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Economic Consequences of Investment Coordination in the Steel Industry

Firms and Industrial Organization in Japan (8)

by

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[Any comment, advice, suggestion, and question is very welcome. But, please not quote.]

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Chapter 9. Economic Consequences of Investment Coordination in the Steel Industry[1]

9-1. Introduction

"Perhaps one-fifth of United States national income originates in industries subject to some direct regulation, and yet economists know very little about how regulation affects the market performance of an industry. The preambles of regulatory statutes hardly provide a reliable guide. Neither does the intensity of the complaints of regulated businessmen." With this statement Richard Caves begins a paper on "Direct Regulation and Market Performance in the American Industry," and argues that "the right questions have not been asked about the effects of regulation, nor the right tests performed" (Caves[1964, p.172]).[2] A big wave of interests in the effectiveness of direct regulation began in 1960s, first came theoretical research and empirical one followed. The 1960s was the period people were the most optimistic on the performance of the government and their role expanded rapidly, but in 1970s optimism gradually disappeared and the age of deregulation began which became a world-wide trend in 1980s.[3]

In Japan regulation and intervention of the government to private business is regarded to spread over a wider area than in US, of which so-

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[1] This chapter is a revised version of Chapter 9 of Miwa[1990], whose original was published in 1977.

[2] One cannot estimate the impact of regulation directly from what the regulator does or insists to be doing. As Stigler and Friedland[1962, p.1] argues, "The innumerable regulatory actions are conclusive proof, not of effective regulation, but of the desire to regulate." See also Caves[1964, pp.180-81].

[3] Coase[1964, p.194] is an example of a skeptical view at an early stage: "What the regulatory commissions are trying to do is difficult to discover; what effect these commissions actually have is, to a large extent, unknown; when it can be discover, it is often absurd." Also see Stigler and Friedland[1962] and Posner[1969]. For an overall review, see Kahn[1988] and Vickers and Yarrow[1988], and Foster[1992] especially for UK.

called "industrial policy" is a representative type.[4] As emphasized in the previous chapter, few information on a concrete "industrial policy" is available. Seldom has the government expressed and explained the objective of a concrete policy. Almost no ex post talks have been on the effectiveness of the policy, either. As the consequence, "an overall picture of the system of industrial policy was seldom clearly presented to the public. Thereby, what is well known among insiders quite often is unknown to the public, including academics" (Komiya[1975, pp.307-8]). The same is true for the impact of the policy. Much exuberant talks have been on industrial policy, however, most of them are based on information strongly biased as mentioned in the previous chapter. What is necessary, putting aside the term "industrial policy," is case studies with careful collection and examination of detailed information for the identification of policy impact.

"Investment coordination" was one of the representative types of industrial policy. It was adopted in many industries around 1960, of which the one in the steel industry was the representative. Here, the term "investment coordination" or "equipment (investment) coordination" is roughly (a trial) to restrain (cooperatively) equipment investment of individual firms, based on the demand forecasts and capacity utilization rates, in order to "avoid excess capacity and the price competition that results from it."[5] This chapter is for a case study. I challenge the task of identifying and evaluating the impact of investment coordination in the steel industry and related policies of the government. Focus centers on the period from just before 1960 to around 1970, which is the heyday both of investment coordination and of Japan's industrial policy.

The task of identifying and evaluating the impact of a policy is seldom easy. The former is indispensable for the latter, and can be

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[4] As shown in the previous chapter, to answer what "industrial policy" is is not easy. Recall the argument there, and note the difference of the substance of "industrial policy" from that as an expression.

[5] Recall the discussion in Section 8-4 that the New-Industrial-Order-Debate was fought on the common understanding of the necessity to avoid excessive competition.

accomplished by finding the deviations between the actual state of affairs and the hypothetical state without the policy actions. The difficulty lies, above all, in how to model such a state. In the case of industrial policy, little is clear on what the government could and actually did, how was the government-business division of role, and what was the net contribution of the policy. It applies strictly to the case of investment coordination in the steel industry. As will be shown below, investment coordination in this industry was basically not a government-led investment cartel but a collective action of major steel firms, which again was a part of coordinating behavior of firms in an oligopolistic market. Thereby, a straight method to investigate, for instance, by drawing and testing a theoretical hypothesis on the existence and the direction of the impact of investment coordination and the net contribution of related policies is both hard (or almost impossible) and inappropriate.[6] Instead, I choose another way to draw a conclusion, by combining the result of two studies on the related points.

I draw a conclusion in this chapter that investment coordination in the steel industry, therefore related policy of the government, was ineffective in the sense that it had no definite impact, at least directly, on investment behavior of individual firms and thereby the total investment of the industry. This conclusion comes from two studies, for each of which are Sections 9-3 and 9-4. The first study in Section 9-3 is on the existence of the power for policy enforcement. When coordination was effective and the net contribution of policy impact was definite, there must be a

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[6] For instance, a trial to build an econometric industry model and to use policy dummy for identification seems to be too brave and rough. Difficulty comes from three reasons: (1) little information is available on what actually occurred on the spot and process on the coordination, and on what was the role of the government and how it actually took part in; (2) it is very hard to model the hypothetical state on investment behavior of individual firms and in total in such oligopolistic industry. partly because of little availability of information, hardly there is a persuasive way to select valid assumptions, for instance, on reaction of rival firms, for a model building; (3) little information is available to test the hypothesis. Thereby, even when an econometric study finds that the coefficient of the policy dummy variable is effective, little information is available for interpretation and it is too brave and rough to jump to a conclusion only with this finding that the policy was effective.

strong power for enforcement (or incentive) to secure the implementation of the agreement on coordination. The second one in Section 9-4 is, looking closely at the coordination process and the result of each year's coordination, to investigate whether we observe such phenomena as should exist when the coordination was effective. By answering these two studies in the negative, I draw the above conclusion.[7] Section 9-2 is an introductory section on the form and basic character of investment coordination in the steel industry, and the coordination process for fiscal year (FY) 1965 is briefly introduced as an example. Section 9-5 is for brief concluding remarks.

Note that this chapter is for a case study, not targeted on the effectiveness of investment coordination in general. Generalization of the conclusion of this chapter is the goal of the next chapter. Note also that I distinguish the impact of coordination from that of the related policies, and that neither had definite impact is the conclusion of this chapter.[8]

9-2. Introduction to Investment Coordination in the Steel Industry

The Form of the Steel Investment Coordination

Investment coordination in the steel industry was basically a jisyu chosei [coordination by themselves; hereafter self-coordination], where individual steel firms coordinated investment plans by themselves. The government and shingikai (policy councils), which are formally a part of the government,

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[7] Often this conclusion is contrasted with that of Imai[1976]. See, for instance, Tsuruta[1988, p.86] and Yamawaki[1988, p.294]. The fifth section of the original version of this chapter, Miwa[1990, pp.263-76], is a critical review of the past literature, mostly the examination of Imai[1976]. I argue there that Imai[1976]'s conclusion, based on wrong fact findings, unclear reasoning, and unpersuasive empirical study, is wrong. In the original, I used this result as the third basis for the conclusion.

[8] The discussion of this chapter is empirical, and I do not go into the normative side of the past controversy. Most of the past literature, Imai[1976] is the representative, focused on whether investment coordination was beneficial for the economy, on the assumption that it strongly affected investment behavior of individual firms. My conclusion that there was no impact implies that such debate is useless.

are thought to have affected the investment decision of individual firms by expressing their opinion on the spot of coordination and by talking directly with individual firms. In 1950s coordination of individual firms' investment plans in the steel industry "was directly guided by MITI with the control of industrial finance (including an issue of the government guarantee for the World Bank loans) and the Foreign Capital Law for technology import licenses."[9]

The beginning of "investment coordination" which we study here was in December 1959, when MITI requested that the industry[10] coordinated on its own [jisyu chosei] the implementation of the long-term capacity plan. Formally, the goal was for the industry to draw up a long-term investment plan for approval by the Industrial Finance Committee of the Industry Rationalization Council. Each firm in principle was to discuss and report by the end of the fiscal year (the end of March) for the coming fiscal year (FY) on the "coordination" of investment, which meant principally the timing of the start of construction of new blast furnaces; often this was not done until the FY had begun. The coordination took the same form until FY 1966.

With the interim report of the Basic Steel Issues Subcommittee of the Heavy Industries Division of the Industrial Structure Council (ISC)[11] in

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[9] 6 April 1974 issue of Weekly Toyo Keizai. See also Imai[1976, pp.140-41], and Section 9-3 below. Note, however, that whether the guide was effective is another question. The law is officially titled the Law Concerning Foreign Capital, and enacted in 1950. Under this law before the liberalization in 1969, coupled with the Foreign Exchange Control Law, "technology import licenses...were allowed preferentially to industries expected to contribute to heavy and chemical industrialization and attain comparative advantage as future export industries. Within the industries, the licenses were granted to the firms with a high promise of developing into foreign exchange earners as future exporters by embodying the imported technology in equipment investment" (Goto and Wakasugi[1988, p.189]).

[10] On this occasion, 8 firms joined the coordination: Yawata Steel (Yawata), Fuji Steel (Fuji), NKK Corporation (Kokan), Kawasaki Steel (Kawatetsu), Sumitomo Metal Industries (Sumikin), Kobe Steel (Kobe), Amagasaki Steel, and Nakayama Steel Works. Hereafter I use abbreviations shown in parentheses.

[11] Formally released as the interim report of the Heavy Industries Division on 2 November 1966. The Industry Rationalization Council was reorganized into the Industrial Structure Council. Hereafter, for simplicity I use ISC for both.

October 1966, the form of the coordination changed. The Steel Committee, newly established within ISC, was to play the basic role: (1) to draw up long-term and annual supply and demand forecasts; (2) to draw up standards for investment coordination; (3) to estimate capacity required in the long run; and (4) to calculate the new capacity on which construction would need to be begun in each year. The allocation of investment among firms was to depend in the first instance on self-coordination among themselves, and in instances in which coordination could not be obtained, decisions were to be made under the gyosei shido [administrative guidance] of MITI, which again was backed by daijin saitei [the decision of Minister of MITI] in case of the necessity.[12] The coordination since FY 1967 took this form.[13]

The Character of the Investment Coordination

In Japan, as in other countries, one of the primary concerns of management of individual steel manufacturers has been to form and maintain an arrangement for coordination among them to stabilize the price of products and the profitability of business. It is one of the representative industries with which an economist begins his talks on coordinating oligopoly and cartels. For instance, Scherer and Ross[1990, pp.235-36] begins the chapter on "Conditions Facilitating Oligopolistic Coordination" with a talk on the Gary dinners in 1907-11, and argue that "until the late 1960s, for instance, American steel producers were fairly successful in abjuring price competition on standard products without resorting to formal collusion." Like in other countries, in Japan the steel industry is oligopolistic and most markets for final steel products of manufacturers with blast furnaces

[12] The Industrial Finance Committee of ISC, for which the coordination was formally requested, was supposed to accept the conclusion of the Steel Committee.

[13] As will be shown in Section 9-3, there was in substance no change in the coordination.

are highly concentrated,[14] with which also fairly high barriers to new entry and homogeneity of products are the conditions facilitating coordination. On the other hand, to maintain stable coordination has been hardly easy: demand for steel products fluctuates tremendously over time, since most of them are derived demands and especially the biggest share of the demand comes from investment for fixed capital formation in the private sector. An unexpected demand fluctuation causes violent price change because of low price elasticity, which limits the coordination but at the same time gives strong incentive for manufacturers to coordinate.[15]

Investment coordination in the steel industry was a part of the coordination. In this rapidly growing industry, manufacturers had to coordinate not only on price and output but also on equipment investment for capacity increase. As shown in Table 9-1 below, the production of steel (in raw steel base) grew from 23.2 million tons in 1960 to 92.4 million tons in 1970, four times in size in 10 years. From the start, they had to talk about how much capacity in total should be added and who should invest.

A successful coordination maintains within it a conflict on the distribution of profit. Under the coordination in Japan's steel industry in 1960s, there was a fierce struggle for market shares.[16] When one could

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[14] For instance, the production share of leading 3 firms in hot-rolled coil and sheet was 50.2 percent in 1963 and 51.8 percent in 1966. Those for cold-rolled sheet were 46.8 percent in 1963 and 44.7 percent in 1966. Those for wide strips were 62.1 percent and 50.3 percent, and for pipes 53.5 percent and 56.3 percent. See FTC[1969].

[15] Also in the prewar Japan, steel manufacturers tried to maintain stable coordination. Because of the import pressure of pig iron, however, the stability of coordination was rather limited than the postwar period. (See Arisawa[1959].) With the advantage of a converter furnace over an open-hearth furnace, the conditions for coordination were established in the second half of 1950s, which made it fairly successful.

[16] The Sumikin (Sumitomo Metal Industries) Incident, which occurred in 1965 as an reaction against an output and price coordination by MITI through administrative guidance [kankoku sohtan], was neither because of a confrontation on whether output coordination was unnecessary nor on the amount of total output for coordination but because on the allocation of shares. As Tachibana[1966, p.19] argues, "Sumikin did not insist on free competition. It is the problem of output share allocation, as they assert, 'as repeatedly insisted, we are not against the raw steel output coordination. We are against its unequal and unfair method'." Also see Zadankai[1966, especially p.28] and a statement of Mr. Hyuga, the president

have a precise forecast for the future demand, the coordination would have been smooth even in such a rapidly growing industry. The result would have been a stable allocation of output and investment shares. In the steel industry, however, the performance of forecast was terrible, and that of an individual firm on which each firm's own investment plan was based differed remarkably. Investment coordination was based on the forecasts of the government and that of Japan Iron and Steel Federation. Although their forecast was revised upward almost every year, their estimate had been lower than those of firms with weak forecast such as Yawata Steel and Fuji Steel which consistently underestimated the actual demand (see Table 9-1 below).[17] Thereby, to reach an agreement on the amount of total investment was hardly easy, and the meeting for coordination was also the one both for a more accurate demand forecast and for negotiation and bargaining to determine the total amount of investment and its allocation.

Unless the sum of the amount of individual firm's investment exceeds the agreed value, the profit of each firm increases with the amount of own investment. When the sum exceeds the agreed value, negotiation for output reduction begins as a part of the coordination. In this case, a firm's profit decreases with the amount of newly built capacity, since it was the custom to allocate the agreed amount in proportion to the actual output of each firm in the past, only with slight modification for new capacities.[18] Each firm has an incentive to discourage both the amount of other firm's investment plan and the total industry investment, which makes own profit safe and increases the market share. Thereby, firms with relatively weak forecast on the growth of future demand declared investment plans larger

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of Sumikin, in 30 Nov. 1976 issue of Ekonomisuto.

[17] The steel manufacturer's views are symbolically revealed in the following statements. "Mr. Inayama, the president of Yawata: Almost always, the forecast of the government has been incorrect (laughing). A pessimist always underestimates the future demand. /Mr. Hyuga, the president of Sumikin: The government's forecast was the worst, and the industry's one was the second. The FY 1966 demand in fact is exceeding 50 million tons, which is 7 million tons larger than the forecast at the beginning of the year" (10 Dec. 1966 issue of Weekly Toyo Keizai.)

[18] Output coordination of raw steel both in 1962-63 and 1965-66 were the examples. See also fn.108 of Miwa[1990, p.270].

than their intention, underestimated the future demand, strongly insisted the strict maintenance of investment coordination, and asserted to allocate the amount of investment in proportion to each firm's past output. On the contrary, firms with relatively strong forecast declared also plans larger than their intention, overestimated the future demand, were reluctant to the investment coordination itself, and strongly opposed to fix the share of investment in proportion to each firm's past output.[19]

As a result, the sum of the amount of investment plans almost always exceeded any strong demand forecast, and each firm's demand forecast varied greatly. The assertion that the coordination was unnecessary always confronted the one for a stricter coordination and all the trials to adopt a long-rule for investment allocation.

The History of the FY 1965 Investment Coordination : An Illustration

In the history of investment coordination, that for FY 1965 was one of the most foundered. At the start of the coordination procedure MITI advised that it would be best in principle to cease all new investment, calling for a one-year moratorium. The majority of firms, like Kawatetsu, however, insisted that one year was too long and should be shortened at least to a half year. Opposition was strong especially by Sumikin, which was in the process of building its 3rd blast furnace of Wakayama Steel Mill (hereafter, Wakayama No.3).[20] It planned to initiate the construction of Wakayama No.4 in April just after the completion of No.3, and did not agree the half-year moratorium proposal. Sumikin strongly confronted other firms, especially Yawawa and Fuji. Coordination lasted long, and reached a

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[19] Not all firms consistency stood on the same side, and often the side was chosen strategically (for instance, a firm constructing a blast furnace tended to stand on the weak forecast side in order to postpone the others' plans, which created a room for its next capacity increase plan.) However, in total, Yawata and Fuji were the representatives of the former, and Sumikin for the latter.

[20] Finally it built five blast furnaces in Wakayama Mill. It is the custom to number them, like Wakayama No.3.

conclusion in July, at least more than three months later than the schedule,[21] when they began an output coordination of raw steel by MITI through administrative guidance because of the market price fall of steel products.[22] The final conclusion was that for the two years of FY 1965 and FY 1966, firms were free to initiate new construction of blast and converter furnaces, but no new rolling mills.[23] As a result, five major steel firms decided the timing of initiation of own blast furnace construction: Wakayama No.4 in August, Mizushima No.1 of Kawatetsu in October, Tokai No.2 of Fuji in January 1966, Sakai No.2 of Yawata in April, and Fukuyama No.2 of Kokan in October.

Let me conclude this section with a comment of one observer of the FY 1967 coordination process, Mr. Tokunaga,[24] which can be viewed as an evaluation of the entire history of investment coordination: "The final outcome of the FY 1967 steel industry investment coordination, the result of roughly a half year's discussion, was that in effect each firm's plans would be approved in full, for both steel making and milling facilities. This was virtually the same outcome as that of the self-coordination which took place in FY 1965 and 1966, so that it can be seen how difficult it was if only those involved tried to coordinate on their own to achieve that which would be seen as desirable from the standpoint of the national economy" (Tokunaga[1967, p.58]).

9-3. The Power for Policy Enforcement

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[21] Note that FY begins in April in Japan.

[22] This conclusion was commented that "Sumikin conceded in the way of output coordination and Yawata in investment coordination" (31 July 1965 issue of Weekly Toyo Keizai). It was in the next quarter of the year, Oct.-Dec., that the Sumikin Incident arose over the way in which output coordination was handled.

[23] This conclusion had an exception clause, and for the consequences of this moratorium agreement see Section 9-4 below.

[24] Mr. Tokunaga, then a managing director of Fuji Steel, was a former vice minister of MITI.

In 1960s the policy for coordinating investment was adopted in many raw material processing industries as steel, petroleum refining, synthetic textiles, paper and pulp; machining and assembly manufacturing were excluded from consideration. As I will mention below, outside of the Petroleum Industry Law, there was no legal basis for this policy; having no such backing, such industrial policy was unofficial. The tool of this policy was administrative guidance, and the central issue is whether this tool was in fact effective in guiding investment and whether there was anything that could secure the effectiveness of government policy.[25] Thereby, this section is for the study of the power for policy enforcement.

As shown above, the coordination of investment directly affects individual firm's profit, and therefore both to reach an agreement and to maintain the coordination effectively were hardly easy. When it was effective in affecting both the total investment of the industry and that of individual firms, there must have been some power (or incentives) to enforce the coordination, that is, something that could secure the effectiveness of the coordination.[26] Limiting attention on the role of the government, I examine here whether it had the power to secure the investment coordination in the steel industry. In the first part, I list up the candidates in general, classify them into types, and then I search the candidates of the source of power in this industry and select four for closer examination, loans from the Japan Development Bank, the allocation of import licenses of bunker coal, the preferential tax treatments, and the decision of Minister of MITI. With closer examination of these four in the second part, I reach a conclusion that the government had almost no power in any form to enforce the coordination. This is one of the two basis for the final conclusion of this chapter.[27]

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[25] See Tsuruta[1988, pp.70-71].

[26] This is a corollary of general discussion on the stability of cartel.

[27] We observe many cases where the Japanese government failed in achieving the policy objective, which supports the validity of the statement in the text. What follows below has the same view. (1) The 1955 "People's Car" concept of MITI in the automobile industry failed in spite

Classification of the Power for Policy Enforcement

The candidates for source of power for policy enforcement in investment coordination can be classified into five groups in form: (1) gyo-ho [industry laws], such as the Petroleum Industry Law (1962), the Machine Industries Law (1956), and the Electronics Industries Law (1957)[28]; (2) ippan-ho [non-industry-specific laws], such as the Foreign Exchange and Foreign Trade Control Law and the Foreign Capital Law; (3)administrative guidance; (4) the guidance of and coordination through the government institutions, such as the Industrial Finance Committee and the Steel Committee of the Industrial Structure Council; (5) the kanmin kyocho kondankai [the Kanmin Coordination Consultative Groups], such as the

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of a wide variety of promotion policies including supplying low-interest rate loans through government financial institutions, granting subsidies, providing special depreciation allowances, exempting necessary equipment from import tariffs, and approving essential foreign technology. One of the important reasons of the failure was that MITI had no power to control new entry and equipment investment which could serve to force the policy (Tsuruta[1977, p.59]). (2) The 1961 "producer group" concept of MITI in the same industry also failed because it had no tools through which it could implement this policy. See Tsuruta[1988, p.84-85] and U.S. Department of Commerce[1972] Chapter 2 of Part 2. (3) Under the Law on Temporary Measures for the Structural Improvement of Specified Textile Industries of 1967 introduced the purchase-and-scrap program to deal with excess capacity, which made use of government finances. Of the FY 1968 target of the program, to scrap 1,000 thousand looms, 620 thousand, rationed to individual firms and forced by the government order, were scrapped, but almost none of the remaining for voluntary scrapping were not. See Kurasawa[1977, p.39] and Ymamazawa[1988, pp.404 and 409-10]. (4) On the contrary, many hold the uniform view that the Foreign Capital Law functioned as the basis for the effectiveness of the investment coordination in the petrochemical industry. See Komiya[1975, p.315], Nakamura et als.[1971, p.57 and p.123], and Tsuruta[1988, pp.70-71]. However, whether it succeeded in achieving the initial policy goal is another question. See Tsuruta[1988, p.73].

Moreover, as mentioned in Chapter 1 as [Misc. III-4], even when the government has the power (for instance, based on a law, like the Petroleum Refining Industry Law) for enforcement, it has not been necessarily used. See Section 10-4 below. As Yoshino[1975, p.176] states, "It is interesting to note that the MITI has been rather hesitant to resort to outright retaliatory actions against recalcitrants. ... even in those cases where the MITI is legally empowered to penalize violators, it takes formal action against them only on rare occasions." Furthermore, as mentioned at the outset of this chapter, the government cannot (and sometimes will not) necessarily achieve the initial goal. See the note 3 above of this chapter.

[28] The latter two are officially, the Law on Temporary Measures for the Promotion of the Machinery Industry and the Law on Temporary Measures for the Promotion of the Electronics Industry. See Komiya[1988, p.16].

Chemical Fibers Consultative Group (set up in Oct. 1964) and the Petrochemical Consultative Group (Dec. 1964).[29]

Cases of industry laws are again classified into three groups by the method of intervention. First, individual examination. Under such laws as the Petroleum Industry Law, the Electric Utilities Law, the Gas Utilities Law, the Banking Law, and the Security and Exchange Law,[30] the government controls new entry and investment by examining an application of each firm. Second, the setting of the standard for new plants, such as the minimum capacity, by law[31]. Third, the administrative guidance, backed by the power of the government endowed by the law.[32]

The control of technology import through licensing under the Foreign Capital Law is the representing example of the second group, ippan-ho. In the fifties and sixties when the dependence on foreign technology was high, capacity investment in industries where investment coordination was adopted quite often needed a license under the Law for technology import. In issuing a license, especially in the case of large scale capacity, the government often attached a condition on the scale of the capacity and the timing of its utilization. Petrochemical industry was the representing

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[29] See Tsuruta[1988, p.71].

[30] See Negishi[1975]. Even in this case the government did not always use the power. In the case of the Petroleum Industry Law, for instance, it is the Petroleum Council that decides formal action against violators (see 6 November 1969 issue of Nihon Keizai Shmbun and Section 10-4 below). Also in the Banking Law, action takes the form of tsutatsu [notification] of the bureau director.

[31] For instance, under the Law on Temporary Measures for Textile Industry Equipment and Related Equipment Law (New Textile Law) enacted in 1964, the capacity registration system was adopted, and machines such as spinning machines could be built up only with registration (Section 3) and a new capacity could be registered only for replacement of an old one (Section 7). In the petrochemical industry, the Kanmin Consultative Group was established in December 1964. It set guidelines for new naphtha facilities in January 1965, and the goal of the technology license approval guidelines became ethylene production of 100,000 tons per year. See Tsuruta[1988, p.72]. But this is not based of an industry law, and not included here.

[32] For instance, under the Law Concerning the Organization of Small and Medium Enterprise Organization (the SME Organization Law, 1957), the Minister of MITI is empowered to issue an order to outsiders of a cooperative of small business and restrict or prohibit the construction of new capacity, when their action impedes the stabilizing activities of the cooperative.

case. However, with the liberalization of technology import,[33] the importance of the regulation of this type gradually decreased in the second half of 1960s.

The last three, from (3) to (5), are the groups in the form of government's intervention. Some of administrative guidance[34] are based on firm legal basis and backed by a power for enforcement like the case of Petroleum Industry Law, but most of them are not. For instance, MITI, as a part of routine work, sets the standard for equipment investment and applies it to each firm in some industries.[35] As shown in the previous chapter, both the membership and the role of policy council differs greatly, depending on cases. The Industrial Finance Committee of the Industrial Structure Council (ISC) is an institutional setting for the investment coordination.[36] However, most industries on the list for discussion for this Committee have other arrangement for their own coordination such as the Petrochemical Consultative Group, and the Committee was supposed to accept their conclusion.[37] Cases in the fifth group, the Kanmin Coordination Consultative Groups, were established after the failure of the Special Industrial Law, based on the idea of the Kanmin System. The

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[33] See Goto and Wakasugi[1988, p.189]. "Until the liberalization of capital transactions, the Foreign Capital Council had approval powers over the importation of foreign technology. This licensing system continued until 1972, when capital transactions in the petrochemical industry were liberalized" (Tsuruta[1988, p.71]). For instance, the production technology of high-density polyethylene, one of the most important petrochemical products, was at the start totally imported and under the control of the Foreign Capital Law. On this point, see Nakamura et als.[1971, p.167].

[34] For a general discussion of administrative guidance, see Section 8-4 above.

[35] The investment coordination based on the discussion within MITI in the ammonia industry in 1968 was an example. See Itoh[1968].

[36] The role of this Committee was both to "coordinate" the scale of the total investment of all industries, fifteen major industries to which MITI was the genkyoku, and to allocate it appropriately among industries.

[37] As shown above, following the 1966 ISC report, the Steel Committee was established within ISC for the steel industry and the Industrial Finance Committee was supposed to accept the conclusion of the Steel Committee.

investment coordination was the main issue of the groups.[38] These three groups needs further examination on whether it has a power for enforcement.[39][40][41]

The Power for Policy Enforcement in the Steel Industry

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[38] On the Kanmin system, see Section 8-3 above. Chemical fibers and petrochemical are famous examples, but the same type of groups, though with other name, were established in other industries such as vinyl chloride pipe.

[39] For instance, we have to examine whether the Foreign Capital Law and loans from the Japan Development Bank could be effective as a leverage for the coordination through the Petrochemical Consultative Group. Also the role of the Petroleum Industry Law to the Petroleum Council. Tsuruta[1988, p.73], however, concludes on the case of the petrochemical industry, "The results obtained through Kanmin System, ...were the exact opposite of the goal of the original policy."

[40] The failed trial to enact the Special Industrial Law with which MITI intended to recover the power to allocate import licenses as a leverage for policy enforcement it had lost by the trade liberalization symbolically illustrates that the effectiveness of the coordination through policy councils without the power was strictly limited. Many groups strongly opposed against the Law and killed it. As Yoshino[1975, p.185] points, "It is extremely interesting to note that even in the drafting stage, both the Ministry of Finance and major city banks vigorously opposed the version of the Bill for the Promotion of Specific Industries proposed by MITI. Though not averse to the basic goals of the bill, the Ministry of Finance objected to it on the grounds that the formula would unduly commit it, and the financial institutions operating under its guidance, to the industrial policy of MITI, resulting in the loss of its independence and freedom." If the coordination through councils could be effective, MITI would have neither tried to establish a new law nor challenged strong opposition. The following opposing view on the Kanmin System plan under the Special Industries Law from the industry symbolically revealed the basic character and the limit of the validity of the coordination through councils: "The government argues that, under the new scheme, they participate in the coordination in a non-authoritative way. I wonder if it actually is possible. Even if they declare it at the start and try to maintain the position, the coordination will end in accepting the government's decision. Thus, it is not substantially different from strict government control, and the result has the same evils as that of government control" (Kotoh[1963, p.116]).

[41] As shown in the following example, some statement on the validity of the effectiveness of administrative guidance is biased. I heard from a manager of a big heavy-duty electric equipment manufacturer that, in 1950s when it planned to enter the home electronics industry, the Bank of Japan opposed the plan and it could not borrow from city banks because of the guidance of the Bank of Japan. But a manager of the other city bank explains differently: "No such guidance did and could exist. The Bank of Japan had enough information to make guidance neither on individual industries nor firms. In my view, the bank used the guidance of the Bank as an excuse to refuse the loan proposal." In fact, it entered the market and made a big success.

Let us examine whether there existed the power to secure the effectiveness of the coordination in the steel industry. Note that the power for the effective enforcement was not necessarily limited to the one with a direct relation to the investment coordination. As Tanaka[1980. p.29] argued, to use a power in possession as a means to obtain revenge for some unrelated matter was the essence of administrative guidance.[42]

There has never been an industry law for the steel industry.[43] No non-industry-specific law seems to have been effective for policy enforcement in the steel investment coordination in 1960s. There are four candidates: low interest rate loans such as of the Japan Development Bank; the allocation of import licenses for bunker coal; preferential tax treatments such as providing special depreciation allowances; and daijin saitei [the decision of Minister of MITI] in case of the necessity, and I will examine them one by one. The first two are of the primary concern.

The first candidate is supply of low interest loans of government affiliated financial institutions such as the Japan Development Bank (JDB). It was not only a subsidy but also supposed to function as a catalyst for private bank loans.[44] My conclusion is that it could not be effective for enforcement. For some time after its inception, JDB concentrated its attention on the electric power and sea transport industry, followed by coal mining, iron and steel, fertilizers, and machinery in that order.

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[42] For instance, in the Idemitsu Incident in 1965 where it refused the administrative guidance of MITI on output quota, it is said that it finally accepted the guidance because of two unrelated reasons. First, it needed a license to borrow US$40 million from Gulf Oil. Second, it needed a permission of MITI to initiate the 2nd naphtha cracking facilities for Idemitsu Petrochemical Industries, its subsidiary. See Kawasaki[1966, p.54]. For the Idemitsu Incident, see Section 10-4 below.

[43] Mr. Shigeo Nagano, the president of Fuji Steel and the most enthusiastic promotor of the steel investment coordination, proposed to enact the Steel Industry Law and explained the reason: "In order to suppress the excessive competition in investment in the steel industry, the present self-coordination method through cartel and administrative guidance is not enough. It needs to be backed up by a law based on the national interest" (30 March 1966 issue of Asahi Shimbun.) This statement also clearly illustrated that the steel investment coordination was not secured the effectiveness by a power for enforcement.

[44] Recall the argument on "signaling effects" or "cowbell effects" in note 42 of Chapter 3.

After the financial tightening in 1954-55, however, it specialized in only three industries - electric power, sea transport, and coal mining - until 1960. The ratio of JDB loans to the steel industry to the total JDB loans decreased since 1957. It was with the implementation of the Second Rationalization Plan in 1956-60 that the production capacity of this industry began to expand explosively. During the First Plan in 1951-55 the only newly built blast furnace was the Chiba plant of Kawatetsu, but 11 new furnaces were completed by the end of FY 1960. Under the First Plan, 12 percent of the total investment in the steel industry was financed with JDB loans, but this ratio declined to 1.5 percent under the Second Plan.[45] The World Bank loans could be another candidate. In this case, JDB functioned as an intermediator. Steel industry was one of the largest users in Japan of the World Bank loans,[46] however, I conclude with two reasons that it could not be effective. First, the amount of World Bank loan to the steel industry was relatively large before 1960, but after that, that is, for the period under study, it was hardly available. Second, even before 1960, the biggest borrowers were Kawatetsu and Sumikin which were relatively uncooperative to the government policy.[47]

The allocation of import licenses for bunker coal is the second candidate.[48] Though import of most items was liberalized in the first half of 1960s, that of coal was not. It was both for the protection of domestic production and for the avoidance of its instantaneous collapse. The allocation of the licenses became famous because of the Sumikin

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[45] Ogura and Yoshino[1988, p.136] and Yamawaki[1988, p.283 and 286]. See also Fukukawa[1964] and Nihon Keizai Chosa-kai[1971, p.146].

[46] See Nihon Keizai Chosa-kai[1971, p.147].

[47] See p.134 and chapter 7 of Tanaka[1975].

[48] To be precise, it was not the control of bunker coal but the allocation of foreign currency for import, whose legal basis was the Section 9 of the Trade Control Ordinance. See Zadankai[1966, p.38]. Throughout the 1950s, the foreign exchange allocation system under the Foreing Exchange and Foreign Trade Control Law (1949) was actively applied as an important means for restricting imports. With the June 1960 announcement of the overall Plan for Trade and Capital Liberalization, however, its use was gradually eliminated, and from October 1960 for pig iron and June 1961 for ordinary semifinished products and rolled steel, application of the allocation system ceased. See Yamawaki[1988, p.289].

Incident in 1965.[49] An MITI official suggested to close off the allocation of import licenses for bunker coal to Sumikin in order to force it to accept the administrative guidance for output coordination. I conclude with two reasons that the effectiveness to use the allocation of the licenses as a leverage for policy enforcement was dubious even for output coordination, and was hardly appreciable for investment coordination. First, the public statement of the vice minister of MITI in the Sumikin Incident to suggest to use as a leverage provoked a strong criticism of the public, arguing that it was an abuse of the authority. In addition, there were severe limitations to using the power.[50] What MITI suggested was to allocate the import license for bunker coal just enough for the guided output quota, not to decrease it to the smaller amount as a penalty.[51] Second, almost every year the investment coordination took so long time, but nobody talked about this leverage on other occasions.[52]

The preferential tax treatments such as providing special depreciation allowances is the third candidate, but my judgement on the effectiveness is in the negative, either. Though such treatments much influenced interindustry allocation of resources, MITI could use them neither in influencing interfirm allocation of investment within an industry nor at

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[49] For this Incident, see note 16 above.

[50] For a general discussion on this point, see Section 10-2 below.

[51] The Incident ended with the acceptance of the output quota by Sumikin, which was explained by Negishi[1977, p.146] as "MITI forced Sumikin to accept the guidance by allocating import licenses according to the output quota." But other types of explanation are also possible. The task of identifying the impact of an intervention is seldom easy, but many argues that the further price decline of steel products was one of the potential reasons. See Zadankai[1966, p.30], Tachibana[1966], Kawasaki[1966], and the statement of Mr. Hyuga, the chairman of Sumikin, in 30 November 1976 issue of Ekonomisuto, pp.78-85.

[52] As shown in the previous section, the steel investment coordination for FY 1965 foundered. It is reported that MITI stuck to their basic procedure: "First, we ask the firms to reach an agreement. In case Sumikin enforces adoption of its will, we judge the plan 'inappropriate' in the Industrial Finance Committee, and request the Federation of Bankers Association of Japan to refuse their loan proposal." See 17 April 1965 issue of Weekly Toyo Keizai. As mentioned above, however, the effectiveness of the guidance based of the coordination through the Committee was dubious. If the allocation of import licenses for bunker coal could be effective in policy enforcement, MITI would have used it.

discretion as a means to obtain revenge for some unrelated matter. Thereby, though from 1951 the steel industry became eligible under the special depreciation allowance system and was one of the industries which benefitted from such treatments, they could not be an effective weapon for policy enforcement.[53] Daijin saitei [the decision of Minister of MITI] in case of necessity is the fourth candidate. As mentioned in Section 9-2, when the Steel Committee was newly established within the Industrial Structure Council in 1967, the Minister's decision was introduced as the final weapon: the allocation of investment among firms was to depend in the first instance on self-coordination among themselves, and in instances in which coordination could not be obtained, decisions were to be made under the administrative guidance of MITI, which again was backed by the Minister's decision. My judgement, however, on its effectiveness is also in the negative with three reasons: first, this procedure was by itself an administrative guidance, not backed by the law; second, it was never used even when the coordination foundered; third, MITI began the review of the role of the Minister's decision in 1969 and abolished in 1970,[54] thus life of this scheme was short.

Thus, there was neither source of government's power nor strong incentives which secured the effectiveness of the process and result of the steel investment coordination.[55] This conclusion is one of the grounds for the conclusion of this chapter that the steel investment coordination did not greatly affect the investment behavior both of individual firms and in total.

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[53] See chapter 3 of Komiya[1975], Ogura and Yoshino[1988, pp.129-32], and Yamawaki[1988, p.285-86].

[54] See 18 November 1970 issue of Nihon Keizai Shimbun and 17 October 1970 issue of Weekly Toyo Keizai.

[55] Mr. Nagano, the president of Fuji, stated in an interview: "After all, self-coordination in fact does not work well.... Even in the past, we, Yawata and Fuji, had no power to force other firms to accept our will. No power to force Sumikin not to build a new capacity. The government had no legal power, either. We are not in an controlled economy" (22 June 1968 issue of Weekly Toyo Keizai).

9-4. The History of the Investment Coordination in the Steel industry

The Role of MITI (Ministry of International Trade and Industry)

"The investment coordination among steel manufacturers with blast furnaces began in 1959. MITI first indicated the amount of investment for new capacity construction, which was based both on long-term supply and demand forecasts and an 'appropriate' capacity utilization rate. The allocation of investment among firms was basically left to self-coordination, but in case it did not work well, administrative guidance to each firm was adopted" (MITI[1969, p.47]). With this statement MITI explains both the form of the steel investment coordination and its role within it. As it must pick up and explain the case where the contribution of MITI to the investment coordination was the greatest,[56] the fact that the above statement is ineffective in explaining our observations implies that the contribution of MITI was not great and the coordination was ineffective. As will be shown below, long-term forecasts always underestimated the demand, and firms did not accept the concept of "appropriate" capacity utilization rate.[57] As shown in Section 9-2, taking the case of the FY 1965 investment coordination, the framework for the coordination set by MITI was not accepted by the firms, either. Neither MITI nor any other participant had a power for effective enforcement, and the coordination that foundered ended in approving all the proposed plans.[58]

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[56] Recall the argument in Section 8-5 on the bias of information available for outsiders from the insiders, including the government. However, Nakamura[1974, p.60], for instance, took the case of the steel investment coordination as an example of an effective administrative guidance that intervened in actions of individual firms, and quoted the explanation of MITI[1969] quoted in the text.

[57] For instance, in the FY 1965 investment coordination, there was a hot debate on the evaluation of the supply capacity of existing and already-approved-for-construction facilities. The debate focused on such detailed points as converter furnaces ratio, pig-iron making capability of blast furnaces, reduction of work of blast furnaces because of repair and suspension, and low level operation of them at the start of operation. See 17 April 1965 issue of Weekly Toyo Keizai.

[58] I use the term "approve," but nobody had the power to refuse some of them.

Table 9-1 shows the forecasts on which the coordinations for the fiscal years during 1960-1966 were based, with the results (all figures are in raw steel base). Table 9-2 shows the performance of the forecast in the third year, the ratio of the result in two years later to the figure for the corresponding year in the forecast, calculated from Table 9-1. For example, in the coordination for FY 1960, the figure for FY 1962 in the forecast, 21.5 million tons, was of the prime concern, and 1.23 in Table 9-2 for FY 1960 is the ratio of the result in FY 1962, 27.3 million tons, to it, which implies that the forecast underestimated the result in more than 20 percent. As shown in Table 9-2, the forecast always underestimated the result during the period.

----- Table 9-1, and Table 9-2 ----

The forecast maintained the tendency of underestimation in the second half of 1960s. Figure 9-1 illustrates the relationship between the forecast and the result for each year from 1965 to 1970. As shown in the Tables and Figure, except for the forecasts for FY 1963 and FY 1966 when Japan was under depression, every year the forecast was revised upward, and still maintained the underestimating tendency. Note that the forecast for the fiscal year two years later was always tremendously smaller than the result. If the coordination could accept the forecast and be effectively observed, Japan would have suffered from serious shortage of steel, which would have been a cause of inflation and an obstacle to its growth.[59] Happily, the coordination was ineffective.[60]

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[59] For the character and role of the long-term forecast, recall the discussion in the second part of Section 9-2.

[60] Note that terms such as "excessive competition" and "excess capacity," though so widely and frequently used, were so ill-defined. The following opposite views on the same state expressed by two presidents of major steel firms were symbolic of the ambiguity: "Mr. Hyuga, the president of Sumikin: We increased production capacities competitively, and I don't think there is excess capacity. In fact, we are importing pig iron. /Interviewer: You mean that there has been no excessive competition in a strict sense in the steel industry? / Mr. Hyuga: In conclusion, I should say, 'yes'" (8 June 1968 issue of Weekly Toyo Keizai); "Mr. Fujimoto, the president of Kawatetsu: I don't know what the public's answer to whether

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The History of Each Year's Investment Coordination

To examine further the influence of the coordination on the investment decision of individual firms and the contribution of the government, I study in detail the history of each year's investment coordination. I focus on the coordination for the initiation of blast furnace construction which has been the basis for the determination of each firm's long-run market share. As mentioned above, the scheme for the coordination changed in FY 1967, accordingly I divide the period into two.

[Coordination before FY 1966]

In the history of steel investment coordination, the two years where it foundered most were FY 1960 and FY 1965. The FY 1960 coordination, the first case, was for investment to be completed by FY 1962. The demand forecast for FY 1962 by MITI was 20.46 million tons (in raw steel base) and that by the Japan Iron and Steel Federation (JISF) was 21.52 million tons. In March 1960 the coordination was settled with the result that three blast furnaces were approved to initiate the construction within the FY and postponed the initiation of Chiba no.4 of Kawatetsu to the next FY.[61] Actual production in 1960, however, sharply exceeded and the long-term forecast was steeply revised upward.[62] As a result, the initiation of construction within FY 1960 was approved in December for three additional blast furnaces, including Kawatetsu. Thus, the FY coordination resulted in approving all the plans for initiating blast furnace construction, possibly

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there has been excessive competition in the steel industry. I do think there has been. Simply, production always exceeded demand. Production capacity is excessive, I believe" (13 July 1968 issue of Weekly Toyo Keizai).

[61] Initially MITI proposed a plan to approve the initiation of construction in FY 1960 of two blast furnaces. See Kawasaki[1968, p.600].

[62] As shown in Table 9-1, the forecast of FY 1960 production at the start was 19.6 million tons, but the result was 23.67 million tons. See Kawasaki[1968, p.601].

with slight impact on the timing of initiation. At the year-end meeting of the List Price Committee, the evaluation by Chairman Inayama of the General Affairs Subcommittee was that "at the beginning of the fiscal year autonomous coordination failed miserably, for while somehow or other the appearance was maintained, the reality was exposed in that manufacturers did not in fact coordinate their efforts in the least."[63]

No coordination was necessary for blast furnace construction for FY 1961, and no plan was proposed for blast furnace construction for FY 1962. When depression began in 1962, some firms expressed a weak forecast of the future demand, and suspended the construction and postponed the initiation behind the schedule.[64] The FY 1963 coordination began in this situation. Sumikin proposed a plan to initiate the construction of Wakayama no.3 in October, but postponed to the next FY through the coordination. The focus of the FY 1964 coordination centered on the construction of rolling mills in Fukuyama plant of Kokan, and proposed construction of five blast furnaces (neither Yawata nor Fuji proposed) were approved without coordination. As shown in Section 9-2, both the coordination for FY 1965 and that for FY 1966 ended with the result that in effect each firm's plans were approved in full.[65]

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[63] On 22 December 1960. See Shin Nippon Seitetsu[1970. p.239]. For the character of this material, see note 22 of the next chapter.

[64] For instance, Yawata postponed the initiation of Sakai no.1 construction and Fuji suspended the construction of Tokai no.1. For further information, see Miwa[1990, p.256] fn.71.

[65] As will be shown soon, the coordination failed in setting a long-term rule for the allocation of blast furnace construction, and their focus always centered on the blast furnaces planned to initiate the construction in the FY under consideration. As a result, the coordination tended to approve the initiation in the order of proposing the plan, which was the reason why firms quite often planned to begin the construction in April. (On this point, see Miwa[1990, p.256] Table 9-3.) Likewise, they stuck to the approval of the initiation within the FY both to restrain rivals' investment and to secure the priority for the construction in the next FY in case of disapproval this year. Moreover, as mentioned in the second part of Section 9-2, the meeting for coordination was also for negotiation and bargaining to determine the total amount of investment and its allocation, and it was rational for each firm to propose a plan with schedule earlier than the true will. Thereby, even when the coordination resulted in postponing the initiation than the proposed schedule for several months on average, it does not necessarily imply that it effectively affected investment. MITI[1969, p.49], however, insists the effectiveness of the coordination: "18 blast furnaces were completed since 1960, of which 8

[Coordination after FY 1967]

In the second half of 1960s, there appeared a de facto rule for the rank order in initiating blast furnace construction, and major steel manufacturers constructed blast furnaces successively at almost an equal pace. In the FY 1971 coordination, a part of de facto rule was formalized.

We observe several trials to make a long-term rule for the allocation of production capacity construction in the history of the steel investment coordination, but they never succeeded in establishing it in a full and rigid form.[66] At the outset of the first coordination for FY 1960, firms talked about a long-term rule for the order of capacity investment. Mr. Inayama, the chairman of the meeting for self-coordination and then-president of Yawata, proposed that investment be coordinated to the basis on the market shares on individual firms over the previous 10 years, against which Kawasaki opposed strongly. They limited the coordination on the blast furnaces planned to initiate the construction in FY 1960, and approved all the plans. The trial for setting a long-term rule revived in the coordination for FY 1965. Again, Yawata proposed it, but Kawatetsu and Sumikin opposed and the trial failed.[67][68]

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delayed the time of completion than the initial plan with the coordination. However, we needed output coordination of raw steel in 1962-63 and 1965-66. If we had not coordinated in investment, we would have suffered from a larger capacity increase and more serious turmoil in steel product markets." Recall that many postponed the construction schedule because not of the coordination but of the depression, for instance, in 1962.

[66] At least at the beginning, many proponents of the investment coordination took for granted to make a long-term rule for capacity allocation among firms. Kojima[1960, p.42], for instance argued, " Needless to say, self-coordination is a control through cartel in German style. Without the intervention of the government, steel manufacturers in the private sector discuss and coordinate by themselves their long-term investment plans, and rationalize the plan for the total capacity expansion." Also, Sogo Seisaku Kenkyu-kai[1963, p.222], evaluating the result of FY 1962 coordination as "a step for real coordination," insisted, "Real coordination is to coordinate long-term plans, that is, to select some from individual firm's plant construction plans or to coordinate the order of their construction, including, as a part, the promotion of joint investment."

[67] As mentioned in Section 9-2, the final result of the FY 1965 coordination was that, for the two years of FY 1965 and FY 1966, firms were free to initiate new construction of blast and converter furnaces, but no new rolling mills. But, the two years' moratorium agreement had an exception clause, on which firms began to propose plans for new capacity construction in FY 1966. Finally, they canceled the agreement in November.

Following the interim report of the Basic Steel Issues Subcommittee of the Industrial Structure Council in October 1966, the coordination for FY 1967 began with a talk to draw up standards for investment coordination. However, there was sharp antagonism between two groups, Yawata-Fuji-Kokan vs Sumikin-Kawatetsu, on the standards. Without reaching an agreement even for FY 1967, they asked non-steel-industry mumbers of the Industrial Structure Coucil, called "neutral members," to mediate the conflict. The final result was to adopt a plan in which each of five major steel manufacturers initiate a blast furnace construction, without an agreement on the standards.[69]

The conflict continued to the FY 1968 coordination. Yawata insisted to initiate the construction of Kimitsu no.2 in April, before the completion of the Kimitsu no.1 blast furnace construction, to which Sumikin responded with advancing the initiation of Kashima no. 1 construction from April 1969 with the completion of Wakayama No. 5 to October 1968. Till that time it was a taboo because of construction cost to initiate the construction of another blast furnace before the completion of the preceding one, so-called "parallel construction," and there had been no such case since the beginning of the investment coordination. The confrontation revived the debate over the allocation rule, and Yawata's plan was regarded as a challenge to the then-established de facto rule. The final result was to confirm the de facto rule not to adopt "parallel construction" of blast furnace, by adopting Kimitsu no.2 for Yawata Steel as the replacement of four blast furnaces, from no.3 to no.6, in Azumada district of Yawata plant and a large scale blast furnace in Kokura plant for Sumikin as the replacement of small Kokura no.2. At the same time, they discussed a rule for construction as a replacement and reached an agreement, called "replacement rule," that construction of a blast furnace as a replacement of old ones

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[68] Note that, because of the character of the coordination mentioned in Section 9-2, whether to adopt a long-term allocation rule was a hot issue. Firms with a weak forecast position such as Yawata and Fuji were enthusiastic in establishing a rule, and vice versa.

[69] Recall the statement of Mr. Tokunaga quoted at the end of Section 9-2.

would be free as an exception of the coordination unless its capacity increase would exceed 20 percent that of the old or 500 square meters. It was the first occasion that the coordination formally adopted an allocation rule.[70]

The FY 1969 coordination adopted not only construction of five blast furnaces in FY 1969 but also that of two for FY 1970.[71] It was the first occasion to make a decision over more than a year.[72] In FY 1969 steel production grew much faster than the forecast, and the demand forecast of 150 - 170 million tons in raw steel base for FY 1975 of the New Economic and Social Development Plan (for 1970-75 published in April 1970) was widely accepted.[73] Thereby, Kawatetsu and Sumikin proposed to initiate in FY 1970 the construction of Mizushima no.4 and Kashima No.2. However, in the spring of 1970 market price of steel products began to deteriorate, and conflicting views appeared on the future steel demand. Nippon Steel, already secured the right to initiate new capacity construction,[74] represented the weak demand forecast side, and Sumikin, planning to initiate Kashima no.2 construction in February 1971 with the completion of Kashima no.1 construction, represented the opposite side. The coordination

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[70] See 27 July 1968 issue of Weekly Toyo Keizai.

[71] The capacity increase with these seven blast furnaces was thought to be enough for the demand forecast of the Industrial Structure Council for FY 1973, 111.6 million tons in raw steel base (120 million tons, the historical peak, was the result).

[72] To be precise, the FY 1965 coordination reached an agreement for the two years of FY 1965 and FY 1966 that firms were free to initiate new construction of blast and converter furnaces. But in this case, they gave up the coordination. Of five for FY 1969 two were for Nippon Steel before merger, and Ohita no. 2 for FY 1970, after the merger in 1970. Till then they coordinated only the time of initiation of construction. Since the FY 1969 coordination, the focus centered on the time of completion, with a condition that the time of initiation should be no more than 18 months before the approved time of completion.

[73] For economic plans in Japan, see Komine[1993].

[74] Ohita no.2. Also Tobata no.4 as a replace.

lasted long, and reached a conclusion in June with the FY 1971 coordination.[75]

The FY 1971 coordination adopted construction of four blast furnaces for FY 1971 and FY 1972, two postponed from FY 1970, Mizushima No.4 and Kashima no.2, and newly adopted two, Kimitsu no.4 for Nippon Steel and Fukuyama no.5 for Kokan. Construction of them, however, were adopted with conditions: at the kindling of a new furnace, a firm had to pause or close an existing one of 2,500 square meters class for a certain period; the furnace in pause (1) would not work before May 1974, (2) would observe the indication of MITI based on its judgement on the demand-supply conditions for June 1974 to March 1975, and (3) would be free to operate after April 1975.[76]

It was only in the FY 1974 coordination that construction plan of a new blast furnace was newly adopted.

[A Brief Summary of the Historical Review]

In the history of the steel investment coordination, none of several trials succeeded in establishing a long-term rule for investment allocation among individual firms. However, in the second half of 1960s the coordination itself took root in the industry, and there appeared a de facto rule for investment allocation, such as not to adopt "parallel construction" of blast furnaces and "replacement rule." Also the coordination became based on the demand-supply forecast of the more distance future. In addition to the history itself of the coordination, the convergence in the long-term demand forecast of individual firms was a cause, too. In 1960s demand forecast always underestimated the result, and firms, particularly those on a weak forecast position, revised upward drastically the estimate. As a result, in the late sixties firms held similar forecast, and each major steel manufacturer constructed a blast furnace at a similar pace, one blast

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[75] The demand forecast for FY 1975 varied widely: 130 million tons in raw steel base by Nippon steel; 165 million tons by Sumikin; 145-155 million tons by MITI. 19 June 1971 issue of Weekly Toyo Keizai.

[76] Weekly Toyo Keizai, 19 June 1971.

furnace in two years. Since the investment coordiantion was a part of the overall coordination of the industry, it was closely related to the output coordination. This was symbolically shown in the result of the FY 1971 coordination, which conditioned a new capacity construction with an existing capacity to pause operation.[77]

The investment coordiantion might have an impact in the first half of 1960s to reduce, though slightly, the change in market shares among steel manufacturers by delaying the capacity construction of realtively agressive firms such as Kawatetsu and Sumikin. This applies more clearly to the late sixties and the beginning of the seventies. This impact, however, should not be so much emphasized. The plans were not always realized as adopted by the coordination, which cancelled a part of the impact. For instance, though all other firms than Nippon Steel completed in FY 1973 the blast furnace adopted in the FY 1971 coordiantion, Nippon Steel postponed until FY 1973 the initiation of not only Kimitsu No.4 adopted in the FY 1971 coordination but also Ohita no.2 adopted in FY 1969.[78] After all, even when the coordination foundered, it ended with a result to adopt each firm's plans in full, or to adopt additional construction plan for firms on the weak forecast side.[79] Never firms on the strong forecast side gave up their plans. Thereby, neither each firm's capacity investment nor that of the industry in total was seriously affected by the coordination.

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[77] Note that Yawata and Fuji merged into Nippon Steel in March 1970. As shown below in Table 9-3, it was a merger between the two largest firms. The market share of the new firm was over 30 percent in semifinished products and the principal ordinary steel products, which became relatively large compared to those of rivals, and thereby the new firm became a dominant firm. I believe this merger functioned as a strong support for the overall coordination of the industry and was by itself a part of the coordination. See chapter 12 of Miwa[1990] for my view of the merger. The relation of the steel investment coordination to the ourput coordiantion was symbolically expressed in the statement of Mr. Fujimoto, the president of Kawatetsu: "if each firm's plans for capacity construction would be approved, the output coordination would have been hard to maintain and each firm's profitability disastrous, which we feared and hated" (13 July 1968 issue of Weelky Toyo Keizai).

[78] The completion of Ohita No.2 was the autumn in 1976, later than that of Kashima no.3 of Sumikin adopted in the FY 1974 coordination.

[79] Recall the above mentioned result of the FY 1971 coordination.

As shown above, the steel investment coordination in the early sixties adopted each firm's plans in full. In the late sixties, each major firm constructed at a constant pace of one blast furnace in every two years, which means that it was almost always constructing a new blast furnace. This fact, with their voluntary agreement not to adopt a "parallel construction" plan, implies that each firm constructed new blast furnaces as it desired and at a pace as fast as possible, which, however, reduced the difference in market shares among major firms. Thereby, as shown in Table 9-3, each firm's relative market shares among major steel manufacturers changed rather drastically in the early sixties, and were stable since the end of the sixties onward, except for that of Nippon Steel.[80]

----- Table 9-3. ----

Summary of Study of the History in Section 9-4.

Study of the history of the steel investment coordination can be summarized as six points, with which I reached a conclusion that the steel investment coordination, therefore the related policy of the government, was ineffective in the sense that it had no definite impact on investment behavior of individual firms and therby the total investment of the industry. (1) MITI did not take part in the steel investment coordination in such a way as could affect the behavior of individual firms, and actually had no definite impact. The role of MITI, if any, was to support the coordination to continue and reach an agreement no matter what it was.[81] (2) No trial for setting a long-term rule for investment allocation succeeded. With time

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[80] Note that the steel production in FY 1967 was 2.75 times larger than that in FY 1960, which implies most of the former was produced with capacities constructed under the investment coordination.

[81] In my view, the largest impact of MITI on the steel investment coordination was to make harder, perhaps only slightly, an application of the Antimonoply to the coordination by providing the result of the coordination with a form of administrative guidance and by concluding with FTC the understanding in November 1966 on "The Application of the Antimonopoly Law to the Use of Policies for the Reform of Structure of Industry." For this understanding, see, for instance, Imai[1976, pp.141-42].

there appeared a de facto rule for the rank order in initiating blast furnace construction, however, it did not affect seriously each firm's investment behavior. (3) Thus, the meeting for investment coordination was always the one for negotiation and bargaining to determine the total amount of investment and its allocation. (4) The steel investment coordination might have an impact to reduce the change in market shares of steel manufacturers. However, it must be slight, if any, and should not be so much emphasized. (5) The investment coordination had no definite impact on the total investment of the industry. (6) The investment coordination was a part of the overall coordination of the industry, and closely related to the oputput coordination. Thereby, such facts as even the most foundered coordination never broke down and there appeared a de facto long-term rule for investment allocation must have supported the maintenance of the overall coordination.[82]

9-5. Concluding Remarks

The investment coordination in the steel industry in 1960s had no definite impact on the individual firm's investment bahavior and on the total investment of the industry. Thereby, the related policies of the government had no impact, either.[83]

Though we must be careful not to generalize the conclusion too much, three points should be noted. First, since the steel investment coordination was a highlight among those in many industries, this conclusion suggests that the investment coordination in any other industry had no definite impact, either, unless some industry specific factor played a definite role. Second, since 1960s was the heyday of Japan's industrial

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[82] The first 5 points are related to direct impact of the coordination. The sixth point suggests an indirect impact. By affecting the overall coordination which had an impact of each firm's behavior including investment, the investment coordination might have an impact on each firm's investment. However, examination of such an indirect impact is out of range of this chapter. For such an indirect impact, see Section 10-5.

[83] Recall note 7 above.

policy, particularly in the form of coordiantion within industry, this conclusion suggests that the same type of policies in 1970s and 1980s could not have any definite impact. Third, these two points also applies to the impact of policies by themselves of the government realted to the investment coordination.

The next Chapter 10 is for a study of "Coordination Within Industry" for generalization.

Table 9-1 Steel Production in the Forecasts for Each Year's Coordination and the Results: FY 1961 - FY 1966, in raw steel base (unit: in million tons)

	60	61	62	63	64	65	66	67	68	69	70
Forecasts											
1960	20.0		21.5			26.0					38.0
			(20.5*)								
61		26.5	29.5	32.5	35.3	38.0					48.0
62			31.4		36.5	39.0					
63				29.0		36.4		43.1			
64					36.0	38.5		44.5			
65						43.0	45.4	47.7	50.0		
66							43.6		51.9		60.0
Result	23.2	29.4	27.3	34.1	40.5	41.3	51.9	63.8	69.0	87.6	92.4

*: A figure in MITI's plan.
Source: Adopted from Kawsaki [1968, p. 600 and 604], added figures for result in 1967-70.

Table 9-2 Ratio of the Result of Steel Production to the Forecast: Performance in the Third Year

FY of coordination	1960	61	62	63	64	65	66
Ratio	1.27 (1.33*)	1.05	1.11	1.14	1.26	1.34	1.33

*: A figure denominated by MITI's forecast.

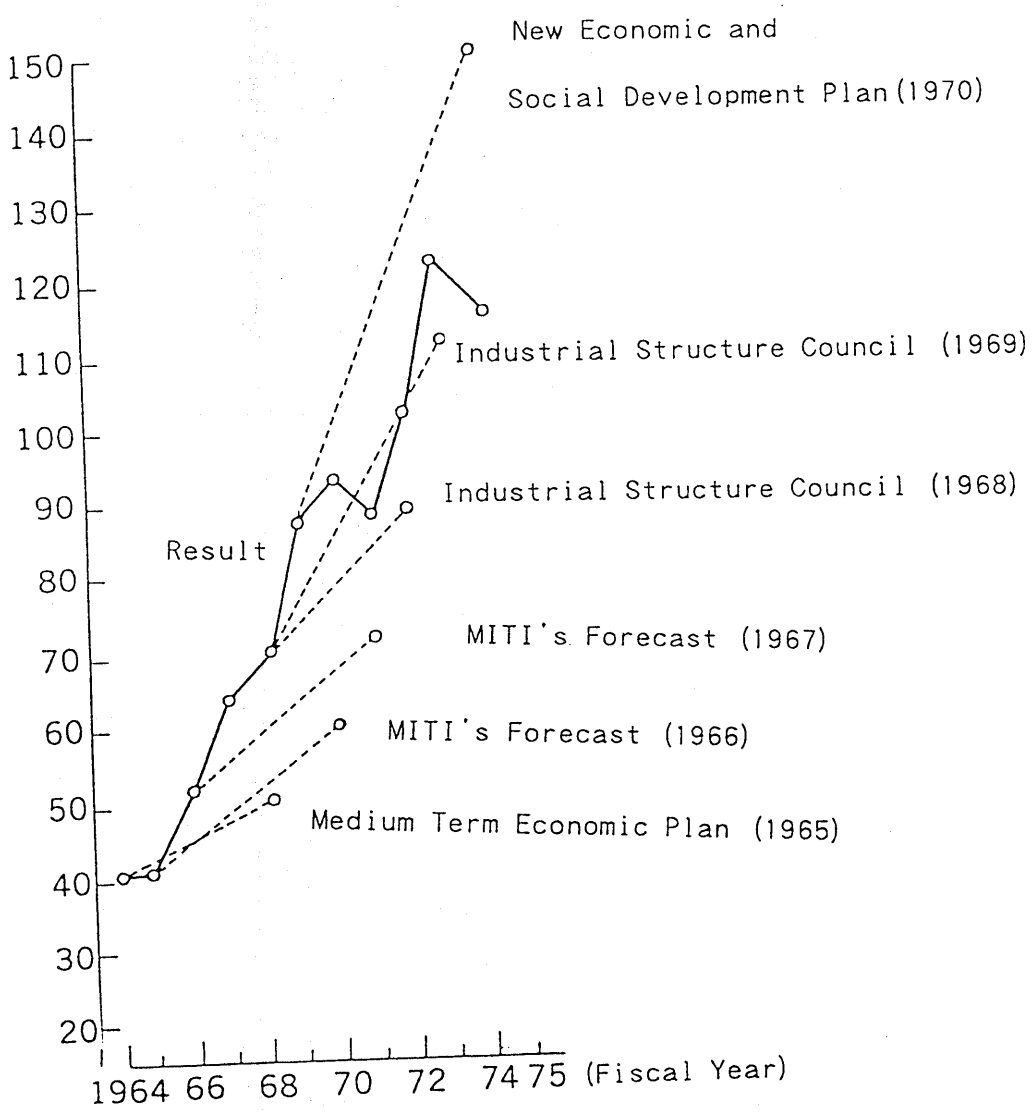
Table 9-3 Each Firm's Relative Market Share Among Major Steel Producers: in raw steel base (unit; percent)

	1960	1961	1962	1963	1964	1965	1966	1967	1970	1972	1974	1976	1978	1980	1982
Yawata (*)	32.3	30.1	29.1	27.5	26.3	25.8	25.5	24.6	45.4	44.1	40.9	41.1	41.3	41.3	41.4
Fuji (*)	22.8	23.2	23.0	23.0	22.6	23.8	23.3	22.5							
Kokan	14.5	15.6	15.2	14.1	15.0	14.1	14.9	15.1	17.5	17.6	17.7	17.6	17.5	17.5	17.5
Kawatetsu	12.8	13.1	12.3	13.7	14.6	14.4	14.6	15.2	14.9	15.5	16.4	16.0	15.9	15.9	15.9
Sumikin	8.3	8.9	10.9	12.5	13.4	13.8	14.4	15.4	15.2	15.0	16.1	16.0	15.9	15.9	15.8
Kobe	9.2	9.2	9.4	9.2	8.1	8.1	7.5	7.2	7.0	7.9	8.9	9.4	9.3	9.3	9.4
Major Firms' Share to the Industry Total (**)	69.7	71.0	70.9	70.3	72.6	73.0	73.8	75.5	78.6	77.8	79.1	77.2	73.7	71.5	67.9

Note: (*) Yawata and Fuji merged to Nippon Steel in March 1970, and the figures since 1970 are those for Nippon Steel.
(**) Sum of six majors till 1967, and five majors afterwards.

Source: Figures for 1960-67 are adopted from Ueno and Mutoh [1968, p. 136], Table 4, and others from FTC's Report on "The Reality of Four Major Oligopolistic Industries," October, 1984.

Figure 9-1 Forecasts and Results of Steel Production: FY 1965 - FY 1970, in raw steel base (unit: in million tons)



Source: Adopted from the figure in 21 November 1970 issue of Weekly Toyo Keizai, p. 67.