The Rise and Fall of the Developmental State? The case of the Japanese and South Korean steel industries

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1 Introduction

The Japanese and South Korean steel industries have been typically addressed as successful examples of state-led catch-up industrialisation and of the 'developmental state' (e.g. Amsden 1989, Ch. 12; Shin 1996, Ch. 7). It is undeniable that industrial policy in the broadest sense towards the industries in both countries had contributed to the rapid growth and modernisation of them. However, crude steel production in Japan had been stagnating since the mid-1970s for about 30 years and the South Korean steel industry was heavily suffered from the East Asian crisis in the late 1990s. Do these experiences provide factual and historical evidence for the views of the developmental state approach that the 'developmental state' is limited to a certain phase of industrialisation and that it demises as an economy matures?[1] In addition, even within the successful periods, the effects and outcomes of industrial policies that have the same features to some extent differ across the countries and over time. How can their experiences be generalised as the 'developmental state'? First of all, is the idea of the 'developmental state', or the developmental state paradigm, appropriate for examining the role of the state in development and development itself?

On surveying the literature, it becomes evident that the developmental state approach tends to have shied away from addressing the 'failed' industrial policy within the successful periods of the Japanese and South Korean steel industries, on the one hand, and the restructuring and transformation of the industries around the long recession in Japan and the crisis in South Korea, on the other. Thus, it has not offered a coherent and systemic explanation for the changing performance of the industries across periods and across countries (and sectors). In other words, the developmental state approach has not fully succeeded in understanding the role of the state in the accumulation and restructuring of the industries in a consistent way and in relating to the totality of empirical evidence.

A weakness of the developmental state approach is to take the dichotomy between market and state as analytical starting point, whether examining the role of technological change or state intervention. However, the ideological and theoretical framework of 'market vs. state' or 'market and/plus state' as such is problematic. For, the dichotomy reduces the agenda of development into the framework of finding appropriate or 'optimal' level of state intervention to the market in resource allocation. Consequently, various factors are obscured by this framework.

Instead, the chapter adopts an approach that sees both market and state as being "the consequence of or form taken by underlying political and economic relations and interests" (Fine 2006, p. 114). Specifically, first, the chapter suggests that it is time and country-specific underlying political and economic relations and interests in and surrounding the steel industry that forge and materialise certain policy, rather than economic justification such as market failures. Second, the chapter argues that the outcome of such policy depends upon the history and country(industry)-specific contexts, so that it is no less important to analyse the

[1] See Fine (2009) for a critical overview of the developmental state approach.

structural and other changes in and surrounding the industry than to observe the output performance of the industry. Third, the chapter shows that the appeared changes, in turn, affect underlying political and economic relations and interests in and surrounding the industry, which then would forge and materialise new and different policy. As this spiral interaction continues with time and always exits, the chapter insists that it is misleading to understand that the role of state lessens as the economy matures.

In a nutshell, a major purpose of the chapter is to examine critically studies in the developmental state paradigm, through examining the restructuring of capital in the Japanese and South Korean steel industries.[2] Situating political and economic relations and interests as a basic layer of analysis, it highlights some aspects of the accumulation and restructuring of the industries which have been put aside by the developmental state approach. In doing so, it attempts to understand the role of the state involved in the experience of the industries in the context of the workings of contemporary capitalism, rather than in terms of the 'developmental state'.

The next section briefly reviews selective literature on the steel industry and argues the limitations of the approaches taken. Sections 3 and 4 delineate some aspects of the underlying political and economic relations and interests which have been driving the accumulation and restructuring of the industries in Japan and South Korea. Section 3 analyses the periods of rapid growth of them and Section 4 examines the periods of their stagnation and crisis. The last section offers some implications for industrial and sectoral studies, based on the findings and discussions of the preceding sections.

2 Steel as the case of the Successful Developmental State

The steel industry is a key sector in terms of industrialisation of an economy. First, the linkages between the industry and the other manufacturing industries are extremely important in terms of industrialisation of an economy. Hirschman (1958), who presented the concept of backward and forward linkage effects among the industries, pointed out that the steel industry scored the highest in the linkage effects. However, he also conceived that it was unrealistic for developing countries to adopt a policy to push forward the industry. Hirschman (1958, p. 108) observes: "it is interesting to note that the industry with the highest combined linkage score is iron and steel. Perhaps the under-developed countries are not so foolish and so exclusively prestige-motivated in attributing prime importance to this industry!" Despite his perspective, some underdeveloped countries such as South Korea did make an attempt to develop the industry and have deployed various policies towards the steel industry in order to introduce the state-of-the-art technology of steel production and to establish the coordination of backward and forward linkages between the steel industry and others.

Second, the role of state has been extremely important in developing the

[2] The restructuring of capital is a concept "drawing upon Marx's notion of centralisation (and concentration) of capital and its implications through production, distribution and exchange. The approach argues that the restructuring of capital materialises in production but can be levered (or not) through corporations directly, the state (industrial policy in the broadest sense), exchange (access to markets and competition), finance (the role of banks in funding and/or directing investment) and labour (through its workplace and political struggle)" (Fine, Petropoulos and Sato 2005, p. 45).

steel industry. It has often been designated as a national strategic industry that is given various preferential measures (Howell, Noellert, Kreier et al. 1988). Indeed, as suggested by the well-known saying 'steel is the nation', the industry has often occupied the central position in the industrialisation process of a nation-state. As such its development has often been a crucial task for governments not only economically but also politically.

However, there is much less literature studying the steel industry than focusing on the other manufacturing sectors such as the electronics and automobile industries, as pointed out by Kawabata (2005, p. 5). For, in the debate over the East Asian development experience, the literature tends to pick up the industries whose development was associated with foreign direct investment (FDI) and export-oriented policy, neither of which was conceived to be prominent in the steel industry. Even so, the integrated steel firms of Japan and South Korea have been studied relatively widely because of their impressive success.

In observing the success, although neoclassical economics tends to undervalue the role played by the state and industrial policy, the steel industry has been an exception.[3] Yet, when it comes to conducting 'empirical' studies, neoclassical economics is destined to reduce or obscure the effects of industrial policy by its strict adherence to mathematics and the various assumptions involved. Conducting such calculations, some studies suggest that to develop the steel industry in developing countries, free markets and trade should rule (e.g. Truett and Truett 1997). However, there are a number of theoretical and empirical flaws in the studies that estimate an aggregate production or cost function for the steel industry, for almost no assumptions that are needed to conduct such calculations, such as perfect competition in input and output markets, the existence of optimising agents, and constant returns to scale, hold true for the conditions of steel production and markets (Sato 2005). As such, the results of these studies, and corresponding policy implications, are highly dubious.

Case studies of the steel industry are also provided by the developmental state approach (e.g. Amsden 1989, Ch. 12; Shin 1996, Ch. 7; D'Costa 1999). To put it differently, the steel industry, not least the Japanese and South Korean, has been studied as providing a case for industrial policy and state. As facility investment needed for establishing a modern integrated plant is massive, there is high barrier for developing countries to launch steel projects. And when such projects are successful, such as in Japan and South Korea, latecomer's advantage is often stressed and, in realising this advantage, the role of government and its capability are focused upon.

The developmental state approach can be divided into two schools, the political and economic (Fine 2006, pp. 103-106; Fine 2009). The political school focuses upon whether the state has the autonomy in forming and implementing industrial policy independent of various interests in the market (e.g. Evans 1995). However, the concept of the developmental state has increasingly been diluted in order to accommodate new case studies that tend to add various factors such as international regime, culture and ideology in attempting to measure the levels of

[3] For example, even Balassa (1988, p. 286), a famous free trade advocate, in denying strategic state intervention in South Korea during its rapid economic growth, accepted the importance, or at least the existence of industrial policy for the South Korean steel industry, noting "apart from the promotion of shipbuilding and steel".

autonomy. Then, the dichotomy between market and state has ironically been undermined. This indicates that the dichotomy as analytical starting point generates various theoretical and empirical problems in understanding economic development, for policies and their effects always reflect "the balance of class forces and not their absence" (Fine 2006, p. 114). In addition, this school does not examine what type of industrial policy is developmental, leaving this issue to the economic school.

In contrast, the economic school focuses upon the contents of industrial policy. Theoretically, as the steel industry is characterised by significant economies of scale, various externalities and market imperfection, industrial policy is often justified through drawing upon the traditional market failure argument. Also, the infant industry protection argument has provided a theoretical basis for state intervention in terms of bringing dynamic comparative advantage for the industry. Furthermore, Chang (2006, Ch. 7), arguing that "there are more theoretical justifications for industrial policy than is normally acknowledged" (p. 9), offers various examples of industrial policy that can be justified by economic theory.[4] In short, the economic school has pointed out that state interventions went beyond remedying cases of market failure, as exemplified by the well-known phrases, 'getting the relative price wrong' (Amsden 1989) and 'governing the market' (Wade 1990). Thus, an implication of this school is that in the catching-up phase, there is a plenty of room for the state to push economic development in general, and the steel industry in particular, through trade, industrial, and technological policies.

However, theoretical (ahistorical and universal) 'justification' for industrial policy cannot offer why and how such policy materialises (or does not materialise) in certain countries at certain times and brings different results, and as such, throws this problem back to the political school. As Fine (2006, p. 106) puts it, "the economic schools arrive where the political school begins". In addition, 'justifying' industrial policy in this manner presumes a state vs. market dichotomy and, a problem with this framework is that the 'success' and/or 'failure' of industrial policy is readily interpreted in terms of the dichotomy. For, as noted earlier, the dichotomy as such lures the interpretations of the experience into identifying appropriate levels of state intervention into the market or market imperfection. Consequently, as Fine (2006, p. 102) points out, this approach can be and has indeed been absorbed and outflanked by the information theoretic approach, which 'justifies' wider state intervention in developing than in developed countries, based on the existence of pervasive market imperfections in the former.

One implication that can be drawn from this brief literature survey is that the dichotomy between market and state conceals the simple fact that economic development is complex processes/outcomes of capital accumulation, where, both

[4] The categories of industrial policy listed by Chang can be summarised as follows: first, the state coordination for complementary investments in the presence of scale economies and capital market imperfections (big push, industrial plans); second, the coordination of investments for competing projects (managed or excessive competition), recession cartel and M&A for decreasing social costs; third, industrial policy for ensuring cost competitiveness (industrial licensing, government procurement, export requirements, and subsidies) and the maximum possible scale in production (luxury consumption control) in the presence of scale economies; and fourth, protective industrial policy offering social insurance for the short run (recession cartels) and promoting structural change in the long run (cartels for the structurally depressed industries).

state and market, and their interaction, are themselves attached to the economic and political relations and interests which act upon them. From this viewpoint, the steel industries of Japan and South Korea as the successful examples of the developmental state need to be re-examined and the scrutiny must include the periods of 'failure' of the industries in addition to the successful periods.

3. Miraculous Development: Rise of Developmental State?

The Japanese steel industry showed rapid development from 1946 to the early 1970s. Crude steel production increased from 0.6 million tonnes in 1946 to 119.3 million tonnes in 1973, even exceeding the USA.[5] The industry has established the most efficient steel-making model in the world in the late 1950s, that is, building integrated steel works with mammoth blast furnaces, basic oxygen furnaces (BOF), and hot strip mills sited at deep water ports. The competition among the six private integrated firms realised scale economies of this model through the 1960s and 70s.[6] In the case of South Korea, crude steel production increased from almost zero in 1970 to 23.1 million tonnes in 1990. The main agency in this process was the sole integrated firm, POSCO, a state-owned firm, which introduced the most efficient steel-making model.

As noted above, various studies have attributed the development of the steel industries of Japan and South Korea to wise industrial policy in selecting state-of-the-art technology and raising finance successfully for this, on the one hand, and the autonomy of the government, non existence of a strong economic class, and/or the capability of bureaucrats and institutions in formulating and implementing policies, on the other (e.g. Amsden 1989, Ch. 12; Shin 1996, Ch. 7; D'Costa 1999, Ch. 4). Needless to say, these arguments by the developmental state approach have raised a number of important points which cast doubt on the dominant neoclassical view that tends to stress the importance of free market and free trade in the East Asian development experience. However, they involve points that are misleading, each of which is discussed in turn. Above all, it is shown here that reflecting changes in underlying economic and political relations and interests, policies towards the industry were frequently modified, and also their outcomes were sometime successful and sometimes unsuccessful.

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[5] Figures of steel production in this chapter are derived from International Iron and Steel Institute (now World Steel Association), Steel Statistical Yearbook, Brussels, various issues, and Japan Iron and Steel Federation, Handbook for Iron and Steel Statistics, Tokyo, various issues, unless otherwise indicated.

[6] The process of steel production basically consists of three steps, iron-making, steel-making and rolling. In iron-making, pig iron is made from iron ore, cokes, and limestone by using blast furnaces. In steel-making, in the indirect method, pig iron is turned into molten steel in open-hearth furnaces (OHF) or basic oxygen furnaces (BOF). In the case of the direct method, scrap or directly reduced iron (DRI) is cast in electric arc furnaces (EAF). This process decides the quality or types of steel, such as mild (carbon) steel, various alloy steel and stainless steel, which are distinguished by the amount of alloying metals and carbon included. Then, acquired molten steel is transformed into semi-finished steel products, i.e., blooms, billets or slabs. In rolling, by using various mills, finished products are made of semi-finished products, yielding the final shapes of products, such as flat products (coils, sheets and plates) and long products (bars, rods, sections). Integrated firms or plants mean that they are involved in all three processes, while minimills or EAF companies produce steel in EAF and rolling processes.

Japanese Model of Developmental State?

From the end of the Second World War to the early 1970s, the development of the Japanese industry is characterised by rapid growth in production and by the installation of integrated steelworks at coastal areas with blast furnaces becoming larger and larger and open-hearth furnaces (OHF) being replaced by BOFs. In other words, accumulation in this period primarily took place in the form of fierce competition in installing integrated steelworks across private integrated firms, responding to rapid growth in demand.

The economic school of the developmental state approach has praised the role of government. D'Costa (1999, p. 80), analysing policies relating to the steel industry, argues that these "not only mobilised finance through its national banking system but also assisted domestic firms to secure modern technologies from abroad". Shin (1996, p. 101), in addition to credit allocation and technological transfer, points to the protection measures of domestic steel markets, suggesting the significant contribution of import substituting policies. Thus, each stresses the importance of the role of the government for latecomers in steel production. For D'Costa (1999, p. 80), the state has played the critical role in placing the Japanese steel industry "on a higher technological trajectory".[7] Then, political questions arise of why and how the government was able to adopt and implement the policies, and how these institutions appeared and resulted in contributing to the rapid development.

The political school of the development state has tried to identify the political and institutional conditions which enabled the policy success of this period. Johnson (1982), depicting in detail the close relationship between the government, not least the Ministry of International Trade and Industry (MITI), and industries including the steel industry in the Japanese late industrialisation,[8] argues that Japan had been a developmental state in nature. This meant economic development enjoyed first priority, and that there was the continuity of policy tools as well as the people who formulated and exercised industrial policies before and after the Second World War. As 'a Japanese model', he delineated four elements of the Japanese developmental state (Johnson 1982, Ch. 9; 1999).[9] These elements are, first, a small and excellent bureaucracy capable of formulating policies and guiding the economy; second, a political system allowing the bureaucracy to do this; third, market-conforming methods of state intervention; and fourth, an organisation commanding powers necessary for implementation, such as MITI. Shin (1996, p. 100) strengthens this argument by adding that with one party rule and absence of

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[7] In addition to industrial policies in the broadest sense, institutions have gathered attention. D'Costa (1999, p. 80) emphasises the importance of the "institutional arrangement between the state, business, and the banking sector". Yonekura (1994, pp. 207-209) focuses on the birth and innovation of entrepreneurs such as Nishiyama's model of integrated steelworks sited at deep water ports, and on the oligopolistic competition between the private integrated firms in the development of the industry. Hasegawa (1996, Ch. 6) sheds light on the internal relation of the integrated steel firms, i.e. management and labour, not least the so-called dual workforce system in enabling "the labour flexibility required" (p. 97) for introducing and upgrading technologies.

[8] For example, Johnson (1982, pp. 255-256) describes in detail how a high-ranked bureaucrat of MITI was cordial to Yawata and Fuji, the largest steel firms, which had been a government enterprise up to 1951.

[9] Note that Johnson formulated this model with a caveat that "analytically speaking, the issue still remains that it is hard to abstract a 'model' from historical reality" (Johnson 1999 p. 43).

the armed forces, the bureaucracy enjoyed autonomy, which enabled strong economic intervention.

These arguments of the political school presume that there was wide room and strong power for the Japanese government to manoeuvre various policies for industries and to discipline firms, as the government enjoyed autonomy or embedded autonomy, free from interests of various classes. Indeed, Aoki, Murdock and Okuno-Fujiwara (1997, p. 25) argue that Japan enjoyed "a unique initial condition of economic development" that there was no dominant economic class, which enabled the state to act developmentally relatively free from any economic and political interests. However, it has not been examined whether this holds true in terms of specific industries, and, indeed, misleading when looking at the steel industry.

First, in the 'initial conditions' of the industry, the government was heavily affected by internal and external interests and by the inherited capital surrounding the industry. It was far from enjoying autonomy. On the one hand, there were conditions inherited from before 1945, such as facilities, technologies, and knowledge and experience, which formed the basis of 'initial conditions'.[10] On the other hand, one of the important factors was the international environment, not least the strategies of the US government for Far-East Asia.

The US policy towards the steel industry changed from paying no interest in rebuilding it, to providing financial and other supports in order to stabilise the Japanese vulnerable economy and, ultimately, through requesting the reconstruction of the industry (Nihon Tekkō Renmei 1959, pp. 5-15; Ichikawa 1974, Ch. 3; Yonekura 1994, Ch. 8). D'Costa (1999, p. 68) points out that the basis of the Japanese domestic competitive market was "bequeathed by the US", for the creation of Fuji and Yawata by dividing Japan Steel in 1950 resulted in "an industry structure with five or six large firms of roughly equal size". It is right to point out that during the US occupation (1945-1952) the role of the US government was extremely important. However, the content and effect of the US policies and their interactions with the underlying political and economic relations and interests of the industry were not confined to effecting the market structure. For provision of technologies, finance, raw materials and steel demand in addition to the formulation of market structure, US policy played a critical role. The interaction between the changes in the policies of the US Occupation Force and the response to these policies by the industry as well as by the government eventually enabled the rehabilitation of the industry and brought about the basis of the pattern of capital accumulation in this period. Also, "it was nothing more than superb luck" (Yonekura 1994, p. 197) that steel demand increased due to the Korean War breaking out in 1950. Even after independence in 1952, for technologies, finance, raw materials and

[10] Before the Second World War, as the steel industry became extremely important for the country's interests in terms of military necessity, it was strongly promoted, supported and controlled by various governmental policies. Reflecting the power relations between the government and the private sector, some private firms remained outside the creation of Japan Steel, into which the government attempted to concentrate steel production. Damage by the war to the production facilities was small, even though production was not sustained due to the consecutive defeats in the final stages of the war. The collapse of the steel industry mainly derived from the loss of ships which delivered raw materials from abroad. For the development of the Japanese steel industry before the Second World War, see Iida, Ohashi and Kuroiwa eds. (1969), for example.

export markets, the industry heavily depended upon the USA and, as such, the pattern of restructuring has frequently been affected by US interests.

Second, for the steel industry, the focus is only on the relationship between integrated firms and the state, tending to put aside the restructuring of steel companies other than the integrated firms. In other words, the developmental state approach unduly focuses on the relations among the government, integrated firms and the financial sector in achieving the technological introduction and diffusion, and neglects the changes in the steel industry as a whole.

Within the Japanese steel industry, the impressive development in production and exports of this period coincided with the massive restructuring of OHF and electric arc furnace (EAF) companies as well as the workforce. In Japan, OHF and EAF companies producing ordinary steel competed with integrated firms from the very start and, at least in the 1950s, the number of these small steel firms was significantly larger than those in the USA or European countries, resulting in the acute conflict of interests among the integrated firms and OHF and EAF steel firms (Iida, Ohashi and Kuroiwa 1969, p. 540). Before long, most OHF and EAF companies came under control of the integrated companies (Ichikawa 1974, pp. 217-228).

Industrial policy tended to be deployed in favour of large firms at the cost of medium-smaller small firms, reflecting the balance among underlying relations and interests of various steel firms and other agencies. For example, by permitting the scrap cartel in 1955, MITI allocated the amount of scrap to companies and decided prices for it. In this system, the integrated companies received preferential treatment, which indirectly forced other OHF and EAF companies to be restructured (Nihon Tekkō Renmei 1969, pp. 443-448; Ichikawa 1974, p. 220). In addition, MITI formed the OHF-EAF sub-committee in its Industrial Structure Council in 1965, when OHF and EAF companies were suffering severely from recession (Nihon Tekkō Renmei 1969, pp. 831-837; Noble 1998, p. 52). The sub-committee advised that the number of OHF and EAF companies should be significantly reduced through becoming affiliates of the integrated firms and by cooperating on their own for purchasing raw materials, adjusting production and marketing. In this way, the process of centralisation and concentration of capital into the six integrated firms was intensified, strengthening the oligopolistic structure of the industry.

Third, the involvement of the government was extensive and identifiable in every aspect of the production and exchange spheres, such as coordinating with steel users, facilitating finance, importing technology, stabilising price, changing industrial structure, and securing raw materials. However, the formation and impact of these policies depended upon the shifting underlying political and economic relations and interests.

For example, in 1958, the open sales price system was adopted to stabilise steel prices with the initiative of MITI, which gave high priority on the stability of steel price for the Japanese economy as a whole (Iida, Ohashi and Kuroiwa 1969, pp. 563-575; Nihon Tekkō Renmei 1969, pp. 46-49; Ichikawa 1974, pp. 264-270; Yonekura 1994, pp. 229-230). In fact, MITI's intervention "was not the cause of aggressive investment but rather the result of it" (Yonekura 1994, p. 230). This was a recession cartel between 31 major ordinary steel producing companies, coordinated by MITI through administrative guidance, shrewdly avoiding the

anti-trust laws.[11] However, this price system collapsed by 1962. The competition between integrated firms directly caused the breakdown, as evidenced by the fact that products over which integrated firms had strong market power were first to breach the open sales price system.[12]

Clearly, the emphasis that Johnson places on the features of MITI in his Japanese 'model' explains the features of MITI, but it does not explain why MITI intervened nor what resulted from the interventions. Also, the motives and results of these interventions differ across time, and a 'model' overlooks the specificity and shifting dynamics of the various interacting factors.

South Korean Model of Developmental State?

The establishment and expansion of the state-owned firm, POSCO, was the core aspect of the system of accumulation in the South Korean steel industry in the period of miraculous growth in the 1970s and the 1980s. As such, how POSCO developed has been the main subject of study. Studying the development process of the state-owned firm, it has been argued that due to the size of the economy and the difference in political regime, in addition to the non-existence of integrated steel production before the Second World War, state intervention in South Korea had been much more direct than for Japan and that South Korea's strategy to create the steel industry was functionally and technologically an imitation of Japan but institutionally different (Shin 1996, Ch. 7; Kipping 1997). Even so, the developmental state approach has attributed the development of POSCO to basically the same factors as those for the Japanese steel industry, i.e. to wise industrial policy, on the one hand, and the autonomy of the government, absence of a strong economic class, and/or the capability of bureaucrats and institutions in formulating and implementing industrial policy, on the other (Enos and Park 1988, Ch. 7; Amsden 1989, Ch. 12; Juhn 1990; D'Costa 1994; Stern, Kim, Perkins et al. 1995, pp. 163-177; Shin 1996, Ch. 7). According to D'Costa (1999, p. 117), "the autonomy of the state, which was also extended to POSCO definitely played a role in capturing the benefits of changing technologies". Needless to say, it is extremely important to examine the developmental process of POSCO. However, the preceding literature tends to neglect the many different aspects of the industry other than the remarkable technological achievement and absorption by POSCO.

First, before the establishment of POSCO, as the rolling sector grew in the 1960s, there appeared an acute imbalance between the upstream and downstream processes in the steel industry that necessitated a big-push policy for the upstream processes (Nihon Tekkō Renmei 1968, pp. 48-67; Taishō Tekkō 2003, p. 97). The import substitution in the rolling sector rapidly proceeded in the 1960s, as the development of private EAF and rolling firms had been undertaken by various groups of firms or conglomerates. It was the increase in domestic demand which mainly induced the development of the steel industry up to around 1970. Indeed, steel demand reached a level (1 million tonnes) that would allow for large-scale

[11] It is important to note that this system also included the 'adjustment' of operations, controlling quantity of production, not least for OHF production, and this policy too promoted shift of technology to BOF from OHF.

[12] Integrated companies began to penetrate into one another's steel products from the late 1950s, not least in strip-mill products, when demand for these products began to increase mainly from the shipbuilding and automobile industries. At this stage, there was a huge pressure of interest payments, for the integrated firms had borrowed massive external loan.

integrated steel production by the early 1970s.[13] In addition, from the early 1960s, the development depended upon imports of steel scrap, semi-finished products and hot-rolled coils (Tekkō Kaigai Sijō Chōsa Iinkai 1966). Thus, the import substitution of iron-making and steel-making processes became an important task politically and economically, because the underdevelopment of these processes often became disadvantageous for the rolling sector and steel users in terms of stable procurement of inputs and in terms of cost competitiveness, and also contributed to worsening the balance of payment problem. These underlying relations and interests of this period were the basis of the steel project of the government and forged the state policy of introducing an integrated steel works.

Second, the effort of the government to raise funds for its steel project was significantly affected by the changing wider political and economic relations and interest of the time. In the 1950s and 1960s, the development of the South Korean economy in general, and the steel industry in particular, was heavily influenced by US policies. As South Korea had been facing a reduction in US aid and mounting military and political pressure from North Korea, and as the international competitiveness of the light manufacturing industry such as textiles was eroding, the steel project was given top priority to lay the foundations for heavy industrialisation. As described by various studies (Amsden 1989, p. 295; Fukagawa 1989, p. 112; D'Costa 1994, pp. 56-57), when the World Bank rejected South Korea's request for a loan, concluding that its economy was immature for having integrated steel production, the finance and technology was arranged by the government mainly through the Japan-Korea Normalisation Treaty of 1965. In short, the government had gone through significant struggles up until POSCO was established as a state-owned company.

Third, the rapid growth of POSCO as well as the manufacturing sector brought about changes in political and economic relations and interests in and surrounding the steel industry. In the period of rapid growth from the 1970s to the mid-1980s, through entry regulation introduced in 1970, there appeared a structure where POSCO had a monopolistic position and other EAF and rolling firms had a supplementary role (Abe 2008, pp. 50-55). For example, the construction and operation of the second integrated steelworks was allocated to POSCO. The government had an idea of building a second integrated steelworks as early as in the mid-1970s, in view of the rapid increase in domestic steel demand based on the development of the heavy and chemical industries (POSCO 1998, p. 88). Responding to this government idea, POSCO and other large private business groups, such as the Hyundai group, submitted to the government their plans for building an integrated steelworks and to obtain the necessary licence (Amsden 1989, p. 293). Innace and Abby (1992, p. 141) report: "In fact, this impending battle became the one of the country's leading news stories. The government was split into two fractions. One backed POSCO, with the other supporting Hyundai. And the question of where to build the second mill was at the center of the storm". Finally, the government gave POSCO the licence in 1978 for building this second integrated steelworks, and Kwangyang was selected as the location in 1981. The reason for the selection of POSCO rather than Hyundai remains as a matter of debate.[14] What is

[13] Korea Iron and Steel Association, Steel Statistical Yearbook, Seoul, various issues.

[14] POSCO argued that the steel industry had a public content so that even the second integrated steelworks should not be delegated to the private sector and that it was an international trend for steel firms to become larger. In contrast, the Hyundai group insisted

important is that this decision that the second integrated steelworks should be owned and operated by POSCO had the effect of maintaining POSCO's monopolistic position over the production of both pig iron and the steel by BOF. In other words, the government regulated new entry so that POSCO could enjoy a monopolistic position in the upstream processes. As a result, other EAF and rolling firms grew, depending upon as well as forging this monopolistic industrial structure. By this division of labour, the industry resolved the problem of the imbalance among the processes by the late 1970s as well as expanding production, an aspect of the underlying political and economic relations and interests that prompted policy changes in the 1980s, which will be discussed in the next section.

In short, it is misleading to assume that the South Korean government was free from political and economic relations and interests in launching its massive steel project and deploying its policy towards the industry. The developmental state model, defined either in terms of autonomy from the market or in terms of the contents of policy, misses out various factors and mechanisms specific to the pattern of capital accumulation of the industry, even in this 'successful periods'.

4 Stagnation and Crisis: Fall of Developmental State?

From the early 1970s, as noted above, crude steel production of the Japanese steel industry stopped increasing and had been stagnating for about 30 years since then. As such, this period itself as well as the role of government in the restructuring of the industry has attracted less attention than the period before. Also, changes in the South Korean industry in the 1990s and how its growth led to, and was punctuated by, the East Asian crisis have not been sufficiently studied. Even so, in general, it is often conceived that the role of the government had become limited in these countries and that industrial policy had shifted towards a neo-liberal policy of liberalisation. In other words, the argument is that there is a demise in the role of developmental industrial policies as the economy matures, since it becomes difficult for the government to formulate and implement industrial policy.

For the political school of the developmental state approach, once industrialisation is achieved, the scope and effect of industrial policy will fade away, thus the developmental state has a limited life. The autonomy of state will be damaged by the strong economic class that appears as industrialisation proceeds (e.g. Moon 1999; Minn 2001). In other words, as the economy matures, the government relatively loses its disciplinary power over the private sector, which demands more freedom in its corporate activities. However, various relations and interests work on and through governments and other institutions whatever the development-stage of a country. Furthermore, this view does not examine what type of industrial policy is developmental, leaving this issue to the economic school. However, without looking into the contents of policy, it is not clear what kind of the developmental state has limited life. And indeed, changes in the contents of policy towards the steel industries can be observed regardless of the level of autonomy and of the development stage of the industry.

In contrast, the economic school argues that various liberalisation

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that the steel industry should also be brought under a competitive structure and that the group could forge backward and forward linkages with the construction, shipbuilding and other industries where the group had significant presence. See Innace and Abby (1992, Ch. 17).

measures resulted in the demise of industrial polices and that the liberalised regime for foreign capital exposed the economies to an inherently unstable international capital market (e.g. Chang, Palma and Whittaker 1998; Wade 1998; Chang 2006, Ch. 6). Therefore, the literature also characterises this stage as reflecting the decline, or even demise, of industrial policy, thus of developmental state. Also, what this view implicitly suggests is that if industrial policy had not been dismantled, there would not have been a crisis or stagnation for these countries. This is problematic, for it misses out the simple fact that formation, implementation, effect and repeal of industrial policy depend on, and are attached to, political and economic context which is always changing. In addition, liberalisation should be understood as another type of state intervention. As Pirie (2005, p. 27) points out, market disciplines "depend on the existence of strong legal institutions (systems of market-based financial regulation, strong bankruptcy and accountancy laws, and statutory corporate governance standards) if they are to function properly". Indeed, state intervention shows no demise at all.

Restructuring in Japan

For Japan, since the early 1970s, the production volume had been fluctuating around 100 million tonnes, and had never exceeded the level achieved in 1973 (until 2006). Because of the overcapacity problem, the production capacity of the integrated firms was reduced, particularly in the mid-1980s. At the same time, the established integrated steel making model was strengthened by the introduction of various energy- and cost-saving technologies, such as continuous casting machines and automation.

Along the lines of the developmental state approach, sectoral studies of the Japanese steel industry of this period do not focus upon the role played by government. For example, on the one hand, Shin (1996, Ch. 7) does not study this period, implicitly assuming that the role of the government is important only in the catch-up phase. D'Costa (1999, p. 80) observes: "the restructuring process has been largely self-led. Except for small subsidies from the government to meet certain costs associated with industry adjustment, much of the disciplining of the industry to coordinate investment and production is carried out by the industry itself". On the other hand, the continuous international competitiveness of the Japanese integrated firms has been the subject of study. Itami (1997, Ch. 6) shows how the integrated firms maintained their international competitiveness even in the era of stagnant production, and Yonekura (1994, Ch. 10) describes how the industry has "overcome the problems associated with the oil crisis and the yen's rapid appreciation" (p. 238). These contributions tend to add examples of the 'Japanese management' argument, praising such factors as the seniority wage system, company based trade unions, life-long employment, and the system that inspires workers' initiatives to improve productivity. Although these studies show various important aspects of changes in the industry, a major problem with them is that the changing pattern of capital accumulation and the role of state in it are not appropriately captured.

It is true that Japan clearly entered the era of neo-liberalism around 1980 (Itoh 2000, pp. 46-48). The government, following the USA and the UK, began to stress a balanced budget, privatisation of state-owned firms, and deregulation across industries. The propaganda put forward was one of 'a small government', meaning reduction in the role and size of the government, criticising not only the

Keynesian-type state intervention in the economy to push effective demand up, but also industrial policy relating to the supply side. However, in reality, the budget of the government has never been balanced, and its fiscal debts have been constantly increasing (Itoh 2000, p. 22).

As such, a crucial question is whether the role of the state has been lessened in this period. Indeed, the role of the state can never be said to have decreased, even though the contents, effects and forms of intervention have been surely changing towards a neo-liberal regime. In short, it is important to reveal the driving forces of neo-liberal policy and its effects on the steel industry, and in doing so, to deny "the neo-liberal myth of the non-interventionists state" (Kiely 2007, p. 179). Three crucial aspects in the restructuring of the steel industry are discussed in turn.

First, for the integrated steel firms, the Japanese government has at times frequently attempted to adjust their competition for facility investment and to facilitate their restructuring. For example, it promoted a merger between the largest two (Yawata and Fuji). The merger took place in 1970 to form Nippon Steel Corporation (NSC), but the fierce investment competition amongst the integrated firms was not able to be stopped or coordinated by the government in face of stagnating demand after the first oil shock. Thus, through the 1970s, the industrial structure laid down in the period before the shock was strengthened. Firms continued investment competition but mainly by increasing their exports. The radical restructuring of the sector began only after the second oil shock as the overcapacity problems became severe, not least with increasing trade frictions with the USA. The integrated firms were further forced to restructure in the mid-1980s facing price competition from EAF firms and growing foreign firms such as POSCO, as well as falling domestic demand and the appreciating yen after the Plaza Accord in 1985.

In addition, it is important to note that in forming their rationalisation plans, the integrated firms exchanged information with one another and with the government. The integrated firms promulgated their rationalisation plans one after another between 1986 and 1987, and they formed the plans based on the common assumption that crude steel production per annum in Japan should be 90 million tonnes and the exchange rate would be 150 yen/dollar (Mizota 1991, p. 180; Kawabata 1998, p. 92). In the background, the Plaza Accord in 1985 was crucially important, by which the yen appreciated from 255 yen/dollar in 1984 to 125 yen/dollar in 1988. The government quickly responded to this rationalisation. For example, MITI published a book in 1987 titled "Towards the New Generation of the Steel Industry", which discusses the direction of the industry and measures to facilitate the changes (Tsūshō Sangyō Shō 1987). The Act on Temporary Measures for Transformation of the Industrial Structure was enacted in 1987. One purpose of the Act was to ease social conflicts in the regions where blast furnaces were pulled down by offering the regions some preferential measures in tax and finance. In addition, the supplementary budget of public works of the fiscal year 1986 was preferentially allocated to these regions (Tsūshō Sangyō Shō 1987, pp. 152-153; Nihon Tekkō Renmei 1988, pp. 53-54).

Furthermore, the government has continuously decreased corporate tax from 42% to 30% over the last twenty years, which facilitates firms in raising

finance internally.[15] In addition, the integrated firms have been selling the land freed by their rationalisation of production, not least from the early 1990s. This has also contributed raising finance internally, and the government and regional governments have often been involved in planning the new utilisation of such land, building theme parks, shopping centres with cinema complex and football stadiums for example.[16] In the late 1990s, after experiencing the long recession and in the face of external and internal pressure, the government abolished the ban on establishing holding companies by amending the Anti-Trust Act.[17] This, in addition to other factors such as massive international restructuring in the automobile and mining sectors, prompted the reorganisation of the five integrated firms into two groups in 2002. NKK and Kawasaki formed JFE Holdings in 2002, and one of the affiliates of the holding company is JFE Steel, which merged the steel businesses of the two companies. NSC, Sumitomo and Kobe came to an agreement to hold shares in one another (capital tie-up) in the same year.

Second, in contrast, the restructuring of the EAF sector became apparent as early as the mid-1970s, and governmental coordination took the form of formal measures that allowed the sector to create a recession cartel and controlled capacity. These measures were requested by the industry and lasted until the late 1980s, which considerably affected not only the EAF sector but also the industry as a whole, not least in terms of speed and rhythm of restructuring.

EAF firms sought policy measures to coordinate falling prices of their products after the first oil shock, in a situation of low capacity utilisation, a rapid increase in the prices of electricity and wages, and a rise in import prices of steel scrap. The government allowed a recession cartel for some long products in 1977 based on the Act on the Organization of Small and Medium-sized Enterprise Association and implemented a structural improvement programme to abolish excess capacity of 3.9 million tonnes in 1978, designating the EAF sector as the 'structural recession sector', through enacting the Act on Temporary Measures to Stabilise Designated Depressed Industries (Nihon Tekkō Renmei 1981, p. 822). The latter policy also regulated new establishment and renovation of EAFs, and promoted M&A. MITI enforced its policy via soft measures, for the Act did not give MITI authority of using compulsory measures. As such, it requested financial institutions to help EAF firms which cut their production observing the direction of MITI. As Noble (1998, p. 54) puts it, "to ensure rigorous implementation of capacity reduction schemes, MITI mobilized its network of agents throughout the country to monitor individual firms." Even so, some firms had tried to resist this policy and began to compete with the integrated firms in some relatively high value-added long products in the early 1980s, undermining the price leadership of the integrated firms (Yonekura 1994, pp. 254-256; Kawabata 2005, pp. 242-243).

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[15] Corporate tax was reduced from 42.0% to 40.0% in 1989, to 37.5% in 1990, to 34.5% in 1998 and to 30.0% in 1999. Also, the government deregulated requirements for issuing shares and bonds in the 1990s by amending relevant laws. See Nihon Tekkō Renmei (1981, pp. 363-372; 1988, pp. 294-304). In contrast to the reductions in corporate tax, the government introduced the consumer tax in 1989 and has increased the rate from 3% to 5% in 1997. See Itoh (2000, p. 103).

[16] This also involved deregulation in laws that regulated land-usage (Nihon Tekkō Renmei 2008, pp. 158-166).

[17] The ban on establishing holding companies was introduced by the US Occupation Force to repress the revival of Japanese conglomerates.

As the economic boom in the late 1980s increased steel demand, various firms including the integrated firms invested in the EAF method, pushed for deregulation of the EAF sector. Due to the recession caused by the Plaza Accord that appreciated the yen, the government lowered the bank rate to extremely low levels from 1987 to 1989, which triggered the economic bubble. As such, the regulation of the establishment and renovation of EAFs lapsed in 1988. Consequently, there was an investment boom on building EAFs as domestic steel demand surged. The capacity of EAF began to increase from 1988 and reached over 50 million tonnes in 1994.[18] This again gave rise to an overcapacity problem as the economy entered the long recession of the 1990s. After the bursting of the bubble, the government was forced to cut its budget on public works. The EAF association repeatedly requested the government to implement some legal measures to protect the sector, which significantly depends upon public construction (Nihon Tekkō Renmei 2008, pp. 181-182). The government partially picked up the requests in the Act on Special Measures for Industrial Revitalisation of 1999 which provides tax and financial preference for the reconstruction of business and diversification etc., and steel companies have been restructured utilising the scheme of the Act.[19]

Third, the integrated firms strengthened their international network of steel production, with the involvement of the government. The Japanese steel industry made significant FDI in the USA in the 1980s, where the integrated steel firms were suffering from the obsolete facilities (Sakuma 1994, pp. 140-144; Yonekura 1994, pp. 263-272; Nihon Tekkō Renmei 1999, pp. 64-65). The integrated firms made FDI especially for rolling plants, for which mother steels (slabs and hot-rolled coils) were basically provided locally. FDI by the Japanese integrated firms in the USA was prompted by the US trade policy which restrained steel imports from Japan and by the request of steel users especially the Japanese automobile industry, which earlier made FDI in the USA.

In contrast, not least since the 1990s, the Japanese integrated steel firms have invested in the downstream processes such as cold rolling and galvanising processes in Asian countries (Sakuma 1994, pp. 145-152; Nihon Tekkō Renmei 1999, pp. 395-397; Kawabata 2005, p. 115). This is partly to meet the request of the Japanese automobile and electronics sectors which invested a little earlier in these countries. Therefore, providing mother products (e.g. slabs and hot-rolled coils) to their affiliated firms abroad, the integrated firms have increasingly begun to depend upon exports to Asia.

Apart from FDI, the other type of internationalisation has proceeded since the 1990s. The Japanese integrated firms also have been making efforts to cooperate with foreign firms (Kawabata 2005, p. 131). For example, NSC has agreed with POSCO in 2000 to hold shares in one another and cooperate in R&D in some steel products, and in securing the raw materials provision. Sumitomo's Wakayama works is now co-owned by Sumitomo and CSC of Taiwan, providing slabs to CSC.

These suggest that the international division of labour of steel production has been changing. The integrated firms have started to make efforts in bringing

[18] At least, eleven units of EAF were newly installed during 1988-94 (Nihon Tekkō Renmei 1999, p. 62)

[19] The Act was twice amended in 2003 and 2007 in order to widen the scope of application. In addition to EAF firms such as Toyo Seiko and Kunimitsu Seiko, the integrated firms have also utilised the scheme of the Act and by 2007, 28 applications from steel firms have been approved by the government (Nihon Tekkō Renmei 2008, pp. 181-182).

cooperative conditions in steel markets of wider regions than Japan, not least Asia, and the government is supporting this trend by various measures, such as Free Trade Agreements (FTA) and the deregulation of international M&A and tie-up (Nihon Tekkō Renmei 2008, pp. 182-183).

To sum up, the government has always been involved in mediating interests. It has kept providing assistance for rationalisation of the integrated firms and the EAF sector, in addition to local societies and labourers affected by the rationalisations. Struggling with the long recession in the 1990s, changes in policy from industry-specific to (neo-liberal) functional measures accelerated. The government enacted and amended various laws, for example, to allow holding companies to be established that had been banned for nearly half-century, to ease (international) M&A, to deregulate labour markets not least for the manufacturing sector, to provide rehabilitating schemes for rationalisation and diversification of business, and to reduce corporate tax. These have been requested by ailing industries including steel and facilitated the restructuring of the industries, in order to sustain international competitiveness. These were not necessarily measures that were specific to the steel industry. However, the industry played an important role in requesting them and utilised them. Furthermore, the so-called macro policy, such as exchange rate (the Nixon shock and the Plaza Accord), the bank rate and fiscal policy towards public construction, interacted with the changing underlying political and economic relations and interests of the Japanese economy as a whole, and had a significant impact on the industry.

Chang (2006, p. 254) argues: "The Japanese corporations had already become very powerful and internationally mobile during the 1970s and 1980s, but Japan had great success with industrial policy during that period, because these firms accepted the legitimacy of industrial policy and cooperated with the government for its success". However, steel firms were not concerned with the 'legitimacy' of industrial policy but lobbied for, and responded to, various policies, based on the political and economic relations and interests specific to each period in which they operated. In short, first, the government is far from non-interventionist even now. Second, as such, although the development of the Japanese steel industry may be divided into the catch-up phase and mature phase, it is misleading to characterise the former by the wider role of industrial policy and the latter by less market failure to justify state intervention.

Restructuring towards and after the Crisis in South Korea

The experience of the South Korean steel industry up to the late 1980s has been studied as a successful example of latecomer advantages and of state-led industrialisation, while few studies have addressed the development and restructuring of the South Korean steel industry from the late 1980s to the early 2000s. Indeed, the continuous growth of POSCO has been the only aspect in focus (Shin 1996, Ch. 7; D'Costa 1999, Ch. 4), for POSCO constructed the second integrated steelworks (the Kwangyang works) from 1985 and its last phase was completed in 1992. Yet, studying the East Asian crisis of 1997, Chang (2006, Ch. 6) points out that the dismantling of industrial policy had begun in the early 1990s and criticised neo-liberal reform. For, he considers that neo-liberal reforms in general, and the post-crisis institutional changes in particular, "are likely to dampen the economy's investment dynamism" (Chang 2006, p. 276).

However, crude steel production had recorded even faster growth from the

late 1980s to the East Asian crisis of 1997 than from the early 1970s to the late 1980s. In addition, even after the crisis, crude steel production has again increased steadily, exceeding the level achieved before the crisis (42.5 million tonnes in 1997), and nearly reached 50 million tonnes in 2005, although the pace of growth has slowed down. This performance cannot be explained by focusing only upon POSCO, or by pointing to the demise of industrial policy. Therefore, there is a need to offer an industry-specific study of what had been taking place prior to the crisis as well as afterwards.

The second oil crisis triggered the economic crisis of 1979-80 and punctuated the economic growth of South Korea. South Korea had to follow the conditionality imposed by the international financial institutions, as it was forced to borrow stand-by credits (Fukagawa 1999, pp. 97-100; Kim and Cho 1999, p. 13). Consequently, economic liberalisation became a policy task, even though the conditionality focused more on macroeconomic policy, rather than industry-specific policy. Furthermore, in the mid-1980s, as the yen appreciated sharply after the Plaza Accord of 1985, the export of South Korean manufacturing goods, mainly automobiles and electronic products, surged, not least towards the US markets. As such, the trade friction with the USA became acute. Therefore, external pressure for economic liberalisation became even stronger. In addition to external pressure, the government came under rising internal pressure to liberalise its economy (Fukagawa 1999, pp. 97-100; Kim and Cho 1999, p. 13). As the economy showed rapid growth in recovering from the recession, the private sector increasingly demanded a liberalised regime, pushing deregulation of new entry and capacity expansion in order to enter successful sectors and to raise corporate external finance for facility investment. In this way, policy changes such as the liberalisation of entry and the partial privatisation of POSCO were pushed forward through internal and external interests, and finally materialised in the late 1980s. These triggered fierce facility investment competition, which was further facilitated and fed by financial liberalisation. Three points are worth attention.

First, responding to liberalisation and increasing demand from the late 1980s, various groups of firms, including POSCO, aggressively entered in the downstream processes of steel production (Abe 2008, pp. 60-63). POSCO invested in the downstream process, such as cold rolling, since the privatisation forced POSCO to invest in high return projects as well as try to match the development of the Korean automobile and electronics industries. This created intense competition in the flat product markets (e.g. coils, sheets and plates) among existing EAF and rolling companies and they too began to invest in new facilities, with the involvement of conglomerates. In addition, the government implemented the 'My Home' policy in the late 1980s. This increased the demand for long products (e.g. bars, rods and sections) and, thus, the private companies began to build new EAFs in the 1990s and even POSCO built an EAF in 1993, which also stimulated investment competition.

Second, the intensified investment competition in the steel and other industries further pushed deregulation not least of finance. As financial liberalisation finally took hold in the mid-1990s, it fuelled the investment competition. It is important to notice that the fierce investment competition triggered by the policy change in the mid-1980s had two features. First, it took the form of competition between various groups of companies. Many investments would not have been possible for a single firm, for steel facility necessitates significant

investment (Mizuno 1999, pp. 13-16). Second, the investment competition depended upon external finance, in addition to optimistic expectations over such investment based on the long boom (Kim and Cho 1999, pp. 9-10).[20] In other words, the intensified competition between conglomerates across the industries exerted internal pressure on the government to deregulate further, not least in finance, and in turn investment was driven by financial liberalisation.[21]

Third, even though the government was losing its coordinating authority through the license system because of deregulation policies, it tried to keep the monopoly of POSCO in the upstream process in the 1990s (Suzuki 2003, pp. 68-69; Abe 2008, pp. 63-65). The Hyundai group announced installation of a new integrated works in 1995. The government decided not to accept Hyundai's or any other plan to build a new integrated steelworks with blast furnaces by resorting to its remaining regulatory authority, fearing excess capacity.[22] Also, seeing the rise of minimill technology (EAF with thin slab continuous casting machines and compact hot strip mill) not least in the USA, the idea that steel production via blast furnaces with BOF had become obsolete had been gaining momentum in the mid-1990s (e.g. Crandall 1996).[23]

This pattern of capital accumulation resulted in a renewal of increasing imbalance between the processes. At the same time, POSCO's monopolistic position in steel making had been weakened. The share of POSCO in steel making capacity decreased from 68.9% in 1990 to 59.4% in 1999, due to the massive investment of other firms on EAFs.[24] In addition, although POSCO maintained its monopoly over iron making, as the imbalance of capacity among iron making, steel making and rolling expanded, other firms tended and needed to procure mother products such as slabs or hot-rolled coils from abroad. This also contributed to changes in the

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[20] For the steel industry, the share of internal finance was significantly lower in the 1990s, compared to the 1980s. It was 59.6% during 1981-1985, while it decreased to 40.1% during 1991-1995 and 32.4% during 1996-2000. Korea Iron and Steel Association, Steel Statistical Yearbook, Seoul, various issues.

[21] Needless to mention, the financial deregulation was also promoted through external pressure.

[22] Although the government had liberalised entry regulation, it still had some measures to control entry. For example, it was able to influence entry and expansion by designating a sector as the object of rationalisation or by not allowing the import of a particular technology if this had already been imported by other companies. See Chang (2006, Ch. 2) and Honjo (2000, pp. 24-25).

[23] With regard to this government decision, Chang (2006, p. 216) argues: the government "supported what many, if not all, people regarded as an over-ambitious steel venture by Hanbo, a medium-sized chaebol with a dubious track record in manufacturing. The decision was emphatically not taken as a part of any coherent industrial policy, and looked particularly strange when the government had already refused to endorse the largest conglomerate Hyundai's entry into the steel industry". This is misleading in two senses. The government, on the one hand, liberalised investment and entry, and the Hyundai group did enter into the steel business in the downstream sector. On the other hand, the government tried to maintain the monopoly of POSCO in the upstream process (blast furnaces and BOF). The technology that Hanbo chose (EAF-based integrated production) did not conflict with this policy towards the steel industry. Thus, it may be the case that the decision to approve Hanbo's plan and reject Hyundai's was a part of coherent industrial policy. Be that as it may, it has been reported that corruption affected the government support for Hanbo (Nozoe 1999).

[24] Korea Iron and Steel Association, Steel Statistical Yearbook, Seoul, various issues.

division of labour where POSCO had played a central role.

Finally, when the steel-using export-oriented industries showed sign of a downturn, excessive investment in the steel industry became the burden. From 1996, the Korean economy showed the sign of a downturn triggered by the depreciation of the yen and the price fall of semiconductors, the two factors damaging the export-oriented industries (Mitarai 2000, p. 214). Accordingly, domestic demand for steel products plummeted and so did steel prices from the beginning of the year 1996 (Kawai 1997, pp. 47-48). This severely hit steel makers, not least the firms that had aggressively made facility investment. The steel industry entails significant investment and the gestation period of building plants is long, so that it is vulnerable to cyclical demand, not least when the facility investment depends on loans. Indeed, the first three companies whose collapse triggered the crisis in Korea in 1997 were steel companies. Hanbo Iron and Steel, which was the most aggressive company in facility investment, was the first to become insolvent, followed by Sammi Special Steel and Kia Special Steel (Mizuno 1999, p. 14). Afterwards, Kwangwon Industries and Korea Iron and Steel in the EAF sector went into bankruptcy (Park and Tcha 2003, p. 203).

The government, following the conditionality imposed by the IMF, implemented various measures (Kim and Cho 1999, pp. 18-19; Mako 2002). Indeed, the government further promoted neo-liberal policy of liberalisation (Chang 2006, Ch. 9). For corporate restructuring, the government laid down the bankruptcy scheme and the debt decreasing guideline, and the privatisation of state-owned companies became a main issue. Also, the government deregulated labour markets as well as foreign investment, in order to facilitate restructuring (Honjo 2000, pp. 21-22). The post-crisis restructuring of the steel industry took place in this further liberalised policy regime. This restructuring process was driven by conflicting interests in the industry, which primarily had their base on imbalance among steel processes that worsened in the wake of fierce investment competition in the downstream processes before the crisis.

First, the Hyundai Motor group enhanced its presence significantly in the steel industry (Park and Tcha 2003, p. 212). The group started buying bankrupted steel makers. Inchon Steel, a firm that belongs to the group, absorbed Kwangwon Industries in 2000, and took over Sammi Special Steel and altered its name to BNG Steel. Inchon Steel as such became INI steel in 2001 (now Hyundai Steel) and in 2004 INI Steel bought the Dangjin plant of Hanbo Iron and Steel.

Second, POSCO was completely privatised in 2000 (Lim 2003, pp. 52-55). The government announced the Privatisation Policy of state-owned companies in 1998, and POSCO was designated as the top priority for privatisation as it was competitive and the privatisation was considered to enhance its competitiveness. The remaining shares held by the governmental institutions were to be phased out in steps from 1998 to 2000, so that even POSCO could in principle at anytime be acquired by domestic or foreign firms or investors.

In this way, the crisis triggered a restructuring. On the one hand, the monopolistic position of POSCO was on the decline, however, on the other hand, concentration of crude steel production as a whole to a few groups of firms proceeded, namely the POSCO group, the Hyundai Motor group and the Dongkuk Steel group (Mizuno 2000, pp. 195-196).

Third, the conflict of interest between fully-privatised POSCO and the Hyundai Motor group, based on continuing imbalance among processes, was an

important factor driving the restructuring of the industry after the crisis. In 1999, Hyundai Pipe requested POSCO to supply hot-rolled coils for cold rolling (Suzuki 2003, p. 69; Abe 2008, p. 71). However POSCO rejected the request. For POSCO insisted that it did not have enough capacity to provide to Hyundai Pipe. Hyundai Pipe managed to procure hot-rolled coils from Japanese integrated firms and began operation of cold rolling lines.[25]

The government attempted to coordinate the conflicts between POSCO and the Hyundai Motor group, however, did not have any measure to make these companies follow its instruction, for it had implemented further liberalisation of its regulatory power after the crisis by repealing and/or amending the Industry Development Act and other Acts (Honjo 2000, p. 26). Instead, the government intervened by way of competition laws (Abe 2008, pp. 71-73). The Fair Trade Commission (FTC) adjudicated that the rejection of the supply of hot-rolled coils of POSCO to Hyundai Pipe was an abuse of the monopolistic position of POSCO. POSCO appealed this adjudication of the FTC to the High Court. Finally, POSCO decided to supply hot-rolled coils to the Hyundai Hysco (renamed firm of the Hyundai Pipe) in 2003 and, in this way, the conflict ended at least temporarily.

Later, the Hyundai Motor group announced building a new integrated steelworks and started the construction in 2006.[26] If achieved, the Hyundai Motor group will have an integrated steelworks with 12 million tonnes capacity per annum in addition to EAF plants and become a strong competitor to POSCO. The government no longer had any measure to stop the group and also did not have any reason to oppose the plan (Abe 2008, p. 74). For, the world steel industry showed an upward trend from 2002, mainly because of the miraculous demand increase from China. In addition, at this stage, the idea that minimill technology would be the next generation technology replacing steel production via blast furnaces with BOF had lost momentum in the world steel industry after the East Asian crisis.

Seeing the strategy of the Hyundai Motor group, POSCO is now trying to find a new strategy (POSCO 2006, pp. 62-72). POSCO has been making efforts to develop export markets for high value-added steel products. For, the Hyundai Motor group is the biggest domestic customer and it will have its own integrated steel firms. As such POSCO needs to find new customers who would purchase POSCO's steel product for automobile usage (Abe 2008, pp. 74- 75). POSCO has established many coil centres abroad especially in Asian countries and has launched a steel project in India to build an integrated steelworks (Park 2008).[27] Further, POSCO plans to make Vietnam a priority country to allocate its resources (Kawabata 2007, pp. 24-26). Behind this, the government announced a policy to push FTA in 2003 and is now making a hard effort to conclude it with India (Okuda 2007).

In sum, investment competition materialised and intensified based on liberalisation itself was prompted partly by the 'successful' economic growth of the economy, and finally led to the crisis. On the one hand, it is misleading to

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[25] The Japanese integrated firms were suffering from the long recession with low operation rates, so that Hyundai Pipe was able to procure hot-rolled coils at a low price, not least from Kawasaki. Hyundai Pipe made a comprehensive technological agreement with Kawasaki (now JFE Steel) in 2000, including hot-rolled coil procurement and technological cooperation.

[26] The Korea Metal Journal, May 19 2005 and August 29 2005.

[27] By 2016, it plans to expand the capacity to 12 million tonnes. However, it has been facing significant difficulties in the process of land acquisition.

understand the neo-liberal reform as materialising non-interventionists state. On the other hand, it is also misleading to presume that the reform necessarily harms the investment dynamism of the South Korean economy, although there are surely various serious problems with neo-liberalism. For, as Pirie (2005, p. 356) argues, the policy implemented since the crisis "must be understood as a logical attempt to secure Korea's position as a site of accumulation within a rapidly changing global economy".

5. Concluding remarks

This chapter's limited overview reveals that policy is continuously formulated and implemented, and brings different results and changes, reflecting changing political and economic relations and interests. The study of the Japanese and South Korean steel industries shows that the role of the state has not been decreasing at all, even though the contents and methods of state intervention are surely changing towards neo-liberal policy. Therefore, it should be conceived that what was eroding in Japan and South Korea is a certain type of state intervention, or more precisely, a certain type of state-capital-labour relations, rather than industrial policy per se.

In addition, it becomes clear that each industrial and other sector within an economy has its own pattern of capital accumulation and the diversity and differences among them are obscured by the dichotomy between market and state. For, the dichotomy depends on unduly abstract concepts, not least 'market'. In other words, the dichotomy as such inherently has the tendency of neglecting and concealing various political and economic (class) interests which are always exerted upon the formation and implementation of policy and affect its outcome.

On the one hand, these findings of this chapter cast doubt on the idea of the 'developmental state', or the developmental state paradigm, as an appropriate and effective framework for examining the role of the state in development and development itself. On the other hand, the chapter demonstrates the strong need to situate state intervention in the context of political and economic relations and interests, rejecting the dichotomy of state and market as analytical starting point.

In other words, there are alternatives to the developmental state approach. The task of understanding development "depends upon rediscovery, and not peremptory dismissal, of the political economy of the past and its careful attachment to an understanding of the restructuring of capital through the movement of the different forms of capital and their association with class, interests and the state" (Fine, Petropoulos and Sato 2005, p. 62). This study is such an attempt, and needs to be extended in the future.

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