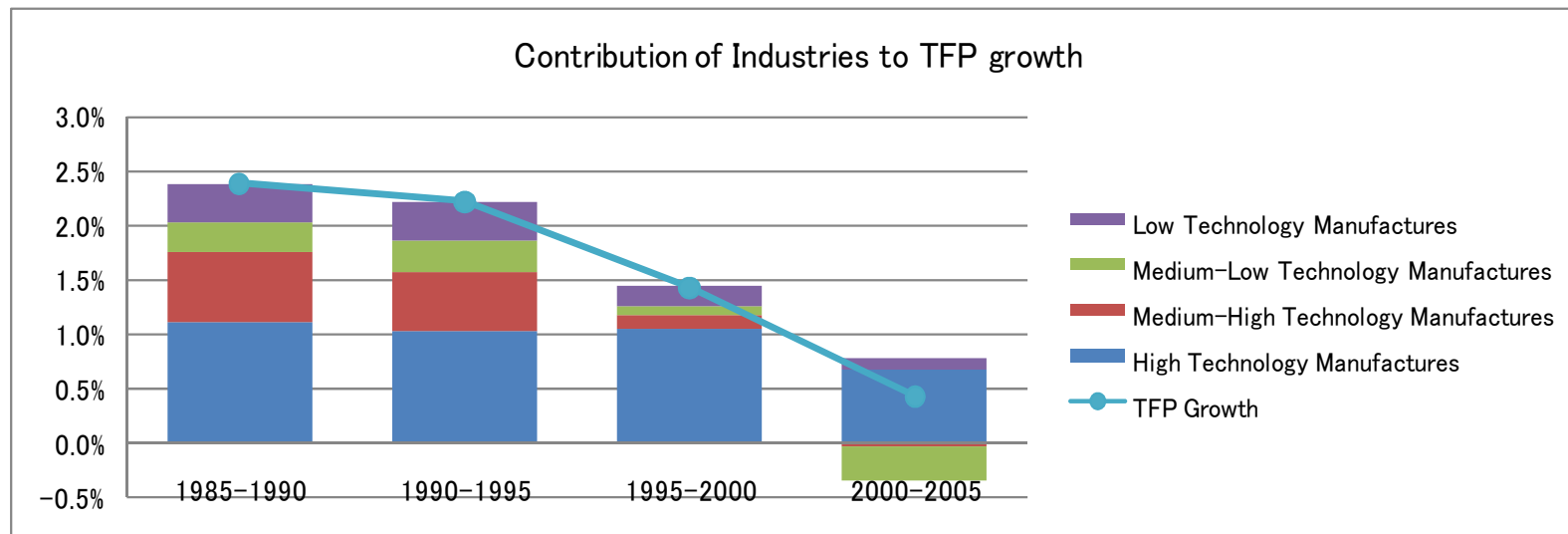
Productivity Dynamics: Japan



Productivity Dynamics: Korea

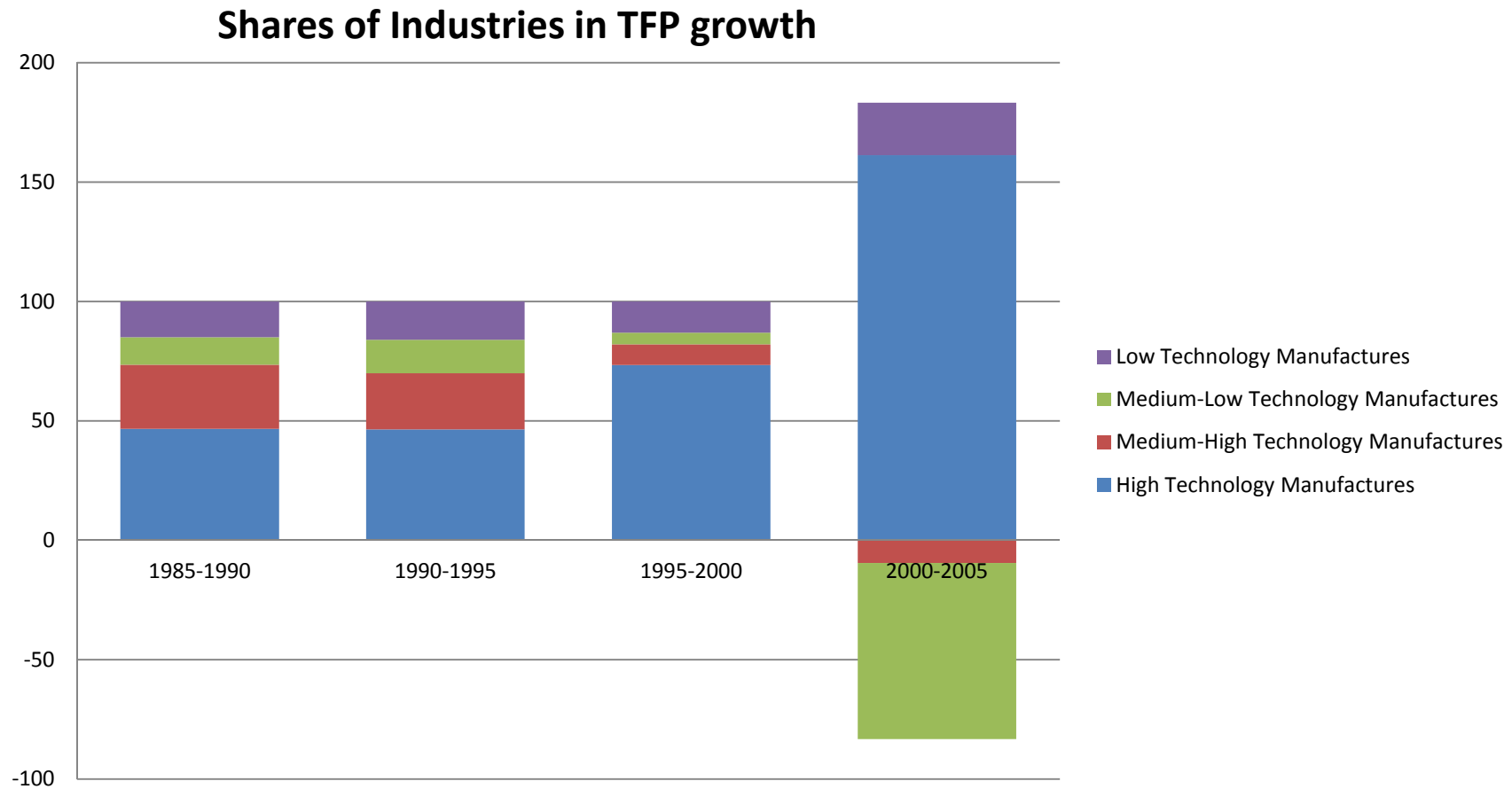


Technology and Productivity Dynamics: Japan



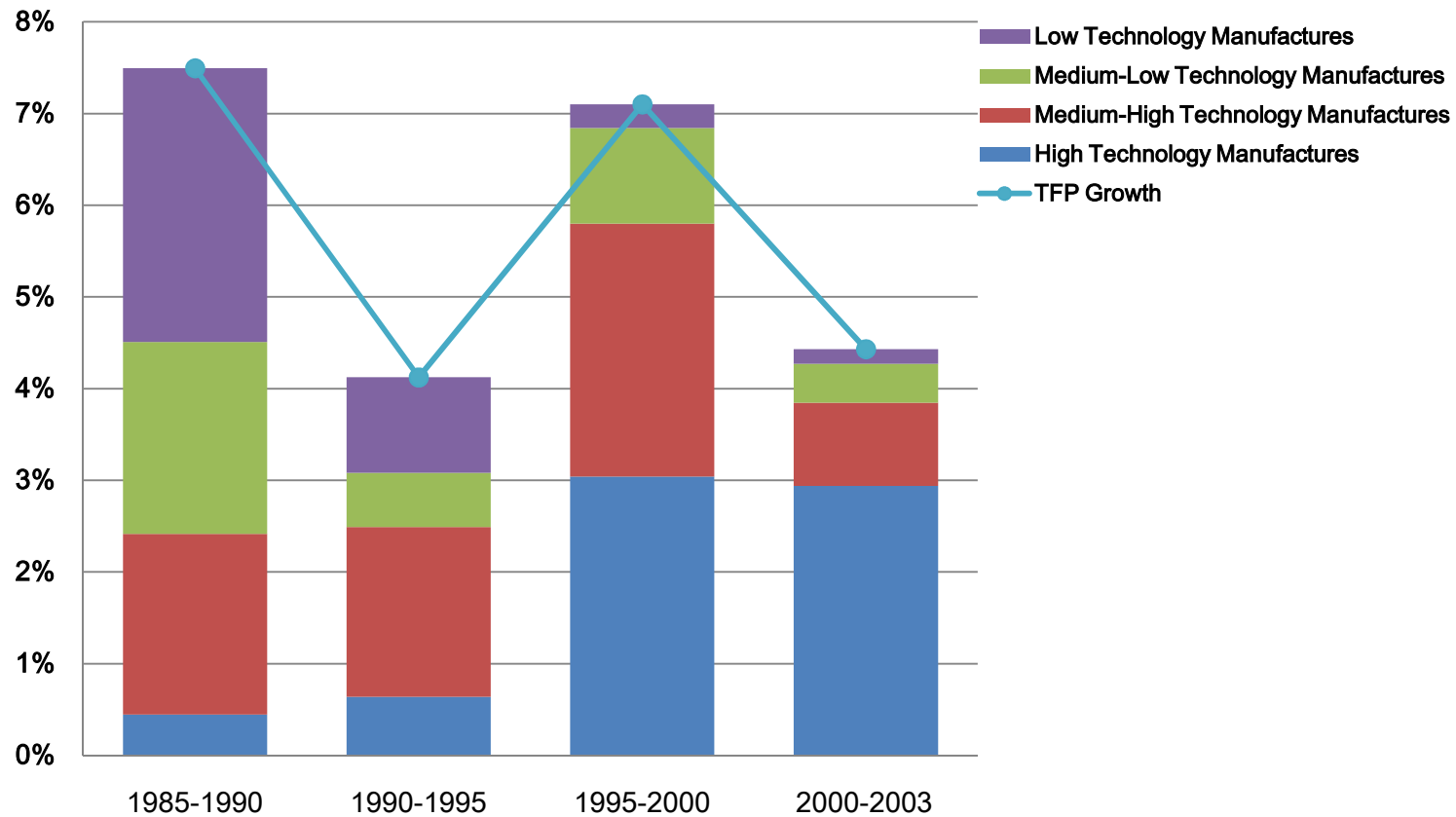
- **High technology industries, such as electronics and pharmaceutical industry account for most of the productivity growth in the manufacturing sector.**
- **The contribution of medium-high and medium low technology industries (such as chemicals, motor vehicles, iron and steel) has sharply declined since 1995.**

Technology and Productivity Dynamics: Japan

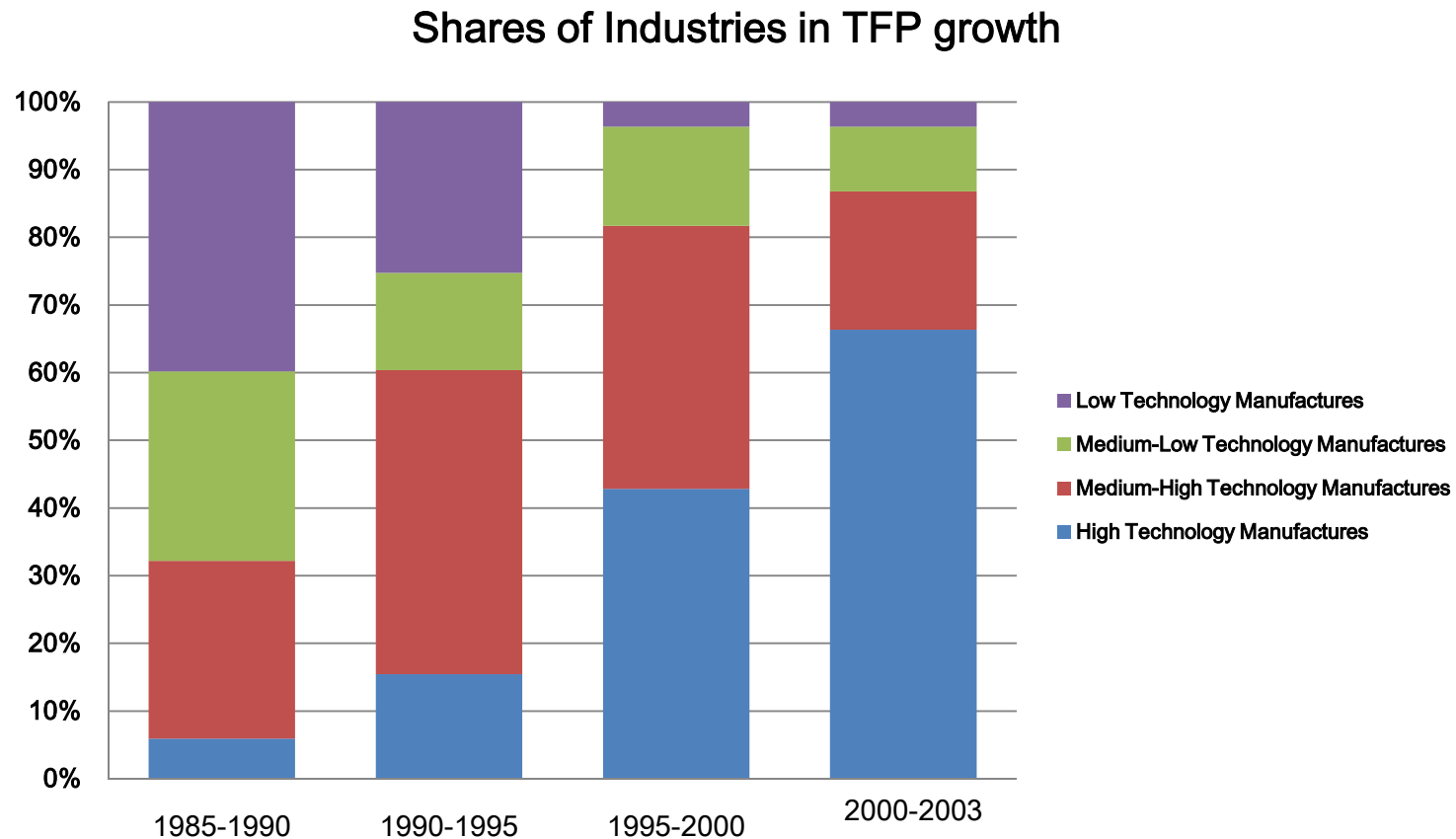


Technology and Productivity Dynamics: Korea

Contribution of Industries to TFP growth



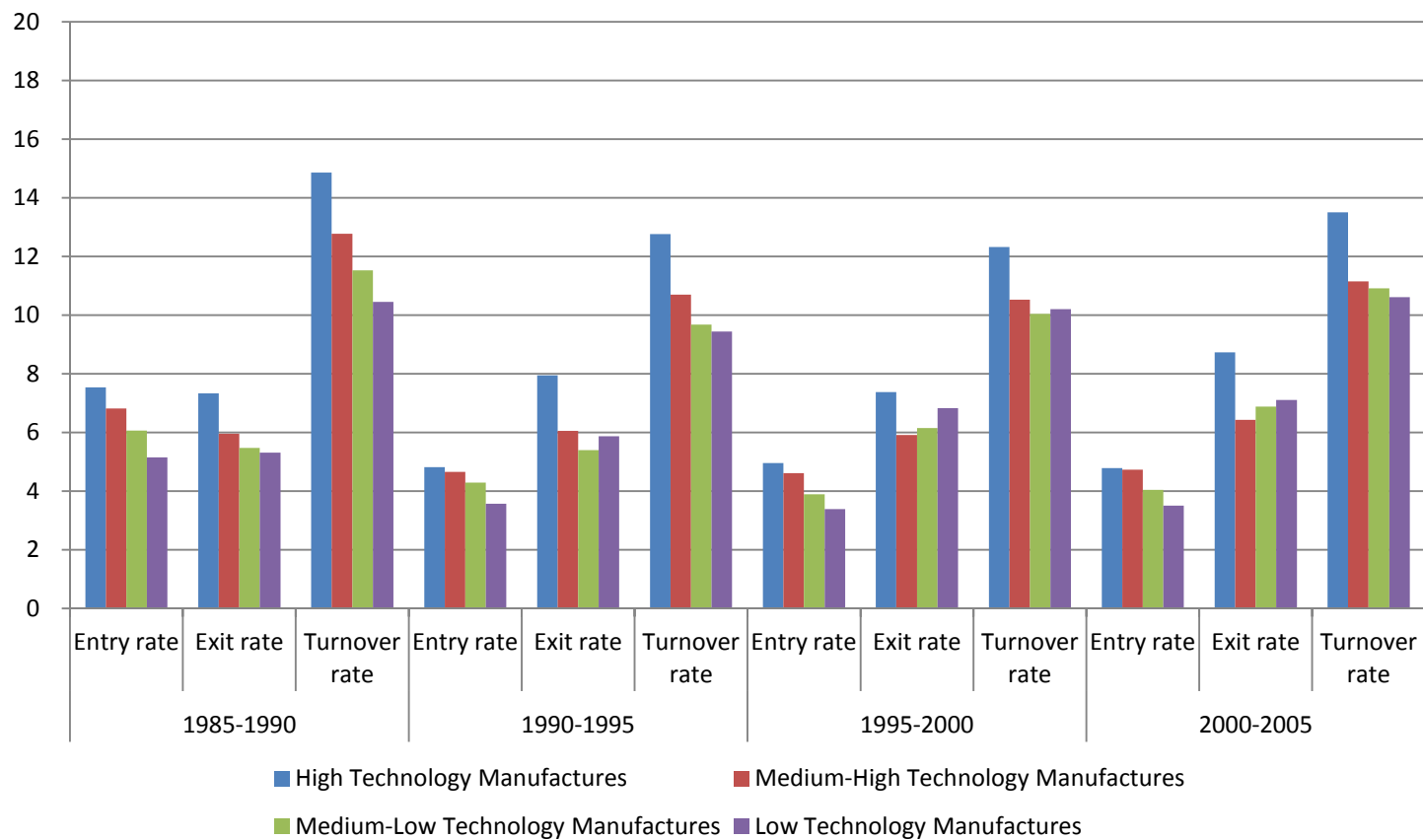
Technology and Productivity Dynamics: Korea



Firm Dynamics: Japan

Entry, Exit, and Turnover Rates

(%, annualized, 1985-2005)



Firm Dynamics: Japan

Entry, Exit, and Turnover Rates

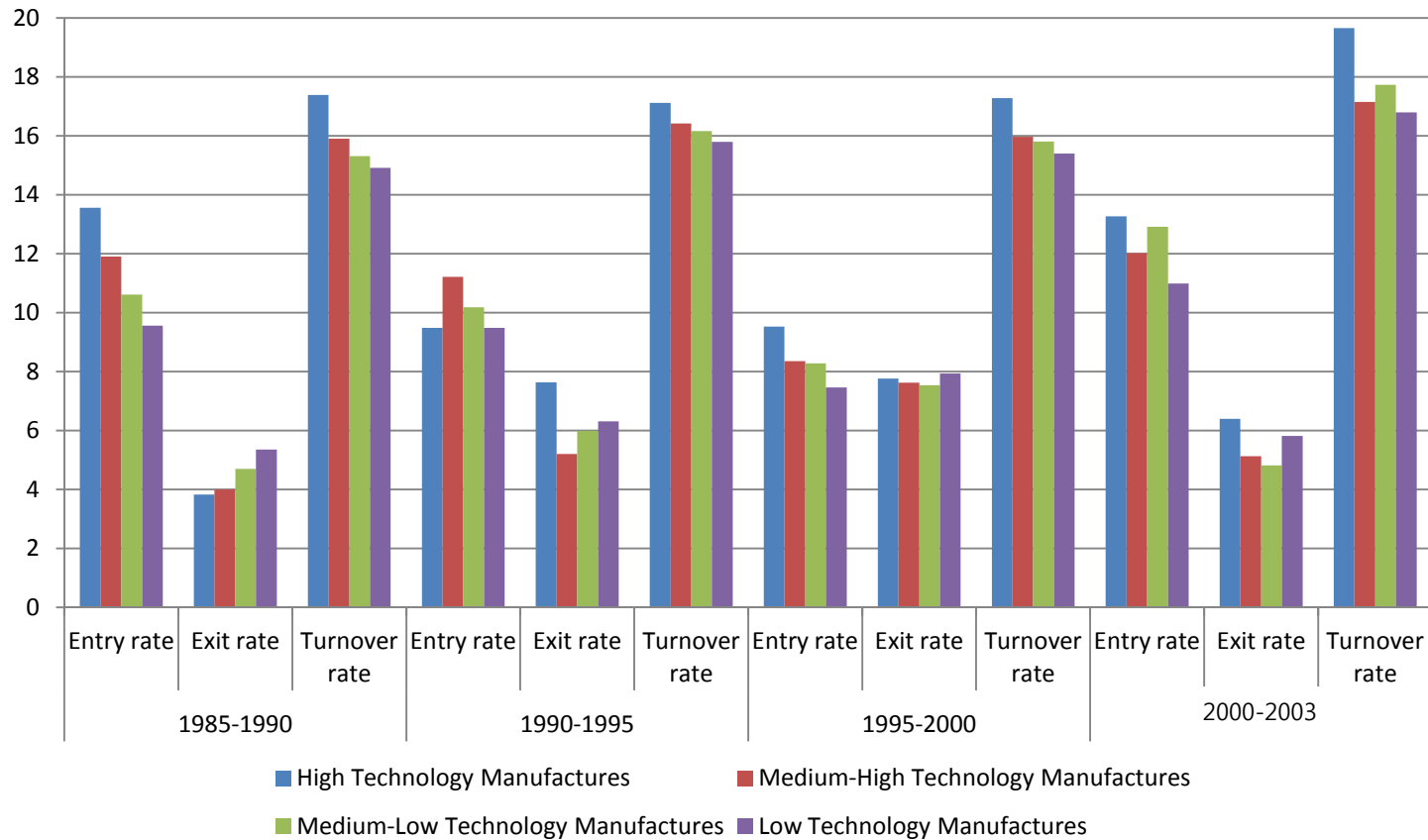
(%, annualized, 1985-2005)

		High Technology Manufacturing	Medium-High Technology Manufacturing	Medium-Low Technology Manufacturing	Low Technology Manufacturing
1985-1990	Entry rate	7.5	6.8	6.1	5.1
	Exit rate	7.3	6.0	5.5	5.3
	Turnover rate	14.9	12.8	11.5	10.5
1990-1995	Entry rate	4.8	4.6	4.3	3.6
	Exit rate	7.9	6.0	5.4	5.9
	Turnover rate	12.8	10.7	9.7	9.4
1995-2000	Entry rate	4.9	4.6	3.9	3.4
	Exit rate	7.4	5.9	6.2	6.8
	Turnover rate	12.3	10.5	10.0	10.2
2000-2005	Entry rate	4.8	4.7	4.0	3.5
	Exit rate	8.7	6.4	6.9	7.1
	Turnover rate	13.5	11.2	10.9	10.6

Source: Author's calculations based on *Census of Manufactures*.

Firm Dynamics: Korea

Entry, Exit, and Turnover Rates (%, annualized, 1985-2003)



Firm Dynamics: Korea

Entry, Exit, and Turnover Rates

(%, annualized, 1985-2003)

		High Technology Manufacturing	Medium-High Technology Manufacturing	Medium-Low Technology Manufacturing	Low Technology Manufacturing
1985-1990	Entry rate	13.6	11.9	10.6	9.6
	Exit rate	3.8	4.0	4.7	5.4
	Turnover rate	17.4	15.9	15.3	14.9
1990-1995	Entry rate	9.5	11.2	10.2	9.5
	Exit rate	7.6	5.2	6.0	6.3
	Turnover rate	17.1	16.4	16.2	15.8
1995-2000	Entry rate	9.5	8.3	8.3	7.5
	Exit rate	7.8	7.6	7.5	7.9
	Turnover rate	17.3	16.0	15.8	15.4
2000-2003	Entry rate	13.3	12.0	12.9	11.0
	Exit rate	6.4	5.1	4.8	5.8
	Turnover rate	19.7	17.1	17.7	16.8

Source: Author's calculations based on *Mining and Manufacturing Survey*.

Entry Regulation and Productivity Dynamics

- **Entry Regulation and Firm Dynamics**
 - Entry regulation reduces entry rate
 - Entry regulation reduces exit rate
- **Firm Dynamics and Economic Performance**
 - Entry raises employment and TFP growth
 - Exit raises TFP growth

(Ahn, 2006)

$$\frac{\ln TFP_{i,t+3} - \ln TFP_{i,t}}{3} = \beta_0 + \beta_{Plant} \cdot X_{i,t} + \beta_{Industry} \cdot Y_{j,t} + \beta_{Dt} \cdot D_t + \beta_{Dj} \cdot D_j + \varepsilon_{i,t}$$

<i>TFP growth rate for subsequent three years</i>	I	II	III
$\ln(TFP)_{i,t}$	-0.24542 *** (-110.31)	-0.24604 *** (-110.39)	-0.24708 *** (-110.56)
Non-production to production worker ratio (plant-level)	0.00465 *** (5.11)	0.00482 *** (4.96)	0.00486 *** (4.97)
Capital Labor Ratio (plant-level)	-0.00004 *** (-5.46)	-0.00004 *** (-5.36)	-0.00004 *** (-5.24)
R&D Intensity (plant-level)	-0.00184 (-0.86)	-0.00197 (-0.87)	-0.00179 (-0.81)
Export Intensity (plant-level)	0.00871 (1.19)	0.00647 (0.89)	0.00654 (0.90)
$\ln(\text{Number of workers})$	0.00938 *** (16.96)	0.01014 *** (18.30)	0.01017 *** (18.30)
Non-production to production worker ratio (industry-level)	0.01248 *** (4.08)	0.00679 ** (2.30)	0.01527 *** (4.89)
Capital Labor Ratio (industry-level)	0.00002 ** (2.05)	0.00010 *** (8.92)	0.00011 *** (9.69)
R&D Intensity (industry-level)	0.75621 *** (9.70)	0.79440 *** (8.74)	0.75078 *** (8.27)
Export intensity (industry-level)	0.05482 *** (7.50)	0.03776 *** (4.83)	0.02668 *** (3.40)
Import penetration rate (industry-level)	0.04214 *** (8.76)	0.04995 *** (10.07)	0.04833 *** (9.80)
Entry rate (industry-level)		0.15204 *** (7.92)	0.13458 *** (7.03)
Exit rate (industry-level)		0.25960 *** (6.79)	0.24569 *** (6.41)
Entry regulation rate (industry-level)	-0.03249 *** (-11.20)		-0.02799 *** (-9.65)
Number of observations	33402	33402	33402
Adjusted R ²	0.43095	0.4322	0.43390
R ²	0.43115	0.4324	0.43414

<i>TFP growth rate for subsequent three years</i>	I (L < 20)	II (20 ≤ L < 50)	III (50 ≤ L < 150)	IV (150 ≤ L < 300)	V (300 ≤ L)
$\ln(TFP)_{i,t}$	-0.26038 *** (-90.43)	-0.23971 *** (-51.25)	-0.22422 *** (-25.01)	-0.18807 *** (-11.10)	-0.16302 *** (-7.06)
Non-production to production worker ratio (plant-level)	0.01049 *** (7.02)	0.00402 ** (2.30)	0.00383 *** (3.39)	0.00427 (1.44)	0.00062 (0.99)
Capital Labor Ratio (plant-level)	-0.00011 (-2.91)	-0.00002 (-1.00)	-0.00002 (-0.82)	-0.00001 (-1.00)	-0.00002 ** (-2.30)
R&D intensity (plant-level)	-0.00220 (-0.86)	0.00200 (0.21)	-0.01992 (-1.56)	0.00506 (0.10)	-0.01689 (-0.11)
Export intensity (plant-level)	-0.00104 (-0.07)	0.02833 * (1.89)	0.00538 (0.36)	-0.02715 (-1.38)	0.00847 (0.43)
$\ln(\text{Number ofworkers})$	0.00570 *** (4.11)	0.00359 * (1.70)	0.01273 *** (4.11)	0.00402 (0.64)	0.00868 * (1.74)
Non-production to production worker ratio (industry-level)	0.00714 * (1.79)	0.02587 *** (4.19)	0.01190 (1.15)	0.00727 (0.66)	-0.02214 (-1.42)
R&D Intensity (industry-level)	0.00013 *** (8.29)	0.00012 *** (6.26)	0.00003 (0.98)	-0.00001 (-0.13)	-0.00001 (-0.12)
R&D Intensity (industry-level)	0.18521 (1.52)	1.16846 *** (6.60)	1.86405 *** (7.07)	2.49020 *** (4.42)	2.22933 *** (3.77)
Export intensity (industry-level)	0.03281 *** (3.08)	0.01230 (0.90)	0.04596 * (1.76)	0.04899 (0.91)	0.00132 (0.03)
Import penetration rate (industry-level)	0.07664 *** (11.55)	0.02092 ** (2.14)	0.00464 (0.34)	-0.01365 (-0.57)	-0.00865 (-0.29)
Entry rate (industry-level)	0.21120 *** (8.50)	0.14750 *** (4.07)	-0.01786 (-0.31)	-0.34436 ** (-2.12)	-0.05689 (-0.43)
Exit rate (industry-level)	0.27865 *** (5.80)	0.19765 ** (2.51)	-0.03044 (-0.27)	0.06738 (0.22)	0.06292 (0.25)
Entry regulation rate (industry-level)	-0.04880 *** (-13.18)	-0.01790 *** (-3.11)	0.02298 ** (2.54)	0.02538 * (1.71)	0.04526 ** (2.44)
Number of observations	21708	7522	3131	671	370
Adjusted R ²	0.4477	0.4334	0.4286	0.4061	0.3645
R ²	0.4481	0.4345	0.4311	0.4185	0.3886

<i>TFP growth rate for subsequent three years</i>	I (L < 20)	II (20 ≤ L < 50)	III (50 ≤ L < 150)	IV (150 ≤ L < 300)	V (300 ≤ L)
$\ln(TFP)_{i,t}$	-0.26038 *** (-90.43)	-0.23971 *** (-51.25)	-0.22422 *** (-25.01)	-0.18807 *** (-11.10)	-0.16302 *** (-7.06)
Non-production to production worker ratio (plant-level)	0.01049 *** (7.02)	0.00402 ** (2.30)	0.00383 *** (3.39)	0.00427 (1.44)	0.00062 (0.99)
Capital Labor Ratio (plant-level)	-0.00011 (-2.91)	-0.00002 (-1.00)	-0.00002 (-0.82)	-0.00001 (-1.00)	-0.00002 ** (-2.30)
R&D intensity (plant-level)	-0.00220 (-0.86)	0.00200 (0.21)	-0.01992 (-1.56)	0.00506 (0.10)	-0.01689 (-0.11)
Export intensity (plant-level)	-0.00104 (-0.07)	0.02833 * (1.89)	0.00538 (0.36)	-0.02715 (-1.38)	0.00847 (0.43)
$\ln(\text{Number ofworkers})$	0.00570 *** (4.11)	0.00359 * (1.70)	0.01273 *** (4.11)	0.00402 (0.64)	0.00868 * (1.74)
Non-production to production worker ratio (industry-level)	0.00714 * (1.79)	0.02587 *** (4.19)	0.01190 (1.15)	0.00727 (0.66)	-0.02214 (-1.42)
R&D Intensity (industry-level)	0.00013 *** (8.29)	0.00012 *** (6.26)	0.00003 (0.98)	-0.00001 (-0.13)	-0.00001 (-0.12)
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Entry regulation rate (industry-level)	-0.04880 *** (-13.18)	-0.01790 *** (-3.11)	0.02298 ** (2.54)	0.02538 * (1.71)	0.04526 ** (2.44)
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Thank you !