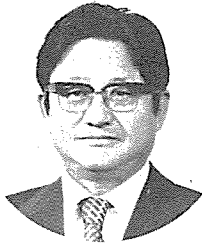


Economic Development In Korea During the Last Two Decades



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이 글은 지난 10월 7일부터 9일까지 3일간 日本 熊本市에서 열린 제13차 Asian Club 원탁회의에서 「지난 20년간의 한국의 경제발전」이란 주제로 발표한 기조연설 내용이다. 〈편집자 註〉

According to UN statistics, Korea had been one of the poorest nations in Asia, until 20 years ago. No one would have believed at that time, if one had said that Korea would be the host of the Olympic Games in 1988.

After World War II, though Korea was liberated from Japanese occupation which had lasted for 36 years, it was divided into two portions at the 38° parallel line by the agreement among four great powers; US, USSR, UK and China, in order to disarm Japanese military forces after the War. The US army and the USSR army marched into the southern and the northern portions of the 38° parallel line respectively, instead of granting instant independence. To make the matter worse, our peninsula

became a front line of cold war between the US and USSR. Even after the Truce of the Korean War in 1953, there remains many problems associated with the division.

In spite of the difficult conditions mentioned above, Korea has achieved a most marvelous economic success during the last two decades of our 5,000 year history. Average annual economic growth has been as high as 8.6% for these twenty years (See Table I).

According to UN statistics, per capita income(GNP) of Korea in the 1950s and early 1960s was \$50-\$100 by official exchange rates, Which would correspond to \$20-\$50 by the prevailing black-market rates of the time.

Around 4 million North Koreans escaped

to South Korea as the refugees heavily burdened an already weak economy. Though more than 70% of total population was engaged in agriculture, Korea would produce only 70-80% of its national food demand. Most of the shortages had to be filled by US surplus agriculture products.

In the late 1950s, flour mills, sugar refining, textile, flat glass, cement, fertilizer plants etc. were constructed with US economic aid. The engineers and skilled workers who had been trained and worked in the construction as well as operation and maintenance stages of the above plants for years played a key role in the industrialization of our nation in the late 1960s and 1970s.

During the period of Japanese occupation, Koreans were allowed to own businesses in the very limited area of manufacturing. Furthermore, Korean engineers were not accepted for employment at most Japanese manufacturing industries.

ECONOMIC GROWTH FROM 1966 TO 1985

In spite of the two recent oil crisis and the social turmoil following the assassination of president Park during this period, Korea has been able to achieve remarkable economic growth, so that it has become an industrialized country and will economically grow to become a member of OECD before the end of the 20th century.

General Park Chung Hee initiated the Military Coup d'etat in May of 1961. One of his catch phrases was "Expel the poverty". After Gen. Park took firm control of the country, he appointed industrialists and engineers to formulate economic developme-

nt plans. The Military Government gave the first priority to the planned projects. Time to time, Gen. Park, resolved some of the major issues directly for the key national projects.

Though he can be accused of prolonging dictatorship for 18 years, he deserves a lot of credit in realizing his motto of "Expel the Poverty" and bringing Korea to its current industrialized nation status.

I am now going to tell you how strongly Korea emphasized the most important of the national projects.

1. Refinery (Yukong)

About a half year after the Coup, we requested Universal Oil Products (UOP), a US company, to make a basic process plan for a refinery at Ulsan. "Yukong", a company wholly owned, then by the government, was formed in October, 1962. It contracted with Fluor Corp., also a US company, to construct a 35,000 BBL refinery based on UOP's process plan. Later, due to shortage of foreign currency during construction, we invited Gulf Oil, another US company, to take over 25% of Yukong by investing \$5 million. In addition, Gulf Oil had arranged a \$20 million commercial loan for Yukong. Fluor completed the construction of the refinery plant within 9 months. Yukong took over the plant from Fluor in December 1963, and started commercial operation on April 1, 1964. Considering Fluor had to import most of the equipment and supplies from the US and Japan, how could we do it within 9 months without Gen. Park and his involvement?

The \$5 million investment of Gulf Oil was the very first foreign investment in

Table 1. KOREAN ECONOMICS INDICATORS

單位：億弗

| Yr | GNP Growth(%) | Foreign Trade | | | Foreign | | 昭和 |
|----|---------------|---------------|--------|----------|---------|---------|----|
| | | Export | Import | Bal-ance | Debt | Cre-dit | |
| 56 | -1.4 | 0.3 | 3.9 | -3.6 | | | 31 |
| 57 | 7.6 | 0.2 | 4.4 | -4.2 | | | 32 |
| 58 | 5.5 | 0.2 | 3.8 | -3.6 | | | 33 |
| 59 | 3.8 | 0.2 | 3.0 | -2.8 | | | 34 |
| 60 | 1.1 | 0.3 | 3.4 | -3.1 | | | 35 |
| 61 | 5.6 | 0.4 | 3.2 | -2.8 | | | 36 |
| 62 | 2.2 | 0.6 | 4.2 | -3.7 | | | 37 |
| 63 | 9.1 | 0.9 | 5.6 | -4.7 | | | 38 |
| 64 | 9.6 | 1.7 | 4.0 | -2.9 | | | 39 |
| 65 | 5.8 | 1.8 | 4.6 | -2.9 | | | 40 |
| 66 | 12.7 | 2.5 | 7.2 | -4.7 | | | 41 |
| 67 | 6.6 | 4.2 | 10.0 | -6.8 | | | 42 |
| 68 | 11.3 | 4.6 | 14.6 | -10.1 | | | 43 |
| 69 | 13.8 | 6.2 | 18.2 | -12.0 | | | 44 |
| 70 | 7.6 | 8.4 | 19.8 | -11.5 | 22 | | 45 |
| 71 | 9.4 | 10.7 | 23.9 | -13.3 | 29 | | 46 |
| 72 | 5.8 | 16.2 | 25.2 | -9.0 | 36 | | 47 |
| 73 | 14.9 | 32.3 | 42.4 | -10.6 | 43 | | 48 |
| 74 | 8.0 | 44.6 | 68.5 | -23.9 | 59 | | 49 |
| 75 | 7.1 | 50.8 | 72.7 | -21.9 | 85 | | 50 |
| 76 | 15.1 | 77.2 | 87.7 | -10.6 | 105 | | 51 |
| 77 | 10.3 | 101 | 108 | -7.6 | 127 | | 52 |
| 78 | 11.6 | 127 | 150 | -22.6 | 149 | | 53 |
| 79 | 6.4 | 151 | 203 | -52.8 | 203 | 63 | 54 |
| 80 | -6.2 | 175 | 223 | -47.9 | 272 | 75 | 55 |
| 81 | 6.4 | 213 | 261 | -48.8 | 324 | 80 | 56 |
| 82 | 5.3 | 219 | 243 | -24.0 | 371 | 88 | 57 |
| 83 | 11.9 | 245 | 262 | -17.5 | 404 | 95 | 58 |
| 84 | 8.4 | 292 | 306 | -13.9 | 431 | 101 | 59 |
| 85 | 5.1 | 303 | 311 | -8.5 | 468 | 112 | 60 |
| 86 | (1-9) | 251 | 238 | 13.4 | - | - | 61 |
| 86 | 9.0 | 317 | 292 | 25 | 475 | 118 | 61 |
| 87 | 7.5 | 356 | 326 | 30 | 479 | 136 | 62 |
| 88 | 7.5 | 398 | 363 | 35 | 482 | 158 | 63 |
| 89 | 7.0 | 442 | 403 | 39 | 481 | 180 | 64 |
| 90 | 7.0 | 491 | 447 | 44 | 473 | 202 | 65 |
| 91 | 7.0 | 544 | 496 | 48 | 461 | 224 | 66 |

Korea and the \$20 million loan was also the first commercial loan. I suppose that financing was initiated under president park's direction. Three years later after the Yukong project, the Korean Government prepared the first Foreign Capital Inducement Law, effective August 3, 1966.

The successful operation of Yukong, the first refinery in Korea, and several expansions of its capacity thereafter, enabled Korea to supply the necessary amount of oil products very rapidly thereby meeting the increasing energy demand of all industries.

When I look back over the history of Korean Industry, I have to say Yukong laid a foundation for the development of all Korean Industries.

2. Pohang Iron & Steel Project (POSCO)

In 1967, 8 companies from the US, UK, W. Germany, Italy and France made a consortium called KISA (Korea International Steel Association) for the purpose of financing the POSCO project. KISA requested a feasibility study of the POSCO project to the World Bank, which concluded in 1968 that it would not be economical. In 1968 the Deputy prime Minister announced the POSCO project had to be postponed, being persuaded by KISA and the World Bank, whereby president Park dismissed him. The next Deputy Prime Minister was so eager for the POSCO project to succeed that he was called "POSCO Deputy prime Minister".

Though political relations between Japan and Korea were officially normalized in 1965, the Korean people had a Lingering feeling of the past toward Japan. President

Park sent park Tae Joon, President of POSCO to Japan several times and he finally obtained consent from the Japanese Government to use the Japanese Compensation Fund and to utilize Japanese technology for the POSCO project. First construction was started in April 1970 and was completed in July 1973. It yielded more profit from the initial operation than expected.

Crude steel production capacity has been increased to 9.1 Million tons after 4 expansions. Production, Sales and Net profit by year are shown in Table II.

The list of top 200 most profitable companies in Korea is announced every year. Since 1974, POSCO has been the NO. 1 company in that list with only a few exceptions. The performance of POSCO has been so spectacular that some industrial leaders even complain that POSCO's large profit margin is due to its monopoly of steel products in Korea.

According to the business magazine, "The Economist" (March 10, 1984 issue), the production cost, and the prices of steel from POSCO are the lowest in the world, i.e. the price per ton is \$290 for POSCO, \$356 for Japan and \$490 for the U. S. Furthermore, POSCO expects to reduce the production cost gradually, partly because POSCO had paid back \$1.3 billion out of its total debt of \$1.9 billion and partly because its assets have depreciated by

more than 50%, as of June 1986.

Although many large steel mills in the World, including the US and Japan, have been forced to reduce their production substantially for the past years, POSCO has been producing above its design capacity for the last twelve years. As a result, POSCO now boasts the world's highest steel prodn production from a single mill.

In addition, despite the strong abjections from the world steel industry, especially from the US and Japan, POSCO launched a second steel mill at Kwang Yang, located at the southern tip of the Korean peninsula. A first unit 2.7 million-ton-per-year crude steel plant is now under construction with mainly European financing and will be in commercial operation in April 1987. A second unit of the same capacity started construction a week ago on September 30, 1986 and will be in commercial operation as of October 1988.

The shipbuilding industry of Korea has been the second largest in the world the early 1980's. The automobile industry started exporting only recently, but shows a strong promise of becoming the second largest in exports after Japan in the near future. Rapid progress achieved in the shipbuilding and auto industries would not have been possible without the stable and low-cost supply of steel products from POSCO.

3. The First Petrochemical Complex

Table II. Production Sales & Profit Pohang Iron & Steel Co.

| Year | 73 | 74 | 75 | 77 | 79 | 81 | 82 | 83 | 84 | 85 | Unit |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|
| Crude Steel | 46 | 117 | 127 | 253 | 530 | 820 | 880 | 845 | 919 | 928 | 10,000Ton |
| Sales | 1.0 | 2.4 | 2.3 | 5.2 | 13 | 22 | 24 | 23 | 24 | 24 | \$100 Million |
| Net Profit | 12 | 80 | 19 | 28 | 54 | 65 | 21 | 67 | 74 | 79 | \$ Million |

The Korean Economic Planning Board (EPB) and the US Agency for International Development(AID) commissioned the Arthur D. Little Co. (ADL) to perform a feasibility study for the development of a national petrochemical industry in 1966. ADL estimated that the prices of several products would be 20~30% higher than the then current international price with an annual capacity of 32,000MT/Y of ethylene.

At that time, I estimated that 66,000MT/Y capacity of ethylene would be adequate for the domestic market but was not sure whether foreign investors and banks would agree with us or not. Fortunately, I happened to attend the UNIDO(United Nation Industrial Development Organization) meeting in Greece in 1967. During my visit with ADL on the way back to Korea, I proposed the ethylene production capacity of 66,000MT/Y and obtained immediate agreement from ADL.

As the Korean economy rapidly grew in the late 1960s, there were even more ambitious proposals calling for 150,000MT/Y. The final plan was settled on 100,000MT/Y. Nine up and down-stream plants were completed in October, 1972. From early 1973, most plants were producing their design capacity but the demand for products unexpectedly increased so fast in the following years that rationing became necessary due to short supply. It was the beginning of the golden age of the petrochemical industry in Korea.

MIRACLE OF THE HAN RIVER

Countries like Japan and Taiwan, Which had been enjoying rapid economic growth continuously from the early 1950's, had to

deal with the sudden experience of negative economic growth in 1974, due to the first oil crisis. Only Korea was able to register a remarkable 8% growth as shown in Table I. Around that time, the phrase 'Miracle of the Han River' appeared. The main contributions for the economic growth originated, in my opinion, from the development of basic industries like POSCO, the petrochemical complex and the third refinery around that time. I always refer to 1974 as the year when Korea joined the rank of industrialized countries.

After having been recognized as an industrialized country, the position of the borrower and lender has been reversed. Now we can obtain loans more easily with much better terms and conditions than before i. e. interest rates have decreased from 3% above the SIBOR or LIBOR rates to just 0.5% over those rates. Consequently, profitability of Korean industries, for which foreign loans are essential, has been improved. Now we are enjoying the various benefits of economic growth such as localization of technology, equipment and machinery supply, and construction Projects. Considering all these situations what was the reality of only ten years ago appears to be a story from the distant past.

ENGINEERS AND BLUE-COLLAR WORKERS IN KOREA

What are the main forces behind the growth of the Korean economy? I believe that the most important contribution came from dedicated engineers and high-quality skilled laborers. As you probably know, Korean skilled workers have been taking first place by large margins in skill and

productivity. They usually win about one half of the gold medals, in the International Skill Olympics, for the last eight years in a row since 1977. We would like to believe that this victory march will continue in the future.

These high-quality blue collars are willing to work 50 to 60 hours per week with wages much lower than those in more developed countries. These workers and their attitudes provided Korea with a main advantage in construction and also in operation and maintenance of plants. I personally believe that engineers and skilled workers should deserve most of the credit for the present Korean economy and I also feel that engineers should deserve better social status, and skilled workers should deserve better wages. Therefore I initiated and found the Korea Engineers, Club in 1974.

THE DEVELOPED COUNTRY AND THE DEVELOPING COUNTRY

Our past experience clearly indicates that a pre-investment study performed by the developed countries for developing countries could not be relied upon, because the economic factors in developing countries contains many peculiarities and are vastly different from those of the developed countries. To be frank, Korea experienced a shortage of products many times because of the underestimated forecasts done by some companies in the advanced countries.

Examples are the projections made by the World Bank, ADL and Thomas Company for POSCO, petrochemicals and electricity, respectively.

When the stable supply of new products becomes available from the domestic producers, there are strong tendencies that new demands will develop. This phenomenon is easy to anticipate but defies accurate quantitative description. Since most projections in developed countries are based upon the trend of past consumption, the same method of projections will tend to underestimate the demand forecast when applied to developing nations.

FOREIGN DEBT ISSUE

Loans from foreign countries are the major source for capital in a country with insufficient domestic industrial capital like Korea. As shown in Table I, the total amount of Korean foreign debt exceeded \$40 billion in 1983, making Korea the fourth largest debtor only surpassed by Brazil, Argentina and Mexico. Naturally, there were some people who worried about debt crisis in Korea. For the \$40 billion debt, we have to pay around \$ 5 billion in interest per year to the creditors which is equal to 6 % of our GNP.

It is now expected that the total amount of debt will decrease (Table I) due to the low price of oil and the low interest rates from about a year ago. The rise of the Japanese Yen value also contributed to increasing our exports and is partially responsible for the first positive balance of trade in Korea's history for the first time since World War II. This is provided that the world economic situation does not undergo major fluctuations. The surplus in trade is likely to increase, it may be even possible that Korea will transform into a net creditor before the end of this century.