
6. Heavy and Chemical Industry Promotion Policy in the 1970s



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1 INTRODUCTION

HCI promotion policies

- Korea's successful industrial development is based on the promotion of heavy and chemical industries in 1960s and 1970s
- Providing incentives
- Protecting them from foreign competition
- Implementing other supportive policies



- Lessons from the Korean policy experience by evaluating the costs and benefits of the HCI promotion policies

2 Industrial Policy in the 1960s

Policy change

- In 1950s, easy import substitution policy aimed at producing non-durable consumer-goods
- The manufacturing sector grew rapidly, 11% per year (1953~1960)
 - weakness of industry base
- Domestic market-oriented
- High dependence on foreign aid for growth and stability

**Major development policy
change by President
Park Chung Hee in 1961**



- First five year development plan (1962~1966)
 - Import substitution → export promotion
- Second five year development plan (1967~1971)
 - Encourage investment in heavy industries

2 Industrial Policy in the 1960s

Policy change

Supported Industry	“Catch up consciousness”
Automobile Industry	<ul style="list-style-type: none">- The Automobile Industry Protection Law(1962)- The five-year automobile development plan
Machinery Industry	<ul style="list-style-type: none">-The Machinery promotion law (March 1967)- A long-term plan for the machinery industry (1967)
Chemical Industry	<ul style="list-style-type: none">-The production of nitrogenous fertilizers expanded in the 1960s- Real push for the petrochemical industry (The early 1970s)
Steel Industry	<ul style="list-style-type: none">- Building a 300,000 ton steel plant- Trial to get financial assistance from the World Bank
Shipbuilding Industry	<ul style="list-style-type: none">-The shipbuilding Promotion Law (1967)- Various incentives such as special loans
Electronics Industry	<ul style="list-style-type: none">- A law was enacted in 1969 to provide incentives- The government induced foreign capital into the electronics industry

3 HCI Policy in the 1970s

Overall HIC policy

Rising protectionism

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**The increased tension
between North and
South Korea**



✓ **Self-reliance**

✓ **Self-defense**

**The amendment to the
constitution in 1972**

**Improvement of the
structure of exports**

The security concern

- **Third five-year plan**
- **Official declaration of HCI promotion in 1973**

3 HCI Policy in the 1970s

Important investment projects

	plans
1 st	The capacity of the Pohang iron and steel plant was to be increased from 1.03 million to 7 million MTs by 1979
2 nd	A copper, a zinc, a lead, and an aluminum refinery were to be constructed during 1974~1978
3 rd	The Changwon machinery industry complex was to be constructed during 1973~1976 and 80 different machinery and material factories constructed during 1974~1980
4 th	Construction of nine shipyards were to be completed by 1981 and an additional five shipyards by 1985
5 th	The Gumi electronics complex was to be completed by 1973 and expanded further during 1977~1981
6 th	The Ulsan petrochemical complex was to be enlarged and construction of the Ryeocheon chemical complex completed by 1979
7 th	Fertilized plant was to be constructed during 1974

3 HCI Policy in the 1970s

Policy Measures

- Industrial and Trade policy Measures
 - Tax incentives were provided to the HCI sector in 1974
- The 1973 tariff reform
 - Tariff rates on heavy and chemical products and intermediate goods were raised

- Financial and Fiscal policy Measures
 - The National Investment Fund(NIF)
 - The government directly invested a large amount in infrastructure in the form of building industrial complexes
 - Direct investment in key industries such as steel and fertilizer plants

3 HCI Policy in the 1970s

Policy Measures

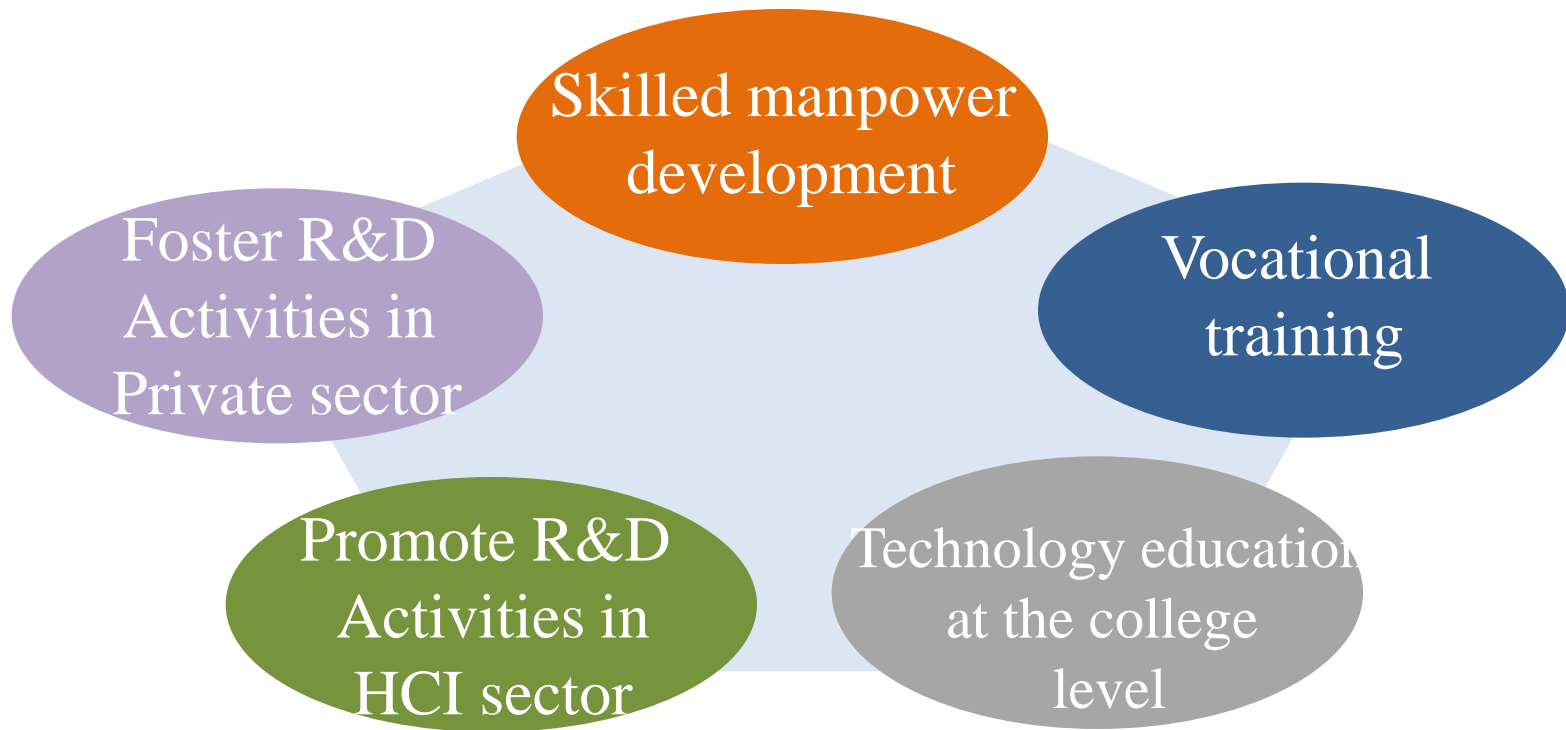
Government Expenditures for the Heavy & Chemical Industry (Billion Won, %)

Year	Total Gov't Budget (A)	Gov't Exp. for Economic Services (B)	Total Gov't Exp. for HCI (C)	Industrial Complex	Government Subscriptions	Compensation for Interest Rate Differences	Others	C/A (%)	C/A (%)
1970	599.6	150.9	16.1	6.0	8.1	2.0	..	2.7	10.6
1971	735.8	180.3	23.3	4.0	16.7	2.6	..	3.2	12.9
1972	966.4	195.0	78.3	3.4	72.1	2.8	..	8.1	40.1
1973	960.2	145.6	13.4	3.5	8.4	1.4	0.1	1.4	9.2
1974	1,428.3	211.9	38.1	20.7	12.2	4.8	0.5	2.7	18.0
1975	2,123.6	490.3	77.1	26.5	40.5	9.9	0.2	3.6	18.8
1976	2,895.2	535.6	66.9	36.8	17.0	12.8	0.2	2.3	12.5
1977	3,717.8	623.4	89.3	41.6	25.0	22.4	0.3	2.4	14.3
1978	4,755.3	725.1	137.2	47.7	63.8	25.1	0.5	2.9	18.9
1979	6,466.5	1,405.4	93.6	44.3	-	48.6	0.7	1.4	6.7
1980	8,814.2	1,338.8	229.4	52.2	138.6	36.3	2.4	2.6	17.1
Total	33,462.9	5,912.3	862.7	286.7	402.4	168.7	5.0	2.6	14.6

3 HCI Policy in the 1970s

Policy Measures

- Technology and Manpower Policy Measures



3 HCI Policy in the 1970s

Policy Measures

Number of Recipients of Vocational Training by Type of Training Institute

	1967~1971	1972~1976	1977~1981
Technical High School	71,749	134,718	257,152
Public Vocational Training	36,317	81,294	120,117
Private Vocational Training	62,546	231,442	375,622
(In-Plant Training)	(48,225)	(177,350)	(337,388)
Total	170,612	447,454	752,891

Facility Investment in Manufacturing Sector

	(Billion Won, %)			
	All Industries	Manufacturing (A)	HCI (B)	Facility Investment in HCI(%) (B/A)
1973-74	1,054	707	434	61.4
1975	1,098	621	481	77.5
1976	1,279	838	622	74.2
1977	2,026	1,380	1,040	75.4
1978	3,125	2,148	1,719	80.0
1979	3,734	2,469	1,870	75.7
Average				75.5

4 Performance of HCI Policy

Performance

Results

- Rapid growth of HCI
- Rapid structural change in manufacturing sector toward heavy industries
- Despite higher output growth most heavy industries revealed lower TFP growth
- The growth of large-scale firms
- Persistent inflationary pressure

Negative side effects

- Persistent inflationary pressure
- Heavy industries with lower productivity growth
- Structural imbalances within the manufacturing sector

5 Structural Adjustment in HCI Sector in the 1980s

Adjustment efforts

- 1979 oil shock
- The death of President Park
- A sharp recession during 1980~1982



**Structural adjustment
program**

- *'Stick and carrot policy'*
 - Giving strong pressure through import liberalization
 - Offering various incentives for industrial innovation
- The HCI sector began to regain its growth momentum after 1983

5 Structural Adjustment in HCI Sector in the 1980s

Adjustment efforts

Growth Rates of Output, Investment, Employment, and Exports in Manufacturing Sector, 1980~1988

(%)

Indicators	1980	1982	1984	1986	1988	Average 1986~88
Output	-0.7	6.7	17.3	18.4	13.0	16.5
HCI	-2.9	8.9	20.4	20.9	17.0	20.2
Others	1.4	4.4	13.6	15.0	7.1	11.4
Full-time Employment	-3.6	3.5	3.4	3.6	0.7	3.4
HCI	-4.5	6.0	6.4	5.9	3.1	5.7
Others	-2.7	1.1	0.2	1.0	-2.3	0.7
Exports (current)	17.6	3.7	20.2	15.1	30.1	27.0
HCI	25.2	14.6	24.1	5.5	36.8	25.7
Others	11.7	-6.1	15.1	29.3	21.9	38.9
Fixed Investment	-28.7	3.7	37.1	25.1	14.0	25.3
HCI	-20.1	2.2	49.6	43.9	12.1	27.6
Others	-43.0	6.4	17.9	-13.5	18.9	20.3

6 Performance of Major Heavy Industries

Development of major strategic heavy industries

Industry	Output
Automobile Industry	<ul style="list-style-type: none">-Reorganize the production system-The production capacity expanded significantly
Chemical Industry	<ul style="list-style-type: none">-The Ulsan Petrochemical Complex was set up in 1972-The Petrochemical Promotion Act (1986)-Rapid growth since the mid~1980s
Steel Industry	<ul style="list-style-type: none">- Reflecting the rapid expansion of overall economic activities in the 1970s
Shipbuilding Industry	<ul style="list-style-type: none">-The long-term Shipbuilding Industry Promotion Act (1973)-SIPA called for the expansion of shipbuilding construction
Electronics Industry	<ul style="list-style-type: none">- Major structural change in the 1970s and 1980s- Rapid growth was largely led by four big companies such as Samsung, LG, Hyundai, and Daewoo

7 Concluding Remarks

Conclusion

- The HCI promotion policy in the 1970s had both positive and negative effects
- Positive effect: the shift of the structure of industrial production and exports toward capital- and technology- intensive industries
- Negative effect: the excessive government intervention in the economy generated strong inflationary pressures while leading to the misallocation of resources



Direct support

Indirect support

- **Human resource**
- **Technology development**



Q&A