# Government Policy for the Development of Shipbuilding and Shipping Industries in Korea

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## 한국의 해운업 및 조선산업의 발전을 위한 정부의 정책에 관한 연구

이 태 우


### 국문요약

본 논문은 지난 30여년간에 걸쳐 한국의 해운업 및 조선산업의 발전을 위하여 정부가 실시한 주요 정책을 개략적으로 살펴보고 그 정책이 양산업의 발전에 어떠한 영향을 미쳤는가를 고찰하는 데 있다. 또한 이 논문은 최근 정부가 양산업의 발전을 위하여 계획하여 시행하고 있는 자유화 및 규제철폐 정책과 양산업이 당면하고 있는 문제점도 다루고 있다.


## 1. Introduction

Thanks to successful implementation of the Korean government's 5-year economic development plans, Korea's merchant fleet has expanded, with the rate of growth accelerating over the years. Starting with 40 steam and motor vessels of 103,870 gross ton (grt) in 1962, Korea became the 12th largest shipping power in the world with 9.5 million grt in 1995. In the meantime, since the Hyundai Heavy Industry constructed Ulsan Yard capable of building large ships of up to 1 million deadweight ton (dwt) in 1973, the shipbuilding industry in Korea has achieved dramatically high growth compared with those of shipbuilding industries in Japan and Western Europe. Korea now controls 20~30 per cent of the world market share of shipbuilding. This has made Korea the second largest shipbuilding country in terms of construction as well as newbuilding orders since 1980s in the world.

This paper aims, firstly, to briefly review history of Korean policy for shipbuilding and shipping industries over the last three decades and, secondly, to highlight the implication

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of its policy for the development of both industries. It also deals with recent policy of liberalisation and deregulation with current problems faced by them.

## 2. A Brief History of Korea's Shipping and Shipbuilding Policy

The Korean shipbuilding industry was very small in scale up to the early 1970s. Although Korea did not have any systematic shipping and shipbuilding policy until then, the Korean government employed various policy initiatives to develop the shipbuilding and shipping industries. Among others, they are:-

- establishment of the 'Shipbuilding Promotion Act' in 1958
- support programme for shipbuilding facility expansion
- shipbuilding subsidy by the government shipbuilding plan[1)]
- soft loan by government guarantee[2)]
- exemption from import duties on shipbuilding material, including steel and timber
- In 1967, the Shipbuilding Industry Promotion Act to improve competitive advantage of shipbuilding industry employed by high technology and modernised facilities
- implementation of deferred payment export system[3)]

The total shipbuilding tonnage was increased approximately eighteen times from 2,096 grt in 1955 to 37,804 grt in 1969 owing to the above measures implemented by the government. Despite such apparent increase in terms of grt of ships built, however, the rate of domestic shipbuilding in total demand for shipbuilding dropped from 94.3% in 1964 to 14% in 1969. Consequently, effective policy for promoting and expanding the shipbuilding industry was required.

Meanwhile, the Korean government has also employed various policy initiatives to

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1) The government subsidised the shipbuilding industry with industrial financial bonds and AID finance. The terms were 12% annual interest rate, repayment period over 728 years, 75% of the vessel contract price and 25% of self-financing. Jon, J-S. (1995), 'The Relationship between the Korean Government's Shipbuilding and Shipping Policies', in Joint, J. and Lee, T-W. (ed), *Shipping in the Asia Pacific Rim*, Centre for International Shipping & Transport, University of Plymouth.

2) A shipowner built vessels with a government guaranteed loan during their construction and then he mortgaged them to a bank after their delivery. As a general rule, he had to raise 10% of total contract price of a vessel through self-financing. The balance was subsidised by 40% with 50% loan of the price. The government reduced the burden on the shipbuilder by reducing annual interest rates to 5 % and extension of repayment period to 15 years. *Ibid.*.

3) Because shipbuilding market was depressed after oil shock in 1973, types of shipbuilding export such as sight payment export were changed to deferred payment export.

develop the shipping industry since liberation from Japan in 1945. Major measures taken by the government were:

- establishment of the Korean Shipping Corporation in 1950
- establishment of the Shipping Information Centre financed jointly by the government and shipping companies in 1962
- enforcement of the waiver system in 1965
- establishment of the Korea Maritime and Port Administration (KMPA)[4] in 1976
- various tax allowances
- soft loan for ship acquisition, including government financed shipbuilding programme, i.e. *'Keihek Zoseon'* in Korean.

We can broadly categorise the above measures as follows: (1) cargo reservation, i.e., the waiver system; (2) the *'Keihek Zoseon'* scheme; (3) fiscal policy; and (4) direct subsidies and special funds. This section will be devoted to mainly discussing the waiver system, the *'Keihek Zoseon'* scheme, and fiscal policy because they are much more related to growth of shipping and shipbuilding industries before the implementation of two industry rationalisation policies, one each for the shipping industry in 1983 and for the shipbuilding industry in 1989 and it is helpful to understand the government policy for both industries.

## 2.1 The introduction of *'Keihek Zoseon'* scheme

The 1973 Arab oil embargo and the subsequent doubling of oil prices greatly reduced world demand for tankers and the market crashed as numerous orders for tankers were cancelled in Japan and Europe. In these circumstances, the Korean shipbuilding industry also experienced a decrease in overseas demand for shipbuilding. According to the policy of encouraging and fostering heavy and chemical industries, the Korean government established the *'Keihek Zoseon'* scheme in 1976. According to the scheme,

- Korean cargoes have to be transported by Korean ships; and
- Korean ships must be built by Korean shipbuilders.

This means that Korean shipowners who want to carry major bulk cargoes to and from Korea had to build vessels at Korean yards. The primary purpose of the scheme was to develop the shipbuilding industry, to link it to the shipping industry and to develop both industries together. This scheme means that the Korean government ties domestic

4) The KMPA was replaced by a new ministry, i.e. the Ministry of Maritime Affairs and Fishery launched in August 1996.

shipyards to shipowners chosen by the government to comprehensively promote marine/shipbuilding industry. It also aimed to promote marine machinery and equipment industry for the shipbuilding industry and to enforce and improve international comparative advantage of marine/shipbuilding industry. Henceforth, the marine industry, shipbuilding industry and shippers are closely linked and interrelated within the scheme.

Table 1 shows tonnage and numbers of ships built and amounts invested in the period 1976-95 for the *'Keihek Zoseon'* scheme. A total of 477 new ocean-going ships amounting to approximately 5 million grt was ordered under the scheme in the period. New ocean-going vessels amounted to 95.5% of the total tonnage ordered by the scheme, others being coastal and fishing vessels. As a result of the development of heavy and chemical industries during the Third Five-Year Economic Development Plan (1972-76), the Korean shipbuilding industry expanded its capacity rapidly and became a strategic export industry. Moreover, since the introduction of the scheme in 1976 shipbuilding activity in Korea has remarkably grown during the Fourth Five Year Plan, resulting in continuous growth and contributing to the expansion of the Korean merchant fleet.

The rule set for the financing of the scheme is 10% of self-financing by the owner (8% for full containerships), 50% of domestic fund loan at an interest rate of 13% to 14% at the initial stage of the *'Keihek Zoseon'* for a total period of 10.5 years including a two and a half year grace period, and 40% of foreign currency re-loan[5] for a total of seven years including a two-year grace period.

Between 1975 and 1981, about 70% of the funds needed came from the National Investment Fund raised by the Korean government and 30% from the Industrial Facility Fund supplied by the Korea Development Bank (KDB). The former fund is raised by taking a certain portion of the new savings deposited with commercial banks each year, whereas the latter is raised by selling long-term government bonds through the KDB. The purpose of raising both funds is to channel the funds to the strategic industries, e.g. shipbuilding, machinery and electronic industries. The Korean government played an important role in supplying additional shipping and shipbuilding financing for the scheme through:-

- the National Investment Fund Loans in local currency
- the Industrial Facility Fund by the KDB in local currency
- foreign currency tied-loan by the KDB and the Long Term Credit Bank (LTCB);
- foreign commercial bank loan
- foreign currency re-loan by the KDB, the LTCB and Korean commercial banks.

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5) A foreign currency re-loan means that the Korea Development Bank, the Long Term Credit Bank and Korean commercial banks borrow foreign currencies from foreign commercial banks and Euro-money markets and lend them to domestic strategic industries, e.g. shipbuilding, chemical, electrical and motor industries.

Table 1. Ships built and Fund provided by *'Keihek Zoseon'* scheme

| | Ships built ('000 grt) | | | Investment amount (billion won) | | |
|---|---|---|---|---|---|---|
| Year | Sub-total | Ocean-going | Coastal | Sub-total | Ocean-going | Coastal |
| 1976 | 68 (8) | 68 (8) | - | 19 | 19 | - |
| 1977 | 185 (31) | 177 (17) | 8 (14) | 223 | 196 | 27 |
| 1978 | 253 (31) | 246 (18) | 7 (18) | 481 | 455 | 26 |
| 1979 | 226 (36) | 205 (17) | 21 (44) | 824 | 718 | 106 |
| 1980 | 203 (61) | 183 (14) | 20 (38) | 991 | 828 | 163 |
| 1981 | 284 (52) | 274 (12) | 10 (10) | 1,384 | 1,278 | 106 |
| 1982 | 180 (22) | 168 (8) | 12 (21) | 1,416 | 1,281 | 1345 |
| 1983 | 279 (29) | 263 (12) | 16 (17) | 1,447 | 1,241 | 206 |
| 1984 | 319 (29) | 290 (6) | 29 (23) | 1,098 | 929 | 169 |
| 1985 | 821 (32) | 797 (14) | 24 (18) | 1,041 | 882 | 159 |
| 1986 | 678 (27) | 663 (14) | 15 (13) | 1,449 | 1,355 | 94 |
| 1987 | 572 (27) | 560 (22) | 12 (5) | 1,758 | 1,649 | 109 |
| 1988 | 520 (27) | 504 (15) | 16 (12) | 2,034 | 1,861 | 173 |
| 1989 | 349 (16) | 244 (7) | 5 (9) | 1,865 | 1,657 | 108 |
| 1990 | 157 (12) | 152 (7) | 5 (5) | 1,579 | 1,509 | 70 |
| 1991 | 2 (4) | - | 2 (4) | 30 | - | 30 |
| 1992 | 6 (7) | - | 6 (7) | 97 | - | 97 |
| 1993 | 15.6 (7) | 12.6 (3) | 3 (4) | 241 | 137 | 104 |
| 1994 | 14 (13) | 4 (1) | 10 (12) | 203 | 44 | 159 |
| 1995 | 4 (8) | - | 4 (8) | 100 | - | 100 |
| Total | 5,035.6(477) | 4,810.6(195) | 225 (282) | 18,180 | 16,039 | 2,141 |

Source: Korea Maritime Port and Administration (1996).

The *'Keihek Zoseon'* scheme contributed to overcoming shipowner's inability to finance equity for new tonnage and lack of foreign currency. However, the interest rates of financing sources available under the scheme have been an issue of controversy, particularly when they are compared with the rates available to export ships. For example, the interest rates under the scheme ranged from 9% to 17% in the period 1976-81. The scheme provided Korean shipowner's with a good opportunity to raise funds at lower interest rates than those from domestic commercial banks, which varied between 15.5% and 20%. Having said that, interest rates under the scheme were unfavourable compared with those under shipyard credits of an export ship in Korea. The latter terms are similar to the interest rates of shipyard credits in the OECD. Thus, unlike the Korean owners, foreign owners ordering ships at Korean shipyards obtained export credit

at standard the OECD financing terms. From the shipowners viewpoint, the terms of financing under the scheme were more unfavourable than those under the Japanese government financed shipbuilding programme, the OECD and even an export ship in Korea in the light of the loan period and a grace period. In fact, this meant that internal conflicts between the shipping and shipbuilding industries arose with regard to the financing terms of the scheme. Most Korean shipowners who built ships under the scheme claimed that they paid more for the ships than it would have cost if they had been contracted in a neighbouring country, Japan. As a result, the *'Keihek Zoseon'* scheme has been no more attractive to Korean shipowners since 1991, as shown in Table 1.

Maritime transportation and shipbuilding are extremely capital intensive industries. For most developing countries where finance for shipping and shipbuilding industries cannot be sufficiently raised at home, capital is scarce and potential investors are not maritime-motivated and prefer less risky sectors, the investment barrier is one of the most serious obstacles to the development of the two industries. Moreover, finance for purchase of second-hand ships is even more difficult to obtain. In Korea there was no original accumulation of capital in the maritime sector and she also faced the above problems during the 1960s and the 1970s. From the point of view of supplying capital for new shipbuilding, the government contributed to developing the Korean merchant marines. In addition, although the scheme has some drawbacks in financing terms, its beneficial effects on expansion of new tonnage and development of shipbuilding facilities were undeniable over the last two decades in Korea.

## 2.2 Cargo reservation: the waiver system

Cargo reservation is an administrative way of reducing the competition from foreign ships in the transport of domestic cargoes. This affects different parts of the countrys seaborne trade; in some cases, a country may even reserve 100% of its cargo for its own fleet which thus enjoys a full monopoly of transport.

Korea adopted a typical form of cargo reservation, the waiver system, in 1959. The system was further developed when the enforcement of the 'Outline of the Procedure for Issuing Waivers' was published by the Ministry of Transportation in 1965. In the same year, the government adopted a resolution to require that over 50% of inbound cargo procured with aid, loan or other government funds should be transported aboard Korean flagged ships. This strengthened the waiver system. In 1967, the most comprehensive attempt at cargo reservation was embodied in the 'Shipping Promotion Law'. This declared the intention of the government to reserve major cargoes of imports and exports for the national fleet in order to improve the balance of payments and, at the same time,

to promote the development of an oceangoing shipping industry in Korea. The major contents of the waiver system were as follows:

- Imports of iron ore, coal, raw chemical products, grain, fertilisers, crude oil, and government purchases as well as exports of plywood, cement, and steel are reserved for Korean flagged vessels unless a waiver is granted to a foreign vessel by the Korea Shipowners Association.
- There are two cases in which the waiver is issued: when the cargo is transported on routes where no Korean flagged ship is serving, and when no Korean flagged ship is available on the date on which cargo must be loaded, although the cargo can be shipped on routes where Korean flagged ship is serving.
- If a foreign carrier is nominated on the Letter of Credit, no waiver is necessary.

The waiver system has reserved considerable cargoes, for example, crude oil, grain, iron ore, cement and plywood, for Korean flagged ships and provided an opportunity for substantial increases in Korean shipping tonnage. For Korea, it reserved considerable cargo, in particular bulk cargoes, for the Korean national fleet. In addition, thanks to the export-led economic industrialisation, rapid export growth was a relevant factor which helped to determine shipping growth. In other words, the point to be emphasised is that in the case of demand for a great deal of final shipping services, foreign trade has played the decisive role. The expansion of shipping in Korea was a response to the export-oriented industrialisation policy. The diversification of export commodities and export markets has led to an increase in shipping tonnage and a change in the composition of the fleet in Korea. Furthermore, this has been a motive for Korean shipowners to order new shipbuilding at Korean ship yards under the '*Keihek Zoseon*' scheme. Therefore, it can be said that the waiver system has contributed to expanding and developing shipping[6] and shipbuilding industries.

## 2.3 Favourable fiscal policy

The Korean government mobilised both internal and external resources by making use of the market mechanism in implementing an export-led industrialisation strategy. The

6) To analyse how the waiver system, along with the economic policies which led to the growth of foreign trade, contributed to the Korean shipping expansion, it is helpful to raise and answer the following questions. What changes occurred in the types and volume of commodities imported and exported as the Korean seaborne trade expanded and the Korean fleet changed its composition and gross tonnage? Where did this seaborne trade come from and go to? What shares of imports and exports have been carried by the Korean fleet? On the answers to these questions, see Lee, T-W. (1990), 'The Korean Shipping Policy: the role of government', *Marine Policy*, Vol. 14, No. 5, pp. 421-437.

strategy in the mid-1960s contributed to the maintenance of an exchange rate near the free market level. In addition, the growth-oriented government encouraged the influx of foreign capital and exchange rate policy in Korea facilitated the inflow of foreign loans. An application for the inducement of foreign capital for acquisition of ships was approved by the government in order to review basic requirements for the expansion and development programme of Korean strategic industries, including shipbuilding industry. Since corporate borrowing from abroad could only be undertaken with the government's authorisation and guarantee, this constituted a substantial augmentation of the government influence. This private long-term loans were covered by the 'Foreign Capital Inducement Law', which was enacted in 1960 and amended in 1962 and 1966 to make it more attractive for investors and lenders. Under this Law, Korean shipowners and shipbuilders were able to obtain the Korea Exchange Bank's or Commercial Bank's guarantees on repayment (both amortisation and interest payments). The Law facilitated the import of foreign loans since foreign lenders were guaranteed repayment regardless of their domestic credit standing by the lending domestic banks for the Korean shipping and shipbuilding companies.

The interest rates on foreign currencies available to the shipbuilding and shipping industries were based mainly on LIBOR. Therefore, despite the fact that there existed differences in the interest rates between borrowers depending on their creditworthiness and the lender's financing sources, it is not difficult to regard LIBOR as a representative interest rate of foreign currencies employed in Korea, giving some allowances.

The general information about LIBOR is open to the public for inspection. It is possible to make one or two observations on financing terms used for both industries in Korea if both LIBOR as a representative interest rate of foreign currency and domestic bank lending rate as a representative interest rate of local currency loan could be chosen, though too much reliance should not be placed on them. Table 2 presents annual average cost of capital in Korea in the period 1966-80.

Table 2. Annual average cost of foreign capital in Korea

(unit: %)

| | 1966-70 | 1971-75 | 1976-80 | 1981-83 |
|---|---|---|---|---|
| I. Domestic bank lending rate+ (Curb market interest rate) | 24.4 | 17.0 | 18.0 | 12.5 |
| II. LIBOR++ | 6.4 | 7.9 | 11.5 | 11.1 |
| III. Foreign inflation rate (GNP deflator)+++ | 4.9 | 8.4 | 5.9 | 4.1 |
| IV. Exchange rate depreciations* | 5.1 | 7.8 | 5.5 | 10.1 |
| V. GDP deflator (rate of change):Korea** | 14.6 | 19.8 | 20.7 | 9.8 |
| VI. Real foreign interest rate: (II - III) | 1.5 | -0.5 | 5.6 | 7.0 |
| VII. Interest rate differential between home and foreign markets: (I - II - IV) | 12.9 | 1.3 | 1.0 | -8.7 |
| VIII. Real private cost of borrowing abroad: (II + IV - V) | -3.1 | -4.1 | -3.7 | 11.4 |

Notes : + Discounts on bills of deposit money banks (three - year moving averages).
++ LIBOR (90 days).
+++ Average of Japan and the USA.
* The Bank of Korea standard concentration rate (three-year moving averages).
** Three - year moving averages.

Source : Park, Y.C. (1986), 'Foreign Debt, Balance of Payments, and Growth Prospects: The Case of the Republic of Korea, 1965-88', *World Development*, Vol. 14, No. 8, p. 1025.

During most years of the 1960s and 1970s, the real interest rate Korean borrowers paid on foreign loans was negative, as shown in Table 2 above. In the period 1966-70, LIBOR adjusted for an exchange rate change was lower than the rate paid on domestic borrowing by as much as 15 percentage points, depending on how expected exchange rate changes are estimated. Even in the period 1971-80, the foreign borrowing rate was consistently lower than the domestic rate, though the differential narrowed considerably. Much of the differential could be explained by the artificially low level of domestic interest rates and the overvaluation of the exchange rate while inflation was accelerating.

It is not difficult to conclude that during the 1960s and 1970s, the enormous influx of foreign capital was certainly induced by the interest rate differential partly caused by the Korean government's money policy and that as a consequence, this interest rate differential was one of the powerful incentives to Korean shipping and shipbuilding companies to borrow abroad and expand their businesses. In other words, they turned to

foreign borrowing as an alternative source of credit in shipping financing. Thus, low interest rates combined with the Korean government's guarantee and the sharp increase of foreign trade resulted in a strong demand for foreign loans which in turn contributed to expanding Korean shipping tonnage as well as shipbuilding capacity during the 1970s and 1980s.

The government also committed itself to a variety of tax incentives and favours for shipping and shipbuilding growth. There were various tax exemptions, e.g. customs duties on the imports of second-hand ships, shipbuilding material and equipment, the net income before tax, the capital and insurance gains related to ships in ocean-going shipping companies.

## 3. Impact of Export-oriented Industrialisation and Import Substitution Strategy on Shipping and Shipbuilding Industries

In 1962 when the nation launched the First Five-Year Plan, Korea had in principle two alternative approaches to economic development. One was an inward-looking development strategy based on import substitution. The other was an outward-looking development strategy emphasizing trade. For Korea, with a long inward-looking tradition, the 1963 change to the outward-looking strategy was indeed remarkable.[7] It is to the credit of the political leadership at that time that such a strategy was adopted. However, there were powerful economic reasons for the policy, including poor natural resource endowment, small domestic markets and the existence of an abundant and well educated labour force with relatively low wages.

The essence of the outward-looking strategy adopted in the early 1960s was to promote labour-intensive manufacturing exports in which it was considered that Korea had a comparative advantage. In order to implement this strategy, the Korean government mobilised both internal and external resources by making use of the market mechanism. The most important elements of the policy were fiscal and monetary reforms, which were aimed at increasing public and private saving, and the establishment of a uniform exchange rate, which was the last step in the gradual adoption of a complete set of export incentives. For example, to mobilise domestic savings, the government raised interest rates on deposits to commercial banks from 5.8% to 20.2% in real terms. As a result, savings deposits in Korean banks nearly doubled each year. In addition, in order

7) On further discussion of inwardlooking development and outward-looking development strategy related to shipping in Korea, see Lee, T-W. (1996): *Shipping Developments in Far East Asia: The Korean Experience*, Avebury, England, Chapter 3.

to promote exports, the government readjusted the exchange rate in 1964, and kept it near the free market level. Furthermore, the Korean won was devalued by nearly 100%, thus eliminating a bias against the export sector.

The Korean government incentive policies were not directed toward perfectly free trade during this rapid growth period. There were, for example, government measures such as tax incentives and preferential loans that led to the expansion of several inefficient domestic as well as export industries, and import restrictions along with high tariffs that stimulated import substitution not only in consumer durables but also in various intermediate goods, including chemicals, electrical machinery, shipbuilding and transportation equipment. The government continued to give its full support to the export-oriented growth strategy. This basic strategy of export-oriented industrialisation was carried out under the subsequent Second, Third and Fourth Five Year Economic Development Plans.

In the early 1970s the government began to modify its outward-looking development strategy by emphasising import substitution, particularly in heavy and chemical industries and in agriculture. This change in economic strategy resulted from a number of disturbing external developments. For one thing, in 1971 the Nixon administration reduced the US troop levels in Korea by one third. This led the government to develop its own defence industry. Korea's resolve in this direction was reinforced by Democratic Presidential Candidate Jimmy Carter's 1976 campaign promise to carry out total US troop withdrawal. In addition, in 1971 the Bretton Woods system began to fall apart. It was widely believed that the system itself encouraged protectionism because it discouraged balance of payments adjustments via exchange rate modification. However, the advent of the flexible exchange rate system failed to reverse this trend. On the contrary, the protectionist trend accelerated. Thus, Korea was forced to diversify its trading partners and to produce and export higher value-added industrial goods.

Although emphasis has been placed on export-oriented industrialisation, since the early 1970s import substitution in selected major industries was also promoted by means of tax concessions and the allocation of preferential credits. The import-substituting industries promoted included shipbuilding, iron and steel, machinery and petrochemicals. Consequently, the machinery industry is now promoted not only for import substitution but also for export expansion.

Let us discuss in detail the shipbuilding industry. In 1976, the industry accounted for 4.3 per cent of Korea's total exports, with ships representing seventh place among exported items. It has been promoted by a backward linkage effect brought about by the remarkably rapid expansion in new shipbuilding tonnage at Korean yards. We should note that the Korean conglomerates, so-called *'chaebol'*, have dominantly involved in the

process of heavy and chemical industrialisation. The initiative was taken by the Hyundai Heavy Industries (hereinafter mentioned Hyundai) in 1973. This was then followed by the completion of two large-scale shipyards in Koje Island, one each by the Samsung Heavy Industries (hereinafter mentioned Samsung) in 1979 and by the Daewoo Shipbuilding and Heavy Machinery (hereinafter mentioned Daewoo) in 1981. At the end of 1980s, the above three builders plus the Hanjin Heavy Industries, which took over the Korea Shipbuilding Engineering Corporation, and the Halla Engineering and Heavy Industries, which expanded its shipbuilding capacity by taking over the Incheon Shipyard, formed the group of big five builders in Korea. The 'big five' have come not only to play a dominant role in the Korean shipbuilding industry, but also to give diverse impact on the world shipbuilding and shipping industries.

However, we must not fail to pay attention to the Korean government's role, which placed the shipbuilding industry as a national strategic industry to strengthen a self-supportive economy and concentrated resources in the industry as a matter of national policy. A good co-operation between the government and the builders was embodied into the 'Priority Industry Promotion Law', the 'Shipbuilding Industry Promotion Act' in 1967, the 'Machine Industry Promotion Act', the 'Electronics Industry Promotion Act' in 1969, and the 'Iron and Steel Industry Pormotion Act' in 1970. The shipbuilding industry that was favoured by the 'Priority Industry Promotion Law' enjoyed such preferential conditions as the following[8]:

- facilities for priority use of introduced foreign capital at a low interest and long-term repayment schedule
- necessary administrative guidance and financial aid for the purchase of raw materials and machinery
- discounts in rail freight rate, port charges, water, electricity and gas rates.

Employment of shipping is dependent upon the volume and pattern of seaborne trade. The size of shipping tonnage is, therefore, ultimately governed by the volume of seaborne trade, the distances over which it is to be transported and the efficiency of seaports. The nature of each of the commodities and the quantity in which it is transported determine the type of shipping required to carry it. While general cargo, which moves in small parcels or consignments, is transported by liner ships, bulk cargo, which consists of homogenous commodities individually moving in large quantity, usually in shiploads, is carried by tramps and bulk carriers. The scope for employment and growth of tramp shipping is dependent upon the volume of bulk cargoes in import and export trades of a

8) Watanabe, T. (1978), 'Heavy and Chemical Industrialization and Economic Development in the Republic of Korea', *Developing Economies*, Vol. 14, No. 4, p. 403.

country as well as the international cross trades in which it can participate. The growth trend of the Korean merchant marine fleet was roughly equivalent to the expansion of total seaborne volume with a similar pattern to the period of 1962-81.[9] This means that Korean shipping growth was accompanied by an increase of seaborne trade volume which in turn can be ascribed to the Korean governments economic policies, i.e. a successful outward-looking economic policy in the 1960s and an importsubstitution policy in the 1970s. Figure 1 relates to the growth trends of the total gross tonnage and seaborne trade volume in Korea over the whole period 1962-81. In this figure, the two curves run in a parallel pattern over the whole period.

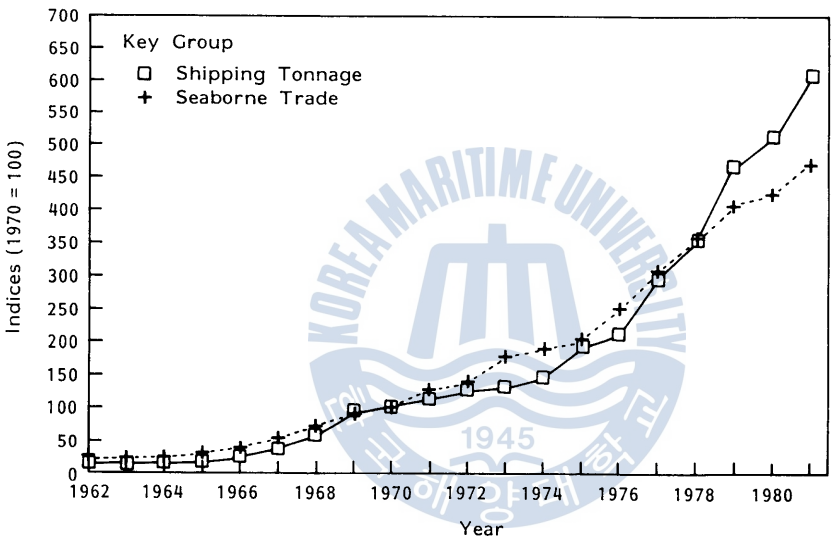


Figure 1. Growth trends in shipping tonnage and seaborne trade volume in Korea, 1962-81

## 4. The Industry Rationalization Policy for Shipbuilding and Shipping

The history of Korea's shipping industry has not been trouble free. The shipping companies did not predict the market drop in the aftermath of the second oil shock in the late 1970s. At the time, they purchased too many old, used vessels and made a huge losses. The industry faced its biggest crisis ever. In the mid 1980s, the industry overcame this difficulty by means of the 'Shipping Industry Rationalization Policy' in December 1983, which required the merger and abolition of carriers and the disposal of

9) Lee, T-W. (1990), *op. cit.*, pp. 434-436.

old vessels. This process was painful but it provided a stepping stone to improve international competitive edge.

Meanwhile, the 'Shipbuilding Industry Rationalization Law' was implemented in September 1988 and repealed in December 1993. The aims of the Law were:-

- to improve the productivity of the industry
- to strengthen its international competitive edge by placing regulatory controls, such as restraint on imprudent expansion of newbuilding facilities and ban on dumping price of bookings caused by excessive competition among Korean builders
- to improve financial structures of shipbuilding companies.

In spite of the recovery of the world shipbuilding market due to rising newbuilding prices and increasing orders after 1987, some shipbuilder's financial position became worse because of the increasing heavy debt which had built up through the long depression of 1980s. Although the shipbuilding market recovered, it was difficult for shipbuilders to recover by their own efforts. Thus, the government carried out the 'Shipbuilding Industry Rationalization Policy', according to a decision of the Industrial Policy Council which took into account of unemployment and the regional economy in 1989.

## 5. Liberalisation and Deregulation Policy and Current Problems Faced by the Shipbuilding and Shipping Industries

Owing to their closed and regulative nature, both the 'Shipbuilding Industry Rationalization Law' and the 'Shipping Industry Rationalization Policy' did not give the two industries the flexibility to compete in the rapidly changing world maritime environment. In addition, debates have been made on the arguments: that the Korean shipbuilding industry has been rehabilitated at the expensive cost of the Korean shipping industry; and that although the Korean government initiated and implemented collaboration schemes and policies for shipowners and shipbuilders, the latter have always been net earners. Furthermore, the World Trade Organization launched in 1995 and the government's desire to be a member of the OECD have been a driving force to open Korean shipping and shipbuilding markets. Thus, since 1990 the government has steadily undertaken liberalisation and deregulation policies for them, guaranteeing liberalisation in the private sector and opening the domestic market to foreign countries. This is briefly introduced below. Liberalisation measures for shipping have been employed as follows (See also Table 3.):

as follows (See also Table 3.):

- Foreign carriers were allowed to establish branches in Korea (January, 1989)
- Foreigners were allowed to invest in shipping auxiliary services, including maritime agency services and freight forwarding services (June, 1993)
- The number of designated cargoes has been gradually reduced from the original 11 to 7 (government procurement goods, refrigerated goods, cement were taken off the list in June 1993, steel products were removed from the list (April 1994)
- The waiver system in liner shipping has been eliminated, allowing foreign carriers to freely access to the Korean market (January, 1995)
- The current seven designated cargoes will be gradually reduced and only three items (crude oil, iron ore, and LNG) will remain on the list by 2001 (raw material for fertiliser and grain will be removed in 1997, coal and petrochemicals in 2001).

The government also announced a basic policy for the shipbuilding industry for the next 10 years so that the industry is able to strengthen its competitive edge as a strategic major export industry in the world market. Basic policy for shipbuilding is as follows(See also Table 3.):

- Free entry to shipbuilding depends only on each companies commercial judgment.
- The government will not subsidies directly shipbuilding.
- The government is going to improve the environment continuously by the relief of regulation and expansion of the social overhead capital, and strengthen international co-operation with other shipbuilding countries.

In 1993, the Korean shipbuilding industry took the first position in the world for the first time with 37% of the shipbuilding market by an amount of 9.5 million grt compared with Japans 32%. The Korean shipbuilding industry is the second largest shipbuilder in the world with 7.1 million grt of shipbuilding order received in 1995. (See Tables 4 and 5.) Six LNG vessels were ordered by the Korea Gas Corporation in August 1996. Thanks to the government's strong support policy, Hyundai, Samsung, and Daewoo shipbuilders have been privileged to build them at their yards.

Table 3. Major Contents of improvement and deregulation on shipbuilding and shipping industries in Korea

| Major contents | '94 | '95 | '96 | '97 | '98 | '99 | 2000 | 2001 |
|---|---|---|---|---|---|---|---|---|
| • Establishment & announcement of shipping industry promotion plan (every year) | → | → | → | → | → | → | → | → |
| • Switchover from the license system to the advance registration system | | → | → | → | → | → | → | → |
| • Gradual reduction of cargo reservation security | | | | → | → | → | → | → |
| • Improvement of appropriate tonnage security | | | | | | | | |
| - liberalisation of foreign capital | | | | → | → | → | → | → |
| - appropriate tonnage security | | → | → | → | → | → | → | → |
| • Reform of shipping taxation system | | | | | | | | |
| - reduction of vessel customs | | → | → | → | → | → | → | → |
| - postponement of corporation tax on vessel dealing | | → | → | → | → | → | → | → |
| - reformation of local tax on acquisition tax, registration tax etc. | | → | → | → | → | → | → | → |
| • Strengthening of relationship with with other countries | → | → | → | → | → | → | → | → |

Source: Jon, J-S. (1995), *op. cit.*

Table 4. Shipbuilding order received by quarter in Korea

(unit: grt)

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|
| 1 Quarter | 113,610 | 304,000 | 1,046,860 | 1,010,999 | 1,187,140 | 1,475,781 |
| 2 Quarter | 1,055,778 | 152,985 | 4,027,907 | 964,655 | 2,021,926 | n.a. |
| 3 Quarter | 2,475,469 | 679,099 | 3,349,506 | 1,368,430 | 1,390,457 | n.a. |
| 4 Quarter | 2,041,900 | 506,570 | 1,082,284 | 3,027,284 | 2,533,818 | n.a. |
| Total | 5,686,757 | 1,642,654 | 6,371,368 | 6,371,368 | 7,133,141 | n.a. |

Note : n.a. = nat available.
Source : Korea Shipbuilder's Association (1996).

Table 5. Shipbuilding order by ship type in Korea

(unit: grt)

| | Tanker | Bulk carrier | Container | Others | Total |
|---|---|---|---|---|---|
| 1991 | 2,519,600(44) | 1,826,699(32) | 581,388(10) | 506,270 (9) | 5,686,757(100) |
| 1992 | 652,000(40) | 172,884(11) | 516,000(31) | 301,953(18) | 1,642,654(100) |
| 1993 | 4,269,290(45) | 3,547,257(37) | 1,038,67911(11) | 651,646 (7) | 9,506,871(100) |
| 1994 | 1,341,600(21) | 2,926,056(42) | 1,825,050(29) | 478,662 (8) | 6,371,368(100) |
| 1995 | 1,125,238(16) | 3,049,850(42) | 2,131,857(30) | 826,196(12) | 7,133,141(100) |
| May '96 | 572,569(39) | 424,500(29) | 457,512(31) | 11,900 (1) | 1,474,781(100) |

Note : Figures in parentheses indicate composition ratio of the total.
Source : Korea Shipbuilders' Association (1996).

Although the above kind of positive valuation to the government policy for the two industries has been given, it will not be forecast optimistically that they will continue to develop in the future without failures. Current major problems both industries are now facing are as follows:-

a) *rising labour costs and disputes, and difficulties in the recruitment of qualified crews and technicians:*
The Korean shipping industry has flagging options: flagging out flags of convenience countries or to introduce second ship register, the so-called the Korean International Ship Register Act.[10] The Korean shipbuilders are considering the possibility of moving some of their activities to lower cost regions in China, Vietnam, and India. They are also considering the formation of joint venture companies with ailing yards in Eastern Europe.

b) *high insurance costs caused by the high rate of marine casualties*

c) *an adverse taxation system related to the shipping industry*[11]

d) *expansion of shipbuilding capacity in dispute:*
With three of the five big shipbuilding companies, Hyundai, Samsung, and Daewoo, have completed their investment in the expansion of their building capacities. With annual demand for newbuilding currently running at 24 million grt, and world capacity at round the 26 million grt mark.[12] However, the Korean yards are

10) Lee, T-W. (1996), 'Flagging Options for the Future: A turning point in Korean shipping policy?', *Maritime Policy and Management*, Vol. 23, No. 2, pp. 177-186.
11) *Ibid.*, pp.179-180.
12) Marine Publications International Ltd. (1996), *Shipping World & Shipbuilder*, May, p. 12.

unrepentant. Imprudent expansion of shipbuilding capacity will result in world-wide overcapacity of fleet tonnage, followed by a long term depression of shipping market. In addition, by 2005 which the replacement demand will be saturated and there will be world-wide overcapacity of more than 30 per cent according to the statistics published by the Japan Maritime Research Institute. This will lead to a return to a long recession similar to that experienced in the mid 1970s and 1980s

e) *shortage in the production of main engines and steel materials*

f) *gradually depreciated value of Japanese currency, i.e. yen, against US dollar:*
The Japanese yen has been sharply appreciated against the US dollar since the beginning of 1993, which resulted partly in the increase of Koreas share rate of shipbuilding market in the world. On the contrary to this, since 1996, gradually depreciated value of the yen has strengthened Japans international price competitive edge.

g) *very limited access to foreign capital markets with favourable financing terms*

h) *an inflexible government regulatory environment.*
Yet again we have forgotten history. The fortunes of shipbuilding and shipping are inextricably linked. The simple truth is if we have more shipbuilding capacity than the shipping market needs, freight rate will once more fall down to the floor. When it happens, shipbuilding will, once again, suffer a very severe, and very predictable slump.[13)]

## 6. Conclusions

The purpose of this paper was to review the Korean government policy for shipping and shipbuilding industries over the last three decades with their recent policy development. It was concerned with fiscal policy, the government financed shipbuilding programme (*'Keihek Zoseon'* scheme), the waiver system and export-oriented industrialisation and import substitution strategy.

An export-oriented industrialisation policy brought about rapid export growth, which in

13) A Japanese scholar suggests a similar view of this in his work. Nagatsuka, S. (1994), *Recent Changes in the South Korean Shipbuilding Industry and its Future Prospects: equipment capacity expansion plans leading to recession*, Japan Maritime Research Institute Report No. 49, p. 54.

turn increased the imports of raw materials in Korea since the early 1960s. As a result, the extensive expansion of foreign trade has been achieved and caused the government to accelerate the expansion of the merchant fleet and in turn shipbuilding capacity, through various preferential measures and incentives, for example, the waiver system, the *'Keihek Zoseon'* scheme, favourable financing terms, and so on. In investigating the relationship between shipbuilding and shipping industries in this paper it is clear that there existed a positive interrelationship between the two industries. However, it must not be disregarded that the expansion of the shipbuilding industry does depend not only considerably on the capacity of foreign trade but also on sacrifice of shipping industry.

It must be mentioned that to a greater extent, the government was concerned with the mobilisation and allocation of resources, the stabilisation of the national economy and the promotion of technological innovation. Furthermore it played many roles in economic development: as a major investor and at the same time as a consumer; as a source of selective development planning and financing; as a powerful agent for implementing policy; and as a motivating force behind investment decisions by private business.

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