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# South Korean Government's policy on the shipbuilding industry: transformation from the industrial policy of developmental state towards neo-liberal one (1953-2018)

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## Abstract

Against the backdrop of the success story of the Korean shipbuilding industry, numerous legends and hero stories have been created. On the one hand, they advocate the developmental dictatorship while highlighting the positive role of Park Chung-Hee and the government. Others have emphasized the role of Chaebol owners or entrepreneurs from a market-oriented perspective. Strangely, the two views are often combined at the same time. This paper went beyond the discussion of success factors to examine how the relationship between the government and the market has changed and what difficulties and problems the shipyard workers had to face in the process. In particular, the paper has dealt with government's policy for the shipbuilding industry during the recessions.

This article provides an overview of the Korean government's policy for the shipbuilding industry and the business strategy of the Hyundai Heavy Industries (hereafter, HHI), South Korea's leading shipyard. Especially, the historical process of structuration of the state-market relations, or the government-industry relations would be focused on. Labor disputes related with restructuring will be also briefly mentioned.

The first part will investigate the historical transformations from the shipbuilding promotion policy of the developmental state into the neo-liberal policy for restructuring to deal with the shipbuilding depression. The effects and implications of such transformation on labor relations will also be noted briefly. The second part will deal with so called the success of the HHI, and its recent restructuring.

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## **Keyword**

Korea, shipbuilding industry, public politics, state-industry relations.

## **Política del Gobierno de Corea del Sur para la industria de la construcción naval: del estado desarrollista al estado neoliberal (1953-2018)**

En el contexto de la historia exitosa de la industria naval coreana, se han creado numerosas leyendas y personajes heroicos. Por un lado, se considera a la dictadura desarrollista al tiempo que se destaca el papel positivo de Park Chung-Hee y el gobierno. Otros han enfatizado el papel de los propietarios o empresarios de Chaebol desde una perspectiva orientada al mercado. Curiosamente, las dos visiones a menudo se combinan. En este artículo profundizamos el debate acerca de los factores de éxito para examinar cómo ha cambiado la relación entre el gobierno y el mercado y qué dificultades y problemas tuvieron que enfrentar los trabajadores del astillero en el proceso. En particular, en este texto analizamos la política del gobierno para la industria de la construcción naval durante las recepciones.

Este artículo proporciona una visión general de la política del gobierno coreano para la industria de la construcción naval y la estrategia comercial de Hyundai Heavy Industries (en adelante, HHI), el astillero líder de Corea del Sur. Especialmente, se centrará en el proceso histórico de estructuración de las relaciones entre el estado y el mercado, o las relaciones entre el gobierno y la industria. Los conflictos laborales relacionados con la reestructuración también se mencionarán brevemente.

La primera parte investigará las transformaciones históricas de la política de promoción de la construcción naval del estado en desarrollo a la política neoliberal de reestructuración para enfrentar la depresión de la construcción naval. Los efectos e implicaciones de tal transformación en las relaciones laborales también se mencionarán brevemente. La segunda parte abordará el llamado éxito del HHI y su reciente reestructuración.

## **Palabras clave**

Corea, industria naval, políticas públicas, relaciones estado-industria.

## I. Introduction

The shipbuilding industry of South Korea (hereafter, Korea) is widely known for its remarkable success stories. The market shares of Korea started at 1.3% in 1973, rose to 9.0% in 1980, and 30.2% in 1987. Korea has emerged as a major player in the global shipbuilding in the late 1980s and maintained its leading position until now. Legends and heroism were spread through media articles and publications of business history bragging about the success of the Korean shipyards.<sup>2</sup>

Western scholars have also paid attention to the success of the Korean shipbuilding industry (Amsden 1989; Jonsson 1995). At first the relationship between the state and the market has become the focus of research by Amsden, who introduced the Korean developmental state to Western readers. Amsden emphasized “a reciprocal relation between the state and the firm” in late industrialization, arguing that the Korean state imposed “certain performance standards from firms” in direct exchange for government subsidies (Amsden 1989: 146).<sup>3</sup> The developmental state approach, however, has serious flaws that downplay the contradictions and negative aspects inherent in developmental dictatorship (Kim 1999: 171-2). Reviewing the relationship between the Korean Government and each shipyard, including Hyundai, Daewoo, and Samsung, Kim (1999) claimed that the government interventions have sometimes resulted in inefficiency as in the Daewoo Shipbuilding case.

Subsequent studies have focused primarily on exploring various factors of the Korean shipbuilding industry's success. In order to build the state-of-the art large shipyards and to construct Very Large Crude-Oil Carriers (VLCCs), the Korean Government and shipbuilders could not but borrow capital and technology from the advanced economies. Thus several scholars paid attention to how new shipbuilders, includ-

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<sup>2</sup> The Title of the Part II of the official history of Hyundai Heavy Industries (1998) is “The Legend of Hyundai Shipyard's Founding”.

<sup>3</sup> Amsden attributed the presence of the discipline not to the ability of policy-makers, but to the dominant state power over the other social forces including business and labor classes (Amsden 1989: 147). Criticizing Amsden's view of stressing the government's role in the construction of the Hyundai shipyard (Amsden, 1989: 81, 112), Bae (2007) argued that Park Chung-Hee government was not thoroughly prepared to build a large shipyard. He noted the entrepreneurial capacities of Hyundai and its accurate analysis of shipbuilding market trends.

ing Hyundai, secured capital and technology from Europe and Japan in the early 1970s (Bae 2002; Bae 2011), and to the background of decisions of European and Japanese shipyards as well (Sofue 2005; Kang et al. 2016). Emphasizing the timing when Korea's shipbuilding industry entered the global market, some studies argued that advanced technology was available from European shipyards as they entered a declining period thus seeking another profitable source of ship equipment (Bae 2011; Eich-Born and Hassink 2005).<sup>4</sup>

Other studies have focused on the formation of a shipbuilding cluster in the southeastern part of the Korean Peninsula (Hassink and Shin 2005; Shin and Hassink 2011). Todd, on the contrary, argued that Asian shipyards sought economies of scale through large shipyards, not taking clusters into account, while the decline of European shipyards was related to the fault with the cluster (Todd 2011, 271).<sup>5</sup>

Many other factors may have also been related to the success of the Korean shipbuilding industry. For example, the repressive labor policy of the Korean Government made it possible for shipbuilders to maintain low labor costs for a long time before 1987 (Nam 2009, 205). The Korean shipyards' own R&D and technological innovation have also deserved attention (OECD 2015).<sup>6</sup>

Research on the success factors of the Korean shipbuilding industry is necessary and useful to understand the industry. Questions on success factors, however, seem to make it difficult to pay attention to continuities and changes in the industrial policy of the Korean government, and the dynamic relations between the government and the industry. This paper aims to focus on the continuities and changes in the industrial policy of the Korean government.

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<sup>4</sup> Bruno and Tenold mentioned that the long crisis of the 1970s and early 1980s was even "a blessing in disguise for South Korea's shipbuilders" (Bruno and Tenold 2011, 217).

<sup>5</sup> The concept of a cluster may be used vaguely, and an evolutionary approach underlying the concept of a cluster's life cycle tends to underestimate historical contingencies, political aspects of industrial growth, and the role of the state as well.

<sup>6</sup> Lee and Park (2013) refer to five success factors of Korean Shipbuilding Companies such as the government's industrial policy, Chaebol-led industrial development, competition between Chaebols, domestic technology innovation, and human resource development. The Chaebol refers to a family-run conglomerate in Korean.

It has been nearly 50 years since Korea entered the global shipbuilding market. The Korean government's shipbuilding policy and relations with major shipbuilders have undergone huge changes along with the Korea's changing position in the market. Starting as late-comers, Korean shipbuilders have become leading actors, which was also accompanied by change in the firm's business strategy.<sup>7</sup> In the first decade of the 21st century the global shipbuilding market has enjoyed an unprecedented boom, and then went through a long-term recession following the global financial crisis of 2008.<sup>8</sup> Since 2010 Korea's shipbuilding industry has also undergone massive reductions in facilities and workforce as well.

The industrial policy of the developmental state has characteristics such as government control of foreign capital and bank sector, direct intervention and incubation of selected industries, authoritarian suppression of labor movement, and direct intervention in industrial restructuring. In comparison, the industrial policy of the neo-liberal state has other features such as capital and financial liberalization, general and indirect intervention in industries – for example R&D support -, emphasis on employment flexibility, and industrial restructuring based on so called market principles. The industrial policy of the Korean developmental state has evolved into a neo-liberal one since 1998. This article provides an overview of the Korean government's policy for the shipbuilding industry and the business strategy of the Hyundai Heavy Industries (hereafter, HHI), South Korea's leading shipyard.

Looking at the continuity and change of the Korean government's policy on the shipbuilding industry over the past 60 years, this paper reviews academic articles and books related to the Korean shipbuilding industry as well as materials published by shipbuilding companies, shipbuilders' association, and government ministries.<sup>9</sup> Korean shipbuilding statistics

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<sup>7</sup> The classification of Cho and Porter (1986) on the competitive strategy of the shipbuilding industry has some limits to capture neo-liberalist trends of increasing mergers and acquisitions under financialization and globalized production system. Taking this into account, this article adopts the term of business strategy in a broad sense, rather than competitive strategy.

<sup>8</sup> The 2008 global financial crisis should be regarded as an incident that reveals an existing oversupply rather than a cause of the shipbuilding industry's downturn (Shin, 2016).

<sup>9</sup> As for official business histories for the Korean shipyards, refer to Korea Shipbuilding and Engineering Corporation (1969), Hyundai Heavy Industries Co.,

presented in this paper are based mainly on annual reports of Korea Off-shore & Shipbuilding Association.

This paper is organized into four parts. The first section introduces and reviews the literature on the Korean shipbuilding industry. The second investigates will the historical transformations from the shipbuilding promotion policy of the developmental state into the neo-liberal restructuring policy dealing with the shipbuilding recession. The different effects and implications of above policies on labor relations will also be noted. The third section deals with the success of the HHI, and its major restructuring since 2014. The effects of the industrial policy of the Korean government are checked at the corporate level, and changes in the business strategy are discussed as well. The final section aims to summarize the discussions of section II, III, and to present some policy implications.

## **II. Trajectory of the Korean government's policy for the shipbuilding industry**

Five periods can be distinguished in the Korean government's shipbuilding policy. The first period is characterized as import substitution (1953-1970). The support for export-led industrialization is a key feature of the second period (1971-1987). During the third period (1988-1997) the developmental state was weakened and liberalization and deregulation started. The fourth period is characterized by financialization and globalization under a neo-liberal transformation (1998-2008), and the fifth period by neo-liberal restructuring of the shipbuilding industry after the 2008 global financial crisis (2009-2018).

### **Import substitution policy (1953-1970)**

In the 1950s, the Rhee Syng-Man government (1948-1960) implemented a planned shipbuilding project, supporting improvement of shipyard facilities, and promoting manpower training. Despite these efforts, however, the shipbuilding industry could not reach the output level of the end of the Japanese colonial period, and demand of domestic ships could not be satisfied. The Shipbuilding Promotion Act, promulgated on March

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Ltd. (1992, 1998), Daewoo Shipbuilding & Marine Engineering Co., Ltd. (2004), Samsung Heavy Industries Co., Ltd. (2004).

11th, 1958, allowed subsidies for less than 40% of new vessel price, which was not carried out due to budgetary constraints. The Rhee government established the five-year shipbuilding plan (1957-1961) to build 153,000 tons of vessels for 5 years. From 1958 to 1961 the annual average shipbuilding completion was also only about 4,500 tons due to weak financial capacity (Korea Development Bank Research Department 1962).

On May 16, 1961 the Park Chung-Hee government (1961-1979) took power through a military coup d'état, and actively pursued to promote the shipbuilding industry through the first and second five-year economic development plans. The government planned to build 67,000 tons of vessels from 1962 to 1966, but the figure was only 20,000 tons until May 1965 (Park 2018, 23).

Under the second five-year economic development plan (1967-1971), the policy goal for the shipbuilding industry was to establish a self-sufficient base for domestic ships, and to gradually develop gradually an export industry. The Shipbuilding Industry Promotion Act, enacted on March 30th, 1967, has increased the fiscal funds loan ratio from 55% to 85% (HHI 1992, 315).

The funds received from Japan in the wake of the normalization of Korea-Japan diplomatic relations in 1965, were used to foster the shipbuilding industry. Using these funds the Korean Shipbuilding and Engineering Corporation (hereafter, KSEC)<sup>10</sup> pushed for expansion of facilities to build 10,000 tons of ships, and built 4,000 tons of cargo ships (Bae 2018, 85).

The shipbuilding industry showed stable growth rates in the 1960s. Total 4,636 gross tons of new vessels were completed in 1962, and 43,230 gross tons in 1971. The imports of foreign ships, however, increased more steeply, and the self-sufficiency of ships was only 18.2% in 1971. In the late 1960s the domestic demand for various fishing vessels increased, but the Korean shipbuilding industry could not respond to this.

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<sup>10</sup> The KSEC was formed by Japanese capital in 1937 as Choseon Heavy Industries Inc. (CHI), to build and repair steel ships. After the defeat of Japan in the World War II, the CHI became a semi-state-owned enterprise and was renamed Korea Shipbuilding and Engineering Corporation in 1950. In 1968, the KSEC was privatized, retaining its name (KSEC 1969). In 1989, the Hanjin conglomerate took over the KSEC in bankruptcy, and set up Hanjin Heavy Industries. Until the huge Hyundai shipyard was established at Ulsan, the KSEC's Young-do shipyard was the largest in South Korea.

While domestic shipyards were idle, ships were imported from abroad (KIMA 1984, 1445).

In 1964 the KSEC built two 1,600-ton cargo ships adopting the block construction method.<sup>11</sup> The block construction method was an innovation which allowed a reduction of the workforce input, and the adoption of a flow work system suitable to Taylorist production management. For more improvements of production, however, it was necessary to increase capacities of docks and cranes, which were implemented only in the 1970s (KSEC 1969). The KSEC exported 20 tuna fishing vessels to Taiwan in 1969, showing the potential of the Korean shipbuilding industry to grow into an export industry. But these exports caused a deficit of 900 million Korean won due to low-priced orders, aggravating the management balance of the KSEC (Bae 2007, 39). In 1971 the KSEC received orders for six oil carriers ranging from 20,000 to 30,000 tons from the US Gulf. The Korean government has promised to increase the transportation costs of crude oil provided by the Gulf so that the company place orders for the KSEC (Bae 2018, 92).

### **Export-led industrialization (1971-1987)**

With the establishment of Hyundai's Shipyard in Ulsan, Korea could only succeed in entering the global shipbuilding market of VLCCs. In the 1970s Korea's shipbuilding industry grew dramatically with the support of the government's promotion policy for heavy and chemical industry. The government's interest in the shipbuilding industry originated from political and military considerations, when, according to the Nixon Doctrine, U.S. military presence in Korea was expected to end. The Park military dictatorship attempted to foster a defense industry which was embodied in the 'four nuclear plant plans (Bae 2018, 90). The Hyundai Chaebol was in charge of the shipbuilding sector in those plans. Paying attention to the expanding oil tanker market, Chung Ju-Yung, the chairman of the Hyundai Conglomerate, actively pursued the construction of large shipyard. Since the Hyundai Shipyard started out as an exporter for

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<sup>11</sup> The block construction method refers to a method in which a block is built at a factory or on the ground, transported to a fleet or dock, and then assembled to construct a ship. The size of a block is limited by the crane capacity which can lift it.

global market in 1973, Korea's shipbuilding records have been published in Lloyd's statistics.<sup>12</sup>

In March 1973, the Korean government announced 'the long-term shipbuilding industry promotion plan', according to which the Korean shipbuilding industry would meet domestic demand by 1980, and export 3.2 million tons of vessels. Another new shipbuilding industrial complex should be constructed at the Geoje Island. In October 1973, the KSEC started to construct the Okpo Shipyard in Geoje. The KSEC, however, could not afford the construction cost of the new shipyard, and went into bankruptcy. As a result, the uncompleted shipyard was taken over by the Daewoo Conglomerate, which completed the first dock of 1-million-ton class in 1981. The Jukdo shipyard built by the Korean Ocean Co., was also acquired by the Samsung Conglomerate. Samsung completed the first dock in 1979 and the second in 1983, and came to have an annual shipbuilding capacity of 450,000 gross tons (Korean Entrepreneurs' Association 1997).

Korea accounted for 3.5% of the world's shipbuilding completion in 1980, and has almost always exceeded 20% since 1986 (see Figure 1). In particular, Korea rapid growth occurred at a time when world shipbuilding market was contracting seriously since the mid-1970s. The world's shipbuilding performance reached a peak of around 32.4 million gross tons in 1975, declining to 10 million gross tons in the 1980s. This meant that the growth of Korean shipbuilding industry was a disaster for European shipyards. On the other hand, Korea had to make it through with such a weak domestic market during severe recessions that the Korean government's proactive support greatly contributed to the survival and growth of the industry.<sup>13</sup>

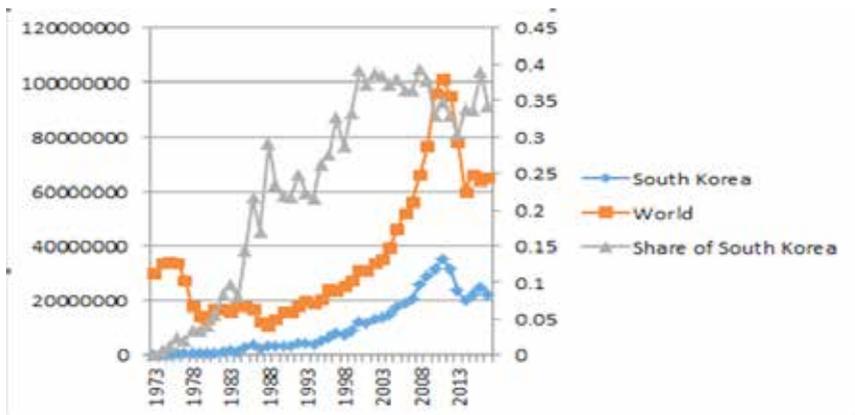
Both the Park Chung-Hee and the Chun Doo-Hwan governments (1980~1987) supported shipbuilding industry through the "export fi-

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<sup>12</sup> The growth strategy of the Korean shipbuilding industry contrasted sharply with Brazil, which aimed at the domestic ship market and focused on domestic capital. The Brazilian shipbuilding industry has virtually disappeared in the 1990s, but is seeking to revive again with Petro bras' oil field development (Du-bois and Primo 2012).

<sup>13</sup> Bruno & Tenold argued that the long crisis of the 1970s and early 1980s was even "a blessing in disguise for South Korea's shipbuilders" (Bruno and Tenold 2011, 217). This argument is controversial, but clearly the severe recession has made the role of the Korean government even more important.

**Figure 1**  
**New Shipbuilding Completion (1973-2017)**  
**(gross ton, ratio)**



Source: Korea Offshore & Shipbuilding Association.

nance” and “planned shipbuilding program.” Since the oil crisis of 1973, the payment method of ship exports has changed into “deferred payment basis.” The Export-Import Bank of Korea was launched as a public corporation overseen by the government in 1976. In the 1970s and 1980s, financial support for ship export accounted for around 80% of total export financing for deferred payments (HHI 1992, 436). With the planned shipbuilding program, real buyers making orders at domestic shipyards were also provided government financial support. Total orders under the program amounted to 199,000 gross tons in 1977, and expanded to 820,100 in 1985, when the shipbuilding recession was most serious. Total orders under the program were over 4.64 million gross tons from 1976 to 1989 (HHI 1992, 462 Table 30).

Under the developmental dictatorship, partial liberalization and deregulation measures have already begun. In April 1979, the Economic Planning Board (EPB) announced a plan to change the government-led promotion policy for the heavy and chemical industry into a private-led initiative based on principles of a market economy (Cho 2016, 68). A group of economic officials who studied neoliberal doctrines in the United States were in the EPB. The new military led by Chun Doo-Hwan, which took office in May 1980 through cracking down the people’s movement

for democratization in Kwangju, accepted the so-called economic liberalization measures and tried to refrain from government's direct intervention in the market. Although officially the government advocated a shift in industrial policy, Kim (1999) noted that planned shipbuilding program and export finance for deferred payments expanded in 1980s rather than in the 1970s. He argued that it was appropriate to view Korea in the 90s as a weakened developmental state in a transition period.

The Korean government's support for the shipbuilding industry at this time was indispensable for the survival and growth of Korean shipyards.<sup>14</sup> However, the Korean government's support was not more favorable to Korean shipyards than that of European governments to their shipyards. Interestingly, the World Bank (IBRD) changed its previous critical stance against Korea's heavy and chemical industrialization in this period. The HHI and the KSEC have reliably repaid interests on loans, and the Bank has come to regard South Korea as an important source of revenue. The IBRD also called for the Korean government's intervention and support to protect its own investment (Park 2015, 91).

The Korean developmental state repressed basic labor rights, and at the same time restricted the employers' right to dismiss workers at will. The Park government enacted the Emergency Act for National Security on December 27th, 1971 and imposed restrictions on the rights to bargain collectively and to go on strike. On December 5th, 1973, right after the oil shock, the government ordered emergency service for labor inspectors to prevent employers from dismissing workers due to reduction of factory operation. And in 1974 the labor department set up the guidelines for evading collective dismissals (Dong-A daily news July 18th, 1974).

In 1980 the new military led by Chun revised the Trade Union Act, making it a principle to unionize at enterprise level and forcing enterprise bargaining. The Act allowed collective bargaining crossing firms only when it was approved by the Government. But workers were not free to organize themselves into unions. Thus, except for the KSEC, until 1987 there were no unions at all at major shipyards such as Hyundai, Daewoo, and Samsung (Shin 2004).

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<sup>14</sup> The Korean government pushed for the amalgamation of small and medium size shipyards. Since 1973, 18 shipyards have been merged by region. By the merger of several small shipyards, was established Daedong Shipbuilding, which was the predecessor of the STX shipbuilding

After the second oil shock in 1979, the global market's slow down led to a sharp decline in sea traffic in the early 1980s \_ -2.9% in 1980, -4.0% in 1981, and -7.6% in 1982. (HHI 1992, 617-623). In 1985, new orders fell to 33.4% in tonnages and 25.2% in terms of total value.

Officially the government's regulation on collective dismissals continued. The ministry of labor sent a letter to the major associations of employers and managers, saying "even though facing redundancy situations, conglomerates should keep current level of employment through transferring workers to related companies, shortening working hours, using shift work, and also using statutory vacation and holidays." (Kyunghyang Daily News March 14th, 1983) The labor ministry demanded that, if they were to dismiss more than 10 workers, employers should get approval of regional labor administration offices. Moreover, the government also threatened to arrest employers who dismissed workers without thoughtful measures. But there were doubts about real effects of the seemingly strong regulations for preventing collective dismissals. A CEO of a manufacturing company in Busan openly said, "If workforce reduction is inevitable for managing the business, employers should have the right to dismiss workers." (Kyunghyang Daily News September 24th, 1983) The number of workers in the Korean shipbuilding industry continued to decrease from 75,643 in 1984 to 57,000 in 1987 and less than 50,000 in 1988. The HHI cut its workforce by 1,687 in 1985 and 5,588 in 1986 (HHI, 1992: 629).

### **Starting liberalization and deregulation, but incomplete - Industrial Development Act (1986) and "Directive of rationalization of the shipbuilding industry" (1989)**

In a formal sense, the Industrial Development Act of 1986 abandoned the industrial policy of the developmental state. The Shipbuilding Promotion Act of 1967 was abolished, and the Industrial Development Act came into effect on July 1st, 1986. The new act avoided the government's direct support for selective industries as much as possible, and pursued functional and indirect supports for technology development and productivity improvement in general. The enactment of the Industrial Development Act itself, however, was led by government officials, especially by the Ministry of Commerce and Industry, which could still retain the authority to designate the rationalization industry according to

its judgment (Kim 2005). The new act can be understood as the result of a compromise of conflicting policy orientations between the EPB and the Ministry of Commerce and Industry (Cho 2016, 69). Thus the government's intervention continued, and a case in point was the "Directive of rationalization of the shipbuilding industry" of 1989 (HHI 1992, 216, 238-241).

Since 1987, the global shipbuilding market has gradually improved, but the Daewoo Shipbuilding and the KSEC faced bankruptcy in 1988 due to many factors such as operating losses, the heavy financial costs, and explosive labor disputes in 1987. South Korea's twelve major shipyards, including the Hyundai, the Daewoo, the Samsung and the KSEC, posted sustained losses due to the shipbuilding recession of the 1980s. The total deficit amounted to 49.1 billion won in 1985, 88 billion won in 1986, 272 billion won in 1988, and 248 billion won in 1989. High financial costs, which amounted to 9.8 percent of the total costs, were a big burden (HHI 1992, 215-216).

The bailout for the Daewoo Shipbuilding was a controversial issue. The Daewoo Shipbuilding completed the 1-million-ton capacity Okpo Shipyard in 1981. As the shipbuilding recession persisted, Daewoo continued to record deficits especially due to the burden of the construction costs. The deficit amounted to 600 billion won in the late 1980s (Cho 2016: 70).<sup>15</sup> Net losses reached 145.5 billion won in 1987 and 212.76 billion won in 1988, and interest payments exceeded 437 billion won for the three years since 1986 (Kim 1999, 163).

In March 1989, the government announced a plan to rescue the Daewoo Shipbuilding. The Daewoo Group set aside 400 billion Korean won in self-rescue efforts, the state-run Korea Development Bank (KDB) suspend 250 billion won of its existing loans for seven years without interest, and offered 150 billion won in fresh loans. Subsequent measures for rationalization of the shipbuilding industry were implemented. Financial and tax supports were provided to the Incheon Shipbuilding and the KSEC as well. In particular, the Directive of 1989 limited the establishment of new shipbuilding facilities or the expansion of existing ones until 1993, and measures were taken to prevent excessive competition for low-cost

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<sup>15</sup> The Daewoo conglomerate took over the suspended Okpo shipyard from the KSEC, demanding the government to contribute an equivalent amount of Daewoo's own investment (Kim, 1999: 161).

orders among Korean shipyards (HHI 1992, 216). The Korean government's intervention was based on the prediction that the recession would end soon.

The Directive of 1989 showed that the Korean government's financial support was indispensable for the industry to tide over the crisis, which was replicated on a larger scale in the subsequent crisis right after the global financial crisis of 2008. The government had the power to decide whether to back up a company's investment plan or not, and whether to keep a certain shipyard alive or not (Kim 1999, 154).

Until the end of 1985, the terms of loans for deferred payments offered by the Export-Import Bank of Korea were 9.6 percent annual interest rates, an 80 percent loan ratio, and an eight-year repayment period. This was adjusted to 80% of the loan ratio, 8.5 years between loans, and 8% of interest rates following the level of the OECD Memorandum of Understanding (HHI 1992, 641). At this time, various government subsidies were being implemented in Europe (Stopford and Barton 1986), and in financial terms Korea was at a disadvantage. In 1980, Korea's interest rate was around 8 percent, but Japan had 2-4 percent, Italy, Sweden and Spain 6-7 percent, and Korea had a shorter repayment period of eight years (Park 2018, 306).

As soon as the Directive of 1989 was released, in 1994, Korean shipbuilders fiercely sought to construct new docks and expand those already in existence. The Samsung Heavy Industries expanded a second dock and built a third dock. The HHI completed the eighth and ninth docks, and the Halla Heavy Industries started building the Samho shipyard which began operations in 1995. As a result, Korea's new shipbuilding completion increased from 3.36 million tons in 1988, to 8.63 million tons in 1998, and its global market share reached 41% in 1999 (Figure 1).<sup>16</sup>

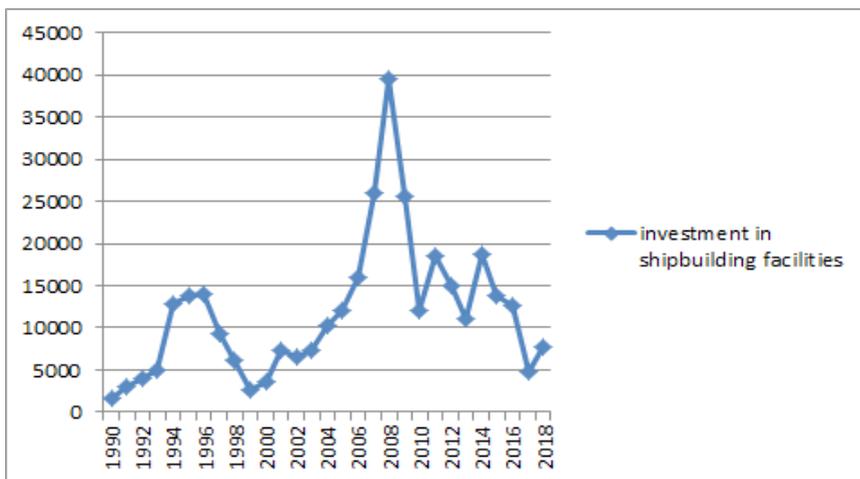
Total investments to the shipyard facilities increased from 166 billion won in 1990 to 1227.1 billion won in 1994, 1386.2 billion won in 1995, and 1397.4 billion won in 1996, respectively (Figure 2).

In the OECD multilateral shipbuilding negotiations of March 1994, the European Union (EU) and other countries urged the Korean government to curb the expansion of facilities, arguing that global over-supply would deepen due to the increase in the capacities of the Korean

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<sup>16</sup> Compared to the increase in the new shipbuilding completion, the employment in the shipbuilding industry showed a slight increase. The workforce increased from 57148 persons in 1987 to 77799 persons in 1997.

**Figure 2**  
**Investment in shipbuilding facilities in Korea**  
**10 mn. Korean Won**



Source: Korea Development Bank.

shipyards.<sup>17</sup> The Korean government announced that it had a plan to curb overcapacities through administrative guidance. At the OECD shipbuilding conference in 1995, however, the Korean government argued that they could not regulate the expansion of shipyard facilities (Cho 2017, 427-8). Cho interpreted that the deregulation of the shipbuilding industry was promoted as a result of the strengthening of the voice of market-oriented bureaucrats in the Kim Young-Sam administration (1993-1998) (Cho 2017). In this case the government might interpret that noninterference would be more favorable to the Korean shipbuilding industry as a whole. In general, it seems that the Korean developmental state has weakened and been approaching toward neoliberal one from 1988 to 1997 (Ji 2011). In terms of the policy for shipbuilding industry, however, practices and heritages of the developmental state remained strong. One such example were the bailouts through direct government interventions in bankrupt shipyards such as the Daewoo shipbuilding.

<sup>17</sup> South Korea became a member of the OECD Working Party on Shipbuilding in October 1990, and signed a multilateral agreement in July 1994, which was to forbid the government subsidies to shipbuilders (Jonsson 1995, 62). As for the shipbuilding disputes between EU and Korea see Glen (2006).

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## **From Asian financial crisis of 1997 to the global financial crisis of 2008**

On January 1st, 1995 Korea became a full member of the World Trade Organization (WTO), thus making it difficult for the government to regulate foreign capital. Moreover, under the terms of the International Monetary Fund (IMF) bailout in 1997 financial crisis, the U.S. Treasury and Wall Street called for allowing foreign financial institutions to set up local subsidiaries, and being able to carry out mergers and acquisitions (Ji 2011, 239-240). Under the new Foreign Investment Promotion Act of November 17th, 1998, all types of foreign direct investment such as hostile mergers and acquisitions were permitted (Thurbon and Weiss 2006, 7). The Asian financial crisis also served as a turning point towards “the flexibility of labor market”, which neo-liberal economic officials had already pursued in Korea. On January 13, 1998, at a meeting with the leader of the Federation of Forean Trade Unions, Michel Camdessus, the Managing Director of the IMF, emphasized the inevitability of collective dismissals in a competitive economic system. In February 1998, a new clause on dismissal for managerial reasons was implemented, thus prompting managers to carry out layoffs, and a series of severe labor disputes on collective dismissals happened in the Young-do shipyard of the Hanjin Heavy Industries (Shin, 2018).

During the boom of the 2000s, Korean major shipbuilders expanded their shipyard facilities in Korea, and at the same time aggressively increased overseas investments. Korean shipbuilders’ domestic facility investment grew very sharply in the mid-2000s, exploding right before the financial crisis. It rose from 741.7 billion won in 2003 to 1.66 trillion won in 2006, and surged to 2.99 trillion won in 2007 and 3.6621 trillion won in 2008 (see Figure 2). In addition, South Korea’s largest shipbuilding companies have accelerated their overseas expansion since the mid-2000s. According to the Export-Import Bank of Korea’s Overseas Investment Statistics, the amount of overseas investments by South Korean shipbuilders exceeded \$75 million in 2005, over \$320 million in 2006, and \$340 million in 2007, and finally hit a whopping \$860 million in 2008.

The Korean major shipyards operated ship block plants overseas (in the case of Samsung and Daewoo), or acquired overseas shipyards (in the case of Daewoo’s Mangalia shipyard in Romania and STX’s acquisition of European shipyards). Moreover, STX and Hanjin built and operat-

**Table 1**  
**Overseas business investment by Korean shipbuilders**

Company	Location	Yard location	Business domain	Beginning of operation	Status
Samsung	China	Ningbo	ship block	1997	operating
		Rongsheng	ship block	2007	operating
Daewoo	China	Shandong	ship block	2005	operating
	Romania	Mangalia	shipbuilding	1997	acquired by Damen shipyards group in 2017
Hyundai Mipo	Vietnam	Vinashin	ship repairing	1999	operating
Hanjin	Philippine	Subic	shipbuilding	2003	bankruptcy and on sale
STX	China	Dalian	shipbuilding	2007	shut down in 2013
	Finland	Turku	shipbuilding	2007	acquired by Meyer Werft in 2014
	France	St. Nazaire	shipbuilding	2007	acquired by Fincanteri in 2017
	Vietnam	Vung Tau	shipbuilding	2011	acquired by Fincanteri in 2017

Source: OECD 2015. p. 17 Table 6, and various articles of Korean newspapers.

ed their own shipyards at Subic in Philippines and at Dalian in China. In addition, targeting the marine structures related to the development of oil resources, Daewoo established a joint venture with Russia's Zvezda shipyard, and Samsung formed a joint partnership with a Brazilian shipyard. In the wake of the financial crisis, however, STX and Hanjin's overseas investment ended in a disastrous failure. Daewoo also had to dispose of the Mangalia shipyard (see Table 1).

China's economic growth was behind the global boom of shipping and shipbuilding in the 2000s. At the same time, deepening financialization and over-investment were accelerating the boom. Korea's shipping

and shipbuilding industries were also going through financialization. The so called ship investment company system was introduced in 2002 with the aim of boosting ship investment. The size of ship funds raised between 2004 and 2011 reached 6.9146 trillion won. STX shipbuilding was a good example attaining rapid growth riding on the trend of financialization. STX grew into a large conglomerate in a short period of time through corporate mergers and acquisitions before falling apart right after the global financial crisis. Expanding its business scope, STX actively utilized asset-backed securities, and initial public offerings (IPO) seeking capital gains. On the other hand, the Korean mid-sized shipyards, which entered the global market in the mid-2000s, got investments from overseas capital such as Goldman Sachs and Macquarie<sup>18</sup> as well as from private equity funds and secondary financial institutions in Korea (Shin 2016).

In the 2000s the focus of the Korean government's support for the shipbuilding industry has shifted to indirect support for research and development investment. In 2012, the OECD's Council Working Party on Shipbuilding launched a review project on government support measures for the shipbuilding industry. The review of Korea was submitted and discussed on November 25th, 2014 (OECD 2015). The OECD WP6 report assessed that the Korean shipbuilding industry's prominence in the high value-added sector has been supported by R&D spending and skilled labor. It pointed out that despite the 2008 economic crisis, large companies continued to invest in innovation, and new R&D facilities were under construction. On the other hand, it noted that the number of college-educated R&D and engineering workers among shipbuilding workforce was growing, and that shipbuilders were investing in training to strengthen workers' capabilities and their ties with universities. Even during the recession, the Korean government continued to provide support for the shipbuilding industry's R&D investment. The R&D investment by the big shipyards dropped dramatically in 2015 and 2016, when restructuring of big yards being carried out on a large scale. The South Korean government continues to invest in R&D unlike private conglomerates. A government-run Korea Research Institute of Ships and Ocean Engineering

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<sup>18</sup> Goldman Sachs invested \$50 million in the SPP shipbuilding, and used the put option to recoup all of its investment. Macquarie set up an investment company to become the second largest shareholder of the SLS shipyard.

(KRISO)'s investment in human resources has also not decreased.<sup>19</sup> The R&D investments through the Ministry of Trade, Industry and Energy and the Ministry of Maritime Affairs and Fisheries seem to be useful for the industry to maintain its competitiveness.

### **Global shipbuilding recession and restructuring of shipbuilding industry**

The global shipbuilding recession following right after the global financial crisis of 2008, however, has forced the Korean government to take the lead in restructuring the Korean shipbuilding industry. The government's restructuring policy was determined through "the emergency meeting for economy" led by the President Lee Myung-Bak (2008-2013). The Lee administration pushed the closure of the small and medium-size shipyards based on "market principles".<sup>20</sup> In 2009, the government proposed a policy of "ongoing restructuring led by creditor financial institutions" with a focus on retrieving loans. Over twenty small and medium shipyards have been shut down or sold between 2009 and 2013 in Korea (OECD's Council Working Party on Shipbuilding 2015, 14 Table 3).

As for big shipyards, the government decided to provide financial support selectively through a profitability assessment, pushing for facility reduction in order to address oversupply in the shipbuilding industry. Korea's three shipbuilding giants pushed for expansion of the offshore plants sector in the face of the shipbuilding recession. Also the Lee Myung-Bak and the Park Geun-Hye governments (2013-2016) had actively encouraged Korean shipbuilders to expand the offshore plants sector as an alternative for shrinking shipbuilding. However, as orders for offshore plants have fallen sharply since 2014, extensive restructuring of large shipyards has also started. The Park administration called major shipyards to cut jobs of regular workers hired directly by 32 percent, from 62,000 to 42,000, and to reduce the shipbuilding docks by 23 percent from 31 to 24 between 2015 and 2018. In particular, in order to secure financial support from the government-controlled KDB, Daewoo Shipbuilding was forced to reduce

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<sup>19</sup> As for detailed R&D statistics refer to annual reports of Korea Offshore & Shipbuilding Association.

<sup>20</sup> More than 20 small and medium-sized shipyards were shut down or sold between 2009 and 2013. As for details, see OECD (2015). p. 14, Table 3.

its shipbuilding capacity by 30 percent and the number of its direct workers by 41 percent to 5,500 by 2018.<sup>21</sup>

In general, labor unions in the shipyards seemed to fail to respond effectively to the government's financially-driven restructuring policy. Over tens of thousands of workers, including regular workers at small and middle shipyard, and internal subcontract workers at big yards, have lost their jobs and been driven to the streets. Regular workers at major shipyards could not but choose 'voluntary redundancy' and remaining workers were forced to accept wage cuts.

### **III. Emergence, growth, and restructuring of the HHI (1973-2018)**

This section outlines the HHI's growth into the world's largest shipyard and the reorganization process since the 2008 global crisis.<sup>22</sup> The history of the HHI can be divided into four periods; emergence and survival (1974-1983); growth and expansion (1984-1997); upgrading under shipbuilding boom (1998-2008); and finally restructuring after the global financial crisis (2009-2018).<sup>23</sup> This section does not deal evenly with the whole period. Instead it focusses on the effects of the Korean government's policy to foster the industry, and also on the effects of the business strategy of the Hyundai on employment relations. Finally, it also notes the transformation of the ownership and governance structure of the HHI around a new holding company established in 2017.

#### **Korean developmental state and emergence of the HHI (1974-1983)**

The shipbuilding division at the Hyundai E&C was established in March 1970. Four years later, in November 1974, the HHI succeeded to deliver the VLCC No. 1, when the HHI entered the global ship export

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<sup>21</sup> This description is based on press releases from Korean government ministries, including the Ministry of Trade, Industry and Energy.

<sup>22</sup> On December 28, 1973, the shipbuilding division of Hyundai Engineering & Construction became an independent corporation and was launched as the Hyundai Shipbuilding Heavy Industries Co., which was renamed Hyundai Heavy Industries Co. later. In this paper those names will not be distinguished, but labeled as HHI.

<sup>23</sup> HHI (1998) divided its history into establishment period (1974-78), take-off period (1979-83), growth period (1984-89), and maturity period (1990-97).

market. Official History of the HHI claimed that the Hyundai shipyard is a “business driven by the independent judgment of private companies”, “proved the inefficiency of government intervention” and grew “out of thorough international competition based on market principles.” (HHI 1992, 129-130). The chairman Chung also said that he had been considering entering the shipbuilding industry since around 1969, regardless of the government’s recommendation. However, he did not think over shipbuilding, but only of constructing just ship blocks for shipyards overseas (HHI 1992, 90-99).

In June 1970, the Park administration drafted a plan for four major plants, including foundry, special steel, heavy machinery, and a shipyard. At first, Korea asked Japan for funding and technical support for the construction of the large shipyard in July 1970 (Bae 2007, 28). But Japan refused as a Japanese investigation team reported that establishing a 200,000 dead weight tons’ class shipyard in Korea was unreasonable, and recommended that Korea should start from 20,000 dwt class vessels (HHI 1992, 318). Then, President Park put pressure on Hyundai to build a large shipyard (Park 2018, 46-49). Eventually Hyundai obtained loans from several banks of England, Spain, France, West Germany and Sweden. The first and most important creditor was Barclays Bank of England, and repayment of all the debts was guaranteed by the Korean government (Park 2016, 445; Kang et al. 2016, 85-88). For constructing the shipyard, the Korean government also invested \$ 10 million, the same amount as Hyundai’s (Kim 1999). In order to build a large shipyard and receive an order for a tanker from abroad, Korea desperately needed foreign capital, technology and reputation. Several European shipbuilding companies showed interest in the construction of the new yard as an opportunity to sell their shipbuilding technology and equipment. Proposals from several firms, including West Germany’s A. G. Weser and Denmark’s Odense Shipyard were reviewed, but eventually A&P Appledore was selected as a partner. In September 1971, Hyundai signed an agency agreement with A&P Appledore<sup>24</sup> for technical support and to secure ship orders (HHI 1992, 326-327; Park 2016, 442; Park 2018, 59-60). Hyundai has agreed to pay A&P Appledore \$ 176.4 million for ship design and technical support,

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<sup>24</sup> A&P Appledore was a joint venture of two British shipbuilders - Austin & Pickersgill and Appledore Shipbuilders Ltd. -, which were actively seeking overseas business opportunities as a new profit source (Kang et al. 2016, 86).

and 0.5% of the new shipbuilding price in exchange for securing orders (HHI 1992, 326; Park 2018, 60-63).

The facilities and materials for the construction of the yard were procured through loans of more than \$51 million from the UK, Spain, France, West Germany and Sweden.<sup>25</sup> These lending countries delivered welding machines, presses, cranes, and other equipment. Thus the initial financing was accomplished mainly through supplier credits (Kang et al. 2016, 94). Shipyard managers and engineers from Europe including Kurt J. W. Schou from Denmark-based Odense shipyard<sup>26</sup> were also HHI's consultants in its early days (HHI 1992, 344).

HHI learnt the construction technology for the shipyard from Japanese Kajima Construction and began sending shipbuilding technology trainees to the Kawasaki Heavy Industries in December 1972 (HHI 1992, 343). In 1973, the HHI signed a technical consulting contract with Kawasaki that included ship design drawings (Kang et al. 2015, 441). The production method of the Scott Lithgow was not applicable to Hyundai. The Scottish shipyard used 50-ton jib crane to build the VLCC on a sloping berth without a grave dock. Moreover, in Britain ship construction was carried out without production design and still in a craft system premised on the skilled craftsmen.<sup>27</sup> Thus HHI imported 'production design' from Kawasaki, and had to pledge that they would use Kawasaki products for major machinery and ship propellers in addition to paying consulting fees (Bae 2007). All ships from No. 3 to No. 9 were equipped with turbines manufactured by Kawasaki (HHI 1992, 373).

HHI completed the construction of its hull plant in March 1973, and operated its first goliath crane in September 1973. The completion ceremony of the Hyundai shipyard was held on June 28th, 1974, along

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<sup>25</sup> See HHI (1992), p. 399, Table 23 for specific details of the shipyard's construction funds. This table is translated into English in Kang et al. (2015), p. 437. As for details of foreign loan, refer to HHI (1992), p. 399, Table 24.

<sup>26</sup> Until April 1976 Mr. Schou served as the first president for about three and a half years (HHI, 1992: 395). He was awarded a medal by the South Korean government in May 1976 for his contribution to the development of the Korean shipbuilding industry (Park 2018, 402). About 30 years later, a Korean former president of HHI acted as a consultant for the management at Odense Steel Shipyard in 2002 (Poulsen et al. 2018, 729). This episode symbolizes the dynamic change in the global shipbuilding industry in the late 20th century.

<sup>27</sup> See Kang et al. (2015, 2016) for the limitations of Scott Lithgow's production method of VLCC at this time.

with the christening ceremony for VLCC No. 1 and 2 (HHI 1992, 949).<sup>28</sup> The HHI delivered six VLCCs in 1976, which was far ahead of the performance of the major UK shipyards, such as Swan Hunter, Scott Lithgow and Harland & Wolf. The HHI proved that it learned a lot quickly from its initial trial and error (Kang et al. 2015, 451-453).<sup>29</sup> Behind the HHI's early success in learning shipbuilding technology and building ships, was the presence of abundant Korean engineers graduated from college.

Since 1976, the pre-fitting technique of Kawasaki shipyard has been introduced, and equipment were installed during the assembly of large hull. However, by 1979, the portion of pre-fitting was only 35%, and by 1989 it had steadily improved since the 1980s, with the portion reaching 75% (HHI 1992, 816-817).

Under the developmental dictatorship, workers could not organize themselves at the Hyundai shipyard until 1987, and even the joint labor-management council did not exist. The internal subcontracting arrangements in the *Hyundai* shipyard evolved under these political conditions. Then, the shipbuilding workers' riots in September 1974 demanding the abolition of the subcontracting arrangements occurred under the despotic labor control practices of the shipyard. Due to the severe labor shortages at the early stages of the shipyard, the Hyundai management had promised incoming workers that they would be treated as direct hired regular workers. The management's breach of the promise triggered workers' outrage. On September 19th, 1974, some 300 workers in the hull shop took actions first, demanding the abolition of the delegate control system. Soon about 3,000 workers went through the police line and burnt the flag of the HHI at the main gate and destroyed the windows and furniture of the main office building. Raging workers threw stones to the CEO, Chung

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<sup>28</sup> The simultaneous push for shipyard construction and shipbuilding could have increased the utility of investment, but this resulted in numerous industrial accidents, which left many workers dead or injured. According to the official history of HHI, more than 3,000 industrial accidents have occurred, and about 60 people have died until March 1973 when a new safety management department was established. However, in 1974, there were 22 deaths from industrial accidents, 1,156 seriously injured and 1,536 minor injuries. The official history states that industrial accidents have decreased since 1978, but 12 people died in 1978, 17 in 1979 and 17 in 1980 in the shipyard (HHI 1992, 364).

<sup>29</sup> After the christening ceremony for VLCC Lines 1 and 2 ended in June 1974, even a large block unassembled remained in the yard (HHI, 1992: 355-358).

Ju-Yung, who had avowed to insist on the original delegate control system (Kim 2006). The military police cracked down on the riots and arrested 877 workers, and imprisoned 20 of them. Eventually management completed the system in the whole shipyard in the late October 1974, when regular workers totaled 3,929 and internal subcontract workers, 10,852 respectively. Since then the proportion of internal subcontract workers in production workforces always exceeded over 60% until the late 1970s (Shin, 2003).

HHI was awarded orders for 12 VLCCs, totaling 3 million dwt until March 1974 (HHI 1992, 337). Between early 1967 and early 1974, total value of tanker orders worldwide increased almost eight times, from 25 million dwt to 196 million dwt (Kang et al. 2015, 431). The overheating of the market was a favorable condition for HHI to enter it. However, a severe depression started off right after the first oil shock and HHI failed to win any orders for VLCCs for next 12 years. In addition some ship owners have refused to take over three tankers.<sup>30</sup> Hyundai conglomerate set up Hyundai Merchant Marine Co. to buy the above three tankers (HHI 1992, 380-381), and the Korean government asked the U.S. Gulf to entrust them half of oil shipping for South Korea to HMM. In addition, since 1975 the Korean government implemented a planned shipbuilding program to provide the company with loans covering up to 90 percent of the shipbuilding costs at very low interest rates.

Among the planned shipbuilding program orders from 1976 to 1980, Hyundai had 557,440 GT, which amounted to the 67.2 percent of the total (HHI 1992, 463 Table 32). Orders won through the program accounted for about 15 percent of HHI's new orders, and helped the yard to tide over the severe depression. Since 1972, the government has expanded export financing for deferred payments, which had no advantage over European shipyards, but was a must-have system (HHI 1992, 391-392). With the establishment of the Export-Import Bank of Korea in 1976, the annual amount of export financing was increased every year to reach 1124.2 billion won in 1984 (HHI 1992, 462-463).

In 1974 and 1975, HHI tried to overcome the recessions by changing its products strategy, receiving orders for multi-purpose cargo carriers, bulk carriers and roll-on/roll-off ships (Kang et al. 2016, 99-100; HHI

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<sup>30</sup> By Jun 1975 cancellations worldwide totaled 115 vessels of about 28 million dwt (Kang et al. 2015: 443 n. 71).

1992, 384-386, 450-458).<sup>31</sup> Financial costs, however, have become a big burden, as in 1974 and 1975 interest rate cost rose from 2 billion won to 10 billion won (HHI 1992, 400-401).

Hyundai Chaebol's entry into the rising Middle East construction market with abundant oil dollars was instrumental to overcome the crisis. Hyundai won an order to build an ASRY (Arab Shipbuilding & Repair Yard) in Bahrain and also an order to expand a naval base in Saudi Arabia at the end of 1975 (HHI 1992, 428). In 1976, Hyundai succeeded in winning an order for the \$931 million project of constructing Jubail industrial harbor and offshore structures (HHI 1998, 65). Profits accruing from sales of steel structures' sales for the Jubail harbor contributed greatly to the improvement of balance sheets. The HHI posted a net profit of 141.7 billion won in 1977 and 86.8 billion won in 1978 (HHI 1992, 484-487, 592).<sup>32</sup>

### **Growth and expansion (1984-1997)**

The Chun Doo-Hwan government took over power through military coup' de eta in May 1980. The new government violently carried out a so called investment adjustment in the heavy and chemical industries, which did not have a significant impact on the Korean shipbuilding industry. When the government implemented the floating exchange rate system in 1980, the won exchange rate against the U.S. dollar fell from 484 won in 1979 to 748.80 won in 1982. This exchange rate fall improved HHI's management. In 1983, it won orders for 66 vessels of 2.075 million tons, accounting for 10.6 percent of new worldwide orders (HHI 1992, 546-547) 1985 was the worst year of the shipbuilding recession. HHI therefore tried to diversify its business into non-shipbuilding sectors such as plant manufacturing, engines, robots, heavy machinery, and steel structures

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<sup>31</sup> In August 1979, the HHI first began to build a Korean-type destroyer (HHI, 1992: 664).

<sup>32</sup> Todd noted the advantages of South Korea's Chaebol, the conglomerates operating shipyards which, unlike family-owned British shipyards, actively pursued growth and innovation (Todd, 2011: 266 n. 23). It is true that Korea's Chaebol have made large-scale investments possible and contributed to overcoming the recession through business diversification. The Odense shipyard was also owned by Møller family and could survive longer than other European shipyards because of "the strong position of the expanding and diversified conglomerate of Maersk." (Poulsen et al., 2018: 721, 725).

(Kim 1999, 265; HHI 1992, 617). The shipbuilding business accounted for about 55 percent of the HHI's total sales at the end of 1986. The figure, however, was much higher than the 9.4 percent for the Mitsubishi Heavy Industries of Japan (HHI 1992, 665).

The HHI has built 131 bulk carriers of 4.44 million tons, 29 Crude Oil Carriers of 2.18 million tons, and 46 multipurpose carriers of 0.88 million tons during the first 12 years. Classifying by shipping company, the Hyundai Merchant Marine (HMM) accounted for the largest share, 36 ships with 1.43 million tons, followed by Kuwait's UASC Corp. with 37 ships and 750,000 tons (HHI 1992, 689). Although apparently HHI has grown through an export-oriented strategy, the HMM owned by Hyundai Chaebol made an important contribution which allowed HHI to overcome the long recession since 1974.

HHI established a block assembly system from the early days of the shipyard. The HHI has applied optical tracking and numerical control (HHI 1992, 805-806). Various design drawings were imported from Europe and Japan (Park, 2018: 415). In 1975 the Viking System developed in Sweden was introduced for photo marking and cutting, and in 1981 Autokon System was imported from Norway (HHI 1992, 813-814). Welding automation has been expanded from plane work to curved work and from in-plant work to outside work (Hong 1982). HHI still purchased many technologies from foreign countries in the 1980s, but has also established its own research institute, the Hyundai welding technology research institute in November 1983. In October 1984, HHI completed its own ship ocean research and development institute (HHI 1992, 649-654).

Hyundai Heavy Industries introduced the Moss-type LNG carrier technology from Norway to build the first LNG carrier in 1991 (HHI 1992, 819), and delivered its first LNG carrier in June 1994. HHI completed the 8th and 9th dock in November 1995, and expanded its automated facilities. In the 1990s, HHI's share of the global new shipbuilding market rose steadily from 11.3% in 1990 to 14.0% in 2000.

In the Hyundai shipyard, workers again challenged the internal subcontracting arrangements through the 1987 Great Workers' Struggle, as the general strikes and sit-downs across the South Korea during the summer of 1987 came to be known. Following the retreat of the military government forced by the massive demonstrations demanding democracy across the country in June 1987, the workers' strikes and sit-ins burst out almost all over the large factories and shipyards, and their main demands

were wage increases and union recognition. In the Hyundai shipyard workers continued the strike, sit-downs and street demonstrations for 56 days from July 28 to September 21 of 1987. Besides the demands for wage increases, recognition of the new democratic workers' union, and the abolition of control for workers' hair, the workers asked that the subcontract workers should be directly hired by the Hyundai shipyard. Finally in 1988 management and the HHI workers union concluded the special agreement for the transfer of the subcontract workers and the previous internal subcontracting companies were almost eliminated and disappeared from the shipyard in 1989 (Shin, 2003).

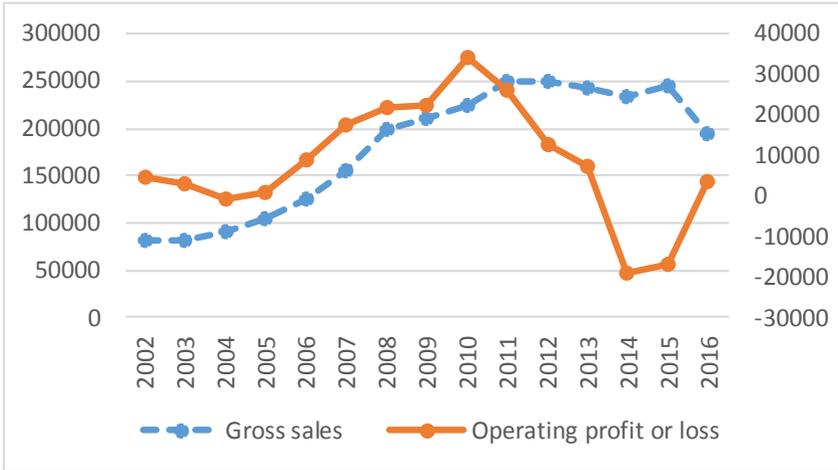
The enterprise level union was organized in the Hyundai shipyard through the 1987 Great Workers' Struggle and became a main actor in labor management relations at the yard (Shin 2004). Since 1987 labor disputes over the shop floor control continued and as working conditions improved sharply the turnover rate of the regular workers declined almost to zero. Faced with these new conditions, management stopped hiring new regular workers and began to increase the subcontracting work with a view to securing numerical labor flexibilities and preventing the growth of union organization. In the Hyundai shipyard 1,881 subcontract workers were already employed by 339 subcontracting companies by 19 January 1991. The proportion of the subcontract workers in relation to the total production workforce in the Hyundai Shipyard continued to increase every year from 8.6% in 1991 to 31.7% in 1996, and even to 50.5% in 2000 (Shin, 2003).

### **Upgrading under shipbuilding boom (1998-2008)**

The Korean economy was suffering from the 1997 financial crisis, but HHI rather took advantage of the yen's fall. It set its 1998 order target at \$9.3 billion, which was a 29 percent increase in relation to 1997, and its total sales at 6.5 trillion won, which would be a 14.6 percent. The Chairman, Chung Ju-yung, officially resigned in May 2000, and HHI was separated from Hyundai Group in 2001. Chung Mong-joon, the sixth son of the Chung Ju-yung inherited HHI. He had already been inaugurated as CEO of the HHI at the age of 31 in 1982.

HHI changed its Mipo Dockyard Co. into new shipyard in 1996, and the Hyundai-Mipo emerged as a strong player in the mid-sized shipbuilding market. In 2002, HHI acquired bankrupt Halla Heavy Industries and operated as Hyundai Samho Shipyard.

**Figure 3**  
**Business Performance of the HHI**  
**100 million Korean Won**

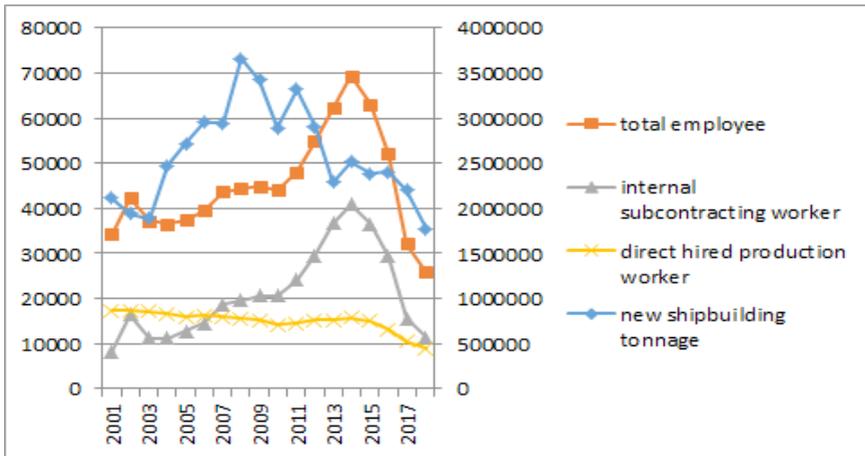


Source: HHI Trade Union (2016).

In terms of orders by shipyard just before the global financial crisis, HHI secured 361 ships, 13.8 million CGTs; Hyundai Mipo, 264 ships, 10.5 million CGTs; and Hyundai Samho, 133 ships and 5.1 million CGTs. Each company ranked first, fourth and fifth in the world respectively. HHI had secured enough orders, largely of high value added ships such as containers, LNG carriers and tankers, by 2012 (Clarkson, Shipyard Orderbook Monitor October 2008).

During the shipbuilding boom of the 2000s, HHI continued to grow rapidly. Between 2002 and 2008 total sales rose from 8.1341 trillion won to 19.9571 trillion. Operating profits also rose, from 2.262 trillion won to 454.5 billion over the same period (Figure 3). Due to the shipbuilding boom, HHI’s overall employment rose from 34205 in 2002 to 44390 in 2008. But during the same period the actual number of direct hired production workers declined from 17,317 to 15,560. The number of internal subcontract workers increased from 16433 to 19616, in order to respond to the increased work load (Figure 4).

**Figure 4**  
**Employment and new shipbuilding completion in HHI**  
**(2001-2018)**  
**(person, CGT)**



Source: Korea Offshore & Shipbuilding Association.

### Global shipbuilding recession and restructuring politics

HHI's new shipbuilding completion increased from 2.118 million CGT in 2001 to 3.663 million in 2008 before plunging into 1.774 million in 2018. HHI expanded its offshore plant business as a way to overcome the shipbuilding recession. Total sales of offshore plant projects more than tripled between 2008 and 2014, but HHI lacked offshore plant design technologies, and the self-sufficiency rate of equipment and materials did not exceed 20 percent (Park 2019). Losses from offshore plants business caused HHI massive operating losses in 2014 and 2015 (Figure 3).

The HHI's total number of employees fell from 69,356 in 2014 to 25,952 in 2018, a trend which also reflects the impact of the spin-offs in 2015. It is noteworthy that the main targets of mass layoffs were internal subcontract workers, whom HHI had increased during the super boom, and during 2009-2014 in order to increase offshore plant construction (Figure 4).

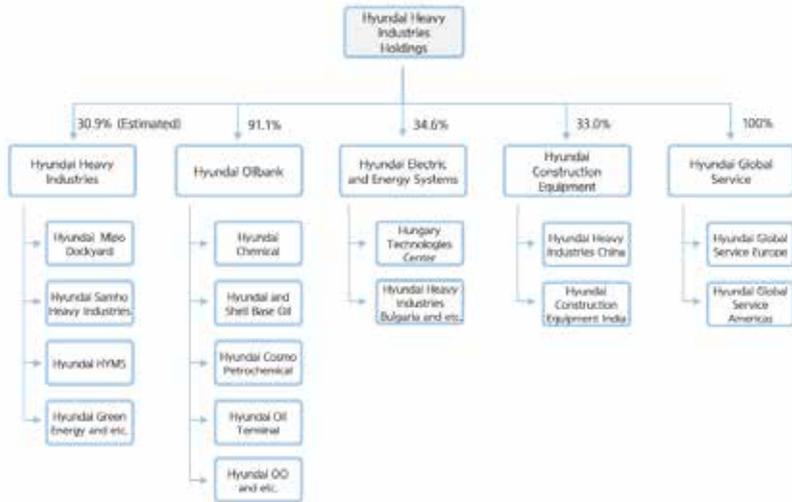
Internal subcontract workers jumped to 40,836 in 2014, but in five years dropped into 11,411 due to full-fledged workforce reductions (Figure 4). This indicates that the main victim of the last shipbuilding recession was internal subcontract workers. The labor union of the shipyard, mainly composed of direct hired production workers, was unable to effectively resist mass layoffs of internal subcontract workers led by the management. On the other hand, some direct hired workers were forced to choose a so called ‘voluntary redundancy’ program. As mentioned in section II, the government’s restructuring policy also played an important role in weakening the resistance of workers against the above job cuts.

The ownership and governance structure of HHI has changed into a financial-capital-friendly form. The HHI was reorganized into a holding company system, which sought to further strengthen the Chung family’s control over the HHI Group. In April 2017, Hyundai Electric and Energy System, Hyundai Construction Equipment and Hyundai Robotics were spun off from HHI. On March 30, 2018, Hyundai Robotics changed its name to HHI Holding Co.

The merger of HHI and Daewoo Shipbuilding is now under way as part of the privatization of Daewoo Shipbuilding owned by the KDB. A new interim holding company called Korea Shipbuilding & Marine Engineering Co., which would be owned by HHI Holding Co. and KDB together, is currently being pushed forward. HHI is under control of Hyundai Heavy Industries Holdings, which also own Hyundai Oilbank, Hyundai Electric and Energy Systems, Hyundai Construction Equipment, and Hyundai Global Service since 2017 (Figure 5). The newly established interim holding company would control HHI, Hyundai Samho, Hyundai Mipo, and Daewoo Shipbuilding as subsidiaries all together.

In sum, the emergence and growth of HHI was the result of a joint venture between the state and Hyundai Chaebol. During the early days of the shipyard the Korean developmental state helped HHI attract capital and technology from abroad. During the recessions following after the first oil shock, the developmental state made up for the shortfall of new shipbuilding demands through planned shipbuilding. The Hyundai Conglomerate was able to set up a shipping company on its own, and also reduce risks in the shipbuilding industry through business diversification. In the last shipbuilding crisis due to the global financial crisis of 2008, the government managed to force HHI to downsize facilities and reduce manpower through financial control. The privatization of Daewoo

**Figure 5**  
**HHI Group after Business Restructuring**



Source: Hyundai Heavy Industries Group (2018). Corporate Governance Reform & Dividend Policy.

Shipbuilding into the HHI group – even though the KDB holds a stake in the new holding company – would mean that the last legacy of the developmental state would disappear. In addition, it means that Chung family's ownership and control over the Korean shipbuilding industry will be strengthened and more sophisticated.<sup>33</sup> However, it is questionable whether corporate governance based on family ownership is still suitable for this larger globalized business.

#### IV. Concluding remarks

Numerous legends and heroic stories have been created against the backdrop of the success story of the Korean shipbuilding industry. On the one hand, they advocate the developmental dictatorship, highlighting the positive role of Park Chung-Hee and the government. Others have em-

<sup>33</sup> Chung Mong-joon is the largest shareholder of the HHI, and his son, Chung Ki-sun is in charge of management as vice president of the HHI.

phasized the role of Chaebol owners or entrepreneurs from a market-oriented perspective. Strangely enough, both views are often combined at the same time. This paper has gone beyond the discussion of success factors to examine how the relationship between the government and the market has changed and the difficulties and problems that shipyard workers had to face in the process. In particular, the paper has focused on the government's policy for the shipbuilding crisis.

Under the military dictatorships the government helped the shipbuilding industry to secure international competitiveness through export finance, the creation of demand through planned shipbuilding, and the suppression of the labor movement and their protests. When a shipyard went to into bankruptcy due to a prolonged recession, the government revived it through massive financial aid. Those policies showed the typical characteristics of industrial policies of the developmental states. The Korean government's industrial policy shifted significantly towards neo-liberalism in 1997. Instead of the preference for foreign loans over foreign direct investment under the developmental period, the Korean government allowed all types of inward and outward capital flows since 1998. As the Korean big shipyards are strongly competitive, the government promoted the liberalization of investment and financialization, which has acted as a factor inducing over-investment in the industry during the 2000s (Shin 2016).

Under the shipbuilding recession after the global financial crisis of 2008, the Korean government pushed for financial-led restructuring. Government officials emphasized market principles, which in fact placed the interests of creditors and shareholders at the top of all priorities (Ji 2011). As for the restructuring of the shipbuilding industry, shipyard unions were not invited to the table for consultation at all. The government and creditors asked unions to sign a workforce reduction agreement in exchange for financial assistance.

Direct hired regular workers at large shipyards, organized by means of labor unions, managed to minimize job cuts and secure some compensation for voluntary redundancy, But internal subcontract workers have suffered massive layoffs without any compensation. This division of workers is still a major impediment for the prospects of the workers' movement in the shipyard.

Korea's shipbuilding industry is highly exposed to the risks of fluctuations in the world economy. Since the 2000s instability in the new

shipbuilding market has increased, and there have been weaker employment protection measures, as neoliberal policy and discourse spread in South Korea. The social pains and inefficiency caused by the restructuring of the shipbuilding industries over the past decade were neither inevitable nor fair. The design of socially responsible restructuring policies and institutions also remains a challenge for the Korean labour movement. Furthermore, shipyard workers' union cannot but think over policies and institutions for regulating speculative investment in the shipping and shipbuilding industries. The principle of industrial democracy, which makes it possible for labor unions to participate in the government's policymaking process, would be of prime importance for the all shipyard workers, including internal subcontract workers.

Incorporating Daewoo Shipbuilding under a new holding company and putting HHI under the control of multi-tier holding company will be another hurdle for the expansion of industrial democracy in the Korean shipbuilding industry. Sustainable corporate governance would be an essential condition for large global companies and the government's industrial policy should also support it.

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