



The Korean Case Study: Past Experience and New Trends in Training Policies

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1. Introduction

1.1 Skills Development and the Role of Government

- The organizing themes of this paper are whether a government should intervene in the human resources development market, especially in the **training market**; if yes, what should be the **rationale for the intervention**; and **how it should intervene**.
- Controversy over these issues has been mainly discussed under **two theories: the human capital theory** and the **public goods theory**.
 - The human capital theory focuses on the responsibility of **both the individual worker and the enterprise**.
 - The public goods theory focuses on **the nature of training** as a public good and therefore on the **failure of the skills development market**.

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1.1 Skills Development and the Role of Government

- Human capital theory was the **dominant theoretical approach** to skills formation.
- This theory assumes that **market failure does not occur** in the economy and considers that all training can be classified into general training or specialized training, in which both the **individual worker** and the **enterprise** have training **investment incentives**.
- It also states that direct training provision by the government is not desirable and as a result, **optimal efficiency** of skills development **can be achieved** under **the principles of a free, competitive market**.
- Furthermore, the human capital theory maintains that **government intervention** in skills development is **unnecessary** and may be **harmful**, assuming that the **free, competitive market** can bring about **sufficient investment** in **skills development**.
- Therefore, the only action a government needs to take is to **refrain from intervention** and to **make sure** that **a free, competitive** market is **well functioning**.

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1.1 Skills Development and the Role of Government

- In the real labor market, however, **market failures like poaching of workers** and **other externalities** occur inevitably.
- **Firms** are likely to **under-provide general training** because they worry that trainees, once their training has been completed.
- **Such market failure** causes **inefficient resource allocation**. **Vocational training** is considered a **public good**.
- It is likely to be under-provided when left entirely to the private sector.
- The **benefit of skills training does not accrue exclusively to the workers** who underwent training and can be **shared by other people in society** like **a public good**; and employers are **reluctant to provide training** to their workers.
- Therefore, the government should **intervene in skills development** to produce an **optimal level** of **training** either by **providing subsidies** or **incentives** to **enterprises** and workers or **directly providing training** to workers.

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1.2 The Role of Government in Korea's Skills Development

- The Korean case offers a **good example** of the **active role** played by **the government** in **skills development** of workers.
- Korea is well known for **adopting a government-led skills development system** to assure industry the **supply of a skilled workforce** and to **protect** the **vulnerable groups** of population.
- **Governmental intervention** in skills development at an early stage in Korea's industrialization was necessary for **three reasons**.
 - Firstly, **workforce mobility** was **frequent** at the time of rapid industrialization in Korea. Enterprises, rather than training their own workers, **practiced “free-riding and poaching”** of the workers trained by others.

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1.2 The Role of Government in Korea's Skills Development

- Secondly, a massive unskilled workforce began to **migrate from rural to urban areas**. The resulting differences in **employment rates** and **skill levels** among the national workforce were significant and were reflected in **individual productivity and wage disparities**. To **redress the inequality** in employment and **income distribution**, therefore, the government needed to **enhance job opportunities** and **productivity through training provision**.
- Thirdly, government intervention was needed because the **demand of future skilled** workers **would not be met** if skills development were **left to the free market**.
- As described above, **government intervention** as a strategy **intended to resolve market failure** does have some rationality.
- It also **transformed mass unskilled youth** leaving **rural areas** to a skilled workforce through **vocational education** and **training** (Shim, 1997).

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1.2 The Role of Government in Korea's Skills Development

- This skills development policy served **a double purpose**.
- While training opportunities were provided to an **annual urban influx of up to 400,000 unskilled rural youth**, it also **met the demand of the skilled workforce** during Korea's **high growth stage** in the **1970s-1980s** (Suh, 2002).

Table 1. Evolution of Skills Development System in response to Economic Development

	1960s	1970s	1980s	1990s	2000s
Per Capita GDP	\$80	\$254 → \$1,676	\$1,645 → \$5,418	\$6,417 → \$9,438	\$10,841 → \$20,000
Economic Development Stage	1st & 2nd Five Year Economic Development Plan(FYEDP)	3rd & 4th FYEDP: Heavy Chemical Industrialization & Take-Off for High Growth	5th & 6th F FYEDP: Stabilization & Open Economy Policy	7th or New Economy Plan. Average Growth, Low Unemployment & Economic Crisis in 1997	Global Economy & Slow Economic Growth
Stage of Skills Development System	Introduction of Skills Development System (1967)	Enterprise Training System Take- Off Period	Public Training Institutes Expansion Period	Transition Period & Reorganization under EIS	Innovation Period with surveys and evaluations
Demand for Skilled Workforce and Responding Skills Development Strategy	For transition from an agricultural to industrial economy → Supply of skilled workers manly through formal education system; non- formal skills development system introduced with subsidies for enterprise training.	Shortage of skilled workforce in heavy-chemical industries→ unlimited supply of unskilled workforce migrating from rural areas; technical high schools and public training centers established; obligatory enterprise training system with a training	Economic Stabilization Policies and declining demand for skilled & technical manpower → Establishment of HRD Service & expansion of public training centers for skilled and master craftsmen.	Increasing demand for upgrade training for incumbents & mass training provision for the unemployed → The levy system for the obligatory enterprise training system converted into levy-grant (rebate) system under EI; mass training of unemployed as a safety net	Flexible labor market & lifelong skills development for both incumbents, the unemployed, and other vulnerable workers
Related Laws	1967: Vocational Training Act	1974: Voc. Trg. Special Measure Act; 1976: Basic	1976: Basic Vocational Training Act	1995: EI Act	1995: EI Act
Market Failure and Government Intervention	Market failure of skills supply (frequent scouting and poaching)	Relief of market failure by government-led regulatory policy	Employers avoiding enterprise training & appearance of government failure	Government intervention changed to incentives (levy-grant system) and to public training for vulnerable groups	Correcting gov't failure by strengthening incentive system for SME training and public training for vulnerable groups

II. Skills Development for Economic Growth

2.1.1 Division of the Role of the Government and the Private Sector

- It is evident that the **government-driven skills development** policy **supported the economic development** policy in Korea.
- Skilled workers were **trained and supplied in accordance** with the **demand of the advancing industrialization** – from **light to heavy** and again to advanced industry.
- As shown in Table 2, about **2.5 million workers** were trained and supplied during the **30-year industrialization** period: 1967-1996.
- This technically qualified workforce became the **basis for high growth**.

Table 2. Number of Skilled Workers Trained during Second to Seventh Five-Year Economic Development Plans (Person, Percent)

	<i>Total</i>	<i>2nd Plan</i>	<i>3rd Plan</i>	<i>4th Plan</i>	<i>5th Plan</i>	<i>6th Plan</i>	<i>7th Plan</i>
<i>Type</i>	<i>1967-96</i>	<i>1967-71</i>	<i>1972-76</i>	<i>1977-81</i>	<i>1982-86</i>	<i>1987-91</i>	<i>1992-96</i>
<i>Total</i>	2,501,588 (100.0)	98,863 (100.0)	312,736 (100.0)	495,739 (100.0)	273,151 (100.0)	313,275 (100.0)	1,006,822 (100.0)
<i>Public Training</i>	623,736 (24.9)	36,317 (36.7)	81,294 (26.0)	120,117 (24.2)	121,044 (44.3)	113,802 (36.3)	151,160 (15.0)
<i>In-Plant Training</i>	1,502,479 (60.0)	47,225 (48.8)	177,350 (56.7)	337,388 (68.1)	114,773 (42.0)	116,389 (37.0)	708,354 (70.3)
<i>Recognized Training</i>	375,373 (15.0)	14,321 (14.5)	54,092 (17.3)	38,234 (7.7)	37,334 (13.7)	83,034 (26.5)	148,309 (14.7)

Source: Ministry of Labor of Korea, Yearly.

II. Skills Development for Economic Growth

2.1.1 Division of the Role of the Government and the Private Sector

- Over the years, **the management of the training** programs and their funding schemes has **evolved**.
- At the outset of the industrialization in the 1960s and 1970s, the **government played the dominant role** in the planning, financing and regulation of skills development.
- However, the main responsibility for providing training services was **delegated to the private sector**.
- In the provision of training, the government encouraged **large enterprises to play a key role** by providing **subsidies** and **other inducements** to employers (1967).
- Consequently, **private sector's share** of training provision was much **greater than the public provision** (Table 2).
- As the government realized that the training subsidies for enterprises could not be continuously expanded **due to fiscal constraints**, the government started **imposing compulsory training obligations** on enterprises (1974).

II. Skills Development for Economic Growth

2.1.1 Division of the Role of the Government and the Private Sector

- At the beginning of the 1980s, the **international recession slowed the pace of Korean export growth**, and consequently the **domestic demand** for **skilled workers contracted**.
- **Enterprises** sharply **reduced their training activities**; however, **the public training** institutions **maintained** the high level of their training activities.
- The government believed that training and productivity improvement would require a **long gestation period**, and **the same level** of training activities should **continue**.
- Consequently, when the economic cycle turned to **prosperity** in early 1990s, the **sharply increasing demand** for a skilled workforce **could be met without much difficulty**.

II. Skills Development for Economic Growth

2.1.2 Complementarities between Vocational Education and Vocational Training

- Skilled workers are generally supplied through **both formal pre-employment vocational education** and **non-formal, targeted vocational training programs**.
- **Pre-employment vocational education** contributes to a skilled workforce through **long-term formal education**, and targeted **vocational training programs** focus on **short-term training** of new recruits and incumbent workers.
- Many countries implement targeted vocational training programs to meet a variety of skills demands while retaining a formal vocational education system (Suh, 2002).

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2.1.2 Complementarities between Vocational Education and Vocational Training

- In the case of Korea, formal vocational education and non-formal vocational training **were developed and implemented complementarily** so as to **adequately supply the human resources** needed for industrialization.
- The **complementary implementation** of the two tracks has been beneficial in ensuring skilled manpower in **a timely manner**.
- The successful development of the formal vocational education and non-formal vocational training owes to several factors.
 - First, there was ever **increasing demand for a skilled** and **technical workforce**.

II. Skills Development for Economic Growth

2.1.2 Complementarities between Vocational Education and Vocational Training

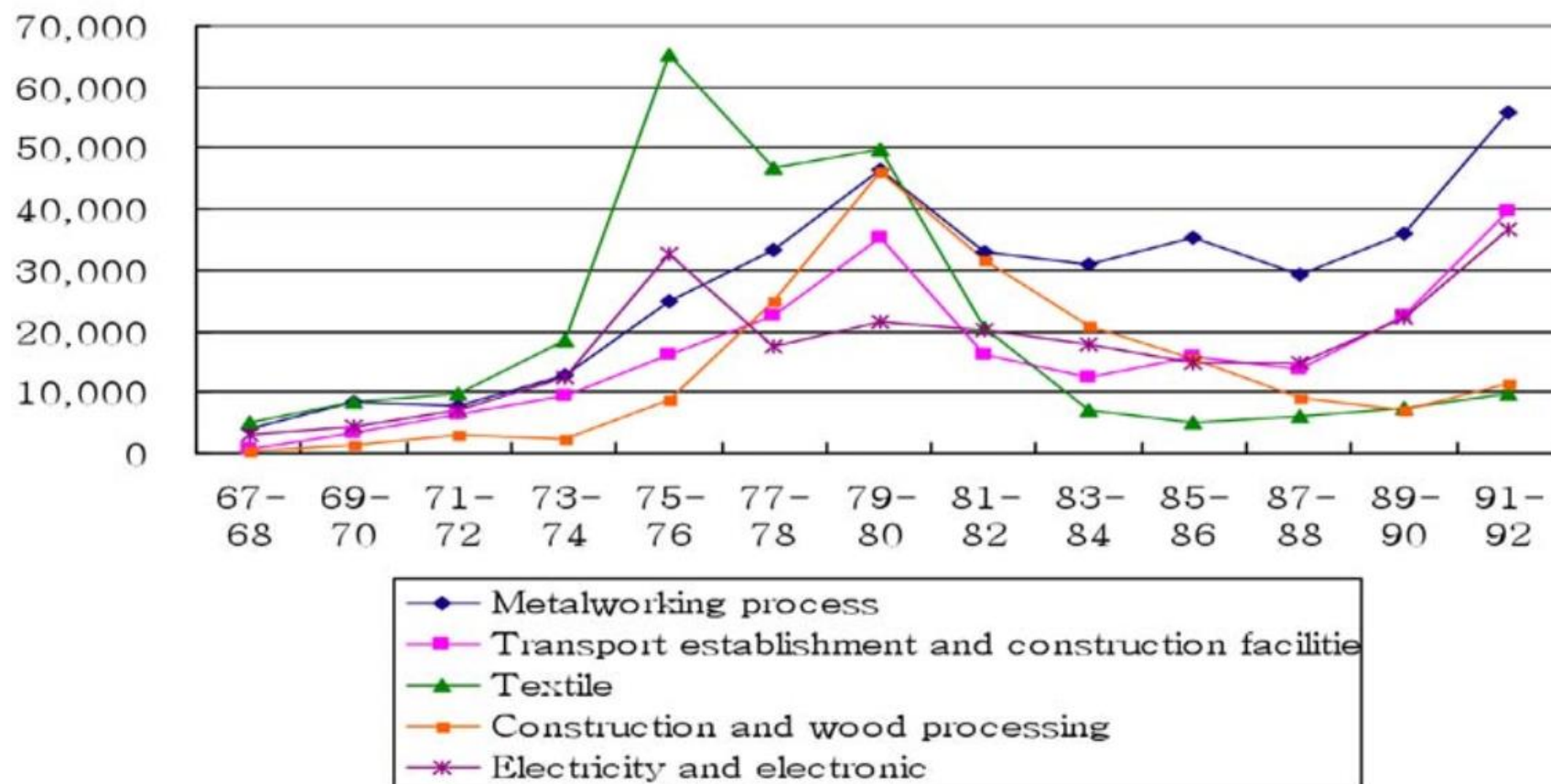
- Second, **non-formal vocational** training targeted initially out of school youth who **dropped out of high schools** or **high school graduates** who did not proceed with higher education and therefore **did not compete with formal vocational** education for clients.
- Third, the quality of both formal and non-formal vocational education and training was high because the **universal primary education** had **already been attained in the 1950s**, and **universal secondary education** had been attained by **1980s**.
- For those less developed countries with a **low educational attainment** and a **weak industrial base**, an emphasis should be placed on **basic education rather than early vocational** education and training.
- **Once basic education is well established**, a vocational education and training system **would be more effective and efficient** in supplying a skilled workforce.

II. Skills Development for Economic Growth

2.1.3 Adaptation of Training Fields to Meet Industrial Demand

- **Public training institutes** targeted those **occupations commonly demanded by all industries**, while **enterprise-based training** was encouraged to focus on **specialized occupations**.
- In this way, training occupations have been **adjusted to meet** the changes in **industrial demand over time**.
- Figure 1 shows the change in the number of trained persons per training field from 1967/1968 to the early 1990s.
- It also indicates the number of participants by year in the five training fields (within a **total of 13 fields**) with the largest number of trainees: **metal processing**; **transport equipment**, and **construction installation**; textiles; construction and wood processing; and, electricity and electronics.

Figure 1. Number of Trainees by Major Occupational Training Field (1967-1992)



Source: Ministry of Labor of Korea, Yearly.

Table 3. Employment Trend by Industry, 1953-1963 (1,000 Persons)

	<u>Employment by Industry</u>				<u>Composition Rate (%)</u>		
<u>Year</u>	<u>Total</u>	<u>Primary</u>	<u>Secondary</u>	<u>Tertiary</u>	<u>Primary</u>	<u>Secondary</u>	<u>Tertiary</u>
1953	6,536	4,928(-)	321(-)	1,287(-)	75.40	4.91	19.69
1954	6,550	4,865(-1.3)	353(+10.0)	1,332(+3.5)	74.27	5.39	20.34
1955	6,578	4,811(-1.1)	386(+9.3)	1,381(+3.7)	73.14	5.87	20.99
1956	6,628	4,767(-1.0)	424(+9.8)	1,437(+4.1)	71.92	6.40	21.68
1957	6,700	4,736(-0.7)	466(+9.9)	1,498(+4.2)	70.69	6.96	22.35
1958	6,798	4,716(-0.5)	515(+10.5)	1,567(+4.6)	69.37	7.57	23.06
1959	6,923	4,710(-0.2)	569(+10.5)	1,644(+4.9)	68.03	8.22	23.75
1960	7,082	4,720(+0.2)	629(+10.5)	1,733(+5.4)	66.65	8.88	24.47
1961	7,269	4,744(+0.5)	695(+10.5)	1,830(+5.6)	65.26	9.56	25.18
1962	7,500	4,789(+0.9)	771(+10.9)	1,940(+6.0)	63.85	10.28	25.87
1963	7,779	4,856(+1.4)	855(+10.9)	2,068(+6.6)	62.42	10.99	26.59

Note: () is growth rate year-on-year, + is increase, - is decrease.

Source: Kim and Seo, 1987.

Table 4. Technical Manpower Requirements during First Five-Year Economic Development

Plan (1,000 Persons, Percent)

	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>
<i>Engineer</i>	8,616	10,994	12,814	15,032	17,055	19,411
<i>Technician</i>	11,128	55,509	66,129	78,266	87,739	97,059
<i>Craftsman</i>	279,670	282,933	339,131	402,334	444,974	485,293
<i>Total</i>	299,414	349,436	418,164	495,632	549,758	601,763

Source: Suh, 2002.

Table 5. Employment Trend by Economic Activity, 1963-1972 (1,000 Persons, Percent)

Year	Older than 15 Years					Labor Force Participa- tion Rate	Employ- ment Rate	Unemploy- ment Rate
	Total	Economically Active Population			Economically Non-Active Population			
		Total	Employed	Unemployed				
1963	14,551	8,230	7,563	667	6,321	56.6	91.9	8.1
1964	14,967	8,341	7,698	643	6,627	55.7	92.3	7.7
1965	15,367	8,754	8,112	642	6,613	57.0	92.7	7.3
1966	15,753	8,957	8,325	632	6,796	56.9	92.9	7.1
1967	16,121	9,180	8,624	556	6,941	56.9	93.9	6.1
1968	16,456	9,541	9,061	480	6,915	58.0	95.0	5.0
1969	16,852	9,747	9,285	462	7,105	57.8	95.3	4.7
1970	17,468	10,062	9,617	445	7,407	57.6	95.6	4.4
1971	18,118	10,407	9,946	461	7,711	57.4	95.6	4.4
1972	18,819	10,865	10,379	486	7,954	57.7	95.5	4.5

Source: Korea National Statistical Office, Yearly.

Table 6. Employment Trend by Industry, 1972-1979 (1,000 Persons, Percent)

Year	Total	Agri/Forestry/ Fishing (Primary)	Mining And Manufacturing (Secondary)	SOC Other Services (Tertiary)	Annual Increase Rate			
					Total	Primary	Secondary	Tertiary
1972	10,382	5,238(50.5)	1,468(14.1)	3,674(35.4)	4.4	9.2	3.9	-1.7
1973	10,942	5,445(49.8)	1,779(16.2)	3,719(34.0)	5.4	4.0	21.2	1.2
1974	11,421	5,481(48.0)	2,027(17.7)	3,914(34.3)	4.4	0.7	13.9	5.2
1975	11,692	5,339(45.7)	2,235(19.1)	4,118(35.2)	2.4	2.6	10.3	5.2
1976	12,412	5,514(44.4)	2,708(21.8)	4,191(33.8)	6.2	3.3	21.2	1.8
1977	12,812	5,342(41.7)	2,866(22.4)	4,604(35.9)	3.2	3.1	5.8	9.9
1978	13,412	5,154(38.4)	3,092(23.1)	5,167(38.5)	4.7	3.5	7.9	12.2
1979	13,602	4,866(35.8)	3,209(23.6)	5,527(40.6)	1.4	5.6	3.8	7.0

Note: () is component ratio.

Source: Korea National Statistical Office, Yearly.

Table 13. Unemployment Trends by Industry: 1997 and 1998

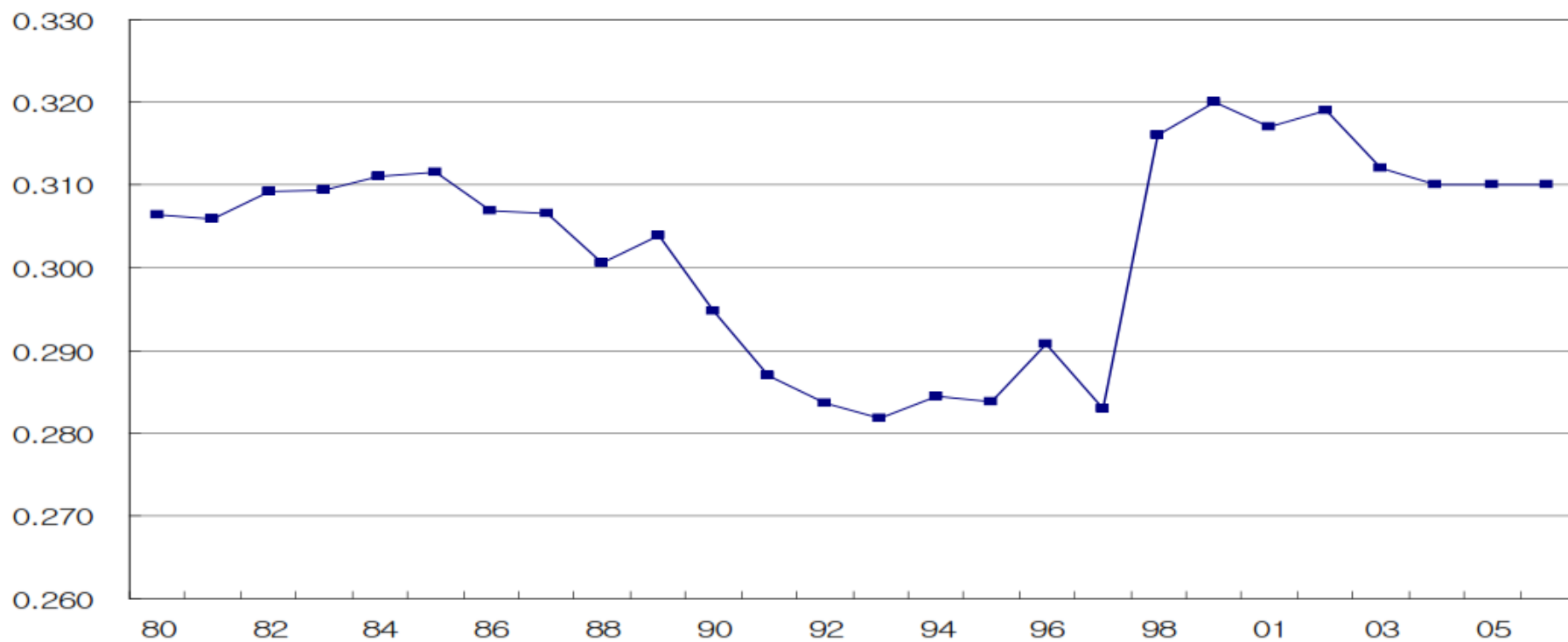
(1,000 Persons, Percent)

	<u>1997</u>			<u>1998</u>			<i>Increase/ Decrease <u>R</u> ate</i>
	<u>Size</u>		<u>Percent</u>	<u>Size</u>		<u>Percent</u>	
<i>Total</i>	319	(1.5)	100.0	1,193	(5.6)	100.0	273.9
<i>Agr./forestry/fishing</i>	4	(0.2)	1.3	17	(0.7)	1.4	315.2
<i>Mining</i>	81	(1.8)	25.4	279	(6.7)	23.4	244.4
<i>Manufacturing</i>	80	(1.8)	25.1	278	(6.7)	23.3	247.0
<i>Service</i>	235	(1.6)	73.7	897	(6.2)	75.2	281.7
<i>Construction</i>	50	(2.4)	15.7	299	(15.9)	25.1	498.4
<i>Wholesale/retail</i>	110	(1.9)	34.5	346	(5.9)	29.0	214.4
<i>Other service</i>	75	(1.2)	23.5	252	(3.8)	21.1	236.0

Note: Figures in parenthesis represent the unemployment rate.

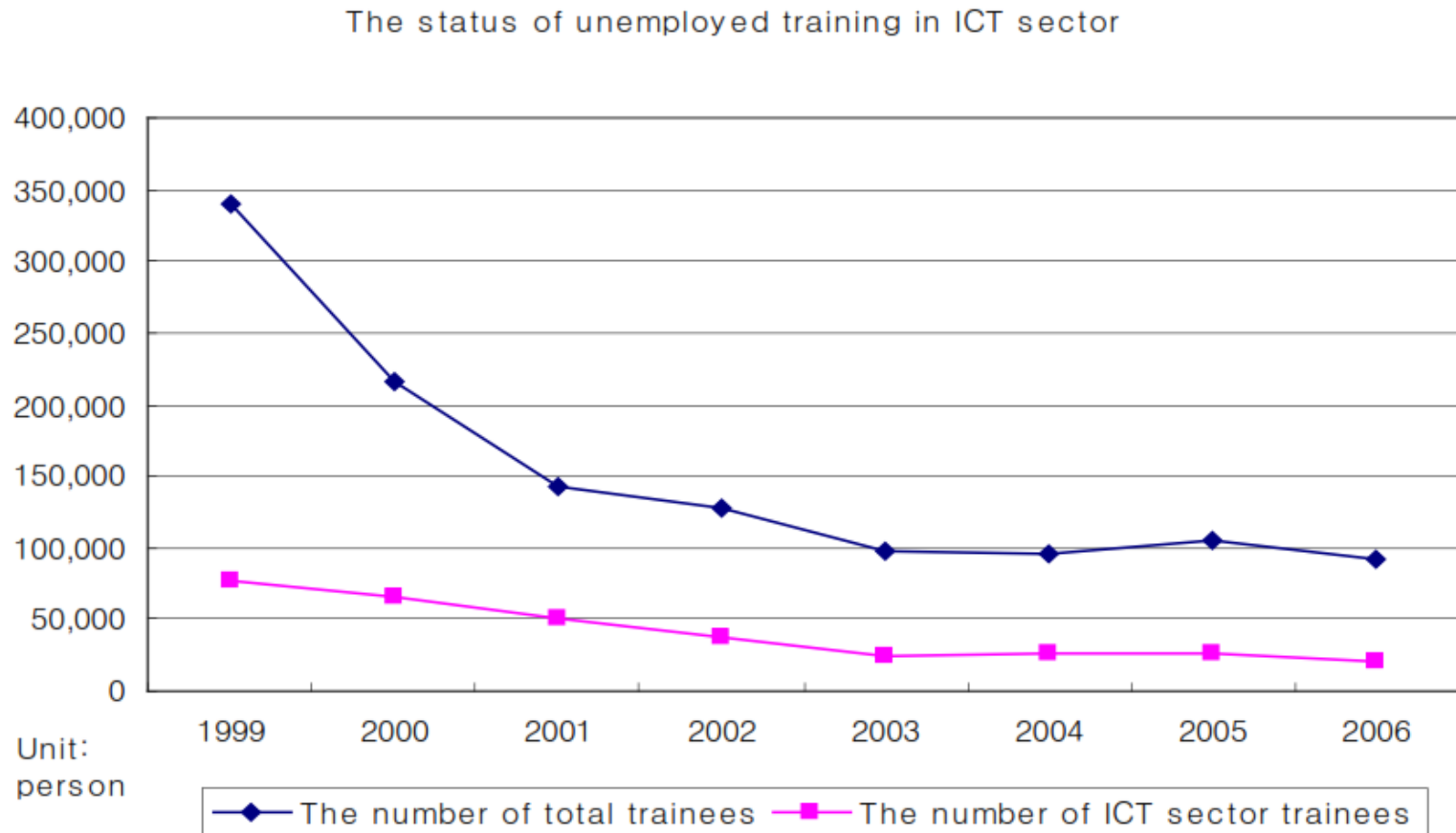
Source: Korea National Statistical Office, 1998.

Figure 3. Trend of Gini Coefficient in Korea (1980-2006)



Source: Korea National Statistical Office, Yearly.

Figure 4. Number of Trainees in IT Training Fields: 1999-2006



Source: Ministry of Labor of Korea, Yearly.

Source: Young-Sun Ra & Kyung Woo Shim (2009)

II. Skills Development for Economic Growth

2.1.4 Appropriate Financing Mechanisms

- The strategy for securing **appropriate financial resources** to support skills development has **varied over time**, depending on the **stage of economic development**.
- When the vocational training policy was **first introduced**, the government adopted a **training subsidy policy** for the **largest 16 companies** (1967).
- The objective of the subsidy policy was to instill the training culture among enterprises on the premise that **training is a public good**.
- Although the subsidy did help the establishment of the in-plant training system among large-scale companies, it **could not be spread to other enterprises** without the increase in the total amount of subsidy, and its sustainability was limited by **the constraint in government budgets**.

II. Skills Development for Economic Growth

2.1.4 Appropriate Financing Mechanisms

- The government initially **mandated** that **enterprises of a certain scale** (e.g. on the basis of the number of employees) in key industries invest in their workforce (up to 10%) through **in-house vocational training** (1974).
- Later, the government gave all large scale enterprises an option to choose **either provision of in-plant training** or the **payment of a training levy** (1976).
- The standard for **the training obligation was changed** from the number of workers to the amount of training expenses as a **percentage of total wage bill** (1987), and **varied types of training was recognized** (1991).

II. Skills Development for Economic Growth

2.1.4 Appropriate Financing Mechanisms

- The **training levy system** was effective in **mobilizing funds** for public vocational training.
- The government **used the training levies** to **build up** the **Vocational Training Promotion Fund** (1976 Act).
- The fund financed establishment of **numerous public training institutions** and the **Vocational Training Management Corporation** that managed them (1981).
- Since 1995, the training expenses have been **reimbursed from the training fund** established with the training levy collected from all enterprises under the **Employment Insurance (EI) System**.

II. Skills Development for Economic Growth

2.1.4 Appropriate Financing Mechanisms

- This **levy-grant (rebate) system** has served as a **financial incentive for enterprises to invest in training** of their workers either **in-plant** or at **training institutions outside**.
- Moreover, the EI fund has reimbursed for **small and medium-sized enterprises (SMEs)** with an amount which is much **greater than the actual training expenses**.
- For certain projects, while **credits and loans** were obtained from the **World Bank** (1975, 1977) and the **Asian Development Bank** (1972), **technical assistance** was received from the **ILO and UNDP**, as well as advanced countries such as **Germany** and **Belgium** as a grant.
- In the end, foreign financial assistance helped establish **25 training institutes**, which contributed to **supplying the skilled workforce** for the industrialization of Korea.

II. Skills Development for Economic Growth

2.1.5 National Qualifications System

- The qualifications system plays the role of **a signal in the labor market**, certifying the skills and capabilities required by industry.
- Korea developed a **qualifications system together with the vocational training system** during its industrialization period.
- At first, the qualifications system was designed to increase the **credibility of the training programs** among employers and the general public, as supported by the **Vocational Training Act of 1967**.
- **A skills certification** clause of the Act established standards by which the government could certify the level of a worker's skills.
- Furthermore, the Act separated testing into **two categories**: the Minister of Labor oversaw the **written test**, and a commissioned organization carried out the **practical test**.

II. Skills Development for Economic Growth

2.1.5 National Qualifications System

- The *National Technical Qualifications Act* was enacted in 1973 to merge various certification regimes operated by the individual ministries and agencies and to **introduce an officially unified certification processes**.
- At the time of enactment, the **Ministry of Science and Technology** managed the **national qualifications scheme** with an emphasis on the qualifications for the **heavy chemical industry**.
- In 1981, the managing ministry was **shifted to** the **Ministry of Labor**, expanding qualifications beyond those relevant to heavy chemicals.

II. Skills Development for Economic Growth

2.1.5 National Qualifications System

- The national qualifications system also contributed to **laying the foundations of human resource development** to effectively support industrialization, by performing a **feedback function** on whether vocational training programs are conducted in such a way that the **demands of industry can be met**.
- As time goes, **cooperation between the public and private sectors** became **more important** in managing the qualifications system.
- The private sector has been increasingly asked to assume a larger part of the management of the national qualifications system.
- The number of **private qualifications** is currently **over 800**, as compared to the **586 government technical qualifications**.