OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as "developed", "industrialized" and "developing" are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

22478

Asia-Pacific Regional Forum on Industry
Bangkok, Thailand, 23-24 September 1999

The Asian Crisis and Implications for Industrial Policies

Sung-Hee Jwa

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TABLE OF CONTENTS

I. Introduction ... 1

II. Economic Restructuring and Impact on Industries ... 1

Economic Restructuring ... 1
Impact on Industries ... 2
Constraints on Recovery ... 5

III. Industries and Industrial Policies ... 7

Overview of the Debate on the Role of Government in Economic Growth ... 7
Pre-Crisis Industrial Policies in East Asian Countries ... 8
Korea's Experience ... 11
An Example of Industrial Policy Lifecycle : Samsung Motor Company ... 23

IV. New Industrial Policy in the Changing Environment ... 25

Changes in the Economic Environment ... 25
New Industrial Policies ... 26

References ... 29

I. Introduction

The financial crisis that started with the devaluation of the Thai baht in July of 1997 severely hit East Asian countries, especially Thailand, Indonesia, South Korea, and Malaysia. As a response to the crisis, governments in these countries implemented emergency measures to bail out their economies, and since then they have been going through drastic economic restructuring programs, never seen before in Asia. Recently, major economic indicators in these countries have been showing signs of recovery, especially in Korea. However, it is too early to conclude that these countries are on the recovery path.

The economic environment is rapidly changing, domestically and internationally. Throughout the crisis, the East Asian countries have increased the standards and legal framework of their economy to global levels. After the crisis, they almost completely opened their economy to the world. In addition, the world economy has been rapidly globalizing, which implies unlimited competition and increasing uncertainty about the economic environment. At this point, past policies should be reevaluated to help us adopt appropriate policies in the future. In this paper, we look back and evaluate the past industrial policies of East Asian countries and then attempt to propose an appropriate framework for industrial policies in the new environment.

The rest of the paper is organized as follows: Chapter II presents the restructuring processes and the impact of the crisis on the industrial sector. The industrial policies that have been adopted by some of East Asian countries will be discussed in Chapter III. We will compare the industrial policies of each country and take a close look at Korea's experience. An evaluation of their industrial policies will be presented at the end of each section. We consider interventionist industrial policies to be one of main causes of the crisis. In particular, section 3 presents a specific case of industrial policy lifecycle. This case will show how an interventionist industrial policy was implemented and how it has affected the economy. Chapter III presents the economic environment that the East Asian countries will confront and proposes a framework for new industrial policies.

II. Economic Restructuring and Impact on Industries

1. Economic Restructuring

East Asian countries undertook a comprehensive economic restructuring program to survive the crisis. Their responses to the crisis have two parts: the restructuring plan and its implementation. Most countries introduced unprecedented economic plans calling for financial and corporate restructuring. Since those plans were made under the supervision of the IMF, the restructuring processes have common features. First, in the field of financial restructuring two government agencies were established – one for discriminating between viable and non-viable financial institutions and the other for handling NPLs. Second, one or two agencies were set up to deal with corporate debt restructuring (see < Table 1 >) and bankruptcy-related laws were revised.

< Table 1 > Newly Established Institutions for Restructuring

	Financial Restructuring	Corporate Restructuring
Thailand	Financial Restructuring Agency (FRA) Asset Management Corp. (AMU)	State Enterprise Policy Committee
Indonesia	Indonesian Bank Restructuring Agency (IBRA) Asset Management Unit (AMU)	Indonesia Restructuring Agency (INDRA) Indonesia Private Sector Debt Settlement Team
Korea	Financial Supervisory Commission (FSC) Korean Asset Management Company (KAMCO) Korea Deposit Insurance Company (KDIC)	Financial Supervisory Commission Emergency Economic Planning Committee
Malaysia	Danaharta (asset management company) Danamodal (recapitalization agency)	Corporate Debt Restructuring Committee

Source: Kim(1999)

In order to implement the plans, the government has supported restructuring with huge amounts of public money.

In the financial sector, restructuring has typically included closures and/or takeovers of insolvent financial institutions, the transfer of non-performing assets to a central agency, and the recapitalization of the remaining financial institutions. These procedures have been carried out by the newly established government agencies mentioned above. Along with restructuring, most countries strengthened their prudential standards in the financial sector and their legal framework: loan classification, minimum capital-adequacy ratios, and regulations to supervise financial activities. <Table 2> shows the financial restructuring process in these countries. Malaysia took a different approach from the other countries. Before the crisis, Malaysia 's banking sector was relatively sounder than that of other countries. The risk-weighted capital adequacy ratio of commercial banks was 10.8% at the end of 1996. However, as the crisis unfolded along with a recession, NPLs rose from 8% of total loans at the end of 1997 to 13.6% at the end of 1998 (measured using a three-month classification standard). As a result, the overall capital adequacy ratio at the end of 1998 had fallen to 8.7%. Between Oct. 1997 and March 1998, the authorities tightened regulations regarding loan classification and capital adequacy ratios for banks and financial firms. However, these regulations were subsequently relaxed in Sep. 1998 to reduce the credit crunch that was believed to be caused by the new regulations[1]. The policy switch from tightening to relaxation probably contributed to the sluggish restructuring pace[2].

In the area of corporate sector restructuring , Indonesia, Korea, Malaysia and Thailand all revised their bankruptcy-related laws and processes to expedite the bankruptcy and reorganization process. However, for some countries (especially Malaysia), those revisions looked suspicious, implemented so as to resuscitate non-viable firms. In addition, these countries privatized state corporations by selling shares to foreign investors in order to finance the cost of restructuring. For example, Indonesia expects to bring in US$ 1.5 billion in government revenues through the privatization of public enterprises by 2000[3]. Corporate restructuring plans are presented in <Table 3>.

In general, restructuring so far has been going in the right direction. Results, however, are far from what was expected.

2. Impact on Industries

The large amount of short-term debts denominated in foreign currencies in the private sector was difficult to roll over, leading to many bankruptcies. For example, in Korea nearly 9,500 corporate bankruptcies were reported in the first quarter of 1998[4].

The traditional export sectors benefited from the devalued currencies throughout the region. However, the advanced export sectors relying on imported parts and components suffered from the capital shortage in addition to the currency devaluation causing a rise in input costs[5]. High interest rates, inflation and income losses due to massive layoffs and salary cuts had a deep impact on industries dependent on domestic demand. In addition, small and medium enterprises supplying parts and components to larger firms that went bankrupt suffered severely.

Since detailed industrial statistics are not available, the World Bank survey data will be briefly reviewed in this section[6].

---

1 Shirazi(1999)

2 Kim(1999)

3 Kim(1999)

4 ESCAP(1998)

5 For example, Thai exports contain on average 60% imported components and raw materials.

6 The survey was conducted in Indonesia, Korea, Malaysia, the Philippines and Thailand between late 1998 and

<Table 2> Financial Sector Restructuring: Comparison

	Content
Thailand	Focused on financial firms and banks Financial firms (total number: 91) 56 were closed (by 1997) and 35 were induced to recapitalize themselves. Banks (total number: 15) Reduced to 11 through nationalization, closures and M&As Strengthening of standards Legal minimum for capital adequacy ratios: 8.5% for banks and 8% for financial firms (deadline of Jan. 15, 1999) Disclosure of NPLs after 6 months (3 months from 2000) Plans (announced on Aug. 1998) Privatize 4 nationalized banks Inject public capital into banks prepared to restructure themselves and their corporate debt and to start lending again set up a framework for private asset companies
Indonesia	Focused on banks Banks 61banks were closed and 7 banks were taken over by the government (by March 1999) 73 banks with capital asset ratios equal to or greater than 4% remain open 4 state banks were absorbed into a newly formed bank (Bank Mandri) Strengthening of standards Increased capital requirement for banks Tightened loan classification criteria Plan Government will issue bonds to provide up to 80% of the financing for the recapitalization of 9 banks (remaining 20% will be provided by the owners of the banks) Prospects Political uncertainty and political interference in IBRA decision-making impedes progress
Korea	Banks (total number 33) Banks with BIS ratios less than 8% were closed. As a result 8 banks were closed or merged Other financial institutions 16 out of 30 merchant banks were closed 3 out of 37 securities companies were closed Strengthening of standards Revision of loan classification criteria Banks are required to disclose connected lending information More conservative calculation of capital asset ratios
Malaysia	Strengthening and subsequently relaxing of standards 10/97 – 9/98: Tightened regulations on loan classification and capital adequacy ratios Tightened loan-loss provision standards to 3 month classification Raised capital adequacy ratio for financial firms 9/98: those regulations were relaxed Unsuccessful consolidation of 40 financial firms into eight Prospects Without firmer government stand on closures, Danamodal could end up bearing more of the burden of capitalization than shareholders
The Philippines	Strengthening of standards Set minimum capital adequacy ratio at 10% Set the limit of loan to a same entity at 25% of bank's own capital Banks are required to disclose NPLs Strengthened banking sector entry prerequisites Plan Privatization of Philippine National Bank Strengthening of prudential standards and operational discretion

Source: Kim(1999), Jwa and Yi (1999), Shirazi(1999)

---

early 1999. The sample includes 816 individual firms from Indonesia, 857 from Korea, 814 from Malaysia, 564 from the Philippines and 659 from Thailand. The industries covered are food, textiles and garments, electronics and electrical machinery, chemicals, and auto-parts. The survey results were presented in "the Asian Corporate Recovery Conference" organized by the World Bank between March 31 – April 2, 1999.

<Table 3> Corporate Sector Restructuring

	Content
Thailand	Law revisions bankruptcy laws: Incorporated reorganization process, enlarged the range of out-of-court workouts, set up special bankruptcy court foreclosure law: strengthened creditor's rights Private sector 67 firms have completed debt restructuring (by March 1999) 200 more firms are expected to complete debt restructuring by the end of 1999 Public sector Revised corporate laws to promote privatization Privatization of natural gas industry is in progress Private sector participation in Rachaburi Power Plant was approved Privatization of Airport Authority and private sector participation in water services are under consideration
Indonesia	Revision of bankruptcy laws Simplification of bankruptcy process Establishment of special bankruptcy court Private sector INDRA program for corporate debt restructuring Government relaxed the regulation on debt-equity swaps Public sector IMF and ADB reevaluated the expenditures and investments of the public sector by June 1998 3 public corporations were privatized in 1999/8/23 Government plans to privatize 150 public enterprises by March 2000
Korea	Revision of bankruptcy-related laws Establishment of management committee in reorganization process to alleviate the court's burden Government introduced out-of-court workout process Private sector Big-deals (large business swaps) for the big 5 chaebols Out-of-court Workout programs for others (83 firms under program as of June 1999) Public sector Government issued Depository Receipts (DR) for POSCO and KEPCO and listed the stocks of Korea Telecom Government plans to privatize 11 public enterprises including POSCO, KEPCO and Korea Heavy Industries and Construction Co.
Malaysia	Focused on reorganization Private sector 47 firms applied to CDRC for restructuring US$ 6.6 billion debt Government makes use of public corporations to support incompetent private corporations: government diverted the Employment Provident Fund of Petronas to support financially distressed private firms

Source: Kim(1999)

2.1 Capacity Utilization and Expectations

The crisis severely affected capacity utilization throughout the region. During 1996-1998, the decline in capacity utilization was more than 10% (except the Philippines). Indonesia experienced the most severe decline, 20.8%. Moreover, Indonesia's capacity utilization in the first half of 1998 is the lowest (59.2%). Korea, whose capacity utilization declined by 12.7% during 1996-1998, had the highest level, 72.1%, among the five countries in 1998.

Among industries, the auto-parts and electronics industries, which are the main exports of those countries, experienced the largest drops in capacity utilization during 1997-1998, 21.7% and 23%, respectively.

In Thailand, manufacturing accounts for 81% of export earnings. The excess production capacity in the manufacturing sector was over 50% in 1998. Production in the automobile industry fell by 56% in

1998. Import-intensive industries such as canned seafood and electronics had accounted for 30% of total manufacturing export earnings before the crisis. Since in those industries imported inputs account for more than 80% of total content, the currency devaluation raised production costs by about 35% and as a result they contracted sharply. Input costs have risen 25-30% for computers and parts, 15-17% for textiles, and 15% for footwear in 1997.

<Table 4> Capacity Utilization Levels

Country	1996	1998 (1st half)	1996-1998 (%)
Indonesia	80.0	59.2	20.8
Korea	84.8	72.2	12.7
Malaysia	81.9	66.3	15.6
Philippines	77.7	68.8	8.9
Thailand	79.4	61.8	17.6
Average	81.1	65.7	15.4

Source: Waiquamdee(1999)

In Indonesia, the automobile industry was the most severely hit by the crisis. The production index of motor vehicles declined by about 72% in 1998. In other industries, the production index in 1998 fell by 42.5% for footwear, 31.5% for radios and television sets, 39.5% for paper, and 39.4% for plastics. Exporters experienced a smaller decline in capacity utilization than non-exporters. For exporters, the smallest decline in capacity utilization occurred in the garment, textile, and food industries.

Expectations for capacity utilization over the next 6 months vary among countries. According to the World Bank Survey, more than 35% of Korean firms expect an improvement compared to only 16% for Indonesian firms. The figure for other countries ranges between 22% and 27% of firms.

2.2 Export Performance

An improvement in export performance was most common for Korean exporters. However, still a significant proportion of exporters reported that their performance had slipped during 1996-1998. A large proportion of Thai and Malaysian exporters reported a worsening performance for the period 1996-1998.

However, proportionately more exporters expected improved performances this year rather than worsening or stagnant ones: above 50% of Korean exporters expected an improvement this year. For Malaysian and Thai exporters, the figure is 39% and 37% respectively. Exchange rate effects and subsequent price competitiveness were the main factors leading to expectations of an improved performance, whereas poor demand and unstable conditions in export markets led to expectations of a worsening performance.

2.3 Expansion Plans

The number of expansion plans has been decreasing since the crisis. In 1997, 44% of firms reported that they considered expanding. This figure dropped to 15.4% in 1998. Most firms without expansion plans in 1997 still did not have any in 1998. Moreover, only half of the firms that had expansion plans in 1998 carried them through. However, the proportion of firms having expansion plans has increased from 15.4% in 1998 to 22.2% in 1999. 27.2% of Indonesian firms expect to expand in 1999, 18.9% in Korea, 23.6% in Malaysia, 25.9% in the Philippines and 15.5% in Thailand.

3. Constraints on Recovery

In late 1998 macroeconomic indicators started to show signs of stabilization and recovery in the East Asian economies. Real GDP and industrial production figures improved, notably in Korea. The local currency regained some strength in Korea and Thailand. Foreign investors' confidence has improved, and private capital inflows have resumed. The relaxed monetary policies adopted in these countries

have resulted in lower nominal interest rates(see <Table 5>). However, it would not be safe to conclude that these economies are on the sustainable recovery path. Particularly, there are no signs of improvement in the high unemployment rates, depressed demand, and still large size of NPLs.

In Korea and Thailand, recent GDP growth was mainly due to a decrease in inventory investment. During the crisis, large interest expenses, exchange rate depreciation, and the lack of cash flow must have forced the disposal of existing stock. After the crisis, inventory investment increased from –15% of GDP to almost 0% of GDP, which was the main factor behind the recent increase of the real GDP growth rate. In 1999, capacity utilization levels have risen rapidly and exchange rates have been stable. However, the composite Stock Price index has experienced ups and downs during the last six months. The current account surplus is most likely to be less than what was expected at the end of 1998.

For Indonesia, there is no sign of recovery yet. The foreign debt is still US$ 140 billion, and the inflation rate is more than 30%. Uncontrolled monetary expansion contributed to economic uncertainty: The growth rate of M2 was 80% in the second quarter of 1998. Relaxed macroeconomic policies without structural reform and political uncertainty can aggravate the state of the economy.

Until mid-1998, a credit crunch and a persistent recession due to a tight monetary policy led Malaysia to switch to an expansionary policy, which began to show some signs of economic stabilization. However, the implementation of capital controls and continued policy inconsistency have increased uncertainty so that foreign investors hesitate to invest in the country. Moreover, the reluctance to restructure the financial and corporate sectors contributes to the stagnant pace of economic recovery.

The steady structural reforms pursued by the Philippines from the early 1990s protected that country from the crisis, even though its external debt/GDP ratio was the highest among the five countries. However, there are still ongoing problems, including a high budget deficit, rising inflation, and increasing poverty. The currency's depreciation will increase debt-servicing costs, which could delay recovery.

< Table 5 > Recent Macroeconomic Indicators of East Asian Countries

Nation	Year	Growth	Exchange rate	Stock Market	Interest Rate
Korea	96	7.1	804.5	819.6	12.1
	97	5.6	949.9	630.7	15.3
	98	-5.8	1403.8	420.0	14.1
	99 1Q	4.6	1197.6	570.2	8.3
Indonesia	96	7.8	2342.3	N.A	14.93
	97	5.0	2909.4	599.8	27.85
	98	-13.6	10688	418.5	62.79
	99 1Q	-13.7	8788	400.5	119.87
Malaysia	96	8.3	2.5159	1142.6	7.82
	97	7.8	2.8132	949.1	7.98
	98	-7.1	3.9245	521.1	8.83
	99 1Q	-1.3	3.8000	545.5	6.17
Philippines	96	5.8	26.216	N.A	12.305
	97	5.2	29.471	2531.8	13.43
	98	-0.4	40.608	1847.0	14.52
	99 1Q	N.A	N.A	1982.5	N.A
Thailand	96	5.5	25.36	N.A	10.10
	97	-0.4	32.12	575.3	17.26
	98	-9.5	40.75	356.1	12.24
	99 1Q	1.2	37.31	N.A	2.69

Source: Cho and Rhee(1999)

Overall, sustained economic recovery and further economic development require political stability and the completion of the financial and corporate restructuring processes. One more condition for recovery is the clarification of the government's role in economic management. Throughout the crisis, the government has made its presence felt in private sector matters by injecting public funds to help

the financial and corporate restructuring processes. In this transition period, we should review and evaluate past policies in order to propose appropriate policies in the new age of globalization. The next section will discuss the trade and industrial policies of East Asian countries.

III. Industries and Industrial Policies

1. Overview of the Debate on the Role of Government in Economic Growth

There is an interesting debate about whether or not the government in an underdeveloped capitalistic market economy can improve upon the market outcome of resource mobilization and resource allocation. The debate is ultimately reduced to measuring the importance of market failure (or absent market mechanisms) versus government failure (or government's inability to assume the role of markets or to introduce market institutions).

While observing the remarkable success of economic development in East Asian countries such as Japan, Korea, and Taiwan over the past thirty years or so, adherents to the neoclassical view[7] feel that one important lesson should be learned from the East Asian experience. In short, this lesson, as far as economic policy is concerned, is to get the basics right. They argue that the government should provide a stable macroeconomic environment and a reliable legal framework in order to create an environment where market forces can act unhindered. Minimum intervention with the lowest degree of relative price distortion is a virtue. They believe that Asian economies benefited most from a strategy where the government more or less followed the lead of the market rather than trying to actively direct it.

On the other hand, a group of economists known as the revisionists attribute greater significance to other aspects of East Asia's success, aspects that have gone relatively unnoticed by neoclassicists[8]. They observe that the government has taken a much more active role in the economic development process than the one envisaged by neoclassicists and thus argue that despite efforts to do quite the opposite, the government has actually been leading the market. Revisionists even go on to argue that during the late industrialization stage, the state should set relative prices at deliberately 'wrong' levels in order to create profitable investment opportunities[9]. Also emphasized is the existence of market failures in developing economies due to market imperfections such as a lack of relevant markets. It is thus contended that a positive role of the government is necessary for the treatment of these failures as markets consistently fail to guide resource allocation toward the highest growth areas in the economy. Amsden, one of the staunchest revisionists, even suggests that the central bank may support priority industries at the cost of macroeconomic stability[10].

The World Bank (1993) answered the revisionists' argument with the reassertion of an obvious truth. "For interventions that attempt to guide resource allocation to succeed, they must address failures in the working of markets. Otherwise, the market would perform the allocation function more efficiently"[11].

---

[7] For example, Krueger(1985), Balassa(1987)

[8] For example, Wade(1990), Amsden(1989)

[9] "Under such disequilibriating conditions, the state's role in late industrialization is to mediate market forces. The state in late industrialization stages has intervened to address the needs of both savers and investors, and of both exporters and importers, by creating multiple prices. Some interest rates are higher than others. Importers and exporters face different prices for foreign currency. Insofar as the state in late industrialization stages has intervened to establish multiple prices in the same market, the state cannot be said to have gotten relative prices 'right', as dictated by supply and demand. In fact, the state in late industrialization stages has set relative prices deliberately "wrong" in order to create profitable investment opportunities" Amsden (1989), p13-14

[10] "Whatever the relationship between inflation and investment in theory, in practice inflation did accompany Korea's push into heavy industry under government leadership in the late 1970s. . . The pursuit of fast growth was not restrained in the interest of price stability" Amsden (1989), p100

[11] World Bank (1993)

In sum, the debate on the role of the government in economic development seems to center around the issue of market failure versus government failure. In this regard, it may be useful to remember that market failure generally reflects the failure of institutions, another form of government failure – this time the failure lies in the government's inability to set up the right institutions or, in other words, the rules of the game in the economy. Therefore, market failures on their own cannot be considered as an automatic justification for direct government intervention. Rather, the government should try to introduce 'right' institutions to provide an optimal environment for an improved economic performance[12]. Furthermore, in most cases of apparent market failure, it should not go unnoticed that government regulations or preferential treatment usually turn out to be the major causes of those failures.

In this section, we will look over the past industrial policies of some East Asian countries. They will demonstrate that the governments were unable to set up the 'right' rules of the game in the economy, which weakened the economies' ability to adapt to the changing economic environment. It will provide some clue to the new paradigm of economic management to substitute for the interventionist industrial policies.

2. Pre-Crisis Industrial Policies in East Asian Countries

It is a well-known fact that all East Asian countries have adopted an export-oriented development model. This model is considered as the main factor behind their rapid growth up until the crisis.[13] The policy tools accompanying the promotion of exports were export-credit schemes and the protection of domestic industries. In addition, most East Asian countries implemented policies especially targeting strategic industries or firms. Korea adopted such a policy throughout the 1970s but this led to over-investment in heavy and chemical industries (HCIs) and to an unbalanced industrial structure. Malaysia followed suit in the early 1980s but reversed its course in the mid-1980s. Indonesia attempted to shift from labor-intensive to hi-tech industries but was unsuccessful. The main policy tool was the direct-credit program. <Table 7> shows the profile of economic policies in those countries.

<Table 7> Policy Profile of some of East Asian Countries

Country	Policy Profile
Indonesia	1973-1980: Oil and commodity boom, growing inward orientation 1974: program of direct credit control and allocation 1979: 1st big devaluation 1982-1988: adjustment period 1983: 2nd big devaluation 1985-1986: tax Reform 1988: full financial sector liberalization
Malaysia	1970–1980: state-led development 1981-1985: Heavy Industrialization path 1981: creation of HICOM 1983: privatization policy begins 1978-87: financial and capital liberalization
Korea	1962-1972: Export Promotion 1973-1979: Industrial Promotion 1980-1993: Adjustment and Deregulation

Source: Choi(1998), World Bank(1993)

Export credit schemes included interest rates subsidies and the rediscounting of export bills. In Malaysia, the Export Credit Financing facility discounted export bills for post-shipment financing and refinanced pre-shipment export credits at subsidized rates for eligible exports, based on letters of credits (LCs). In Thailand, the Bank of Thailand rediscounted 50 percent of the value of loans to

[12] Vanberg(1991)

[13] Baghwatti(1999), Balassa(1991), World Bank(1993)

exporting firms by commercial banks at subsidized rates. Korea rediscounted pre-shipment credits based on LCs[14]. Indonesia, Malaysia and Thailand all went through periods of domestic market protection. The level of protection in Indonesia and Thailand were particularly high, while that in Malysia was relatively low (see <Table 8>). Korea selectively protected HCIs (see <Table 9>). Effective protection rates have been declining but in Indonesia and Malaysia they remained high until 1990. The same is true for HCIs in Korea.

<Table 8> Effective Rates of Protection, Indonesia and Thailand (Selected Years)

(%)

Country/Sector	1971	1974	1978
nesia Manufacturing total (excluding oil sector)	77.4 (1981)	67.4 (1983)	66.3 (1985)
iland Manufacturing	74.1 (1975)	68 (1987)	59 (1990)

Note: The effective rate of protection is the percentage by which value added at domestic prices exceeds value added at world prices
Source: World Bank (1993)

<Table 9> Selected Effective Rates of Protection, Korea

(%)

	1975	1980	1985	1990	1995
Food Products	17.4	-52.2	-48.1	-40.1	-32.4
Manufacture of beverages and tobacco products	-24.5	-6.4	-13.0	-21.7	-29.0
Construction material	-3.8	44.9	34.0	34.0	26.9
Non-durable consumer goods	-27.6	36.1	33.0	11.2	63.4
Durable consumer goods	52.6	55.3	13.1	25.1	10.8
Machinery	-0.1	62.6	23.2	24.2	10.9
Transportation Equipment	25.6	99.1	46.7	49.3	18.8
Manufacturing	-3.8	22.8	11.1	10.0	4.4

Source: Hong (1998)

Interventionist Industrial policy was motivated by the belief that shifting the industrial structure toward newer and more modern sectors increases the opportunities for capturing economies of scale. Korea, Malaysia and Indonesia all used interventionist industrial policies. Among them, Korea had the most systematic set of policies (details in section III-2). Malaysia started promoting HCIs in the 1980s, following the same path taken by Korea and Japan earlier. However, the key difference is that the Malaysian government led the industrialization drive by expanding the number of state firms out of the conviction that the government could speed development. The government established the Heavy and Chemical Industries Corporation of Malaysia (HICOM). HICOM started a number of large-scale, capital-intensive projects including iron and steel, nonferrous metals, machinery and equipment, paper and paper products, and petrochemicals. In 1988, HICOM had set up nine companies involving steel, cement, motor vehicles, and motorcycle engine manufacturing. A well-known project was the PROTON car project, a joint venture with Mitsubishi. However, the performance of state firms, including HICOM, was lower than expected. In 1984 the deficit of public enterprises reached 3.7% of GNP[15]. Poor management and low profitability made the treasury bail out incompetent enterprises. Moreover, the government could not endure rising fiscal deficits and declining terms of trade. In the late 1980's it shifted its policy to the privatization of public corporations and the development of the private sector. Out of the more than 800 state enterprises in the mid-1980's, about 100 were sold by 1990. However, the privatization process has been slow, even after the crisis.

[14] For details of export credit schemes, see World Bank (1993)
[15] World Bank (1993)

Indonesia's approach was a little different. The government used public funds to shift from labor-intensive manufacturing to high technology industries such as aircraft and electronics. The government decided to support the private sector's efforts to upgrade their technological capabilities. However, public sector research facilities and strategic industries have few links with the private industrial sector[16]. Moreover, the efficiency of public investments was low. For example, the Indonesian aircraft producer, Industri Pesawat Terbang Nusantara (IPTN), has absorbed $ 1 billion in government funds since its establishment in 1979. The strategy was to absorb foreign technology through licensing and co-production and eventually to design and produce aircraft with domestic technology and then export them. However, the domestic market was too small to capture economies of scale. Moreover, the company has had little exposure to the world market[17].

During the industry-targeting industrial policy period, the East Asian governments directed large amounts of money toward HCIs (Korea and Malaysia) or toward high technology industries (Indonesia). For example, Korea allocated more than 50% of total credits to HCIs.

The financial markets in East Asian Countries were immature. In fact, even though the growth of financial assets in East Asia was very rapid[18], the equity and bond markets developed slowly. Thus, banks have played an increasingly important role in allocating capital. Because banks lacked the ability to select borrowers and to monitor their performance, the government intervened in the process of capital allocation. In addition, the government influenced banks' lending decisions through the allocation of savings deposits that it directly held. Indonesia, Korea, Malaysia and Thailand used their state-owned banks to finance priority projects. In these countries, a very large share of the financial system's total deposits was held in publicly owned commercial banks (see <Table 10>). In Korea, the government put private banks under its control by revising some laws (see section III-2).

< Table 10> Proportion of Total Deposits in Financial Institutions in East Asia

(Percentage of Total Deposit)

Economy/year	*With government or postal savings institutions*	*With personal/provident insurance funds*	*With public commercial and specialized banks*	Total
Indonesia				
1971-76	N.A	N.A	–	–
1976-80	N.A	N.A	79.9a	79.9[a]
1981-85	N.A	N.A	71.7	71.7
1986-90	–	N.A	61.3	61.3
:ea Rep. of				
1971-75	4.8	N.A	80.7	85.5
1976-80	1.0	N.A	80.0	81.0
1981-85	2.2	N.A	57.9[b]	60.1
1986-90	1.1	N.A	32.1	33.2
laysia				
1971-75	4.1	30.8	–	34.9
1976-80	3.6	24.7	–	28.3
1981-85	2.0	24.9	–	26.9
1986-90	1.5	30.4	–	31.9
Thailand				
1971-75	12.7	N.A	1.1	13.8
1976-80	10.0	N.A	3.7	13.7
1981-85	8.2	N.A	1.6	9.8
1986-90	7.6	N.A	2.2	9.8

Source: World Bank(1993)

Indonesia, Malaysia and Thailand had started financial and capital liberalization in the 1970s before

[16] World Bank(1993)
[17] Of the 230 aircrafts that IPTN has manufactured since its creation, about 90% have been sold domestically (World Bank(1993))
[18] World Bank(1993)

they deregulated their real sectors, which, according to many researchers, was a key factor leading to the crisis[19]. Korea had been reluctant to liberalize. It only liberalized its economy from the early 1990s[20].

Industrial policies that target certain industries and firms have generally not been very successful in changing industrial structures and raising productivity[21]. The Malaysian government had no choice but to get involved in the business of bailing out unprofitable state firms. Also privatization was sluggish. The Korean government had closely monitored and even guided the HCI restructuring process in the 1980s. In addition, the cost of large, highly subsidized credits to firms operating in targeted industries was substantial Those credits burdened banks with NPLs and interfered with financial resource allocation. Economies with closed capital markets under government control, such as Korea until the early 1990s, could have sustained those costs. But in the world of open capital markets and competition in international capital markets, targeted credit programs are not viable options.

The order of liberalization may also have mattered. It is conventional wisdom that governments should deregulate the real sector before the financial sector. Otherwise, banks and other financial institutions will be saddled with NPLs given out to protected enterprises that would fail with liberalization. Indonesia, Malaysia, Thailand and Korea liberalized their financial and capital sectors before their real sector. The huge amount of NPLs after the crisis probably reflects the results expected from conducting liberalization in the reverse order.

3. Korea's Experience

3.1. Industries and Industrial Policies before the Crisis

Schematically, the pattern of Korean industrial policies during the last 30 years could be depicted as a cycle of (i) government selection of industries and corporations to be supported → (ii) mobilization of tax and financial resources and drafting of trade policies to support the selected industries → (iii) government-led restructuring of industries and corporations in distress. The government actively intervened into every phase of the cycle. Entry and exit barriers, and financial and tax supports were the tools of industrial policy. Entry barriers basically allowing only the existing large corporations to enter the targeted industries and policies designed to support these corporations contributed to the rise of big diversified enterprises, the Korean chaebols. Moreover, exit barriers erected as a result of active governmental intervention in industrial and corporate restructuring inhibited the natural flow of economic resources form non-viable firms to viable ones. Financial support included loans of scarce financial resources at preferential, subsidized rates, with long maturity periods to corporations chosen to operate in selected industries. These practices resulted in biased resource allocation.

During the 1950's, Korea concentrated its energy on rebuilding industrial facilities. No industrial policy existed at that time. Meaningful industrial policies were first implemented in the 1960's, at which time the First Five-year Economic Development Plan[22] was launched. The government targeted the construction of key industries through import-substitution. It selected several industries including fertilizer and refined oil as strategic industries to be supported. Laws supporting these industries were enacted. The government allocated most investment resources, which were procured mainly through foreign loans, to firms operating in these industries.

The most extensive government intervention took place in the 1970s when it carried out "the heavy

[19] Rasiah(1998), Vajragupta and Vichyanond(1998), Sachs(1997).

[20] For details of financial and capital liberalization in East Asian Countries, see Choi (1998)

[21] World Bank(1993)

[22] Five-Year Economic Development Plans were implemented every five years starting in 1961 during the 1960s and 1970s. However, from the 1980s on, the plans have merely been a broad profile of government economic objectives.

and chemical industrialization drive". The government designated certain industries as key industries. These included iron and steel, nonferrous metals, shipbuilding, general machinery, chemicals and electronics. Tax and financial resources as well as trade policies were used to promote the development of these industries. Entry barriers were set up, contributing to the rise of the chaebols. During this period, the size of HCIs grew large.

In the 1980s, the problems of the previous decade's industrial policies started to come out. Over-investment in HCIs and the expansionary monetary policy that caused high inflation led the government to refrain from active industrial promotion policies. The industrial policy was redrawn to support technology-intensive industries. The underlying motive for this shift was to correct the structural imbalance that started to appear in the manufacturing sector in the late 1970s. Massive inflows of fund in HCIs were cut off, leaving many of these industries with severe overcapacity. Moreover, the government closely interfered in industrial and corporate restructuring.

In the 1990s, the government's economic policy emphasized deregulation. The government rescinded many existing regulations, but sometimes revived the once repealed ones. The government's interventionist "habit" and the private sector's persistent expectations of government initiation/intervention in the market have kept impeding the development of market economy.

3.1.1 Selective Nurturing of Industries by the Government

For the sake of rapid economic growth, the government set up economic development plans and selected strategic industries. Furthermore, in the course of promoting these industries, the government restricted entry through regulations, contributing to the growth of a few large corporations.

In the early 1960s, fertilizer, refined oil, steel, synthetic chemical fibers and electric machinery were selected as the industries to be supported. The government also set up a division of labor: The government was supposed to build the oil refineries while the private sector was in charge of the other industries. During that period, 60% of total investment was procured through foreign loans, 55% of which was used for the fertilizer, refined oil, cement and textile industries. Moreover, 25% of foreign loans were spent on SOC such as electricity, telecommunication and transportation.

In the second half of the 1960s, the government targeted the steel, petrochemical, and general machinery industries. These three industries absorbed 60% of total investment in the manufacturing industry and 77% of foreign loans.

In the 1970s and early 1980s, the HCIs were targeted as strategic industries[23]. They included iron and steel, nonferrous metals, shipbuilding, general machinery, chemicals and electronics. Once again, tax and financial resources as well as trade policy were used to support these industries. The government allowed only existing large corporations to enter the targeted industries, and as a result they enjoyed the benefits emanating from the government's support of these industries. The government allowed foreign loans for firms in the targeted industries on a preferential basis.

3.1.2 Entry and Exit Barriers

Once the strategic industries were selected, the government decided which ones it would take care of and which ones it would delegate to the private sector. There was fierce competition in the private sector to get permission to enter these industries. However, once the entry permission was obtained, the selected firms were protected by entry restrictions and supported through tax and financial policies.

After industrial capital began to be accumulated in the 1960s, the government recycled the

[23] The main reason for this policy appears to be security concerns raised by the reduction of US troops stationed in Korea. The Korean government felt the need to build up certain industries for national defense (Yoo(1989)).

corporations i.e. those that had been selected in the 1960s were selected again to participate in the HCI drive of the 1970s. For example, 'the Promotion Plan for Heavy and Chemical Industries', announced in June 1973, stated that the companies wishing to enter the HCIs must procure 30% of total investment with their own capital. This was a way to ensure that only those enterprises that were selected in the 1960s were selected again. These companies were the only ones able to put out such a large amount of capital, based on their capital accumulation experience of the 1960s.[24] Along with the promotion of HCIs, the government in the 1970s adopted an export-oriented policy. For that purpose, it sought economies of scale in export industries, resulting in the establishment of the so-called 'General Trading Companies.' These companies were private enterprises specializing in the export of Korean goods, and had government backing. Because the general trading companies were given permission to enter the HCIs, they were therefore also deeply involved in those industries.

Trade policy also supported the selected industries and corporations. It was almost impossible to import foreign products if similar goods were produced domestically. However, if the exporter needed to import inputs for the production of export goods, it was exempted from this rule and moreover benefited from the tariff rebate system. As such, the general trading companies engaged in the export and import businesses as well as in the HCIs through their subsidiaries, and benefited greatly from the system. As a result, HCI output accounted for 57% of the general trading companies' total exports in 1980[25].

In addition to entry selection, the government actively intervened in the corporate restructuring process, including the liquidation and M&As of private firms. <Table 11> shows the main content of industrial and corporate restructuring that took place during Korea's rapid economic development period.

<Table 11> Content of Industrial and Corporate Restructuring

	Content
1969-1971	112 insolvent firms in the PVC, automobile, steel, chemical and textile industries were liquidated or acquired by other firms
1972: Industrial Rationalization	Due to a tight monetary policy recommended by the IMF and a sharp devaluation, firms took out loans at high interest rates and with short maturity. Those firms' financial problems worsened Industrial Rationalization - Covered 61 firms, including 30 in heavy industries, 8 in chemical industries, and 10 in light industries. - Self-rationalization through specialization, M&As and R&D supported by the government through financial and tax support
Late 1979s-early 1980s Restructuring of HCIs	The government decreased flow of money to HCIs to correct over-investment in those industries. The electricity generating, heavy construction equipment, automobile, and diesel engine industries were covered. Main restructuring tools were M&As. The government supported restructuring with bail-out financing and interest rate subsidies
1990s Business Specialization Inducement	Induce the big 30 business groups to specialize Regulations on the core business areas chosen by individual business groups will be eased

Source: KERI(1999)

Throughout the 1960s, the country's export-oriented economic development strategy, financed by large investments, generated many incompetent firms due to their lack of experience and managerial skills. The funds needed to finance the projects of the 1960's were mainly procured through foreign loans under government guarantees and were allocated by the government. The emergence of many non-viable firms could have lowered the nation's credit status in international financial markets,

[24] One more reason was that the heavy and chemical industries required a large production scale and therefore large amounts of money, giving a relative advantage to the big enterprises that had financial and managerial experience and ability.

[25] In the same year, heavy and chemical output accounted for 42% of the nation's total exports.

which would have impeded economic growth, greatly dependent on foreign loans. The government, despite criticism that it was itself partly responsible for failures in resource allocation, actively intervened in the corporate restructuring process. Between 1969-1971, one hundred and twelve incompetent firms were either liquidated or acquired by other firms. The government's corporate restructuring strategy was to transfer ownership without liquidation. However, problems of high financial costs and capital structure vulnerability persisted in all firms. The tight monetary policy recommended by the IMF in the early 1970s and sharp currency devaluations aggravated those financial problems. Thus, the government took comprehensive measures and applied them uniformly to the remaining firms in order to alleviate their financial difficulties. Those measures included transforming short-term debts into long-term debts, lowering interest rates, and tax exemptions.

From the late 1970s, the main problems of the Korean economy were over-investment and persistent inflation caused by the expansionary monetary policy. From 1979, the government switched the target of economic policy to the stabilization of the economy and the scaling-down of investment in HCIs. In 1979, the government set the M2 growth rate at 25%, 10% lower than the 1978 rate. It also diverted financial support toward the expansion of consumer goods industries, which led to a reduction of investments in HCIs. Throughout the 1980s, the government reorganized the HCIs to raise their competitiveness through the creation of economies of scale and to reduce the social costs associated with massive corporate bankruptcies. The restructuring process covered the electricity generation, heavy construction equipment, automobile, and diesel engine industries. However, the government underestimated not only the transaction costs of M&As, but differences in production technologies and the technological levels of the merged firms or the acquired and acquiring firms, leading to many idle facilities. In addition, the government carried out a program of industrial rationalization. It revised the tax reduction regulation law. The revision states that (i) the government sets the industry rationalization criteria and (ii) firms going through rationalization according to these criteria will get tax reductions or exemptions. Until 1988, seventy firms were classified as firms necessitating rationalization. Among them, sixty-seven firms were disposed of through government-led M&As, two firms went through a reorganization process and one firm was liquidated. Note that most firms were merged with or acquired by third parties based on criteria set by the government, not through market discipline.

3.1.3 Financial and Tax Support

The government allocated financial resources and provided tax support to the corporations given the permission to enter the industries it deemed economically strategic.

During the 1960s, the government put almost all domestic financial resources under its control: It revised the Korea Central Bank law and Bank Law, took over the stocks of commercial banks owned by private enterprises, and established special-purpose state banks such as Kookmin Bank for the general public and the Industrial Bank of Korea for small and medium firms. In the early 1960s, the government allocated 55% of foreign loans to the strategically selected industries. In the second half of the decade, 60% of investments in the manufacturing sector were allocated to three strategic industries, petrochemical, steel, and machinery. In addition, the government applied low interest rates on loans to firms entering the selected industries, reinforcing private sector dependency on the government.

Even after the industrial restructuring program of the late 1960's, many of the surviving firms (selected and helped by the government) experienced financial difficulties. The government relieved them with comprehensive and uniformly applied measures. It allowed short-term private-sector debt to be changed to long-term debt, lowered interest rates (from 19.0% to 15.5% for the discount rate of commercial bills), issued special bonds (30% of which were changed into long-term low interest rate loans), raised the depreciation rate of fixed facilities from 30% to 40-80%, and raised the corporate exemption rate from 6% to 10%.

In the 1970's, the government got deeply involved in the allocation of investment funds not only to

strategic industries but also to individual investment projects. To provide large investment resources into the heavy and chemical industries, the government established the National Investment Fund in 1974, and commercial banks, virtually controlled by the government at that time, were told to give out loans to targeted investment projects. In addition, the government gave priority to companies operating in the heavy, chemical, and export-oriented industries to introduce foreign loans. The loans to these companies and other earmarked loans were called 'policy loans'. The interest rate on the policy loans were kept low (see <Table 13>). <Table 12> shows the share of policy loans compared to total domestic credit during 1975-1985. The earmarked loans were for the agricultural sector, small and medium firms, residence construction, and so on. The foreign trade loans were used to finance exports in general. Hence, loans that were not earmarked were the most likely source of investment funds for the heavy and chemical industries. More than half of total investment funds were under government control and more than 2/3 of them were allocated to HCI firms and exporters. In the late 1980s, more than 93% of national investment funds and 42% of the Korea Development Bank's loans were allocated to those industries.

<Table 12> Share of Policy Loans in Domestic Credit

(%)

	Not earmarked	Foreign Trade	Earmarked	Total
1975	27.67	8.86	18.52	55.04
1976	26.98	9.84	17.78	54.61
1977	29.52	10.20	18.03	57.76
1978	32.14	10.62	19.17	61.93
1979	33.05	10.49	16.34	59.88
1980	32.76	11.15	15.44	59.35
1981	31.52	12.56	16.24	60.31
1982	29.65	12.16	14.25	56.05
1983	27.70	12.56	15.98	56.24
1984	25.73	12.62	16.94	55.29
1985	25.03	12.75	16.98	54.76

Notes: (1) Domestic credit includes all loans and discounts to the private sector by deposit money banks (commercial banks and special banks) and two development institutions, the Korea Development Bank and Korea Export Import Bank

(2)'Not earmarked' includes loans from the National Investment Fund, Loans denominated in Foreign Currencies, and all loans by the Korea Development Bank, and other miscellaneous items.

(3) 'Foreign Trade' includes loans for foreign trade by deposit money banks and all loans from the Korea Export and Import Bank

(4)'earmarked' includes loans for agriculture, small and medium firms, and residence construction

Source: Yoo (1989)

<Table 13> shows the gap between the preferential interest rate and other interest rates. The difference between the earnings rate of commercial bills and the interest rate on loans for equipment grew from 3.0% in 1965 to 12.6% in 1970 to 15% in 1980. The difference between commercial bills and loans for foreign trade is even greater. Those differences grew smaller after 1985. In addition, since the inflation rate ranged between 10 % - 28.7% during 1975-1985, real interest rates on policy loans were negative.

<Table 13> Various Interest rates (%)

	1965	1970	1975	1980	1985	1990	1992	1993
commercial bills	14.0	24.6	20.1	30.1	14.2	16.5	16.2	12.6
Loans for Equipment	11.0	12.0	12.0	20.0	12.0	12.0	12.0	9.5
Loans for Foreign Trade	6.5	6.0	9.6	15.0	10.0	10.0	10.0	8.5

Source: Lee(1998)

In sum, until the mid-1980's the export sector and the heavy and chemical industries enjoyed easy access to financial resources at low interest rates.

In general, tax support to the corporations operating in the selected industries included tax reductions on export sales, reductions of indirect and customs taxes on inputs for export goods, reductions of corporate tax, and a high rate of depreciation. <Table 14> shows the trend of corporate tax reduction. The reduction rate slowly increased until the 1970's, but then started to increase very sharply in the late 1970's and early 1980's.

< Table 14> Reduction of Corporate Tax (%)

	1966	1967	1971	1976	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Reduction rate	23.1	20.4	21.5	35.2	64.8	82.7	61.3	34.4	14.2	13.7	15.1	15.6	12.2	16.8

Source: Lee(1998)

<Table 15> shows the effective marginal tax rate for selected industries. The favorable tax treatment lowers the tax rate to around 3/4 of what it would otherwise have been.

<Table 15> Effective Marginal Tax Rates

	Chemical Products		Basic Metal and Product		Electrical and Electronic Machinery	
	general	special	general	special	general	Special
1973	48.90	46.30	49.00	46.90	49.30	47.10
1975	54.20	38.80	53.20	38.70	53.70	39.10
1978	41.10	29.50	41.20	31.00	42.00	30.90
1980	45.30	32.00	45.50	32.90	45.80	33.00
1981	55.80	42.40	55.00	42.60	55.60	43.00
1982	57.10	50.80	56.40	50.80	57.00	51.20
1983	37.60	34.80	38.10	35.80	38.40	36.00

Notes: 'General' rates are applicable to firms that are not qualified to get special tax treatment and 'special' rates are for qualified firms
Source: Kwack (1984)

In addition, the effective tax rate on HCIs during the 1970s was 20%, while that of light industries was almost 50%[26]

3.1.4 Productivity Trend: Evidence of the Effects of Industrial Policies

Governmental control over the financial sector contributed to the mobilization of capital, but not necessarily to an increase in productivity. In addition, loose supervision of the financial sector contributed to the loose corporate governance structure. These factors gave rise to inefficient resource allocation.

Studies[27] show that the quantitative growth of inputs rather than the growth of input productivity promoted the growth of the Korean manufacturing sector. In particular, the input productivity of most HCIs decreased between 1970-1980 (and some of them between 1970-1985). These results imply that the government's interventionist industrial policy, together with the two oil crises of the 1970s, generated inefficient resource allocation.

For example, in <Table 16> shows that total factor productivity in the manufacturing sector decreased during 1975-1985 and started to gradually increase from the early 1990s. Moreover, the number of industries whose input productivity decreased rose between 1970-1990 (See <Table 17>).

[26] Lee (1988), Lee (1992), Yoo (1991)
[27] Lee(1998), Moon(1991)

<Table 16> Increase of Total Factor Productivity (%)

	1967-1970	1970-1975	1975-1980	1980-1985	1985-1990	1990-1996
Increasing rate of TFP	3.30	1.56	-3.10	-0.26	0.76	2.43

Source: Lee(1998)

In particular, factor productivity in the HCIs for the most part decreased during 1970-1985 (See Lee(1995), Lee(1998)). During 1975-1980, there were massive investments in HCIs. The yearly average growth rates of capital intensity were 24.6% in general machinery, 18.5% in the steel industry, and more than 10% in the other HCIs. The increase in capital investments combined with technological progress and increased managerial skills will raise capital efficiency. In Korea, R&D and managerial skills did not catch up with the increase in capital investment i.e. resource allocation was inefficient. As a result, factor productivity decreased.

< Table 17> Distribution of Total Factor Productivity

	1967-1970	1970-1975	1975-1980	1980-1985	1985-1990	1990-1996
Below –4%	0	1	3	1	0	2
-3 ~ -3.9	0	1	0	1	0	0
-2 ~ -2.9	1	0	0	1	1	3
-1 ~ -1.9	0	1	1	3	3	0
-0.9 ~ 0	1	1	3	3	7	1
0 ~ 0.9	2	0	5	5	9	2
1 ~ 1.9	4	1	2	3	5	6
2 ~ 2.9	5	2	2	6	1	5
3 ~ 3.9	2	4	5	4	0	6
Above 4%	13	17	7	1	2	3

Source: Lee(1998)

Additionally, the government's system of financial and tax support to selected firms in the targeted industries was not effective. Some studies show that it did not statistically contribute to the increase in input productivity[28]

3.1.5 Growth of the Chaebols

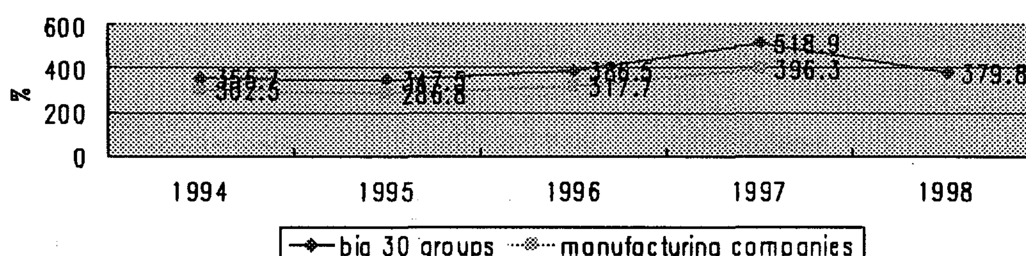
The strategy of government-led economic development set the ground for the growth of business conglomerates, called chaebols. In the early stages of economic development, the government allowed a few corporations to enter the targeted industries. Since those industries were HCIs subject to economies of scale, the size of the corporations involved could not but grow larger. Afterwards, the government continued to make use of their experience and managerial skills in the course of economic development. The government gave those large corporations preferential entry into the targeted industries. Moreover, entry barriers hindered competition, and the government offered financial and tax inducements to the chosen firms. Thus, the large corporations had every incentive to diversify their operations according to the government's industrial targeting policy. They became large business groups. Furthermore, in disposing of insolvent firms, the government reorganized the industrial structure by transferring their ownership to the big business groups, reinforcing the growth of the chaebols. In addition, the government, to minimize the huge potential social cost of chaebol bankruptcies, resuscitated insolvent chaebols or their subsidiaries through preferential measures. As a result, the big business groups had little chance to restructure themselves according to market discipline. The formation and growth of the chaebols was the result of the interaction between industrial policies and the chaebols' responses to them.

[28] Lee(1995), Lee(1998)

Chaebols had a distinguishable management system. The controlling shareholder, the chairman, controlled the management of all of its affiliates. The chairman of a chaebol has maintained control rights over its subsidiaries through cross shareholding. Consequently, the boards of directors and supervisors of all subsidiaries do not function as they are supposed to i.e monitor the management. In fact, board members may be expelled from the board if they oppose to the chairman.

The growth of the chaebols became a burden to the economic policy. Since the chaebols are accountable for a large share of the Korean economy's assets, sales and debts, most industrial policy measures were inevitably connected with them. The chaebols, as leading companies in major industries such as petro-chemicals, automobiles, and semiconductors, which are export-oriented industries exposed to harsh international competition, initiated large scale projects. Moreover, strategic concerns in oligopolistic markets forced them to expand their capacity. They became larger and larger with little experiences of how to restructure, generating the notorious 'too-big-to-fail' legacy of the chaebols. In addition, Korea's financial system was heavily skewed toward indirect financing through banks compared to direct financing through the stock market. Moreover, the government controlled the banking system. It allocated financial resources so as to support big businesses and sometimes to resuscitate them through the government-controlled banking system. As a result, through over-expansion as well as the given Korean financial structure, chaebols end up with high debt/equity ratio. <Figure 1> shows the debt-equity ratio trend of the big business groups.

< Figure 1 > Debt-Equity Ratio of the 30 largest business groups



Data: Bank of Korea and Fair Trade Commission of Korea

From the early 1980s, the anti-monopolist policy began to focus its attention on regulating economic concentration. The Regulation on Monopoly and Fair Trade Act ('The Fair Trade Act' hereafter) was enacted in 1980. The regulations on M&As and big business group financing were introduced in 1986. The regulations on market concentration and cross payment guarantees among subsidiaries of a chaebol were introduced in 1990 and 1992, respectively. <Table 18> presents the main regulations regarding economic concentration.

<Table 18> Regulations on Economic Concentration in 1990

		Content
Market Structure	Suppression of economic concentration	holding companies are prohibited Restrictions on total investment in subsidiaries Restrictions on cross guarantees Restrictions on voting rights of financial and insurance companies having shares of affiliates
	Restrictions on M&A.s	anti-competitive M&A is prohibited Unfair M&A is prohibited
Corporate Behavior	Restrictions on exercising market power	Restrictions on unjust price determination and change Restrictions on entry barriers Restrictions on hindering other firms' operations
	Restrictions on collusion	Restrictions on collusive determination of prices and sale conditions Restrictions on regional demarcation and exclusive dealing
	Restrictions on Unfair Transactions	Maintaining resale prices is prohibited Restrictions on unfair international contracts

Source: KERI(1995)

The Fair Trade Commission selected the top 30 chaebols, based on the size of their assets, as its main target of regulation. In addition, the government put restrictions on loans to the chaebols to prevent leveling concentration. During the 1990s, it introduced the business specialization policy to induce the chaebols to limit diversification to 2-3 specialized business lines.

These regulations were not as effective as expected. Both the net assets and cross holdings of the chaebols have increased by 2.1 times during 1993 – 1997. Market concentration is still high - the top thirty chaebols accounted for 45.8% and 47.9% of total sale in 1988 and 1997, respectively (see <Table 19>). The top thirty accounted for 24.2% and 21.5% of total financial loans in1990 and 1995, respectively.

<Table 19 > Economic Concentration of the Chaebols (%)

		80-90	1991	1992	1993	1994	1995	1996	1997
Assets	5th	21.3	24.6	24.9	24.4	23.9	26.9	27.2	28.9
	30th	42.5	45.0	46.1	44.9	43.6	47.3	47.1	46.6
Sales	5th	24.4	27.5	28.9	28.0	28.5	31.7	32.4	32.4
	30th	44.0	42.8	45.0	43.1	43.6	47.8	48.4	46.6
Employment	5th	2.01	2.59	2.46	2.47	2.56	2.73	2.71	N/A
	30th	3.85	4.83	4.34	4.35	4.61	4.68	4.62	

Source: Hwang(1999) and KERI(1999)

There are several reasons for the failure of regulations on economic concentration. First, restrictions on competition including entry barriers and price regulations were still effective. Second, the government could not commit the fate of incompetent chaebols to the care of market mechanisms because of the potential social cost of their financial problems and bankruptcies. So the government kept incompetent chaebol subsidiaries alive with public money or merged them to other chaebols' subsidiaries. The court reorganization processes were usually ignored. Furthermore, the M&A market was inactive and bankruptcy laws including reorganization processes were inadequate. Third, The financial industry was too immature to exercise its role to check on chaebols' overexpansion. Korean banks did not perform their duty of loan screeing thoroughly because they were used only as tools to support the government's industrial policy in the so called "government-managed financial system," a product of excessive government intervention in the banking sector. Banks and other financial institutions got used to governmental guidance and coordination. The interest rates on loans for the chaebols were lower than market rates because of governmental intervention. They hardly needed and so lacked the requisite ability to conduct credit and project analyses. Since they lacked such ability, for every loan they provided, even for credit loans, they required debt guarantees or collateral to reduce risks. So the chaebols satisfied the banks with cross payment guarantees among subsidiaries, and they could obtain as much as needed for expansion.

All of these factors made regulations on the chaebols ineffective and possibly led to the erosion of their competitiveness.

3.1.6 Evaluation: Interventionist Industrial Policies as A Cause of the Crisis

The government-led interventionist industrial policy strategy generated various structural problems. First, industry- and firm-targeting industrial policies greatly distorted resource allocation. They frequently tended to substitute for the price mechanism. It resulted in over-investment in and subsequent restructuring of the the HCIs. Preferential industrial policies have worsened economic concentration, resulting in structural imbalance between big and small-and-medium firms and a monopolistic economic structure. Second, government control of the financial sector as a tool to support its industrial policy undermined financial institutions' ability to discriminate between competent and incompetent firms and projects and to monitor the performance of borrowing firms. It eventually led to the underdevelopment of the financial sector. Third, persistent government

intervention destroyed private sector incentives for creative economic ventures. State support of selected industries and firms, and government control of the financial sector made the private sector dependent on governmental guidance and coordination. In addition, since the government helped the large enterprises, especially the chaebols, survive financial difficulties by showering them with preferential measures, the too-big-to-fail legacy emerged and moral hazard ensued. Lastly, in political economic sense, the government's ability to select and support strategic industries and to enforce restructuring programs generated room for rent seeking. The corporations lobbied government officials, which raised suspicions of corruption. It also contributed to the prevalent anti-chaebol sentiment.

By and large, interventionist industrial policies greatly contributed to the development of the crisis. They frequently substituted for market operation. As a result, distortion of resource allocation, nourishment of private sector's dependence on government leading to discouragement of private sector's autonomy and creativity reduced the effectiveness of market mechanism. All of the results also had moral hazard prevail in the economy. Due to moral hazard, the necessity for economic restructuring to allow market mechanisms to work was likely to be unrecognized. The agents in the economy didn't have much incentive to exert themselves to adapt to the changing economic environment. All of them provided the environment for the crisis. The economy lack of market flexibility and ability of adaptation could not avoid the crisis. Moreover, it had to resort to another great government intervention to respond to the crisis i.e. it had to depend on government in clearing up all the vestiges of the government interventionist policies.

Industrial policies are based on the belief that the government has sufficient information about the changing economic environment and the ability to fully anticipate the optimal industrial structure. However, the economic environment has been changing rapidly of late. It is getting more dynamic and therefore more uncertain. Market participants have more information about changes in the economic environment than the government. In addition, as the economy grows in size and complexity, it is getting less and less possible for the government to absorb these changes and determine the optimal industrial structure over time on behalf of the private sector. It is thus safe to say that Korea's industrial policies should adapt to the changing economic environment.

3.2 Post-Crisis Corporate Restructuring

3.2.1. Corporate Restructuring

The direct cause of the crisis in Korea was a combination of measures undertaken by the Korean government in 1997 that triggered the blowout and the Korean government's policy of overvaluation of the exchange rate. The poorly implemented financial liberalization was also responsible for weakening the corporate financial structure. Furthermore inadequate prudential regulation and supervision were responsible for accelerating the crisis during the inappropriate sequencing of the liberalization of the domestic financial market[29]. For corporate sector, the IMF pinpointed Korean chaebols as the culprits of Korea's structural weakness and stressed the need for rigorous corporate restructuring. High debt-equity ratios and a very poor use of capital in the corporate sector prior to the crisis aggravated the impact of tightening liquidity on corporate cash flow and investment activities. Cross guarantees between affiliates of chaebols helped create high debt levels, which were prevalent among the large Korean chaebols.

After the crisis, an agreement to improve the financial structure of the business sector was signed between creditor banks and their corporate clients under government guidance. The agreement has three components. The first one relates to improve corporate governance and managerial transparency. It includes appointment of outside directors and the adoption of consolidated financial statements. The second one seeks to improve financial conditions and the capital structure of business and to eliminate cross-debt guarantees among group subsidiaries. It covers a reduction in debt-equity ratios to 200% by

[29] Jwa and Yi(1999)

the end of 1999 and reduction of cross-debt guarantees. The third component aims to improve business competitiveness by streamlining business activities. It includes mutual deliberation over M&As of affiliated company and entry into new business areas.

To improve corporate governance and accelerate the corporate restructuring process, measures to revitalize the domestic M&A market were introduced. M&A activity involving foreign firms has been encouraged through the amendment of the Foreign Capital Inducement Law. The appointment of outside directors is now required by law. Limits on the voting rights of institutional investors were lifted, and the rights of minority shareholders were strengthened. To facilitate the exit or reorganization of insolvent firms, the bankruptcy and corporate reorganization laws have been revised. An out-of-court workout program was also introduced by an association of financial institutions.

Progress has been made in corporate restructuring. 25% of directors were appointed as outside directors in listed companies. Debt-equity ratios have decreased from 477.08 % in 1997 to 390.64 % at the end of 1998. The Chaebols' cross guarantees have decreased by 103.3% of the amount planned for 1998, and 48% of that for 1999. 55 non-viable firms belonging to the 30 largest chaebols have been forced to close down, while the workout process with creditor banks has begun for viable ones.

As for the top five chaebols, the Emergency Economic Planning Committee presented five guidelines for chaebol reform in Jan. 1998 (see <Table 20>)

<Table 20> Agenda for Chaebol Reform

Objectives	Measures	Schedule
Enhanced Transparency	·Adoption of Consolidated financial statements	·FY 1999
	·Following international accounting principles	·Oct. 1998
	·Strengthening voting rights of minority shareholders	·May 1998
	·Compulsory appointment of outside directors	·Feb. 1998
	·Establishment of external auditors committee	·Feb. 1998
Strengthening Accountability	·Strengthening the legal liability of controlling owners	·Jun. 1998
	·Allowing voting rights of institutional investors	·Sept. 1998
	·Introduction of cumulative voting system	·Dec. 1998
Resolution of Cross Guarantees	·Resolution of existing cross guarantees	·Mar. 2000
	·Prohibition of new cross guarantees	·Apr. 1998
	·Prohibiting demand for cross guarantees from financial institutions	·Apr. 1998
Improvement of Financial Structure	·Agreement with banks to improve capital structure	·Apr. 1998
	·Removal of restriction on capital infusion with consideration	·Feb. 1998
	·Exclusion of income tax deductions on interest payment from excessive borrowing	·FY 2000
	·Introduction of asset-backed securities	·Sept. 1998
Streamlining Business Activities	·Adoption of corporate-split system	·Jun. 1998
	·Improving M&A procedures	
	·Liberalization of foreign ownership of real estate	·Jun. 1998. ·Jun. 1998.
	·Full liberalization of M&As	
	·Streamlining bankruptcy procedures	·May 1998 ·Feb. 1998

Source: Jwa and Yi (1999)

The top five chaebols agreed to decrease the number of their subsidiaries and to concentrate on three to five core businesses in order to solve the problem of over-diversification and over-investment. They will reduce the number of their subsidiaries by up to 70% by the year 2000 in return for comprehensive tax breaks and other benefits, including debt-equity swaps by creditors. The government has also strongly encouraged big deals among them. The big deals, or more precisely business swap deals, have been taking place in eight major industries including the semiconductor and automobile industries.

3.2.2. Evaluation

Post-crisis corporate restructuring has proceeded under the strong government guidance. There has been progress in corporate governance, financial and business structures. Reduction of debt/equity ratios and cross-guarantees, introduction of outside directors, and close-down of non-viable firms are among others. However, the process of restructuring is reminiscent of the interventionist industrial restructuring attempts of the 1970s and 1980s. For example, in big deals, the government forced M&As upon firms and gave them deadlines by which they must be completed, and determined the acquiring and acquired firms in advance. In addition, the government infringes on the property rights of the companies participating in restructuring programs. The big deals could raise doubts as to the consistency of government policy: first, they may lead to a significant increase in market concentration, which could be in conflict with governmental policy regulations on economic concentration. Second, after the deals are over, would the government prohibit new entry in the industries affected by the big deals? What if the potential entrants are foreign investors?

Another example is the reduction of debt/equity ratio uniformly applied to each of big five chaebols. Government did not take into account the diversity of economic agents. Considering that each of these chaebols has different managerial styles and businesses outlooks, their debt management plans and/or capability cannot but be different. The policy of lowering the debt-equity ratio might be right, but it is unclear whether the same numerical target and deadline must be applied to all chaebols uniformly. Furthermore, it could also create policy inconsistency in the near future. If the government decides to stick with the same policy after 2000, it will restrict the freedom of the corporate sector in managing financial options. If it does not, the question of why the guideline was so strictly enforced before 2000 will arise.

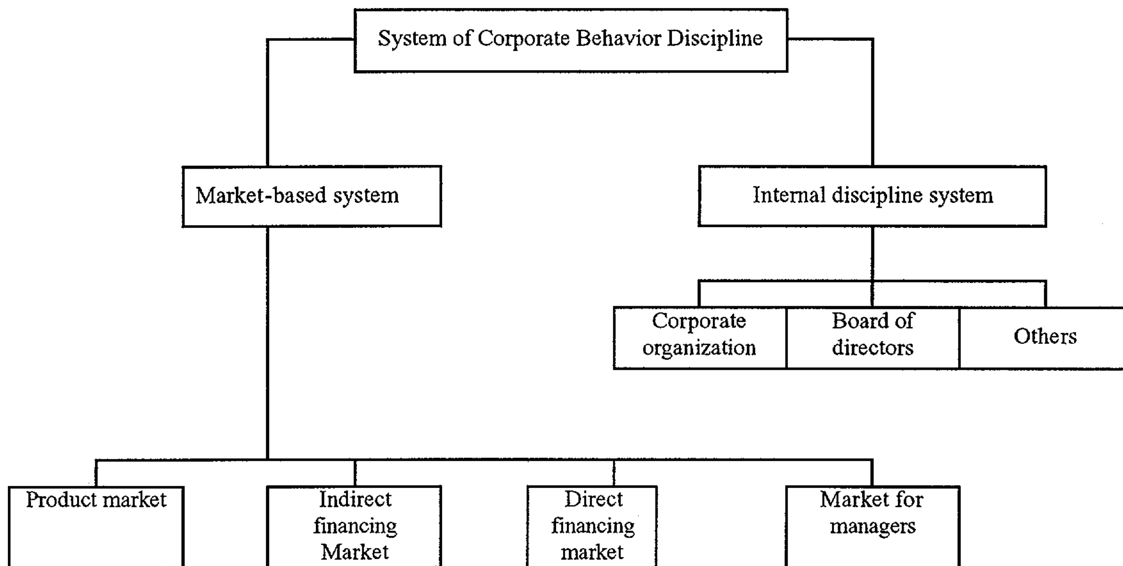
It looks that this restructuring process has paid too much attention to changing outward symptomatic characteristics, rather than setting the correct underlying institutional and incentive structures. The government-led restructuring without providing appropriate institutional foundation will not have a lasting effect. Systematic approach such as establishing economic environment encouraging voluntary restructuring in the process of competition is more favorable to the economy.

Broadly speaking, there are two distinct systems for disciplining corporate behavior, the market-based system and the internal discipline-based system. (see Figure 2).

The market-based system can be further broken down into the product market, direct financing market, and market for managers. Through competition in the product market, consumers choose efficient and competitive businesses that produce good products. In the direct financing market, shareholders, through their oversight rights as well as the threat of mergers and acquisitions, discipline incompetent corporate managers. In the indirect financing market, creditors keep close checks on corporate managers, not only by means of close analyses of creditworthiness before extending credits to firms, but also by closely monitoring firms' use of funds. The competition among professional managers in the market for managers contributes to improving overall managerial efficiency by sorting out managers with poor managerial performances. On the other hand, the internal discipline system of oversight relies on inside organizations, such as holding companies, coordination offices, and the

board of directors for providing checks and balances on managers. In addition, there is the hybrid approach through which institutional investors appoint outside directors to oversee managers. The proper role of the government is to change laws and institutions and enforce them so as to provide corporate management with an external environment that will ensure the normal functioning of the various disciplinary systems. Then, as these systems begin to operate, firms will start restructuring at a faster pace as they realize that their survival depends on it. This system is far more favorable to the market economy than the government-led restructuring system.

<Figure 2> Disciplinary System of corporate behavior



Recently, the big deal in the automobile industry fell through. The Samsung Group decided to seek court receivership for its automobile unit, backing off from its earlier plan to sell the debt-laden unit to the Daewoo Group. The life of Samsung Motor Company, a subsidiary of the Samsung Group and a participant in the big deal, is an example of the government's interventionist industrial policy. This case will be presented in the next section as a case study.

4. An Example of Industrial Policy Lifecycle : Samsung Motor Company

This section will discuss the rise and fall of Samsung Motor Company and the government's role in the process. This is a typical example of how the government influenced a firm's activity from entry to exit.

Samsung group, one of the largest chaebols in Korea, signed a 'technology import contract' with Nissan Motor Company, Japan on April 26, 1994. It was Samsung's first step toward participaing in automobile industry. However, before the contract was signed, the government had undertaken an economic analysis of Samsung's entry into the Korean automobile industry. As a result of this analysis, on April 28, 1994, the government had decided not to allow Samsung entry into the automobile industry. The reasons for this decision were (i) duplication and over investment in the automobile industry, (ii) exhaustive competition in the limited domestic market[30], and (iii) delay of technological independence caused by the introduction of foreign technology.

[30] There were three automobile manufacturing companies in Korea, Hyundai Motor Company, Daewoo Motor and Kia Mortors . The production capacity of the first two companies was more than two million cars in 1997.

But suddenly[31], on November 30, 1994, the government allowed Samsung to enter the automobile industry. Subsequently, Samsung submitted the report of technology import and the government accepted it. Samsung Motor Company (SMC hereinafter) was established on March 28, 1997 and operation of the production line began on May 12 1997. SMC introduced its first model into the market on February 17, 1998.

However, there were numerous debates on SMC's competence, its profitability and its too much amount of debt among economists and social reformers. On December 7, 1998, a big deal between Daewoo Motor and SMC stipulating that Daewoo acquired SMC was announced and on March 22, 1999, the CEOs of both groups agreed on the principles of the big deal[32].

There were various conflicts of interests in the process of big deal. Most of all, the handling SMC's more than 4 trillion Korean Won debt, which is estimated to be more than four times the value of its equity, was a headache to the government as well as to both companies. Eventually, the big deal negotiations fell through and SMC filed for the Corporate Reorganization Process on June 30, 1999. Under that process, the court decides on whether the filing firm is worth reviving through reorganization, and once the court makes a decision for reorganization, the creditors and the filing firm set up a reorganization plan including debt adjustment. After the filing, the government, along with the subcontractors and the community where SMC is located, insisted on keeping SMC alive regardless of its economic viability. Furthermore, the creditors and the government have pressured the CEO of SMC to solve SMC's debt problem using his own private wealth.

<Table 21> Diary of SMC's Life

1994. 4.26	Contract of technology import with Nissan
4.28	Government disallows Samsung's entry into the automobile industry
11. 30	Government allows Samsung's entry into the automobile industry
12.3	Samsung submits its request for technology import
12.7	Government accepts the report
1995.3.28	SMC was established
1997.5.12	The production line began
1998.2.17	SMC introduces its first model into the market
12.17	The big deal between Daewoo Motror and SMC is announced
1999.3.22	The CEOs of Daewoo Motor and SMC agree on the principles of the big deal
6.30	Collapse of the big deal. SMC files for the Corporate Reorganization Process

The example of SMC case shows the typical features of interventionist industrial policies. First, the government controlled a private company's entry into a market – the government determined SMC's entry into the automobile industry. Second, the government closely interfered with the private sector 's restructuring process. It decided on whether a firm should go bankrupt or be acquired by another firm. The government even determined which firm should acquire the other– the government determined SMC should be acquired by Daewoo Motor.

The life of SMC also reveals how uncertainty arises from intervention. First, what made the government reverse its decision about SMC's entry into the automobile industry? After all, there were reasons given for disallowing SMC's entry, but not for the abrupt decision reversal afterwards. As such, nobody knows why the government changed its decision. Consequently, the qualifications required to enter the automobile industry remain unknown. Second, what is the cause of SMC's failure afterwards? Is it duplication and over investment in the automobile industry, exhaustive competition in the limited domestic market, or management failure? If it is one or both of the first two,

[31] There are various political behind-the-scene stories and rumors regarding this event. For example, Pusan, where SMC's manufacturing unit is located, is the then President's hometown. It is said that the President decided to allow SMC's entry into the automobile industry to boost the economy of his hometown. Since those stories cannot be corroborated, it is impossible to know whether they are true.

[32] The reason for SMC's participation in big deal remains unclear. Since government has strongly urged the big deals, it probably intervened into the determination of SMC's exit from the automobile industry.

then the questions regarding the government's policy reversal, from barring Samsung's entry to allowing it, remain. If the cause is management failure, the court and the creditors should decide on how to handle SMC. But then, why did the government insist on the continuation of SMC's operations and why did it intervene in the debt-handling process?

Persistent government intervention undermined private sector autonomy and nourished dependence on the government. At this point one has to wonder whether creditors have responsibility for lending money to firms. Why did they wait for the government's decision instead of actively trying to solve the debt problem? Governmental control of the banking sector during last 30 years has made the creditor banks dependent on government guidelines or coordination.

Sometimes, government intervention crates conflicts with the system of private property rights. What allows the government to pressure a CEO into paying a corporate debt using his own private wealth? There are neither laws nor regulations in Korea about CEOs surrendering private property except for shareholders giving up their shares in the case of a business failure.

The SMC case shows the legacy of governmental discretion in policy/decision making; determination of rise and fall of a private firm, uncertainty rising from inconsistent policies and their implementation, private sector lack of autonomy in decision making, governmental infringement on private property. Should this kind of industrial policy continue in the 21st century? The next chapter will provide a direction for industrial policy in the changing economic environment.

IV. New Industrial Policy in the Changing Environment

1. Changes in the Economic Environment

IMF Programs for financially distressed East Asian countries entailed the implementation of global standards and the liberalization of their economy. Throughout the crisis, the East Asian countries strengthened the standards and legal frameworks of their respective economy to global levels. In addition, after the crisis, East Asian countries almost completely opened their economy to the world. These results imply that governments' ability to intervene in the economy will greatly diminish[33]. As such, these economies will follow global standards.

In addition to this change in the domestic economic environment, we should also pay attention to the rapidly changing world economic environment. During the last 50 years, the world economy has been globalizing (economically integrating) because of increasing inter-dependence between countries, a process made possible by breakthroughs in transport and communication technology and the liberalization of trade and capital. What will be the effects of rapid globalization on the economic environment of this region?

First, globalization implies the expansion of economic activity across politically defined national and regional boundaries through the increased movement of goods, services, factors of production and economic agents via trade and investment. Preferential and discriminatory policies will become increasingly ineffective under an economic environment that is moving towards globalization. As a result, government-led economic development strategies and policy instruments will also become ineffective. It is easy to see how direct regulations to promote or protect targeted industries would eventually constitute obstacles to further economic development. Generally speaking, globalization

[33] Some worry about the increase in governments' share of their own economy after restructuring. As a result, it is in an even better position to intervene in the economy. For example, in Korea, the government's share of total stock has increased from 7.4% in 1996 to 17.3% in 1998. Since it injected public money into most private banks to recapitalize them, its actual share will be higher than 17.3%. Thus, the government now carries more weight in the private sector than before. However, it can be expected that with liberalization and globalization, the economy will leave increasingly little room for government intervention.

will ensure that economic policy-making and implementation will proceed according to the principle of non-discrimination and market mechanisms.

Second, in the process of globalization, knowledge, information, and technology will be the most important forces behind economic development. A few industries in the traditional sense do not constitute a sufficient basis to economic growth. Technology and industries are intermeshed with each other; no technology is industry specific:

"But the same thing has happened in the automobile industry, which increasingly has become dependent on electronics, and on the computer. It has happened to the steel industry, which increasingly has become dependent on materials science of which the original steel companies were totally ignorant – and largely still are. It has happened to the paper industry – the list could be continued indefinitely."[34]

In the 21st century, networking, systemization, and intellectualization of economic activity will be a fact, and the cycle of technological innovation will be shorter. These changes will greatly affect production systems and market structures.

Third, rapid globalization implies the advent of an age of uncertainty. In information and knowledge-based societies, the sources of value-added shift from the manufacturing industry to the service industry. Successful economic strategies in industrial societies are not necessarily applicable to the new society of globalization and information. Additionally, rapidly increasing integration and a shorter technological innovation cycle would make the search for an appropriate industrial structure for this new society somewhat fruitless.

2. New Industrial Policies

2.1. Philosophical Background

It is generally accepted that the critical factor behind Asia's rapid growth was 'Asian Values'. But at the onset of the crisis in 1997, these same 'Asian Values' were blamed for causing the crisis. Asian Values are based on Confucianism. Confucianism stresses the fulfillment of human morality through learning and training. It emphasizes that elite groups, who are supposed to have moral superiority, should lead the morally lacking general public using principles and rules that they have chosen themselves. Adherents to Asian Values insist that the government and the elite group of officials should manage the economy. Some political leaders in East Asian countries have supported the maintenance of Asian Values. Their argument is that the government and its officials have been capable of generating rapid economic growth and therefore that future prosperity should depend on the government. However, it seems as if political leaders make reference to Confucian Asian Values mainly to justify their almost authoritarian political systems.

Morover, connecting Asian values only with Confucianism is too much of a simplification. In traditional Asian philosophy, there exists another school of thought, Taoism, which has been widely ignored in the process of industrialization. Taoism is skeptical about confining people within specific moral values and an artificial order. It emphasizes the spontaneity and the accommodation to being natural. The central theme of Taoism is 'being natural without force'.

> "Give up the desire to be sage and throw away intellectuality, then the payoffs to the people will be much larger. Give up the desire to master perfect virtue and throw away the arrogance to be just, then the welfare of the people will be greatly enhanced. Give up the desire to be ingenious and throw away cleverness, then there will be nothing to steal . . ."[35]

[34] Drucker (1999)

[35] Lao-Tsze, Scriptures on Morality

In applying Confucianism and Taoism to the economic context, Confucianism emphasizes government-led economic management while Taoism tends to stress the importance of spontaneous market order.

Taoism in economic sense is similar to neoliberalism. Hayek, the leader of the Austrian School and neoliberalism, stresses the spontaneous market order and competition as a discovery process, rather than government intervention in resource allocation.

> "The one who tries to possess the world in a forced way will lose it. The world is a mysterious thing that cannot be controlled in an artificial way. The one acting contrary to being natural will fail and the one trying to hold with force will lose . . ."[36]

Government-led economic management based on Confucian Asian Values may have contributed to the growth of East Asian economies. However, emphasis on the leading role of the government and its officials resulted, in general, in more regulations and restrictions on economic activity than in Western countries. In addition, emphasis on the elite group as a leading social force resulted in non-transparent governance rather than rule of law.

Due to the complexity and diversity of the real world economy, governments will come across great difficulties in playing the role of an omnipotent and objective economic system manager. To cope with the changing economic environment, it will be wiser to follow the spontaneous market order and principles of competition rather than artificially managing the economy.

In the widely open world economy ruled according to global standards, a new paradigm of economic management should be presented. The economy is a system in which diverse agents interact with each other. It rises above artificial manipulation. The government, recognizing the complexity and diversity of the economy, should adapt to its nature. The economy is not a system that can operate by control. It is a system in which continual search and evolution take place. Governments should nurture the economy by providing proper surroundings for market mechanisms to operate.

> "We are only beginning to understand on how subtle a communication system the function of an advanced industrial society is based – a communication system which we call the market and which turns out to be a more efficient mechanism for digesting dispersed information than any that man has deliberately designed. If man is not to do more harm than good in his efforts to improve the social order, he will have to learn that in this, as in all other fields where essential complexity of an organizes kind prevails, he cannot acquire the full knowledge which would make mastery of the events possible. He will therefore have to use what knowledge he can achieve, not to shape the results as the craftsman shape his handiwork, but rather to cultivate a growth by providing the appropriate environment, in the manner in which the gardener does this for his plants"[37].

2.2. Directions of New Industrial Policies

Due to the rapid pace of globalization and the adoption of global standards, governments' ability to effectively intervene in the economy is declining rapidly. What should be the direction of industrial policy in this environment?

Before the crisis, a group of economists called 'revisionists' suggested that the implementation of an industrial policy similar to the ones adopted by successful East Asian economies such as Japan, Taiwan, and Korea would be a good strategy. The tendency was even more conspicuous when discussing the possible policy responses to the so-called "unlimited competition" resulting from globalization. An increasingly common view seems to be that the government should help firms

---

[36] Lao-Tsze, Scriptures on Morality
[37] Hayek(1989), p7

compete successfully in the international market and that it should intervene, to a large extent, in adjusting the industrial structure to the globalized competitive environment.

This paper's implications are diametrically opposed to the revisionists' industrial policy proposal. Above all, globalization is basically a diversified and sometimes conflicting phenomenon that has different economic implications depending on the context[38]. Therefore, it is especially difficult for a government to design a particular industrial structure that is supposed to be optimal for its economy. In this sense, the economists' search for an alternative industrial organization will not yield any definitive, single structure of industrial organization.

For example, the Fordist mass production system was thought of as the optimal production system in the early 20th century. However, changes in the market environment, such as demand diversification and technological flexibility supported by microelectronics, called for a more flexible production system. As a result, from the late 1970s the German and Japanese lean-and-flexible production systems (Just-in-Time system of Toyota Motors is a typical example) emerged and seemed to have surpassed the Fordist mass production system. But in the late 1980s and 1990s, the German and Japanese systems were in turn being challenged by new American systems such as the self-managed team or self-directed work team systems. Therefore, instead of adopting an active interventionist industrial policy that requires a tremendous volume of information and is not guaranteed to produce the correct solutions, an effective response to globalization may be to let the market order prevail in discovering an optimal business and industrial structure[39]. This entails allowing the private sector maximum freedom to make structural adjustments in response to the globalization of market competition. The role of the government should be confined to preserving the spontaneity and endogeneity of the market order and to cultivating a better economic environment for its smooth operation. The government should determine exogenous variables for the market order while the determination of endogenous variables should be left to market competition.

[38] Oman(1993) identifies the globalization phenomenon as not only a market extension but also a mixture of market deregulation, the spread of new information technologies, the intermeshing of financial markets and the innovation of industrial and production systems.

[39] Jwa (1997) presents theoretical and empirical analysis about spontaneous evolutions of industrial organizations. It shows that, due to globalization and the progress of information technology, industrial policies based on Hayekian competition should be accepted whatsoever.

References

Amsden, A., Asia 's Next Giant, Oxford University Press, 1989

Balassa, B., "The importance of Trade for developing Countries", Banca Nazionale del Lavoro Quarterly Review, No. 163, pp437-469 (1987)

Bhagwati, J., "From Miracle to Debacle: The Asian Economic Crisis in Perspective", presented in 32th International General Meeting: the Challeges of the Next Century for the Pacific Basin, Pacific Basin Economic Council, 1999

Camdessus, M., "Governments and Economic Development in a Globalized World", presented in 32th International General Meeting: the Challeges of the Next Century for the Pacific Basin, Pacific Basin Economic Council, 1999

Cho, Y. and Rhee, C., "Macroeconomic Views of the East Asian Crisis: A Comparison", presented in Conference on Asian Corporate Recovery: Corporate Governance & Government Policy, 1999

Chang, E., the World of Taoism, Dong Nam Poong, 1998 (in Korean)

Choi, D., Causes and Development of East Asian Crisis, KERI, 1998 (in Korean)

Drucker, P., Management challenges for the 21th Century, Harperbusiness,1999

ESCAP, "The East Asian Crisis: Implications for Sustainable Industrial and Technological Development in the Asia Pacific Region"

Hallward-Driemeier, M. and D. Dwor-Frecaut, "Asian Corporate Recovery: A Firm Level Analysis", presented in Seminar on Asia Financial Crisis: Evaluation and Problems, 1999

Hayek, F.,"The Pretence of Knowledge", American Economic Review vol.79, No.6, pp3-7, 1989

Hwang, I., "The Ownership and Control of Chaebols", in Direction for Corporate Governance Structure of Korea Toward 21th Century, 1999 (in Korean)

________.,"Understanding Economic Concentration", in Open Economy and Economic Concentration, Korea Economic Research Institute, 1998 (in Korean)

IMF, "Indonesia: Statistical Appendix", IMF Staff Country Report No. 99/39, 1999

Jwa, S., *A Theory of Chaebol: Evolutionary Approach*, Beebong Publishing Co., Korea, 1999 (in Korean)

_____, Economy Not Controlled by Command, Nanam Publishing Co., 1999 (in Korean)

_____, "Globalization and Industrial Organization: Implications for Structural Adjustment Policies", Regionalism vs. Multilateral Trade Arrangement, NBER-East Asia Seminar on Economics, Vol. 6

____ and C. Huh, "Korea's 1997 Currency Crisis: Causes and Implications", Korea Journal Vol. 38, No 2, Summer 1998

____ and Yi, Korean Financial Crisis: Evaluations and Lessons, presented in Australia and Kora into the New Millenium: Political, Economic and Business Relations organized by Australian Center for Korean Studies, Griffith University, Aug. 1999

Krueger, A.O., The Experience and Lessons of Asia 's Super Exporters, in Corbo et. Al. (1985)

KERI, *Business Groups in Korea*, Korea Economic Research Institute, 1995 (in Korean)

KERI, "Policies for Corporate Restructuring: Review and Problems", Policy Report 98-03, Korea Economic Research Institute, 1998

KIET, "Regional Information: Southeast Asia", Real Economy, Vol. 114, November 1997, Korea Institute for Industrial Economics and Trade (in Korean)

Kim, W., "Financial and Corporate Restructuring in Southeast Asia Countries", World Economy, June 1999, Korea, Korea Institute for International Economic Policy (in Korean)

Kwack, T., "Industrial Restructuring Experience Policies in the 1970s", presented in Workshop: Industrial Restructuring Experience and Policies in the Aisan NICs, East-West Center, Honolulu, 1984

Lao-Tsze, Scriptures on Morality

Lee, B., "Debt Guarantee of Business Groups", in Open Economy and Economic Concentration, Korea Economic Research Institute, 1998 (in Korean)

Lee, B., *Factors of Korean Economic Growth and Roles of Industrial Policies*, Korea Economic Research Institute, 1998 (in Korean)

Lee, J., "Corporate Restructuring in Korea: Experience and Lessons", presented in a Policy

Workshop organized by Korea Money and Finance Association, 1999
Lee, K., *Policy Loans: Effects and Problems*, Korea Institute of Public Finance, 1994 (in Korean)
Lee, S., "Governemnt-led Industrial Organization Policies: Accomplishment and Problems", Federation of Korean Industries, 1988 (in Korean)
Lee, Y., "Implications of the Financial Crisis on Industrial Development in Korea", KIET Occasional Paper 031, 1999, Korea Institute for Industrial Economics and Trade
Moon, H., Cho, B., Hwahng, H. and Kim, H., Masurement of Total Ractor Productivity: 27 Industries in Manufacturing, Korea Productivity Center, 1990
Oman, C., Globalization and Regionalism: the Challenge for Developing Countries, OECD Development Center
Rasiah, R., Busting the Bubble: Causes and Consequences of the Southeast Asian Financial Crisis", European Institute for Asian Studies Briefing Paper, No. 98/01, 1998
Sachs, J., "The Wrong Medicine for Asia", mimeo, 1997
Shirazi, J., "The East Asian Financial Sector Restructuring: Progress and Issues", presented in Conference on Asian Corporate Recovery: Corporate Governance & Government Policy, 1999
Sohn, C., Yang, J. and Yim, H., "Korea's Trade and Industrial Plocicies: 1948-1998", KIEP Working Paper 98-05, Korea Institute for International Economic Policy, 1998
Vajragupta, Y. and Vichyanond, P., Thailand's Financial Evolution and the 1997 Crisis, Thailand Development Resaerch Institute Foundation, 1998
Vanberg, V., "Spontaneous Market Order and Social Rules: A Critical Examination of F.A. Hayek's Theory of Cultural Evolution" in John Cunningham Wood and Ronald N. Wool (eds.), Friedrich A. Hayek: A critical Assessments, Vol. IV, Routledge, London and New York, pp177-201
Wade, R., Governing the Market: Eocnomic Theory and the Role of Government in East Asian Industirlization, Princeton University Press, 1990
Waiquamdee, A., S. Krairiksh and W. Phongsanarakul, Corportaes' "Views of the Constraints to Recovery", presented in Conference on Asian Corporate Recovery: Corporate Governance & Government Policy, 1999
World Bank, The East Asian Miracle, A World Bank Policy Research Report, 1993
Yoo, I., "the Role of Korean Government in Crisis", presented in Conference on Economic Crisis and the Role of Government, Korea Public Finance Association, 1999
Yoo, J., "Effects of Heavy and Chemical Industrialization Policy in 1970's on Capital Eficiency and Export competitiveness", Research on Korea Development Vol. 13, No 1., Korea Development Institute, 1991
Yoo, J., "The Government in Korean Economic Growth", KDI Working Paper No. 8904, Korea Development Institute, 1989