# 출장보고서

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Ⅰ. 출장 개요

▣ 출장목적

○ 중국 GRIIS(Guangdong Research Institute for International Strategies)에서 주최하는 학술 포럼 참석

○ Historical Review of Industrial Restructuring of Korea에 대하여 주제 발표

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Ⅱ. 주요 활동

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## ▶ 첨부 자료 ◀

# Historical Review of Industrial Restructuring of Korea

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## I. Pre-industrialization

Korea was one of the poorest countries in the world in 1950s. Looking back upon the past of Korea, it can be easily understood why Korea became the poorest.

First, the Chosun Dynasty(1392~1910) whose political ideology was based on Confucianism admired puritanical way of life and thus suppressed the devlopment of commerce and international trade. In the 19th century there occurred numerous riots from starvation.

Second, Korea was Japanese colony for 35 years(1910~1945). Japanese imperialism deprived Korea of any opportunities of economic growth. A few of industrial sites were developed in the northern area of the Korean peninsula which was aimed at the integrated economic zone with Manchuria. The southern area of Korea was developed as the base of food supply for Japanese.

Third, Korea was emancipated from Japan in 1945 and the Republic of Korea was established in 1948. Korean War(1950~53) broke out and destroyed industrial facilities and SOC completely.

In the first half of the 20th century the Korea peninsula was the ground of the invasion of imperialism and of the cold war. Ironically, what was destroyed was not only economy but also social structure. The noble class in the Chosun Dynasty whose contribution to economy was negative was removed by the Japanese occupation. Social stratification woven in the Chosun Dynasty had been tight and rigid. People in the



common class could not dream of socially upward movement.

When Korea was reborn as a nation in 1948, there was actually no ruling class. Because Korea was emancipated by the Allies Power including the US and the USSR, not by ourselves, the social structure of Korea was in a vacant state. Therefore, to build up a new nation meant the formation of new ruling class. The opportunity of becoming a member of new ruling class was open to everyone in Korea. If the eagerness to enter new ruling class was to be integrated, the potentiality of high economic growth could be realized.

There had been a central question among Koreans: why we failed to modernize and thus remained to be the poorest country in the world. Modernization and economic development has been the national consensus of our age.

It was thought that modernization should come from modern education. Statistically, the rate of illiteracy was low even in the colonial period. But it was the outcome of Japanese policy to bring up labor force. Access to advanced learning required for modernization was limited. What was necessary for building up a nation after the emancipation was the persons of advanced knowledge. Hence, the educated people who were equipped with the knowledges of business administration, engineering, etc were regarded as a member of new ruling class. In particular, college education became the indicator of new high or ruling class. Consequently, the competition for college has been extremely severe. The educated people have been the locomotive for economic development.

Refering to the history of western countries, it was found that men of business were respected. It was thought that the reason that we remained to be the poorest should be to look down on businessmen. It was generally agreed that business should be respected as a vehicle to save starving people.

Waht remained was the implementation of the national consensus. The political hub of gathering those spirits were needed. President Park, Chung-Hee rose and conpired the 5·16 military coup in 1961. He understood the aspiration of Korean people for modernization and economic development and triggered the march to put them in practice. The appearance of President Park was a fortune to Korea and Koreans.

## II. Primitive Development Stage of 1960s

① Beginning of Economic Development

As soon as he grasped political power in 1961 he promised economic development. But almost all Koreans did not believe his promise. His promise was thought to be nothing but a political slogan. His slogan of economic development looked like a daydream. Their disbelief seemed to be rational. The initial conditions for economic development was not favorable. There was no natural resources. Industries had no accumulated capital for investment. The state of SOC was miserable. Only unskilled and uneducated people were endowed. In a word, the situation seemed to be hopeless to ordinary persons.

If the economic landscape of the early 1960s is shown, it would be helpful for the situation. As for employment in 1963, 63% of all workers were engaged in agriculture. Only 8% of them worked in industry. In export in 1961 the share of manufacturing goods was only 15% whereas that of raw material was 85%. The share of students in college or above were only 4.4% in 1965. Per capita income was 79 USD in 1960. The average annual economic growth rate for 1953~60 was 3.8%.

The initial strategy for economic development was to build up modern industrial plants. Modern industrial plants were expected to improve productivities drastically through the economies of scale and so to contribute to economic growth effectively.

But, modern industrial plants were beyond Korean industry's capability. The import of industrial plants was inevitable. The problem was that funds for importing, that is foreign exchanges was not sufficient. The solution was to make foreign exchanges by exports and/or to borrow foreign loans.

Korean government decided to make every effort of maximizing the volume of exports. The meaning of 'export' in the initial stage of



development was different from that of today. Since the purpose of promoting exports lay in earning foreign exchanges, profitabilty of exporting company did not matter. Neither did or the efficiency of government support for exports matter. What mattered was the acquired quantity of foreign exchanges. Everything was attempted to be exported. It included wig, plywood, rabbit' hair, pig's skin, bamboo products and so on.

In order to collect the information on foreign markets KOTRA(Korea Trade Promotion Agency) was established in 1962. If the foreign offices of KOTRA informed a new fashion trend or the change of consumers' taste, exporters in Korea developed new items instantaneously.

The foreign exchanges earned by exporting was the resources for import. They were too valuable to be consumed away. Foreign exchanges was enforced to turn in the Bank of Korea by the law on the management of foreign exchanges. Private reserving was prohibited by the law.

What should be added to the interpretation of the export is the rationale for adopting export-oriented policy. Economists praised the decision of Korean Government that adopted export-oriented policy rather than import substitution policy which was in fashion in 1960s. It is true that export promotion has contributed to rapid growth and internationl competitiveness. However, at least in the initial stage of development it was not intended for the purpose of what economists make much of. It was after the mid 1960s that Korean government recognized the true virtue of export promotion.

Another way of securing foreign exchanges was foreign loan. Presumably, FDI is preferred to foreign loan. FDI can share the risk of investment failure among investors. In the case of foreign loan, the risk of paying back is ascribed entirely to debtor.

Nevertheless, the political atmosphere was unfavorable for FDI. Since the second world war, a lot of colonies became independent nations. They were afraid of the resurrection of imperialism by way of FDI. On the other hand investing countries were afraid of the nationalization of invested assets. In fact there were frequent incidences of nationalization in developing countries during the period of 1950s~60s.

Therefore, foreign loan was inevitable choice to Korean government of 1960s. Korean government encouraged aggressively public or commercial loan from abroad. As an incentive government provided private firms with guarantee for the foreign loan. Governmental guarantee made the way to the intervention into private firms. Regulation and guarantee of government was a powerful tool for realizing its will.

Normally regulation tends to be regarded as a hurdle to economic activities. But, in Korea regulation played a role of stimulating investment of private firms. That is why it is called to government-led development.

It is though that foreign loan could play a role of driving force to acquire foreign technology and skill and thus to accelerate exporting of private firms. Private firms to be given foreign loan must pay the principal and interest to foreign loaner sometime. They must earn foreign exchanges by exporting. The plants that private firms set up with foreign loan should be able to produce exporting products. In order that engineers could manage the production processes they must make themselves master of foreign technological knowledges and know-hows. If they neglected to learn foreign technologies their firms might be exposed to failure in exporting. Hence they could not but be eager to learn foreign technologies. If the firms were provided with governmental guarantee, government would monitor their technological progress. In sum, borrowing became the stick to absorb foreign technology. But it was very risky. The business of Korean firms was on the edge.

Other means of accumulating foreign exchanges had been searched. One example is to dispatch Korean workers to West Germany. Once West Germany accomplished the miracle of Rhein river at the end of 1950s, German economy was in the excess demand for labor force. German government asked Korean government to send workers for mining and nursing. Korean government willingly accept the request. The recruit for working in Germany was so popular among Korean youths that a lot of college graduates applied. Their salaries sent to Korea was helpful for



accumulating foreign exchanges and contributed to industrialization.

Another example was the participation in the Vietnam War. Politically, it was criticized by Korean as well as foreign intellectuals. But economically, it helped very much Korea to industrialize. In return for the participation, Korean government asked the U.S. government to open some economic projects to Korean firms in Vietnam. Those projects included transportation service, construction, supply of footwear etc.

The story of establishing POSCO may be a good example that shows how difficult it was for a developing country to go over the threshold of industrialization. Steel mill used to be a symbol of modern industry and it was also the dream of President Park. He tried to launch the project of building up a steel mill just after the military coup. It did not take a long time for him to be encountered with a chain of obstacles. The biggest trouble was financing problem. The huge amount of foreign exchanges for constructing a steel mill was beyond Korea’s capacity.

Korean government applied for the development funds of the World Bank. Unfortunately, it failed to pass the feasibility test. The reason was that the demand for steel products produced by the planned mill was not sufficient. Korea did not have comparative advantage in steel industry. The World Bank recommended that it should be economical to import steel at a reasonable price.

But Korean government had a totally different plan. Its vision was to develop shipbuilding industry, machinery industry, automobile industry, etc. sequentially on the base of planned mill. Korean government argued that the problem of insufficient demand would be solved by developing inter-related industries. The argument of Korean government was rejected by the World Bank.

After several times of trial, at last Korean government succeeded in financing in the late 1960s. The fund was obtained from Claim Funds gained by Treaty on Basic Relations between Korea and Japan which was ratified in 1965. Claim Funds originated from the Japanese compensation for exploiting Korean colony during the occupation period.

Retrospecting to the case of establishing POSCO we can raise a question. In the book, The East Asian Miracle, published by the World Bank in 1993 the World Bank analyzed that economic miracle of Asian Countries including Korea was attributable to export-oriented policy. Inconsistency is found in their arguments. They rejected Korean government's proposal that steel industry would be grown up through exporting. Without President Park's big push which seemed to be irrational to ordinary economists, POSCO is not imaginable.

② Settlement of Institutions

Economic Development Planning

Korean government established '5-year economic development planning' which started in 1962. Its purpose was to show explicitly what goals to achieve and how to mobilize resources. Then economic agents were going to make a plan based upon government's plan. By use of the mechanism government drove economic development and attained at the planned growth rate. Its fundamental objective was to induce the activities of economic agents. Therefore it was different from those of socialist countries which denied the function of market economy. On the contrary, Korean economic planning implement economic infrastructure in order for market economy to work.

Korean government established Economic Planning Board(EPB, in short) to manage the planning. Budget office was attached to EPB. That implies EPB was authorized to allocate resources that would be utilized for economic development. The head of EPB was vice prime minister who had the authority of coordinating other ministries. Korean economic planning had lasted until the 6th planning(1987~92).

Export Promotion Forum

Korean government institutionalized Export Promotion Forum in 1965. It was presided by president and consisted of exporters and export policy authorities. It was a monthly forum to review the performance of exports and to discuss any hurdles on exporting and find solutions. President Park made much of the Forum. Although the special army forces of North Korea made a surprise attack on Blue House on January 21, 1968 he attended the Forum on the next morning.



③ Performance

There had been big success of economic growth and export promotion in 1960s. At the end of the first Economic Development Planning(1966) Koreans were surprised at their performance. The annual growth rate of 1966 was 12.2%. The amount of exports went through 100 millions USD on November 30, 1964. The day is still celebrated as 'Day of Export'. Statistically, economic growth during the period of 1961~70 was 8.4% which was at the world top level. Export was exploded from 33 million USD in 1960 to 835 million USD in 1970, that is the increase of 25.3 times. The share of manufacturing industry in GDP increased from 10.8% in 1960 to 21.6% in 1970.

The engine of growth was the large firms engaged in exporting labor-intensive products. In particular, the development of textile industry was noticeable. It grew up to be a leading sector domestically and overseas. Korean textile industry was positioned at the world top level with Hong Kong and Taiwan at the end of 1960s.

Korean exporters of textile took advantage of the change in international industry structure. Japan used to be at the top position in textile industry until the early 1960s. As Japan transformed its industrial structure from textile to electrical and automobile Korean exporters penetrated into the transition. Their import of Japanese design and technology upgraded Korean textile industry which remained at the low end level.

The experience of success in textile industry extended to footwear industry. Using the common characteristic in labor-intensive industries, footwear industry could develop rapidly. It also grew up to be a world leader.

Electrical products such as radio and TV began to export. But their competitiveness was not yet comparable to that of Japan. The only strong point of low wage was not critical in electrical industry.

Success in economic growth made the national sentiment of Korea change from pessimism to optimism. The spirit of 'we can do it' became prevalent. The political popularity of President Park soared and he was re-elected for the president in 1967.

④ Industrial Upgrading

It was sure that Korean economy was in the mood of progress at the end of 1960s. However, the argument that with the existing industrial structure to produce low value-added it should be difficult to attain the economy of high income began to be raised among economists.

The Japanese experience of industrial restructuring in 1960s was a stimulus to Korean industrialists. Some of large firms who were successful in accumulating capital launched the projects of preparing transformation of their business. One of them was to enter into automobile industry. In fact, it was also another dream to make a made-in-Korea car among Koreans. Many firms began to review their business in electrical industry.

Without the Korean government's ambitious projects of heavy and chemical industrialization in 1970s, there might be a slow and steady industrial transformation on the market base.

The appearance of financially failed firms alerted Korean government at the beginning of 1970s. Because of limited market size of labor-intensive industries, competition among Korean producers must bring about losers. Based on the market principle those firms should go into bankruptcy. But the bankruptcy was not be taken for granted by Korean government. Korean government as well as private firms was not accustomed to massive bankruptcy caused by industrial restructuring. Bankruptcy had been regarded as individual firm's financial failure. Moreover, it was taken into consideration that the increase in bankruptcy might have a negative influence on foreign loan. Most of financially failed firms were saved by the emergency measure. It became a momentum that Korean government recognized the necessity of industrial transformation.



## III. Heavy and Chemical Industrialization of 1970s

① Background

Originally, heavy and chemical industrialization(hereafter, HCI) was initiated for the purpose of national security. At the end of 1960s the treat of North Korea's invasion became bigger and bigger. To make matters worse, Nixon doctrine was declared in 1969. In order to rationalize pulling out of the U.S. forces from Vietnam, President Nixon said that Asian countries should defend themselves by their own forces. Until then, defence of South Korea was relied upon the U.S. Army. Thanks to lessening the burden of national defence Korean government was able to put all the resources into economic developing. Nixon doctrine implied that Korea should arm itself in preparation for pulling out of the U.S. army.

What mattered was the shortage in armament. In fact, there was no made-in-Korea arms at all. It became urgent that heavy and chemical industries need to be developed for armament.

Besides national security, HCI had another good reason for accelerating economic growth. In order to continue the trend of high growth in 1970s high value-added industries needed developing. Heavy and chemical industries were the good candidates.

A political reason was hidden in HCI. President Park who enjoyed high popularity in 1906s attempted to prolong his presidency at the beginning of 1970s. He wanted the higher economic growth in order to soothe political resistance.

Despite of the initial motive HCI was characterized with dual targets consisting of economy and security. Actually, electronic industry was included in the target industries of HCI. It was regarded as a rising star for future, unlike the name of HCI.

② Implementation

President Park declared the plan on HCI at the New Year's press conference in 1973. Six industries were targeted: steel, chemical, non-iron metal, machinery, shipbuilding, and electronics. Government assigned accountable companies, mainly large firms, to each industry. National Investment Fund was founded for financing. Some of engineering colleges picked up by government were to specialze in the education and researches of specific industry. Finally, special team in charge of HCI was established in the secretarial office of Blue House.

The projects of HCI were proceeded based on the plan of government at first. Since HCI was proceeded for the purpose of national security the accountability of completing the tasks was absolutely important. For the reason large firms which had been revealed their capability were selected and were subsidized enormously. The incentives given them during the projects of HCI became to amplify he formation of Korean Chaebols.

But as time went by, the concern of Korean government moved to the objectives of economic growth and export promotion. From the stage of the birth of HCI, Korean government was in agony. The concentration on national security would be likely to lower economic growth. The opposite case would be likely to have national security weakened.

Fortunately, the dilemma was solved by a technocrat of brilliant idea. He suggested that in the time of peace firms joining in HCI may produce commercial products; in the time of emergency they should change instantaneously production lines to produce military arms. In order to increase in business incentive, firms in HCI might be allowed to produce military arms during the phase of recession of business cycle. Of course, during the phase of boom they might be allowed to increase in the share of commercial products. Also, for the instantaneous change of production lines interchangeable parts and components should be designed. Thanks to his idea HCI could fulfill both of the goals. He was appointed to be the head of special team in charge of HCI in Blue House.

International situation became favorable to Korea. Nixon doctrine of pulling out was relaxed, being taken into account the situation of Korean Peninsula.

Korean economy continued high growth during HCI. High growth was enabled by large firms in HCI. Large firms plunged into the projects of HCI. Basically, HCI provided large firms with the opportunities of



entering into new industries induced by incentives. To illustrate incentives, markets of heavy and chemical industries were secured by the procurement of government. In othert words, the risk of investment failure could be absorbed by government. Funds for investment was available at very low cost. It was easy to be granted various kinds of license in other businesses. That was another important incentive for large firms. Because all of large firms in HCI belonged to Chaebol, i.e. conglomerate, business license could be invisible benefit. As a result, the business boom induced by HCI was overheated at the end of 1970s.

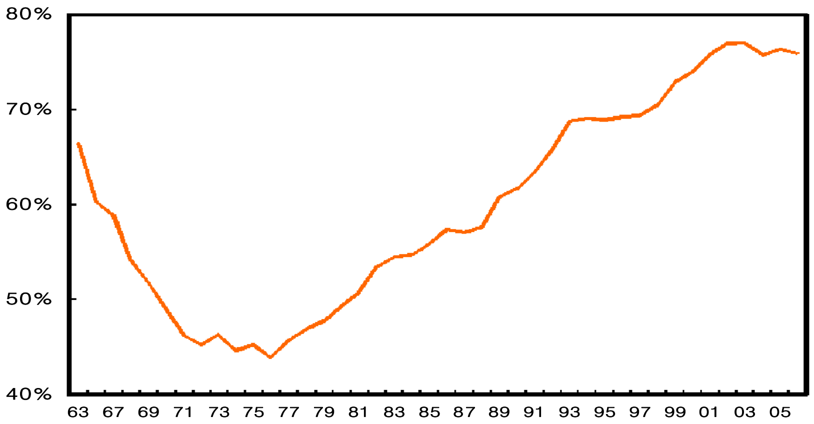
The projects of HCI were launched in January, 1973. When the first oil shock broke out in the winter of the same year, it was expected that HCI would wreck. Nevertheless, HCI went through the unexpected hurdle of the first oil shock. How was it possible?

The skyrocketing oil price dried up the foreign exchange reserves. But it was not easy to make foreign exchanges since the stagflation triggered by oil shock dropped the amount of exports. Korean economy was in peril. The clue was found in oil dollars. The rise of oil price meant lots of dollars were poured into the Mideast countries. They launched to build up SOC with oil dollars. Korean government decided to join the construction projects. Korean firms and workers were sent to the Mideast. The oil dollars earned in the Mideast salvaged HCI and Korean economy.

In conclusion, the HCI plan which began with the motive of national security ended up with providing business opportunities and industrial transformation. Through HCI the project of made-in-Korea automobile started successfully. The shipbuilding industry was launched and grew up to be a major exporting industry within a very short time. Electronic industry of which firms were eager to learn foreign technologies grew up to be another major exporter. All those industries were not directly related with national security or even defense industry. They had developed with commercial objective.

HCI was the momentum to develop small and medium-sized enterprise(hereafter, SME) policy. The portion of SME in terms of employment had decreased before HCI, since their business was outdated and large firms were actively supported in 1960s. Korean government recognized the role of SMEs during the projects of HCI in that the parts and components produced by SMEs were critical in maintaining the competitive advantage. The law on promotion of interrelated suppliers was enacted in 1975. SME policy aimed at developing suppliers of large firms, which have fixed the characteristic of Korean SMEs. SMEs developed as suppliers could reinforce the competitiveness of large firms in assembling industries in turn. Thus it made a kind of circle.

[Fig. 1] The Portion of SME in terms of Employment




The competitiveness of large firms, in particular assembling industry, relied on that of their suppliers. The competitive advantage could be augmented by cheap but qualitative parts and components produced by SMEs.

Usually, the production of SME as a supplier followed these steps. Large firm as an assembler imported technology-embodied parts and components. When technology was acquired, large firm made the decision of make-or-buy and if it decided to buy, then it would provide technology to suppliers. Based on the acquired technology, SME could produce cheap but qualitative parts and components.



If cheap but qualitative parts and components are to be supplied by SME or a large firm is to provide technology to SME, the long-term and stable relationship should be required. That is, subcontracting system is indispensable. With the market transaction, opportunistic behavior could not be avoided. In the case of developing country, it is an effective way of upgrading the technology of SME that a large firm quipped with advanced technology and modern management should train SME.

③ Evaluation

HCI had the double-helixed characteristic by birth. Most of criticism against HCI came from the government intervention that replaced the function of market economy. They argue that inefficiency took place even in commercial industries in HCI by the intervention. But it must be understood that both of defense and commercial characteristic existed.

In sum, HCI has had the double-sided effects. The positive point is that industrial structure was changed fundamentally within a short term. Without big push trough HCI, it would not be easy to go over the threshold of heavy and chemical industries.

Korean economy had developed remarkably during HCI. The economic growth rate(1973~79) was 10.8%. Export increased rapidly from 3.2 billion USD in 1973 to 15.1 billion USD in 1979. Moreover, heavy and chemical industries set up during HCI could lead to technology-intensive industries in 1980s~90s.

The negative point is that unbalanced growth that Korean economy still suffer from was inherited from HCI. Whatever the origin may be, it is true that inefficiency was resulted from HCI. So generous incentives of government caused over-investment. Statistically, operating ratios of industries in HCI had been half times of those of other industries. Chaebol has expanded in nyumber and in each size by the unbalanced growth strategy. Duality of Korean economy has been deepened since SME was developed as supplier of large firms. Finally, allocating function of financial institutions was deteriorated by government's intervention.

At the end of 1970s, side effects of HCI became too serious to sustain. Inflationary pressure triggered by over-investment was so serious. Except participating firms in HCI, most of economic agents or social classes complaint their alienation. Even EPB was opposed to continuing HCI at the end of 1970s.

As soon as President Park was dead in 1979 the project of HCI were closed. Ironically, hasty pursuit of HCI aimed by President Park had negative impact on his popularity. Nest administration did not succeed to HCI.

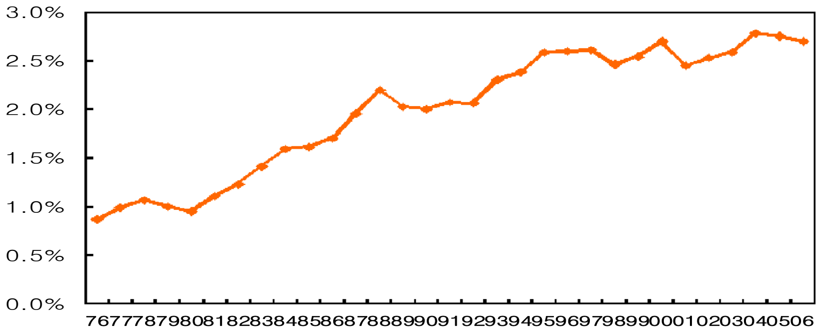
## IV. Globalization and Its Impact of 1990s

① Globalization

Globalization resulted in the fundamental change of industrial structure. The competitive advantage of Korean industries has laid in price until 1990s. Globalization deprived Korean industry of the traditional price competitiveness. In particular, the negative impact was concentrated on labor-intensive industries.

To make matters worse, political liberalization accelerated the decline of price competitiveness at the end of 1980s. Labor unions were prosperous and intensified to struggle for higher wages. Being tired of the conflicts with labor unions, a lot of firms increased in the investement for labor-saving production facilities.

[Fig. 2] The Share of Korea in the World Exports

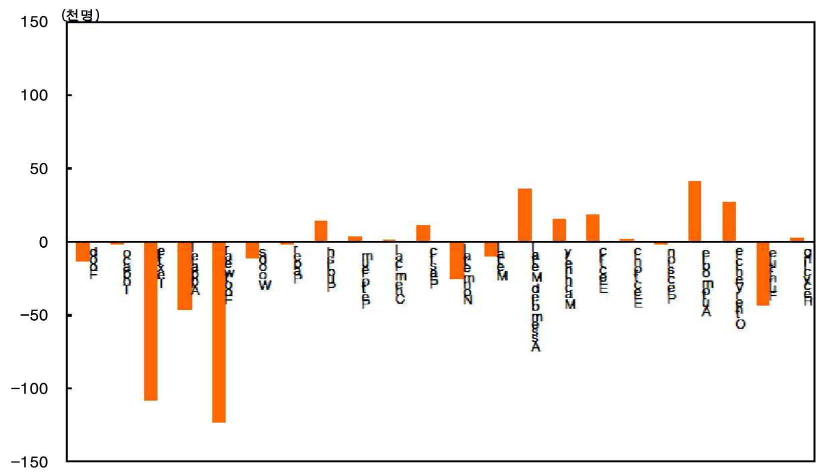





Many a businessmen argued that Korean economy should be in crisis and that the rescue programs should be provided. But Korean government rejected the argument and rather asked for restructuring toward technology-intensive industry.

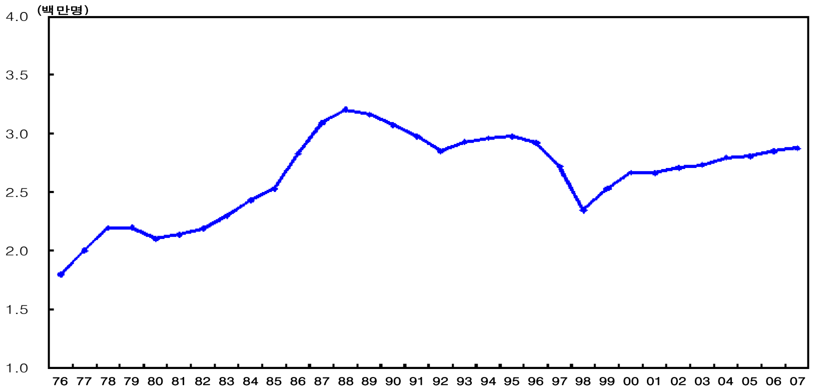
Economists reported that weakened competitiveness happened in the labor-intensive industries. Based on the report there emerges the social consensus that R&D should be intensified and technological industry structure should be established.

[Fig. 3] Change of Employment during the Period of 1991~97




Like any other economies in transition, Korean economy suffered from industrial restructuring. The point was that while technology-intensive industries were nor developed yet, labor-intensive industries were declining. As a result, manufacturing sector experienced the reduction in employment for the first time. It was after the Asian Financial Crisis that it restored the increase in employment.

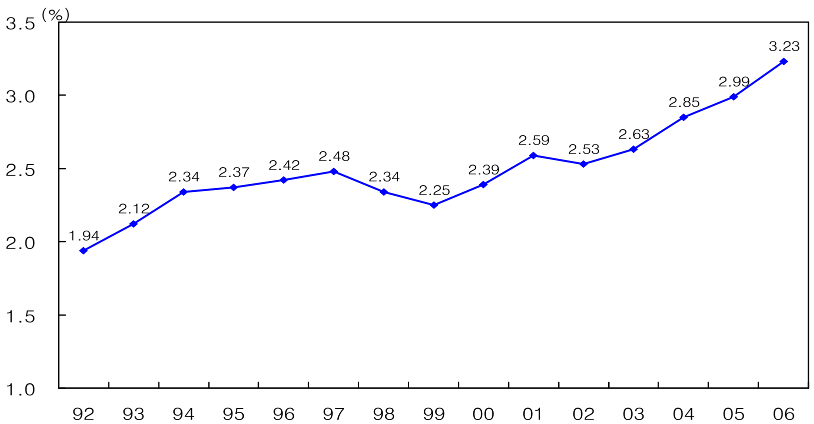
[Fig. 4] Employment of Manufacturing Sector




② Transformation

Fortunately, Korean industry responded to the change of environment promptly. Firms increased their R&D expenditure enormously. As far as the growth rate of R&D expenditure was concerned, Korea has been at the top level in the world.

[Fig. 5] The Ratio of R&D Expenditure to GDP






Additionally, the share of private firms in R&D expenditure was high. About 75% of R&D expenditure came from private firms. Firms tried to regain the competitiveness by transforming their business into technology-intensive structure.

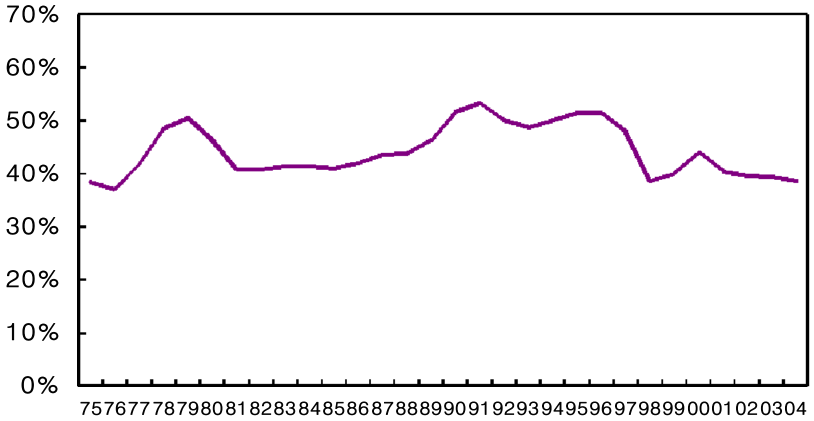
The result of intensifying R&D turned out to be very successful. Korea jumped to the 4th place in the patent application to the World Intellectual Property Organization(WIPO). Industrial technology grew up to be at the world top level.

[Fig. 6] Patent Application to WIPO

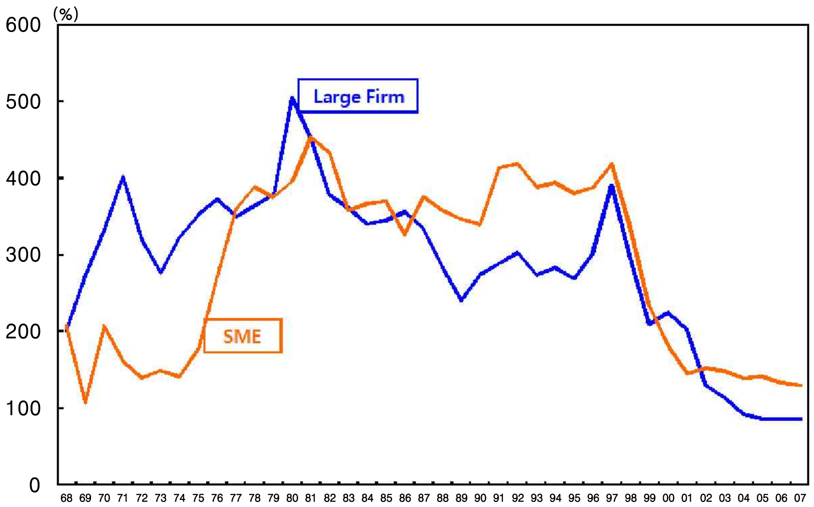
| | 2002 | 2004 | 2007 |
|---|---|---|---|
| 1 | USA(41,296) | USA(43,350) | USA(52,280) |
| 2 | Germany(14,326) | Japan(20,264) | Japan(27,731) |
| 3 | Japan(14,063) | Germany(15,216) | Germany(18,134) |
| 4 | UK(5,376) | France(5,185) | Korea(7,061) |
| 5 | France(5,089) | UK(5,026) | France(6,370) |
| 6 | Netherlands(3,977) | Netherlands(4,284) | UK(5,553) |
| 7 | Sweden(2,990) | Korea(3,558) | China(5,456) |
| 8 | Switzerland(2,755) | Switzerland(2,899) | Netherlands(4,186) |
| 9 | Korea(2,520) | Sweden(2,851) | Switzerland(3,674) |
| 10 | Canada(2,260) | Italy(2,189) | Sweden(3,533) |

However, industrial restructuring heated investment in 1990s. There were two sources of investment. One of investment was made to enter technology-intensive industries. The other was made to install labor-saving production equipments. In addition to equipment investment, investment of construction for expanding SOC which had been postponed in 1980s was increased. The ratio of total investment to GDP in 1990s was as high as that of 1970s' HCI period.

[Fig. 7] The Ratio of Total Investment to GDP




[Fig. 8] The Debt-Equity Ratio of Large Firm and SME






The real problem was that financing for investment was dependent on borrowing. Borrowing has been a practice of Korean firms. But their repetition of the practice was inadequate for such risky activities as R&D. The fragile financial structure could not defend against the Asian Financial Crisis.

## V. Polarization Issues of 2000s

① Polarization

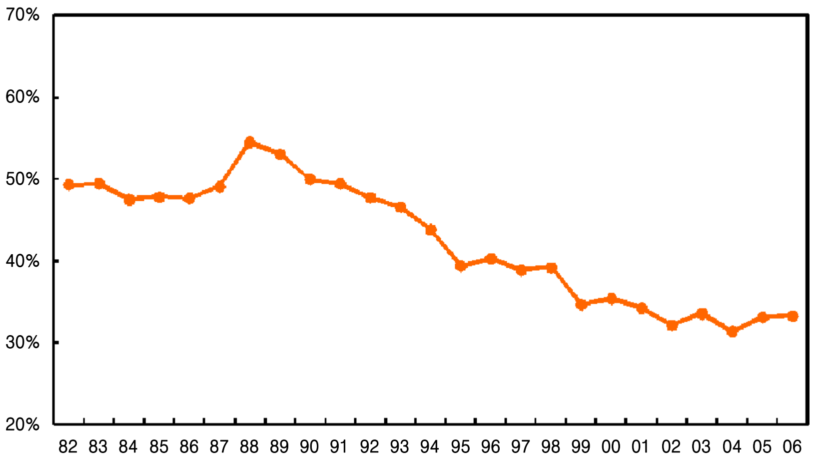
Korean economy as a whole bounced promptly just after the Asian Financial Crisis. The source of bouncing was the resilience of manufacturing industries relied on technology and innovation. But it was limited to large firms of manufacturing and IT.

Another problem was that manufacturing industries have evolved to produce high value-added but to offer limited number of jobs. On the contrary, service industries offered plentiful jobs but the quality of jobs was not good since its value-added was low. Therefore, there emerged the polarized structure of income distribution. The solution for improving the polarization problem should be to upgrade the service industries. Combined with the gap of SMEs, polarization is the current issue in Korea.

② SME

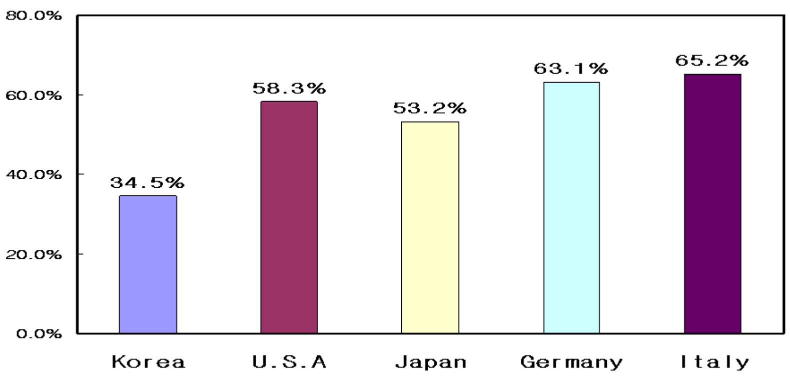
Productivity gap between SME and large firm had been stable before 1990s. Large firms reduced their workers, expanded outsourcing to SME, and intensified R&D activities in 1990s. Those efforts were directed toward the improvement of productivity. The productivity gap between SME and large firm had been widened drastically in 1990s. The productivity gap of SME is another source of polarization.

[Fig. 9] The Labor Productivity of SME Relative to Large Firm




The productivity gap of Korea is prominent when it is compared with other countries.

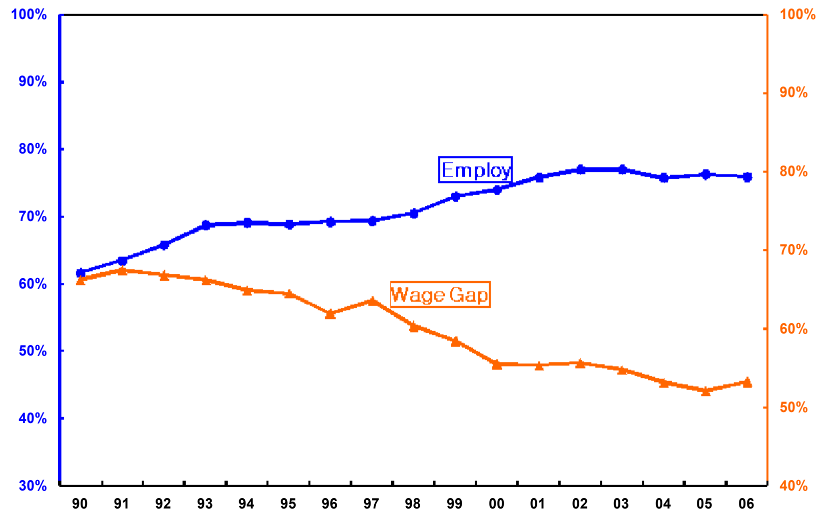
[Fig. 10] The International Comparison of Productivity Gap of SME(2002)






The income distribution in Korea has been deteriorated since 1990s. The phenomenon is said to take place universally due to globalization. In Korea it can be explained that the increase in employment of SMEs with the lower wage implies deteriorated income distribution.

[Fig. 11] The Wage Gap and the Portion of Employment of SME




③ service

Service industries are said to offer plentiful jobs. However, if we look into the inside of service sector carefully, it can be found that many of knowledge-based services install entry barrier through overqualified license or limiting the number of license. Entry barrier in service industries constrains job creation. Government have made attempts of removing the barrier. Since interest groups are resistant to the reform of removing barrier the result is not fruitful.

Korean service industries are under-developed and thus the competitiveness is weak. Nevertheless, it has not been noted since service market was closed. When Korean economy was encountered with the

Asian Financial Crisis, financial market was asked to open completely. The result was the increase in trade deficit of services. Because services can be consumed abroad trade deficit of services increased. The increaed trade deficit of services lower economic growth. The reduction of economic growth after the Asian Finaancial Crisis can be explained by the increase in trade deficit.

It is the central issue to modernize services in Korea. Many of self-employment originate from workers out of declining industries. Since the social welfare system is still poor, layoff workers tries to find job in service industries with low level of knowledge or capital in shape of self-employment. Nowadays, the number of self-employment is increasing, reflecting industrial restructuring. With limited size of market, it implies deteriorated productivity. Also its status is unstable. Re-training or re-education of exit workers is necessary in order to find a new job.

Because of globalization and IT, service sector becomes tradable. It is necessary to strengthen its competitiveness.

## VI. Epilogue

The history of industrial structuring in Korea has been the history of upgrading knowledge base. Economists prescribe that it is necessary to upgrade knowledge base in order to continue economic growth. It is quite true. But the problem is that it is not so easy to practise as they say. Resources should be invested in order to upgrade knowledge base. That means something should be saved; otherwise it might have been consumed for others. In other words it means sacrifice. For Asian countries which had no opportunity of capital accumulation through capitalism, it means self-sacrifice, that is sacrifice for their own people.

In Korea, President Park was criticized for his dictatorship, because he asked for sacrifice of his own people.