Internationales Asienforum, Vol.13 (1982), No.3/4, p.287-307

AN OUTLINE OF THE KOREAN MODEL OF ACCUMULATION AND INDUSTRIALIZATION+

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INTRODUCTION

When I talk about the Korean model of development policy, I do not mean a theoretically conceived and completely closed macroeconomic model with the necessary variables and determinants. Rather I shall try to outline the main characteristics of the Korean economic performance and to analyze the developing and industrializing strategy which the Korean government has followed for the past 20 years.

As the main characteristics of the Korean model, Dr. Hans W. Singer had identified[1]:
- rapid economic growth,
- fairly equal economic distribution and
- export orientation.

Focusing more on the economic policy measures, "The Economist"[2] pointed out "the pattern of economic miracle" as follows:
1. Maintaining rural full employment.
2. Promotion of cost-conscious technology installation, and
3. making the business system, especially the entrepreneurs, beloved.

What was common to the two authors is the fact that they began with praise of the unique economic performance of Korea but concluded in large measure with critical scepticism about the Korean economic future.

I will take a reserve approach to the Korean model, that is, I shall begin with the critical point os Korean economic policy in the past and conclude with an optimistic vision of the Korean economy in the future.

+) Presented to the Symposium on South Korea, Friedrich-Ebert-Foundation, Bonn, Germany, on 7th and 8th December, 1981.

In order to identify the sources of Korean economic problems, I characterize the Korean model of accumulation and industrialization by the following points:

I. High Rate of GNP and Export Growth

II. Government Guided Economic Policy

III. Outward Looking Strategy

IV. Imbalanced Economic Growth Strategy with,

4.1 Sectoral Imbalance
4.2 Imbalance between Large and Small-and-Medium Scale Enterprises
4.3 Imbalance between Export and Domestic Market Industries

Before I begin with an analysis of the Korean model, it is my obligation to outline the Korean economic performance of the last 20 years. This will be done very briefly.

I. HIGH RATE OF GNP AND EXPORT GROWTH IN THE PAST 20 YEARS

The Korean economy during the 50s can be classified as stagnating, with very low economic growth. The GNP growth between 1954 and 1967 was 4.4 % per year on average, and this is very low in comparison with the economic growth of the 60s and 70s. The economic situation at the end of the 50s can be characterized as follows:

1. Agricultural economic structure: the share of the primary sector in GNP was 43.8 %, whereas the share of the secondary sector was only 14.9 %.
2. The ratio of domestic saving to GNP was less than 4 %.
3. The political attitude of the Syngman Rhee government to the economy was not interventionary and the period can be characterized as an era of non-existence of economic policy.
4. Both management and labor had no industrial education and this resulted in very low productivity for all industries.

With the onset of economic planning in 1962, the Korean economy experienced an extraordinary, high rate of economic and export growth.

The GNP per capita grew to 1,624 US $ in 1979 from a merely 86 US $ in 1961. The average GNP growth rate per year in Korea was:

7.7 % during the 1st 5-year-plan period (1962-1966)
10.5 % during the 2nd 5-year-plan period (1967-1971)
11.2 % during the 3rd 5-year-plan period (1972-1976)

This tendency continued through 1977 (10.3 %) and 1978 (11.6 %) till the beginning of 1979 (13.6 % at the 1/4 1979).

The total export of Korea was just 55 million US $ in 1962. In 1979 it grew to 15 000 million US $. A 273 fold nominal expansion in less than 20 years. The average expansion rate of export between 1962 and 1976 was 41.9 % (77: 28.6%, 78: 26.5 %, 79: 15.7 % growth rate).

The economic structure has also changed drastically. The share of the primary sector has declined to about 20 % in 1979 from about 40 % in 1962, whereas the share of secondary industry has increased to about 35 % in 1979 from 13 % in 1962. The total output of the processing industry in 1962 was composed of 75 % light industry and 25 % heavy industry. The ratio in 1979 was 46:54. The structure of export commodity has also experienced a good advance. The export of processing products was just 27 % in 1962 whereas it was about 90 % in 1979.

All these data show that the Korean economy has, no doubt, made remarkable progress in twenty years. The major factors of this successful economic performance can be regarded as:

1. Government guided economic policy aiming at rapid growth.
2. High rate of investment through domestic and foreign saving.
3. Promotion of export as the engine of growth.
4. Unbalanced economic resource allocation in favor of the processing industry.
5. High education level of the labor force resulting in higher technical expertise and higher productivity.
6. Decreased growth rate of population.

II. GOVERNMENT GUIDED ECONOMIC POLICY

In contrast to the basic attitude of the Syngman Rhee government, non-interference in economic affairs, the new government of Park Chung Hee had not only introdced an economic planning system as a global frame for the private economic sector but engaged itself deeply in the economic process from 1962 on. The government activity was not limited to fixing the global data, but tried to get the whole economy under control by fixing the sectoral output and export targets.

One indicator of the intensive government activity in the economic field is the steadily increased share of SOC (social overhead capital) in GNP and the higher growth rate of SOC in comparison to the growth rate of GNP. The share of SOC in GNP in 1979 was more than double that of 1964 (17.2 % and 7.1 % respect-

ively[3]; and the growth rate of SOC was always higher than that of GNP, especially in 1968 and 1969 when SOC had growth rates of 34 % and 32 %. In 1978 as well it was 21.3 %, whereas the GNP growth rate was 11.6 %.

Government activity in the economic field was not limited to the formation of SOC, but it was interested also in the fields of production and distribution. The government ratio of the total domestic investment between 1963 and 1975 was 25 % on average. If the share of the government controlled enterprise is added, the portion will soar to 42 % on average.

In connection with the government plan to promote heavy and chemical industries from 1973, the construction of five major industrial complexes was started in 1974: a machinery industry complex in Changwon, a non-ferrous metal complex in Onsan, the second petrochemical complex in Yochon, a medium sized shipyard in Okpo, and a cement plant in Bookpyung. Besides these investments the government had already started the construction of an electronics industrial complex in Gumi in 1971 and the Pohang Integrated Steel Plant in 1968.

The saving of government and its controlled enterprises between 1963 and 1975 was only 30 % of total domestic investment, so that a saving gap of 12 % resulted. This gap was covered by loans from the Bank of Korea, public debt, capital import, etc.

Further evidence of deep government engagement in the economic process can be seen in the high portion of investment for government financing in the total investment, which is estimated at about 27 % average throughout the first three five-year plans. 57.7 % of this was spent for SOC in the same period. Government investment just for heavy and chemical industries between 1970 and 1980 took 2.6 % of total government expenditures and 14.6 % of its economic services, as shown in the Table 1.

One of the results of the government guided economy in Korea was the high dependency of private enterprise on so-called strategic financing, especially on the long term loan with especially favorable interest rates and on foreign capital, which has a considerable low interest rate in comparison to local credit.

The share of strategic financing of the total available credit in Korea has steadily increased until just recently, as Table 2 shows:

Table 1: Government Expenditure for Heavy and Chemical Industry (Unit: Billion won)

Year	Gov't Total Budget+ (A)	Economic Services (B)	Expenditure for Heavy and Chemical Industries				Others	C/A (%)	C/B (%)
			Total (C)	Industrial Complex	Sub-scription	Compensation for Interest Rate Differences			
1970	599.6	150.9	16.1	6.0	8.1	2.0	-	2.7	10.6
1971	735.8	180.3	23.3	4.0	16.7	2.6	-	3.2	12.9
1972	966.4	195.0	78.3	3.4	72.1	2.8	-	8.1	40.1
1973	960.2	145.6	13.4	3.5	8.4	1.4	0.1	1.4	9.2
1974	1 428.3	211.9	38.1	20.7	12.2	4.8	0.5	2.7	18.0
1975	2 123.6	409.3	77.1	26.5	40.5	9.9	0.2	3.6	18.8
1976	2 895.2	535.6	66.9	36.8	17.0	12.8	0.2	2.3	12.5
1977	3 717.8	623.4	89.3	41.6	25.0	22.4	0.3	2.4	14.3
1978	4 755.3	725.1	137.2	47.7	63.8	25.1	0.5	2.9	18.9
1979	6 466.5	1 405.4	93.6	44.3	-	48.6	0.7	1.4	6.7
1980	8 814.2	1 338.8	229.4	52.2	138.6	36.3	2.4	2.6	17.1
Total	33462.9	5 921.3	862.7	286.7	402.4	168.7	5.0	2.6	14.6

Source: Park and Lee (ed.), Government Budget and Policy Goal (KDI 1981), pp.177-178.

+) Includes special accounts.

Table 2: The Ratio of Normal and Strategic Financing in Korea

Year	Normal financing (%)	Strategic financing (%)	Total amount in bil. won
1977	54.9	45.1	5 127
1978	45.9	50.1	7 708
1979	51.1	48.9	10 701
1980	49.4	50.6	14 801
July 81	46.2	53.8	16 901

Source: Dong-A Ilbo, Sept. 30, 1981.

Such a definitive role of government in allocating capital and massive support to strategic industries within the framework of controlling economic performance is one of the important reasons why the capital structure of Korean enterprises are over-debted. The average ratio of own capital of Korean enterprises is not only extremely low (16.46 % in 1980), but is also declining over time, as shown in the Table 3.

Table 3: The Capital Structure of the Korean Enterprises

Year	Share of Own Capital (%)	Year	Share of Own Capital (%)
1970	22.45	1976	23.15
1972	26.32	1978	21.24
1974	24.98	1980	16.46

Source: Hankook Ilbo, Oct. 4, 1981.

It is remarkable that in the past almost all of the big Korean enterprises were holding a large amount of liquidity and also had invested in speculative objectives like real estate. This must be considered one of the very important reasons for inflation in Korea. The price of real estate has soared 100 times, 10 000 % in some parts of Korea in the last 20 years.

Another face of the excessive economic involvement of government is the tax policy. It is natural that the average tax burden of an expanding and dynamic economy should gradually grow, and the growth of the tax burden in Korea could be considered reasonable when it was increased to 18.4 % of GNP in 1979 from 10.6 % in 1962[4]. However, if you look at the structure of Korean taxes, it

must be considered critical. In spite of the increasing development expenditure requirement over time, the Korean enterprises and especially the exporting industries have enjoyed a great deal of government financing sudsidy, tax exemption and tax discount, special depreciation, interest subsidies, etc. The share of tax exemption of total domestic taxes was estimated at 28.7 % for 1975 and 26.7 % for 1976.

Table 4: The Ratio of Tax Burden to GNP (%)

Year	Total	Direct Tax	Indirect Tax
1962	10.6	2.1	3.7
1966	10.7	3.3	3.2
1971	15.0	5.4	5.2
1976	17.4	4.1	5.8
1978	17.9	3.7	6.0
1979	18.4	3.9	6.5

As shown in the Table 4, the share of direct tax in GNP had its peak in 1971 and since then has had a declining tendency, whereas the share of indirect tax has been increasing steadily since 1962. As is well known, the ratio of direct tax should not only be bigger than that of indirect tax, but also must have an increasing tendency when a country wants to achieve a redistribution effect through tax policy, because the indirect tax burdens the lower income earner relatively more heavily than the higher income earner.

Another critical point of the Korean tax performance in the past is the fact that an extremely high portion of direct tax had to be paid by households and not business enterprises. For example, the households paid 70 % of the total direct taxes in 1970, 75 % in 1973 and 65 % in 1975.

III. OUTWARD LOOKING STRATEGY

At the beginning of the 1st Five-Year-Plan (1962-66), the main hindrances to the developing policy were the lack of capital because of extremely low domestic saving, and the very narrow domestic market due to the weak purchasing power of the consumer. The starting point of the Korean model of industrialization was a typical example of "circulus vitiosus" of the static economy: low

income - low saving - low capital formation - low investment - low income, etc.

The average domestic saving ratio to GNP between 1954 and 56 was 3.3 %, whereas the investment ratio was 11.0 % (Table 5). This situation didn't change much until the beginning of the 60's. In order to break down the circle of poverty, the Korean government chose an industrial policy alternative, which is classified as an "outward looking strategy". The main feature of the outward looking strategy consists of two components: extensive export promotion and heavy reliance on foreign capital and technology.

The second component of the outward-looking strategy in Korea consists of the massive inducement of foreign direct investment, which requires an additional and comprehensive study. Without going in details in this problem, I will comment briefly on the development of the ratio of domestic and foreign savings to GNP in fixed price, as shown in the Table 5, before the 1st Five-Year-Plan period about 70 % of total domestic investment was covered by foreign savings.

Due to the government effort to accumulate national capital, the share of domestic saving has been increased steadily since the start of the 1st Five-Year-Plan. As a result, the ratio of foreign saving in total domestic investment declined to 35 % during the 3rd Five-Year-Plan period, and then increased slightly in 1979.

Table 5: Ratio of Domestic and Foreign Savings to GNP (%) in 1975 Prices

Year	Domestic Savings (A)	Foreign Savings (B)	Domestic Investment (C)	(B/C) %
1954-56	3.3	7.7	11.0	72.8
1961-63	3.9	10.0	13.9	68.9
1967-71	13.1	12.9	26.0	49.6
1972-76	18.2	9.8	28.0	35.0
1977	25.3	6.2	31.5	19.6
1978	25.7	11.0	36.7	29.9
1979	25.0	16.8	41.8	40.2

Source: Handbook of Korean Economy, 1980, EPB, Table 3-4, p.16.

My special attention to the outward looking strategy will be focused on the export promotion policy of the Korean government and its consequences. In 1961, the Korean economy was restructured toward export promotion and away from the earlier emphasis on import substitution. In January and February 1961,

there were two devaluations intended to reduce the degree of currency overvaluation. In addition to devaluation, there came into being various export promoting measures like tax exemption and reduction for exporters, special export credit with preferential interest rates, etc. In 1963, parallel to the quota and quantitative controls over purchases of foreign exchange, an export-import link system was introduced.

The various export incentives system was further intensified in 1964. The Korean Won was devalued by almost 100 % in May 1964, and a unitary floating exchange rate was put into effect in March 1965. The interest rate to exporters, having been reduced to 8 % in 1964, fell to 6.5 % in September 1965. When you compare this interest rate with the bank loans of 26 % at that time, you can imagnine how attractive was the export credit. Further export incentives were:

- wastage allowance for the raw materials imported for export processing (coverage for dumping loss),
- preferential electricity rate,
- exemption of customs duties on imported equipment,
- reenforcement of the export-import linkage system,
- accelerated depreciation allowance for fixed capital,
- foreign capital loans for import of machinery and equipment, etc.

for exporters.

Table 6: Official and Effective Exchange Rate for Exports, 1960-1965

Won per Dollar	1960	1961	1962	1963	1964	1965
Official Exchange Rate (A)	62.5	127.5	130.0	130.0	214.3	265.4
Average Export (B)	83.9	14.6	-	39.8	39.7	-
Export Subsidies (C)	1.2	8.5	21.5	19.6	27.4	39.2
Effective Exchange Rate for Exporter (A+B+C)	147.6	150.6	151.5	189.4	281.4	304.6

Source: Frank, Kim and Westphal, Foreign Trade Regimes and Economic Development: South Korea, National Bureau of Economic Research, 1975, p. 70-73.

Table 6 shows the differences between official and effective exchange rates in favor of exporters. The exporters could borrow 78 % of their financing requirement at 6.5 % interest rate in 1965 when the commercial lending rate was

26 % in the same year. The amount of the short term credit to exporters went up steadily in the following years, reaching 94 % of the total requirement in 1972. This interest rate was even reduced to 6 % in 1967 and remained so until 1972. Table 7 shows the interest rate discrimination in Korea from 1962 until 1980.

Table 7: Interest Rate of Export Financing in Korea (%)

Effective Date of Change		Export Finance (A)	Discounts (B)	B - A
1962	4	12.78	16.43	3.65
1962	7	10.95	16.43	5.48
1962	12	9.13	15.70	6.57
1963	5	8.03	15.70	7.67
1964	3	8.00	16.00	8.00
1965	9	6.50	26.00	19.50
1967	6	6.00	26.00	20.00
1973	5	7.00	15.50	8.50
1974	1	9.00	15.50	6.50
1975	4	7.00	15.50	8.50
1976	8	8.00	18.00	10.00
1978	6	9.00	19.00	10.00
1980	1	12.00	25.00	13.00

Sources: Economic Statistics Yearbook 1965 and 1980, The Bank of Korea; Financial Statistics Monthly, Mar. 1978 and Nov. 1980.

The result of the extensive export incentives system is not only encouraging in the macroeconomic point of view, but since export incentive policies in Korea have been basically trade-oriented rather than production-oriented, the main concern of export promotion has been gross export value. The portion of local value added did not play any significant role therein. And so,

- the domestic value added ratio of exports which stood at 75.2 % in 1966 fell to 64.4 % in 1978[5];
- the reliance of the Korean export industry on imported raw materials, intermediates, and equipment has increased over time because of the duty free import;
- the export-import linkage, export premium and export subsidies etc. led, to some extent, to dumping export;

- the excessive subsidies on the import of raw materials, intermediate goods and capital equipment discouraged their domestic production and affected unfavorably the small and medium sized industries because the system tended to discourage the backward linkage of the industry;
- the Korean economy was traditionally a capital gap economy. The discriminating financing condition in favor of exporting industry made production for domestic sale less profitable in comparison with export sale[6].

IV. UNBALANCED GROWTH STRATEGY

One of the main features of the Korean economic model is, without a doubt, the unbalanced growth strategy in the sense of Albert O. Hirshman. This is true in at least three cases:
- unbalanced growth between agriculture and manufacturing,
- unbalanced growth between large scale, and small and medium enterprises, and
- unbalances growth between export and domestic market industry.

4.1 Sectoral Imbalance

It is a well known fact that in its growth policies Korea has relied heavily on manufacturing for exports as the "engine of growth"[7].

This is not only a conclusion on the basis of ex-post fact analysis of Korean economic performance, it is also an obvious result of a well considered choice of growth strategy by the Korean government, as already shown.

The following table shows the global target of sectoral production by the various economic plans.

Table 8: Production Growth Target by the Plans (%)

Plan Period	Total Growth	Primary Sector	Mining and manufacturing	SOC and Services
1965-71	70.2	44.8	93.4	63.8
1972-76	82.8	34.7	130.5	62.0
1977-81	78.6	30.2	145.9	61.4

Source: 2nd, 3rd and 4th economic plan

As shown, the mining and manufacturing sector played not only a dominant role for the achievement of the excessive growth target, but its position relative to other sectors grew steadily, whereas the position of the primary sector, and especially the agricultural sector, declined in the same period.

If we turn toward the performance side, we can find the same result. The mining and manufacturing sector achieved the highest growth rate since 1967 and is also projected to do so in the 5th Five Year Plan Period, as shown by Table 9.

Table 9: Industrial Origin of GNP (In 1975 constant price)

	1967-71	1972-76	1977-81	1982-86
GNP				
Growth Rate	9.72	10.12	10.94	10.00
Ratio to GNP	100.00	100.00	100.00	100.00
Agriculture				
Growth Rate	1.51	6.15	-0.01	3.00
Ratio to GNP	32.70	25.54	20.64	13.55
Manufacturing and Mining				
Growth Rate	19.95	17.99	17.10	12.60
Ratio to GNP	17.60	25.87	31.36	30.50
SOC and Others				
Growth Rate	12.64	8.41	12.72	9.90
Ratio to GNO	48.69	48.30	47.30	47.15

Source: KDI, "Development Strategy and Policy Priorities for the Fifth Five-Year Development Plan", Working Paper 8003, 1980, p.22.

Table 10: Domestic Capital Formation by Sector in 1975 Prices

Year	Primary Sector (%)	Mining and Manufacturing	SOC and Services
1961	32.7 (13.0)	58.6 (23.3)	160.7 (63.8)
1966	92.6 (12.2)	257.6 (33.9)	409.6 (53.9)
1971	134.0 (7.8)	405.2 (23.5)	1 188.3 (68.8)
1976	273.4 (9.4)	719.2 (24.6)	1 925.8 (66.0)
1979	378.7 (6.7)	1 536.0 (27.2)	3 738.6 (66.1)

Source: EPB, Handbook of Korean Economy 1980, Table 7-2, p.28.

Table 10 shows the development of domestic capital formation by sector and the share of each sector by total in the end of each plan period, except 1961. In 1961, one year before the start of the Korean economic plans, the share of the primary sector in total capital formation was 13.0 %, which has declined over time except in 1976. In cost of the primary sector, the share of the secondary and tertiary sectors have increased over time, if the year 1971 for secondary and 1966 for tertiary are excepted.

When you compare the three sectors in absolute terms, the capital formation in the primary sector has increased 11.6 times, whereas in the secondary and tertiary sectors it has increased 26.2 and 23.3 times respectively.

The relative disadvantage of the primary sector in favor of the secondary sector by allocation of investment capital is demonstrated in Tables 11 and 12 also.

Table 11: Imported Capital Allocation by Sector (%)
(Approved by the end of 1978)

Sector	Public	Commercial	Total
Primary	18.6	1.8	9.8
Manufacturing	4.4	67.0	37.0
SOC and Service	77.0	31.2	53.2

Source: EPB data.

Table 12: Foreign Investment by Sector
(Approved by Aug. 1979) (Unit: 1 000 US $)

Sector	Proj. No.	Amount	Share (%)
Primary	51	14 202	1.3
Manufacturing	749	772 499	73.5
SOC and Service	73	272 336	25.4

Source: EPB data.

John H. Adler of World Bank advised the nation to reduce the investment in manufacturing and to expand investment in housing for lower income households and to direct public investment toward meeting the public service needs of low income groups in health, sanitation, water supply, and education[8].

Also Wilhelm Hankel, a German consultant of World Bank, criticized the excessive industrialization policy remarking that not only has Korea lost her self-sufficiency in regard to nearly all cereals and the higher protein foods like meat and processed food, but also the foreign exchange burden of imported foodstuffs has increased over time. Therefore he recommended more intensive promotion of the agricultural sector in order to decrease the country's dependency on agricultural imports[9].

4.2 Selective Promotion of Industry and Unbalanced Growth Between Large Scale and Small and Medium Scale Enterprises

In line with the unbalanced growth strategy, some important industries were selected and promoted intensively during every plan period. In the 1st plan period, the textile, plywood, and wig manufacturing industries, which had completed import substitution in the 50s, were designated export promotion industries and enjoyed government promotion incentives. Furthermore, the synthetics industries were promoted as strategic, important import substituting industries.

In the 2nd plan period (1967-72), promotion incentives were shifted to the rubber and synthetic fiber industry as an additional export promotion industry, and to the electronics, electric equipment, and petrochemical industries as strategic industries.

Korean industrial policy reached a turning point in 1973 when the government announced promotion of the heavy and chemical industries as the new strategic industries. The emphasis in industrial policy shifted from light industry for export toward heavy and chemical industry.

As a result of this changing industrial development strategy, various incentives given to export were gradually reduced while a preferential tax and credit system was increasingly intensified for the heavy and chemical industries.

Newsweek observed the planning and implementing process of the Korean economy as follows:

> "The EPB and the ministries first establish a list of priority projects, goods to be manufactured and a production and export target. Companies then made proposals about what parts of the plan they would like to tackle."[10]

In this way, the Korean government fixed the plan target and selected the strategic important industries, and then left it to the enterprises to achieve the

target. In an economy like Korea's in the 60s and early 70s in which savings were low and the capital market was not well developed, bank credit and foreign loans had been virtually the sole source of financing investment. And because this source was strictly controlled by government, the enterprises had to adjust to the government target.

A series of preferential tax and credit systems were devised in order to induce investment in heavy and chemical industry. The government established a National Investment Fund (NIF) in 1974 to help the entrepreneurs' long-term investment in heavy and chemical industry. The loans of NIF are made at a preferential rate, and the interest rate differences are subsidized by the government. As of the end of Dec. 1980, 67.8 % of total loans was allocated to heavy and chemical industries.

In addition to the financial support, government provided various incentives for the promotion of heavy and chemical industries:
- complete exemption of corporate and income tax for the first 3 years and 50 % for the following 2 years, and alternatively
- 8 % investment credit or 100 % special depreciation allowance,
- additional tariff protection for the heavy and chemical products.

As a result of the strategic promotion, investment in heavy and chemical industry has doubled in real price between 1977 and 1979, while investment in light industry increased by 50 %, as shown by Table 11.

Table 13: Investment in Manufacturing (won billion, 1975 prices)

	Plan Target 1977-81	1977	1978	1979	77-79
Total	4 515	781	1 276	1 498	3 555
Share of Heavy Ind. (%)	64.01	78.29	80.25	79.71	78.93
Share of Light Ind. (%)	35.99	21.71	19.75	20.29	21.07

Source: Chuk Kyo Kim, op. cit., Table 3, p. 15.

The government promoted heavy and chemical industries like petrochemicals, shipbuilding, machinery, electronics, iron and steel industries, etc. have now production plants with world standard unit capacity.

One of the consequences of the promotion of heavy and chemical industries is the concentration of the economy in a handful of large scale enterprises. In 1960, there were only 137 of these companies with more than 200 employees

each. Their share of the total number of companies was only 0.9 %. They employed 23.9 % of total employees producing 33.2 % of the whole manufacturing industrial output. In 1966 when the 1st Five Year Plan was completed, the dominant position of the large scale enterprises was significant. There were already 379 in this category of company, which took 39.7 % of total employment producing 54.4 % of the total output of the manufacturing industry.

This concentration phenomenon continued. In 1976, even though the classification criterion for large scale industry was changed from 200 to 300 employees each, the number in this category of enterprise increased to 1 029, with 55.9% of total production in the manufacturing industry. Nowadays, some exaggerate by saying that the Korean economy is managed by a dozen GTCs (General Trading Companies).

Without a doubt, the incentive system in favor of export industries as well as in favor of strategic important industries promoted large scale enterprises and discriminated against the small and medium scale enterprises.

The average export growth rate of small and medium sized enterprises between 1963 and 1973 was 53.3 % per year, larger than that of the total Korean economy at 44.1 %. But between 1974 and 1980, when the heavy and chemical industries were promoted as strategic industries, the situation was reversed. The small and medium sized companies marked an average growth rate of only 22.8 % per year, whereas that of the whole economy was 24.5 %.

4.3 Imbalance Between Export and Domestic Market Industry

It is already said that the nations export incentive system benefited exports over domestic sales. This in turn tended to suppress the growth of small and medium sized industries which are to a large extent domestic market-oriented. Exporters were subject to a free trade regime, and in contrast to exporters the producers for the domestic market generally had to pay duties on their imported inputs, pay higher interest charges, and were subject to higher income taxes. Although legal tariffs are high in Korea, tariff protections on imported goods were to a large extent redundant because some tariffs are highly prohibitive. As a result, the nominal protection rate which measures divergence between world market and domestic market prices is considerably lower than the legal tariff rate and tended to decline continuously over time (see Table 14). In 1975, the nominal rate of protection was even negative (-6.7 %) for total manufacturing; and a negative nominal rate of protection was found in processed food and tobacco (-17.6 %), finished consumer goods (-19,9 %) and intermediate goods (-3.8 %). If we further take into account the various charges

Table 14: Estimated Nominal Rates of Protection by Major Industries in Korea for Selected Years (Unit: %)

	1963	1968	1970	1975
Processed Food and Tobacco	16.5	1.3	-4.7	-17.6
Textiles	11.1	23.7	16.1	4.5
Finished Consumer Goods	13.7	11.3	0.8	-19.9
Intermediate Goods	16.5	9.1	1.7	- 3.8
Machinery and Transport Equipment	31.6	41.1	47.6	13.3
Total Manufacturing	16.1	11.1	4.0	-6.7

Source: Edward S. Mason, Mahn Je Kim, et al., "The Economic and Social Modernization of the Republic of Korea", p. 158.

on inputs for domestic production, the effective rate of protection would be much lower than the nominal rate of protection. Since the effective protection rate can be interpreted as an indication of relative profitability of products, we can contend that the domestic sale of manufactured goods become less profitable compared with sales abroad.

As a result, the growth of domestic market-oriented industry is likely to be lower than that of export-oriented industries. As shown in Table 15, the relative position in terms of value added of such domestic market-oriented industries as food, beverage, tobacco, wood and wood products, furniture and fixtures, and printing and publishing in the total manufacturing industry declined continuously over time. It is also notable that these industries are mostly the industries in which the nominal protection rate is negative, indicating lower profitability of domestic market-oriented industries compared with export-oriented industries. Therefore, one can argue that small and medium sized industries with a lower export share are likely to show lower profitability compared with large scale industries which are more export-oriented. This should have led to the lower growth of small and medium-sized industries in the past fifteen years.

In Korea, excessive subsidy was given to the import of intermediate goods and capital equipment for exports while the exchange rate was overvalued. This led to the continued dependence on the import of intermediate goods and capital goods discouraging their domestic production.

The excessive subsidies on the import of raw materials, intermediate goods and capital equipment was not favorable for the growth of small and medium

sized industries because the system tended to discourage backward linkage of the industries, thereby preventing development of supplier industries which are by nature mostly small and medium sized[11].

Table 15: Change in the Production Structure of Manufacturing by Size of Firm

Industries	1963			1978		
	5-199	200 and above	Total	5-199	200 and above	Total
Food	11.6	5.8	8.8	9.4	6.6	7.3
Beverage	13.0	4.8	9.2	4.5	5.8	5.5
Tobacco	0.1	28.7	13.6	-	7.1	5.2
Textiles	12.2	23.1	17.3	14.5	13.5	13.8
Apparel, Other Made Up Textile Products and Footwear	4.1	0.5	2.4	4.4	4.5	4.5
Leather and Leather Products	0.5	-	0.3	2.3	1.5	1.7
Wood and Wood Products except Furniture	3.4	3.3	3.4	2.9	2.0	2.2
Furniture and Fixture	1.4	-	0.7	1.0	0.4	0.6
Paper and Paper Products	4.0	3.3	3.7	3.7	1.6	2.2
Printing, Publishing and Allied Prod.	5.0	3.1	4.1	2.7	1.6	1.9
Rubber Products	1.0	5.2	3.0	1.1	3.4	2.7
Chemicals and Chemical Products	11.2	7.9	9.6	13.2	9.9	10.8
Petroleum and Coal Prod.	4.3	0.3	2.4	2.3	4.6	4.0
Clay, Glass and Stone Prod.	6.1	6.0	6.1	7.8	3.9	5.0
Basic Metal	5.0	1.8	3.5	4.6	7.4	6.6
Metal Products	3.8	0.6	2.3	6.7	2.5	3.6
Machinery	3.6	0.8	2.3	5.9	3.2	3.9
Electrical Machinery	2.9	1.8	2.4	5.1	10.2	8.9
Transport Equipment	3.8	2.6	3.2	3.6	8.0	6.8
Other Miscellaneous	2.8	0.4	1.7	4.2	2.3	2.8
Manufacturing Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Report on Mining and Manufacturing Census, 1963 and 1978, Economic Planning Board.

V. FUTURE PERSPECTIVE

Analyzing the Korean model, I remember the lesson of Josef Schumpeter, who identified 60 years ago the following five factors as sources of economic development[12]:

- production of new commodities,
- development of new production methods,
- discovery of new sales markets,
- securing new sources of input materials, and
- development of new forms of business organizations.

When you review the sources of the Korean economic development in the past, you realize that the Korean model has little in common with that of Schumpeter. This conclusion cannot necessarily be understood as a critical or pessimistic viewpoint of the Korean model.

It is evident that the main drive of the Korean economic performance in the past was successful government policy with obligatory production targets and excessive export promotion. In this regard, the activity of the government was not limited to indicative forecasting and anticipating the global trends of economic development; the government intervened in the whole economic process directly with all possible incentives and disincentives. The unbalanced growth strategy chosen by the government led the financial system to hardly solvable distortions in the capital market in Korea resulting in the following phenomena:

1) Negative interest rate for the favored enterprises and industries discouraging and deteriorating the savings of enterprises and high income classes.

2) Big differences in interest rates between promoting and normal credits resulting in a heavy debt ratio and at the same time financial overliquidity of many leading enterprises, which led to a massive speculative investment.

3) Big interest rate different between local and foreign loan resulting in preferences for foreign loan, which led to an underdevelopment of the local capital loan market.

All these situations accelerate the inflation pressure on the lokal market.

Without a doubt the present economic situation in Korea is very critical with the drawback of the growth rate to minus in 1980, slacking down the export growth recently with a high inflation rate and a severe balance of payment problem. To all these problems, the outlined components of the Korean model were contributors.

The other question which should be kept in mind is whether Korea had any other alternatives. I would say, yes. Korea had other alternatives from which to

choose. But I am not at all sure whether other roads could have brought the same results which Korea has achieved in the last 20 years. I tend to think not.

After World War II there were virtually no industries that could stand on their own, and initial efforts at rebuilding the nation were wiped out completely by the Korean War, as Newsweek rightly remarked[13]. The critical economic situation in Korea at present is caused not by the choice of irrelevant policy strategy but rather by the fact that the Korean economic planners have failed to choose the right time "to revise concepts and strategies, whose merits in the past are evident but whose relevance for the future is full of question marks"[14].

The time to reconsider the past economic model has come, and the present situation makes it compulsory to revise the development strategy.

In this connection I want to conclude my presentation with the remark that the Korean government has to give its economy a chance to develop the dynamics of a new combination in the sense of Schumpeter; and this could be achieved through the following measures:

- transforming the economic order from a guided to a self-regulating market economy,
- promotion of technological innovation and diffusion for the development of new products and new production methods,
- diversification of the sales market of Korean products through development of internal absorptive capacities for the own production (high quality consumer goods and intermediary goods for export products),
- diversification of the export market expanding export to the Third World and eastern European countries,
- promotion of local capital market development and reduction of discriminating finance for strategic purposes,
- diversification of agricultural structure and
- strengthening the social policy activities.

The catalog of necessary measures seems to be long, but the essence of future economic strategy is simple: development of economic dynamics through promotion of a new combination in the sense of Josef Schumpeter.

Notes

1) Hans W. Singer: "Has the Korean Model a Future in a Changing World?" KIEI Seminar Series No. 30, Seoul, Nov. 1979, p. 1.

2) The Economist: "Asia Survey, Korean Road", May 7, 1977 pp. 41-42.

3) EPB: Handbook of Korean Economy 1980, p. 10.

4) See Table 4.

5) Bank of Korea, Input-Output Tables, various issues.

6) Kim Chuk Kyo: Industrial Policy and Small and Medium Industries in Korea, KIEI Working Paper No. 19, Korea International Economic Institute, Seoul, December 1981, pp. 21.

7) J. H. Adler: "The Prospects of the Korean Economy in a World of Uncertainty", Korea International Economic Institute Seminar Series No. 15, 1978, pp. 8-9.

8) See John H. Adler, op. cit., p. 29.

9) See Wilhelm Hankel: "Some Comments and Recommendations to Macro-Issues, Sectoral Priorities and Selective Incentives with Regard to the Fifth Five-Year-Development Plan of Korea", KDI Consultant Paper Series No. 20, Preliminary Draft, 1981, pp. 34 p.

10) See Newsweek, "Here Come the Koreans", June 6, 1977, p. 24.

11) See Chuk Kyo Kim, op. cit., pp. 23-28.

12) J. Schumpeter: Theorie der Wirtschaftlichen Entwicklung, München 1968, p. 119.

13) Newsweek, op. cit., p. 22.

14) W. Hankel, Some Comments and Recommendations ..., op. cit., p. 3.