Chapter Title: The Foreign Exchange Allocation Policy in Postwar Japan: Its Institutional Framework and Function

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Tetsuji Okazaki and Takafumi Korenaga

12.1 Introduction

The Japanese foreign trade regime was substantially different from its present form until the beginning of 1960s. Before 1949 foreign trade was controlled directly by the government, and moreover, there were multiple exchange rates. Although direct control was abolished and a single exchange rate was set as a part of the wide range of policies for transition to a market economy in 1949, a new system to control foreign trade—the foreign exchange allocation system—was introduced. The Japanese government could execute a de facto import quota through this system. This regime continued to operate until trade liberalization progressed under pressure from overseas in the early 1960s.

It is widely admitted that indirect trade control through the foreign exchange allocation system was used as a tool of sectoral industrial policy as well as of macroeconomic policy to maintain the balance of payments. For instance, the official history of the Ministry of International Trade and Industry (MITI et al. 1994) states the following: "It [import control] aimed at effective use of limited foreign currency to promote economic development, and it allowed necessary import goods to be secured, while preventing a rush of imports. Through foreign exchange allocation and approval of imports, MITI could monitor the industries under its jurisdiction and carry out the administrative guidance necessary for their development."

Kosai (1989) also considered foreign exchange control a sectoral policy measure first of all. The foreign exchange allocation system generated rents by creating differences between domestic and foreign prices, and it exerted

substantial economic and political influence. On one hand, rents generated by government intervention have been criticized on the grounds that they cause rent-seeking activities by the private sector, but on the other hand, it has recently been pointed out that rents can be an effective industrial policy measure if appropriate institutional arrangements are provided (Aoki, Murdock, and Okuno-Fujiwara 1996). Taking into account that not a few developing and transforming countries have not liberalized their foreign trade, and that they face serious rent-seeking problems, we can say that the Japanese experience of foreign exchange control has great relevance.

However, little research has investigated the function of foreign exchange allocation from an economic standpoint, although official histories of MITI (MITI et al. 1990) and the Ministry of Finance (MOF 1976) and Inuta (1981), by the author of MOF (1976), describe the details of the institution. Kosai (1989) only mentions import restrictions on dynamos and passenger cars. Both Fukao, Omi, and Eto (1993) and Nakakita (1993) devote only one page to a description of the foreign exchange allocation system. Recently, Takagi (1996) explained the foreign exchange allocation system in detail and also analyzed its function from a macroeconomic standpoint.

Therefore, in this paper we will analyze the institution and the function of foreign exchange allocation in 1950s Japan, focusing on the sectoral and microeconomic aspects. In section 12.2 the foreign exchange allocation system will be explained briefly. In section 12.3 we will analyze its operation and function concerning macroeconomic aspects and allocation by good. In section 12.4 the criteria for allocating foreign exchange to firms will be made clear. In section 12.5 we will analyze the system's operation and function concerning allocation by firm using firm-level data. Section 12.6 concludes the paper.

12.2   Foreign Exchange Budget and Foreign Exchange Allocation System

The Foreign Exchange and Foreign Trade Administration Law (Gaikoku Kawase and Gaikoku Boeki Kanri Ho), enacted in December 1949, provided a new institutional framework for foreign trade, taking the place of direct government control. Article 1 of the law prescribed that its purpose was to develop normal foreign trade and administer foreign exchange and foreign trade, in order to secure balance of payments, stabilization of the currency value, and effective utilization of foreign currency (MOF 1976, 616). It shows that such a microeconomic item as the effective use the foreign currency was originally included in the purposes of the law.

For these purposes the law prescribed the concentration of foreign exchange and the foreign exchange budget system (*gaika yosan seido*). All foreign currency, precious metals, claimable assets in foreign currency, and foreign currency securities were to be concentrated in the hands of the government, Bank of Japan, or foreign exchange banks. The government would make a foreign

exchange budget to efficiently use the concentrated foreign currency (Bank of Tokyo 1960, 2).

The foreign exchange budget system is explained in Bank of Tokyo (1960), Shimada (1960), MOF (1976), Inuta (1981), MITI et al. (1990), and Takagi (1996). We will draw our summary mainly from the outline of the system in Bank of Tokyo (1960). The foreign exchange budget was made starting in January 1950, at first quarterly and later every half-year. It consisted basically of three parts: (1) a summary table, (2) a foreign exchange budget for import goods, and (3) a foreign exchange budget for services, though details of the forms differed each term.[1] In part 1, summary tables of parts 2 and 3, foreign exchange rates, and a projection of the balance of payments were shown.

Part 2 was the core of the foreign exchange budget. It consisted of the budget for foreign exchange allocation system (*gaika wariate sei*) goods (FA goods), the budget for automatic approval system (*jido shonin sei*) goods (AA goods), and the reserve budget.[2] The division between FA goods and AA goods was crucial. The budget for AA goods was allocated in a lump to the AA group of goods, and the import of AA goods was automatically approved as long as the budgeted quantity of AA goods had not been reached. In other words, for AA goods, import was de facto free within the total limit. Accordingly, the liberalization rate of foreign trade was usually defined as the ratio of the AA goods budget to the total budget.

On the other hand, in order to import FA goods, one would apply to the minister of international trade and industry at each dealing ex ante and would receive an allotment of foreign exchange. Moreover, the foreign exchange budget for FA goods was allocated not in a lump but rather to each good, and the minister of international trade and industry would allocate foreign exchange to importers within the limit determined for each FA good. Therefore, for FA goods, the quantity of imports was basically determined by the foreign exchange budget. This means that the government had wide-ranging powers to restrict the quantity of imports.

The foreign exchange budget was decided by the Cabinet Ministers Council (Kakuryo Shingikai), which consisted of the prime minister, the ministers of foreign affairs, finance, agriculture and forestry, international trade and industry, and transportation, and the secretary of the Economic Planning Agency.[3] The draft of the budget for imports and services incidental to imports was made by MITI, and the budget for other services was made by MOF).[4]

In making the budget for imports, MITI used the estimated amount of for-

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1. A table of budgeted services receipts was also included before the first half of 1953 (MOF 1976, 278–79).

2. AA goods did not exist at first. There was instead a first come, first served system (*senchaku-jun sei*; MITI et al. 1990, 121).

3. The president of the Bank of Japan participated in the council as an advisory member.

4. The Trade Bureau of the Economic Stabilization Board (Keizai Antei Honbu) made the whole foreign exchange budget until the Economic Stabilization Board was abolished in July 1951 (MITI 1952).

eign exchange that could be spent in each term. That amount was calculated on the basis of projected exports, special procurements by the U.S. Army, balance-of-services trade, and targeted balance of payments. MITI allocated this amount among AA goods and each FA good. The import procedure after the foreign exchange budget was decided continued with (1) import proclamation (*yunyu kohyo*) by MITI, (2) import announcement (*yunyu happyo*) by MITI, (3) foreign exchange allocation by MITI, (4) import approval (*yunyu shonin*) by foreign exchange banks, (5) letter of credit establishment by foreign exchange banks, and (6) import bill settlement by foreign exchange banks. Steps 2 and 3 relate only to FA goods.

By import proclamation, lists of AA and FA goods, currency for settlement, and areas where certain goods were to be shipped were announced. Because import approval by foreign exchange banks was done directly upon import proclamation about AA goods, import proclamation was especially important for such goods.[5] On the other hand, for FA goods, import announcements were done separately for each good based on the import proclamation. The import announcement specified the place where applications for foreign exchange allotment should be handed, time limit for application, applicant's qualifications, the foreign exchange allocation criterion (*gaika shikin wariate kijun*), and so forth. The foreign exchange allocation criteria provided the rules by which foreign exchange was allocated to individual firms, as will be discussed in section 12.4.

According to the import announcement, each firm that wanted to import FA goods handed an application for foreign exchange allocation (*gaika shikin wariate shinseisho*) to MITI. MITI decided on the allocation of foreign exchange to each applicant by reference to the budget and to the foreign exchange allocation criteria. Then, if the minister of international trade and industry decided to allocate the foreign exchange, a foreign exchange allocation certificate (*gaika shikin wariate shomeisho*), valid for four months, was delivered to the applicant (Shimada 1960, 170).

12.3   Movement of the Foreign Exchange Budget and Its Allocation by Good

12.3.1   The Macroeconomy and the Foreign Exchange Budget

The exchange rate of the yen and the trend of the balance of payments for the 1950s and 1960s are summarized in figure 12.1. Japan, which had shifted from a regime of plural exchange rates to a regime of single exchange rate in April 1949, maintained a fixed exchange rate of 360 yen per dollar until August 1971. Change in the real exchange rate measured by export goods should be noted, however. The real exchange rate appreciated rapidly in the early 1950s,

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5. The import announcement was abolished for FA goods in the latter half of 1959.
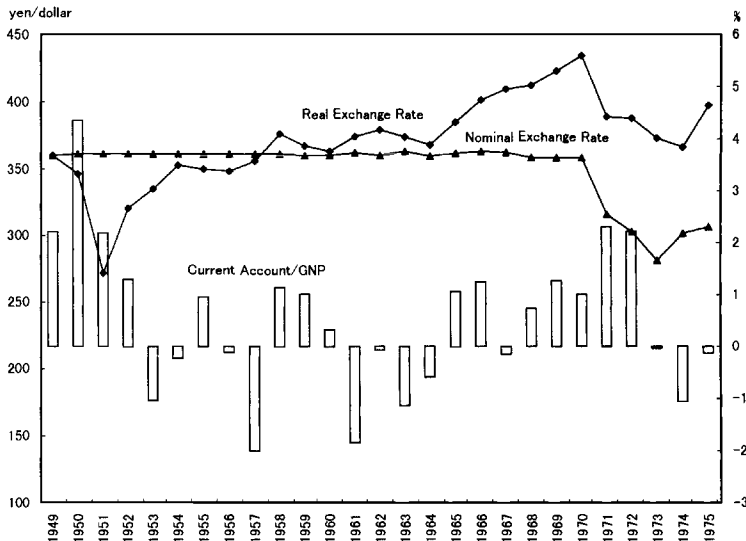
Fig. 12.1   Exchange rates and balance of payments

and it remained above 360 yen per dollar until the end of 1950s. After staying
a little lower than 360 yen per dollar for several years, it depreciated rapidly in
the latter half of the 1960s. While even in 1949 the yen was said to be overval-
ued, inflation during the Korean War increased the degree of overvaluation.
Until the first half of the 1960s the Japanese economy frequently faced large
current account deficits (fig. 12.1), while there remained large latent unem-
ployment. These facts suggest that the rate of 360 yen per dollar was higher
than the equilibrium level until the first half of the 1960s. In fact, according to
(admittedly fragmentary) data on the black market rate of the yen in the 1950s
surveyed by the Bank of Japan, the black market rate was over 400 yen per
dollar (fig. 12.2). Overvaluation of the yen formed the macroeconomic back-
ground for the adoption of the foreign exchange budget system.

The first column of table 12.1 reports the total foreign exchange budget. The
foreign exchange budget tightened from 1954 to the first half of 1955 and then
expanded rapidly from the latter half of 1955. It tightened again from the first
half of 1957 to 1958, and then a long expansion started in 1959. The back-
ground of these changes in the foreign exchange budget scale was as follows.

The purpose of tightening in 1954 was to cope with the current account
deficit of 1953 (fig. 12.1). In the foreign exchange budget of 1954, the budget
for "nonessential" goods was cut, and a policy of substituting domestic raw
materials for imported raw materials was pursued, while the budget for raw
materials used in the processing trade and for raw materials whose prices were
rising rapidly was expanded (Bank of Tokyo 1960, 215–17). The current ac-
count recovered in 1954, and a surplus was expected to continue for the time
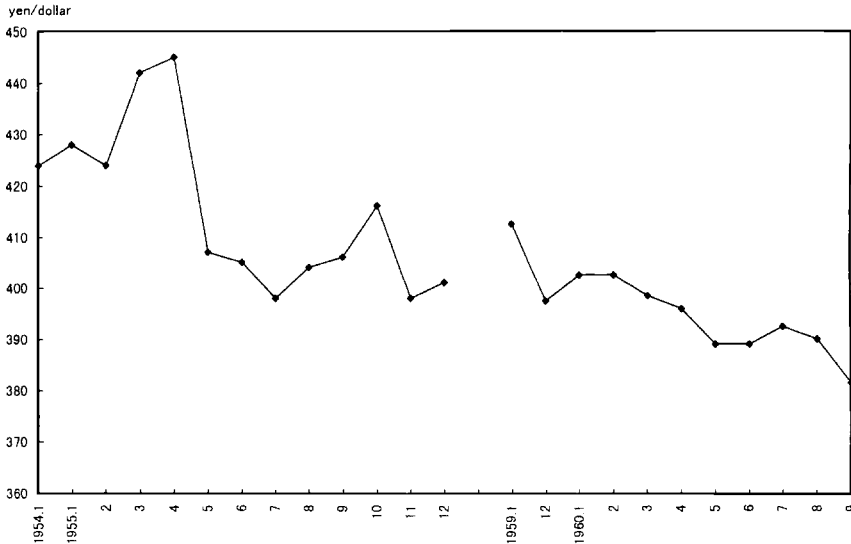
yen/dollar

Fig. 12.2   Black market rate of yen
Source: Bank of Japan, Bureau of Foreign Exchange, *Kawase Boeki Geppo* (Monthly bulletin of foreign exchange and trade; Tokyo, various issues).

being. Taking this situation into account, from 1955 to 1956 the government pursued a policy of large foreign exchange budgets in order to support the expansion of exports and production (Bank of Tokyo 1960, 218–23).

However, in early 1957 the balance of payments turned to deficit, and a confrontation over the policy of making the foreign exchange budget took place among the relevant authorities. MITI insisted that large foreign exchange budgets should be continued, coupled with a tightening of fiscal policy, on the grounds that contraction of the budget would cause speculative advances in prices and a decline in exports. On the other hand, MOF and the Bank of Japan stressed the necessity of reducing imports directly by reducing the foreign exchange budget as well as by tightening fiscal policy, because the balance-of-payments deficit was quite serious. Consequently, the foreign exchange budget for imports for the first half of 1957 was set at a level slightly below that of the previous term (Bank of Japan 1957.I-a, 1–4).

In making the foreign exchange budget for the latter half of 1957, MITI and MOF agreed that under the circumstances of a large balance-of-payments deficit, the scale of the budget should be reduced as long as possible. Although there remained disagreement between the two ministries about projected receipts, the foreign exchange budget for the latter half of 1957 was substantially smaller than that of the previous term (Bank of Japan 1957.II-a, 1–5).

The balance of payments turned to surplus in the latter half of 1957, which provided the conditions needed for expanding the foreign exchange budget.

Table 12.1 **Outline of the Foreign Exchange Budget (millions of dollars)**

Year	Total	FA	AA	Reserve	AA/Total (%)
1952	1,242	763	348	131	27.99
	1,501	988	494	19	32.89
1953	1,237	799	300	138	24.26
	1,546	1,250	274	22	17.75
1954	1,100	931	141	27	12.82
	1,090	913	175	1	16.06
1955	1,160	970	190	0	16.38
	1,454	1,218	236	0	16.23
1956	1,765	1,413	352	0	19.94
	2,483	1,969	513	0	20.66
1957	2,236	1,589	497	150	22.23
	1,652	1,242	330	80	19.98
1958	1,628	1,148	330	150	20.27
	1,757	1,161	470	125	26.75
1959	1,941	1,217	630	93	32.46
	2,328	1,581	700	47	30.07
1960	2,624	1,459	1,000	165	38.11
	2,800	1,480	1,150	170	41.07
1961	3,272	1,422	1,850	0	56.54
	3,526	1,526	1,800	200	51.05
1962	3,114	1,264	1,650	200	52.99
	3,154	774	2,380	0	75.46
1963	3,465	796	2,575	94	74.31
	3,815	705	2,860	250	74.97

Sources: Bank of Japan, *Gaikokukawase Binran* (Handbook of foreign exchange; Tokyo, n.d.); Bank of Japan (various dates-a).

However, this time MITI requested the compression of the budget in order to adjust demand and supply in each industry. Although MOF and the Economic Planning Agency insisted that from the standpoint of the long-term economic plan, the foreign exchange budget should be expanded, the foreign exchange budget for the first half of 1958 was even smaller than that for the previous term.[6] As to the foreign exchange budget of the latter half of 1958, the industrial societies requested that the scale be reduced, and it was not expanded substantially (Bank of Japan 1958.I-a, 1–4). After the latter half of 1958, as the Japanese economy entered a large boom with a surplus in the balance of payments, the foreign exchange budget increased until 1961 (Bank of Tokyo 1960, 229–31).

Next, let us consider the allocation of the foreign exchange budget between AA goods and FA goods (table 12.1). The ratio of the AA budget to the total

6. MITI's Bureau of International Trade assumed that it was necessary to expand the foreign exchange budget, projecting a business recovery, but the bureaus in charge of the industries insisted on reducing the foreign exchange budget in order to stimulate recovery (Bank of Japan 1958.I-a, 1–4).

budget (import liberalization ratio) fell below 20 percent in 1953. After a grad-
ual recovery from 1956, it rose rapidly in the early 1960s. From 1953, under
the tightening of the total foreign exchange budget, several goods that had been
classified as AA goods, such as raw cotton, iron ore, and crude sugar, were
converted to FA goods (Inuta 1981, 181). In making the foreign exchange bud-
get for the first half of 1957, the government adopted a policy of increasing the
number of AA goods and decided in future not to convert AA goods to FA
goods in response to balance-of-payments situations (Bank of Tokyo 1960,
221). Then the recovery of convertibility of European currency at the end of
1958 spurred trade liberalization in Japan. In making the foreign exchange
budget for the first half of 1959, the Japanese government decided to promote
trade liberalization, and in June 1960 the cabinet agreed on the Liberalization
Plan of Trade and Foreign Exchange (Boeki Kawase Jiyuka Keikaku Taiko),
which announced that the liberalization ratio would be raised to 80 percent in
three years. The rapid increase in the liberalization ratio in the early 1960s was
based on this plan.[7]

12.3.2 Allocation of the Foreign Exchange Budget by Good and Generation of Rents

The foreign exchange budget for FA goods was allocated to each good as
explained in section 12.2. Table 12.2 shows the composition of the foreign
exchange budget by large item. Foods and textiles had the largest weights, but
their weights were decreasing. On the other hand, the weights of petroleum,
machinery, and raw materials of steel increased. It can be said that changes in
the composition of the foreign exchange budget basically reflected changes in
the industrial structure. However, examining the changes in detail, we find that
there existed various policy factors. Hereafter, we are going to examine alloca-
tion of the FA budget by good from the latter half of 1956 to the first half of
1958 (detailed information on the making of the foreign exchange budget is
available in unpublished materials from the Bank of Japan). Raw cotton, wool,
steel and its raw materials, petroleum, and machinery, which were items with
comparatively large budget allocations, will be considered (table 12.3).

Raw Cotton

Allocation of the foreign exchange budget to raw cotton was based on
MITI's demand and supply plan for cotton products. Necessary production of
cotton products was calculated from estimated demand for cotton products and
estimated changes in stocks. And the level of production determined the neces-
sary level of raw cotton imports, which in turn, together with the estimated
import price of raw cotton, determined the necessary foreign exchange budget
(Bank of Japan 1956.II-b, 113–20). The budget for the latter half of 1956

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7. On the process of trade liberalization, see Takagi (1996, 20–30).

Table 12.2 **Allocation of FA Budget of Foreign Exchange by Good I**
(percent of total FA budget)

Good	1953	1954	1955	1956	1957	1958	1959
Foods	31.32	29.01	25.96	16.15	18.35	19.47	14.44
Government monopoly goods	0.98	1.03	1.12	0.67	0.49	0.97	0.87
Lumber	0.00	1.72	0.89	0.79	0.46	0.89	1.77
Materials of daily necessaries	0.57	1.70	2.22	1.57	1.49	1.42	1.49
Textiles	32.72	31.59	29.26	23.81	26.76	27.65	25.40
Materials of fertilizer	1.92	2.23	2.22	1.93	1.34	1.37	1.23
Coal	2.47	2.71	2.93	3.34	4.65	3.47	3.42
Materials of steel	2.16	3.77	8.21	15.88	12.61	4.28	7.43
Nonferrous metals	0.46	1.60	1.71	5.13	3.31	2.29	3.34
Petroleum	5.73	7.44	7.24	6.66	7.26	11.77	10.96
Chemicals	0.55	0.38	0.33	0.44	0.72	0.87	0.98
Medicines	0.60	0.37	0.28	0.17	0.24	0.27	0.27
Machinery	10.45	5.67	7.87	15.45	12.01	11.82	15.91
Other	10.06	10.79	9.77	8.01	10.32	13.46	12.49

Source: Bank of Tokyo (1960).

Table 12.3 **Allocation of FA Budget of Foreign Exchange by Good II**
(thousands of dollars)

Good	1956 Oct–Mar	1957 Apr–Sept	1957 Oct–Mar	1958 Apr–Sept
Staple foods	186,025	122,034	177,244	142,513
Soybean	48,105	48,000	33,600	40,425
Sugar	65,057	89,706	47,486	54,000
Salt	6,294	5,042	4,942	5,100
Lumber	12,360	6,942	6,000	10,662
Beef tallow	14,330	13,338	10,350	11,000
Hides	8,250	11,150	12,050	11,382
Raw cotton	198,122	216,275	215,300	204,639
Wool	121,000	124,800	141,500	73,500
Pulp for chemical fiber	10,626	14,370	7,010	7,752
Phosphorus ore	10,538	9,123	8,605	6,868
Potash	30,507	20,807	16,330	16,320
Raw materials for steel	159,810	288,503	68,500	57,400
Coal	57,683	82,237	49,363	38,777
Petroleum	104,982	103,616	93,470	141,000
Machinery	146,000	190,000	150,000	123,000

Source: Bank of Japan (1956.II–1958.I-b).

served the interests of the cotton-spinning industry, especially of large enterprises, which had requested a reduction in raw cotton imports in order to support cotton product prices (1956.II-b, 123). Concerning the budget for the first half of 1957, the cotton-spinning industry again requested a reduction in raw cotton imports, but because the margin of the cotton-spinning industry was rather high, MITI did not agree and increased the foreign exchange budget allocation (1957.I-b, 80). However, in the first half of 1957, the actual amount of foreign exchange allotment was far below budget, in order to reduce the output of cotton products, and the import quantity budgeted for the latter half of 1957 was even smaller than that for the latter half of 1956 (1957.II-b, 94–95). Moreover, the budget allocation to raw cotton in the first half of 1958 was curtailed substantially to support production cutbacks under administrative guidance (1958.I-b, 94–95).

Wool

Allocation of the foreign exchange budget to wool was based on MITI's demand and supply plan for wool products. Necessary production of wool products was calculated from estimated demand for wool products and estimated changes in stocks. And the level of production determined the necessary level of wool imports, which in turn, together with the estimated import price of wool, determined the necessary foreign exchange budget (Bank of Japan 1956.II-b, 130–34). Allocation of the foreign exchange budget to wool was expanded from the latter half of 1956 to cope with an increase in domestic demand for wool products. The government aimed at reducing both the domestic price of wool products and the rents generated by the difference between the domestic and import prices of wool (1956.II-b, 136). Also in the first half of 1957, a large amount of the budget was allocated to wool (1957.I-b, 85–86), but the actual amount of foreign exchange allocation was cut in order to reduce the output of wool products. Allocation of the foreign exchange budget to wool in the latter half of 1957 and the first half of 1958 was compressed to support this production reduction (1956.II-b, 105).

Steel and Its Raw Materials

Allocation of the foreign exchange budget to steel and its raw materials (iron ore, scrap iron, and pig iron) was based on MITI's demand and supply plan for steel. To cope with the rapid increase in steel demand due to the expansion of investment, allocation of the foreign exchange budget to steel and its raw materials was increased in the latter half of 1956 and the first half of 1957 (Bank of Japan 1956.II-b, 174–75). Because there was a bottleneck in blast furnace capacity, a large amount of the budget was allocated to scrap, pig iron, steel ingots, and steel products (1957.I-b, 135–39). In the latter half of 1957, allocation of the budget was substantially reduced because of a decrease in steel demand (1957.II-b, 159–61). As the decline in steel prices became serious, production cutbacks of crude steel and some kinds of steel products were

started under administrative guidance by MITI in March 1958. Corresponding to this measure, MITI curtailed the production plan for steel of the first half of 1958, and reduced the allocation of the foreign exchange budget to steel and its raw materials (1958.I-b, 133–34).

Petroleum

Allocation of the foreign exchange budget to petroleum was based on MITI's demand and supply plan for petroleum products. Demand levels for heavy oil, volatile oil, kerosene, and light oil, respectively, were estimated, and from these estimates the necessary levels of imports of crude oil and petroleum products were calculated. Under the domestic refinement principle, MITI gave priority to imports of crude oil. However, because demand for heavy oil was especially large in Japan, a substantial amount of the foreign exchange budget was allocated to heavy oil (Bank of Japan 1956.II-b, 208–9). In the first half of 1957, the budget for crude oil and heavy oil was increased because of a serious shortage of water and coal for generating electricity (1957.I-b, 171–72). Moreover, MITI guided petroleum companies to make long-term contracts for chartering tankers to cope with the shortage of tankers caused by the Suez Crisis. For the latter half of 1957, allocation of the foreign exchange budget to petroleum was suppressed because of a projected slowdown in demand growth, which in turn caused a problem of excessive chartering (1957.II-b, 189–91). Then, in the first half of 1958, a large amount of the foreign exchange budget was allocated to petroleum as a countermeasure to the excessive chartering problem (1958.I-b, 159–60).

Machinery

For machinery, foreign exchange allocation according to a demand and supply plan was impossible because of the great variety of machinery. MITI's Bureau of International Trade (Tsusho-kyoku) adjusted the budget claims from each bureau of MITI and each ministry, based on surveys of machinery demand in each industry under their jurisdiction (Bank of Japan 1956.II-b, 220–22). The claims from the bureaus of MITI and other ministries are shown in table 12.4. In the latter half of 1956, large amounts of machinery imports were requested by such sectors as steel, machinery, transportation, and electricity because of rapid investment increases. MITI chose to keep the foreign exchange budget for machinery at almost the same level as the previous term (1957.I-b, 179), thus denying about 10 percent of the demand (table 12.4). Concerning allocation of the foreign exchange budget to machinery, machinery users were inclined to prefer imported machinery on the grounds of high quality, availability of loans at low interest rates from manufacturers, and quick delivery. On the other hand, domestic machinery producers insisted that domestic machinery should be used as much as possible. MITI's goal was to maintain a balance between encouragement of the domestic machinery industry and rationalization of the user industries (1956.II-b, 223–24).

Table 12.4   Claims for Foreign Exchange Budget for Machinery by Ministries and Agencies (thousands of dollars)

Ministry or Agency	1956 Oct–Mar	1957 Apr–Sept	1957 Oct–Mar	1958 Apr–Sept
Total	157,430	288,661	193,529	189,461
(ratio of actual allotment, %)	(92.72)	(65.82)	(77.51)	(64.92)
Bureau of Heavy Industry, MITI	66,382	119,689	54,222	88,202
Bureau of Textile, MITI	22,946	16,780	15,285	10,234
Bureau of Light Industry, MITI	11,159	24,967	19,000	12,939
Bureau of Enterprise, MITI	9,813	10,917	502	18,135
Bureau of Mining, MITI	9,745	11,362	8,968	9,159
Bureau of Public Utility, MITI	7,615	31,886	1,450	3,207
Bureau of Coal, MITI	n.a.	n.a.	2,330	2,329
Ministry of Transportation	n.a.	45,921	15,752	11,493
Ministry of Agriculture and Forestry	5,874	12,041	4,845	6,535
Agency of Defense	5,686	4,999	4,918	2,615
Ministry of Construction	n.a.	2,952	1,951	4,550
Agency of Science and Technology	n.a.	2,357	4,147	1,439
Ministry of Finance	n.a.	n.a.	1,956	500
Ministry of Health and Welfare	n.a.	n.a.	1,000	1,148
Ministry of Education	n.a.	n.a.	1,000	400
Other	18,210	4,790	56,203	16,576

Source: Bank of Japan (1956.II–1958.I-b).

In the first half of 1957, although demand for machinery was still large, MITI denied 34 percent of the claims, expecting investment to be postponed because of constraints on raising funds. In making the foreign exchange budget, MITI's Bureau of Heavy Industry called for a reduction in the budget, while the Bureau of International Trade believed that there was room to increase the budget (1957.I-b, 188–90). This confrontation between the two bureaus reflected the above-mentioned problem of balance.

In the latter half of 1957, MITI denied 22 percent of the claims (table 12.4), on the grounds that the effects of the tight monetary policy would gradually be felt and that investment for rationalization of industries had peaked because of the rapid increase in machine imports in the past two to three years (1957.II-b, 198–99). Moreover, in the first half of 1958, the foreign exchange budget for machinery was reduced to its lowest level since the latter half of 1955. Protection of domestic producers was one reason (1958.I-b, 173–75).

The above discussion shows that in the cases of raw materials, MITI's demand and supply plan for each good was used as a base. It also shows that there were often cases in which allocation of the foreign exchange budget was restrained for purposes of industrial policy. Because restraint of the foreign exchange budget for FA goods constituted a de facto import quota, as stressed in section 12.2, it is probable that for many FA goods rents were generated.

We can roughly measure the scale of rents by subtracting the tariff from the difference between the domestic and import prices of each good. We estimated the scale of rents for 27 goods whose weights were relatively high in the wholesale price statistics (compiled by the Bank of Japan) and whose c.i.f. import prices are available in the customs clearance statistics (compiled by MOF). The results are shown in table 12.5. For 15 of 27 goods, rents were

Table 12.5   **Estimation of Rents (yen)**

Good	Unit	Domestic Price (A)	Import c.i.f. Price (B)	Tariff (C)	B + C (D)	A/D (E)
Staple foods						
Rice	ton	68,767	61,350	0	61,350	1.12
Wheat	ton	52,360	26,350	0	26,350	1.99
Soybean	ton	43,694	43,762	0	43,762	1.00
Other foods						
Refined sugar	ton	132,900	62,995	15,749	78,744	1.69
Flour	ton	44,766	35,857	8,964	44,821	1.00
Crude sugar	ton	59,903	37,671	7,534	45,205	1.33
Textile						
Raw cotton	ton	314,506	295,544	0	295,544	1.06
Wool yarn	ton	2,420,855	1,448,937	144,894	1,593,831	1.52
Wool	ton	1,149,868	614,443	0	614,443	1.87
Fuel						
Coal	ton	7,516	7,159	0	7,159	1.05
Crude oil	kl	6,881	6,359	0	6,359	1.08
Volatile oil	kl	30,928	11,095	0	11,095	2.79
Metal						
Scrap	ton	20,965	17,754	0	17,754	1.18
Steel plate	ton	43,981	39,903	5,985	45,888	0.96
Iron ore	ton	5,726	5,377	0	5,377	1.07
Machinery						
Truck	number	1,015,000	174,190	52,257	226,447	4.48
Car	number	837,430	216,766	86,706	303,472	2.76
Vacuum bulb	number	197	316	47	363	0.54
Materials for construction						
Cedar lumber	m³	11,749	19,766	0	19,766	0.59
Cedar log	m³	8,306	14,169	0	14,169	0.59
Pine lumber	m³	11,225	17,391	0	17,391	0.65
Chemicals						
Salt	ton	3,600	3,839	0	3,839	0.94
Paint	ton	168,112	261,442	39,216	300,658	0.56
Dyestuffs	ton	507,867	2,023,691	505,923	2,529,613	0.20
Other						
Printing paper	ton	64,903	73,704	7,370	81,075	0.80
Pulp for rayon	ton	78,814	71,323	3,566	74,889	1.05
Soybean refuse	ron	42,160	35,368	0	35,368	1.19

Sources: Bank of Japan, *Oroshiuri Bukka Tokei Nenpo* (Statistical yearbook of wholesale prices; Tokyo, 1955); MOF, *Gaikoku Boeki Nenpyo* (Yearbook of international trade; Tokyo, 1955); MOF, *Import Tariffs of Japan* (Tokyo, 1955).

generated. The rents were especially large for automobiles, volatile oil, refined wheat, wool, and flour.[8]

12.4   Criteria for Foreign Exchange Allocation and Methods of Allocation by Firm

Allocation of foreign exchange to firms meant allocation of the rents generated import restriction. Therefore, there is a substantial possibility that allocation of foreign exchange to firms caused rent-seeking activities in the private sector and corruption of the bureaucracy and political circle. At the same time, however, it might be an effective tool of industrial policy. Concerning the first possibility, some then-bureaucrats of MITI talked in retrospect about the strong political pressures MITI faced with respect to foreign exchange allocation. One of them, who served as chief of the Budget Section (Yosan-ka) of the International Trade Bureau in the 1950s, said that he daily received petitions and requests from Diet members, and that resisting these pressures was one main role of the chief of the Budget Section. Moreover, another then-bureaucrat, who was a vice-chief of the International Trade Bureau in the 1950s, said that several Diet members came regularly to the vice-minister's office to petition about the foreign exchange allocation.[9]

Certain mechanisms to evade such political pressures were prepared in the foreign exchange allocation system, the outline of which was sketched in section 12.2. MITI took the course of reducing the range of its discretion as much as possible concerning the allocation of foreign exchange to each firm, as is discussed in Okazaki and Ishii (1996). The manual of the foreign exchange allocation system, which was written by the authorities at MITI in 1960, states: "Although foreign exchange allocation is prescribed to be at the Minister of International Trade and Industry's discretion in the Foreign Exchange and International Trade Administration Law, it does not imply that the Minister determines the allotment case by case arbitrarily. MITI determines a certain criterion concerning each good, by reference to the purpose of classifying it as an FA good, and allots the foreign exchange mechanically or screens the applications according to the criterion" (Shimada 1960, 158).

It can be said that MITI intended to restrain rent seeking by reducing the room for discretion through the definition of clear allocation criteria an-

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8. It was widely recognized that the foreign exchange allocation system generated rents. E.g., Amaya, a vice-chief of MITI's Planning Section, states, "The foreign exchange allocation system promoted the accumulation of capital for two reasons, that is, restriction of international competition and giving premiums to firms that were allotted the foreign exchange" (1955, 51–52). And Toshiyuki Miyauchi, a managing director of Itochu Co., criticized the system at the 1959 meeting of the Association of Corporate Executives, "So far the foreign exchange allocation system has been at the center of the industrial policy, but such a distorted situation, in which import premiums exist, is not appropriate when the European currencies have recovered convertibility" (Okazaki et al. 1996, 127).

9. Interview by the Research Institute of Industrial Policy History.

Table 12.6   **Methods and Criteria for Foreign Exchange Allocation by Firm, Latter Half of 1956**

Good	Method[a]	Criterion
Soybean	ATO	Criteria set by the consuming industry based on actual consumption in the first half of 1955, actual allocation in the first half of 1956, and desirable allocation
Sugar	AT	Actual imports in 1955
	ATN	Criteria set by the trade associations of the sugar refining industry based on production capacity, actual production, and per firm rate
Lumber	AT	Actual imports from July 1955 to June 1956
Beef tallow	AT	Actual imports from July 1955 to June 1956
	AC	Actual exports (export link), actual consumption in the latter half of 1955, actual production in 1955, and per firm rate
Hides	AT	Actual imports
	AC	Actual purchases
Raw cotton	AT	Actual exports (export link)
	ATN	Actual exports (export link) and production capacity
Wool	ATN	Actual exports (export link) and production capacity
Pulp for chemical fiber	ATN	Actual exports (export link)
Phosphorus ore	ATO	n.a.
Potash	AT	n.a.
Raw materials of steel	ATN	Actual production and production plan
Coal	ATN	
Crude oil	AC	Actual foreign exchange allotment and actual imports in the past three years
Refined oil	AT	Actual foreign exchange allotment and actual imports in the past three years
Machinery	AC	Individual screening by the Council of Machinery Import Allotment

Source: Bank of Japan (1956.II-b).

[a]ATO, allocation to trading company on order; AT, allocation to trading company; ATN, allocation to trading company on notification; AC, allocation to consuming company.

nounced beforehand. "A certain criterion" in the quotation above is the foreign exchange allocation criterion specified by the import announcement (see section 12.2). The foreign exchange allocation criteria for major goods in the latter half of 1956 are presented in table 12.6. There were four allocation methods: allocation to a trading company (*shosha wariate*, AT), allocation to a consuming company (*juyosha wariate*, AC), allocation to a trading company on order (*hacchusho hosiki shosha wariate*, ATO), and allocation to a trading company on notification (*naijisho hoshiki shosha wariate*, ATN).

The AT method allocated foreign exchange based only on the conditions of trading companies, past import records in many cases; it was used for some sugar imports, lumber, and some beef tallow imports, among others (table 12.6). The underlying view was that past import results showed a company's

ability to achieve imports and this method would contribute to long-term import trade relationships (Shimada 1960, 178). Under this method rents were acquired by the trading companies.

In the AC method, foreign exchange was allocated directly to the companies that used the import goods. The ATO method was based on purchase orders put out to trading companies by user companies, and ATN was a kind of ATO in which MITI notified each user company beforehand of the order limit. In the AC, ATN, and ATO methods, the condition of each user company—export record, production capacity, and production—was used as the criterion (table 12.6).[10] Specifically, the use of criteria based on export records like those for raw cotton, wool, and pulp for chemical fiber was called the "export link system" (*yushutsu rinku-sei*). Under the AC, ATN, and ATO methods, rents were acquired by the user companies.

It is notable that in many cases the criteria were based on clear and objective conditions. This fact is the point of the quotation from Shimada (1960) above.[11] It also supports the view of "creating contests" of World Bank (1993). The main point of this view is that the another type of competition—contest-based competition with clear rules, referees, and rewards—works in the East Asian countries, including Japan. In the foreign exchange allocation system, the rents obtained by receiving allocations were attractive rewards for private companies. To obtain more rewards, companies had to win competitions to achieve performance, the rules of which were the allocation criteria. MITI played the role of referee, mechanically and strictly applying the criteria—that is, the rules.

In addition, it is notable that these criteria are thought to have led corporate behavior in specific directions. The cases of export-based and production-capacity-based criteria have special significance. In the former case, rents from foreign exchange allotment are thought to have played the role of an export subsidy. In the latter case, it is thought that investment was promoted by the rents, which functioned as investment subsidies.

These effects were clearly recognized by the people concerned in those days. MITI intentionally used the export link system to promote exports. For instance, Shimada states, "It is an effective export promotion measure" (1960, 179–80). Nishimura (1955), a bureaucrat of MOF, states that the background of the introduction of the export link system to textiles in the early 1950s was a decrease in exports caused by a rise in domestic prices, and that the rapid increase in textile exports in 1953–54 was due mainly to the effects of the export link system. All of the examples of the export link system shown in table 12.6 allocate foreign exchange for raw materials based on the export per-

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10. As there was quite a wide variety of machinery, it was impossible to adopt such an objective criterion. Therefore, the Council of Machinery Import Allotment (Yunyu Kikai Wariate Shingikai) under MITI determined an allotment for each application through a screening process referring to industrial policy, trade policy, and social policy. The council consisted of the staffs of the Budget Section and the Import Section of the Bureau of Trade, the sections in charge of machinery industries, and the sections in charge of user industries (Bank of Japan 1956.II-b, 219).

11. It will be tested quantitatively in the next section.

formance of products made with those raw materials. This method was called the "raw materials link system" (*genzairyo rinku-sei*). In addition, foreign exchange for raw materials could be allotted based on the export performance of products that had no input-output relation to those raw materials; this was called the "deficit-covering link system" (*shukketsu hosho rinku-sei;* Nishimura 1955).

The deficit-covering link system was applied to the exports of ships, production plants, whale oil, raw silk, and canned food, among others, in 1953–54 (*Ekonomisto* 33, no. 7 [1955]: 17–21). The companies that exported those goods were allotted foreign exchange to import crude sugar. They acquired a de facto export subsidy by selling the crude sugar to sugar-refining companies at the higher domestic price. The shipbuilding industry especially enjoyed the benefits of this system. It enabled shipbuilders to cut export prices and consequently spurred the first export boom of ships in 1953–54. The deficit-covering link system was strongly criticized by the International Monetary Fund's research mission in 1954, and it was abolished in 1955. The criticism from overseas suggests that this system had large export promotion effects.

In contrast, the criteria based on production capacity were not intended to promote investment but to level the capacity utilization ratio. However, it was recognized that they had the effect of investment promotion. A bureaucrat at MITI wrote in a 1956 article, "The companies invested aiming at an increase in the amount of the import quota, because the method of foreign exchange allocation is based on the amount of equipment" (Hiramatsu 1956). Moreover, the *Oriental Economist* commented, "The overinvestment in such industries as textiles, sugar refining, and milling is mainly due to the raw materials allotment policy of the government based on equipment capacity" (*Toyo Keizai Shinpo* 2604 [1953]: 15).

12.5   A Quantitative Analysis of Foreign Exchange Allocation by Firm: The Wool-Spinning Industry

12.5.1   A Brief History of the Wool-Spinning Industry

The Japanese wool-spinning industry contracted substantially during World War II. Although its equipment was reconstructed in accordance with the equipment restoration plan approved by the occupation authority in 1948, raw material imports were a crucial constraint on the recovery of the industry (Textile Society of Japan 1958, 310–13). Imports of wool were very low for a few years after the war because imports of raw materials in general were under strict constraint and priority was given to raw cotton among the textile materials. It was not until 1949, when the trade agreement was concluded between sterling area nations, that wool imports got back on track (Wool Spinning Association of Japan 1987, 92).

Meanwhile, wool imports were shifted to private trade from state trade at the beginning of 1950. Simultaneously, MITI announced "detailed criteria of

allotment of the foreign exchange for wool import from January to March 1950" (*Showa 25-nen 1–3-gatu yomo yunyu shikin wariate saimoku*), the substance of which was that the total foreign exchange budget for wool ($9,613,000) would be divided into two parts: one for domestic demand (70 percent) and the other for export (30 percent). The former was allocated according to the production capacity of each firm, while the latter was allocated according to the export record of each firm (Wool Spinning Association of Japan 1987, 94, appendix 24–25). It is notable that both export records and production capacity were already in use as criteria.

In July 1950 an important revision in the method of allocation was introduced. In the method adopted in January 1950, the amounts of foreign exchange for export and domestic demand, respectively, were set beforehand; however, after July 1950, foreign exchange was preferentially allocated according to export records, with the remaining part allotted by considering production capacity for domestic demand (MITI 1950).[12] The method after July 1950 is generally called the export link system of wool (Textile Society of Japan 1958, 321).

The method of allocation was revised frequently after that. In particular, important revisions were made in August 1953 and April 1955. Before August 1953 foreign exchange was allocated ex post in accordance with past export records; after August 1953 it was allotted ex ante according to the export plan of each firm and was adjusted subsequently in line with actual exports. At the same time another system, "achievement rewards" (*suiko hosho*), was introduced; it was related to the above revisions in order to increase export incentives.[13] Under this system, additional foreign exchange was allocated to each firm according to the achievement ratio of its export plan. The revision in April 1955 was needed to cope with problems caused by the 1953 revision. The method adopted in 1953 greatly stimulated exports. It was criticized by foreign countries and gave rise to a shortage of wool in the domestic market. Therefore, in April 1955, export incentives were reduced by abolishing the achievement rewards and decreasing the ratio of foreign exchange allocation to exports of each firm (Textile Society of Japan 1958, 325–26).

These methods and actual allocation were determined by the Hemp and Wool Section (Mamo-ka) until fiscal year 1955 and by the Silk, Wool and Chemical Fiber Section (Kinu Ke Kasen-ka) thereafter, both of MITI's Bureau of Textile. We found an almost complete collection of original documents concerning the foreign exchange allocation for wool imports made by those sections of MITI. Moreover, in those materials firm-level records of exports and production capacity are also available. Hereafter, we will quantify the foreign exchange allocation method at the firm level and then analyze the effects of the method.

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12. The ratio of the amount of foreign exchange allotment to the amount of exports differed according to the kind of the product.

13. For details, see Wool Spinning Association of Japan (1987, 104–6, appendix 58–63).

Table 12.7   **Determination of Foreign Exchange Allocation for Wool Imports by Firm**

Fiscal Year	Export Performance (α)	Production Capacity (β)	Adjusted R^2	Sample Size (number of firms)
1953 Oct–Mar	2.017 (8.814)	11,603 (16.045)	.997	21
1954 Apr–Sept	0.954 (8.986)	5,165 (4.807)	.987	45
Oct–Mar	1.324 (4.175)	4,997 (1.388)	.947	47
1955 Apr–Sept	1.732 (28.481)	4,484 (10.860)	.998	47
Oct–Mar	1.275 (15.543)	13,533 (13.958)	.996	55
1956 Apr–Sept	0.319 (2.119)	23,449 (13.182)	.967	50
Oct–Mar	1.487 (12.585)	28,759 (18.522)	.993	54
1957 Apr–Sept	1.186 (17.297)	5,208 (5.658)	.988	54
Oct–Mar	1.066 (10.352)	16,702 (11.691)	.984	51
1958 Apr–Sept	0.989 (16.461)	8,043 (13.237)	.985	44
Oct–Mar	0.738 (29.118)	9,078 (35.950)	.991	64
1959 Apr–Sept	1.134 (25.606)	381 (4.777)	.933	63
Oct–Mar	0.914 (16.456)	18,039 (28.553)	.989	50
1960 Apr–Sept	0.561 (14.034)	15,148 (24.350)	.977	45
Oct–Mar	0.691 (21.758)	7,904 (29.200)	.985	59

Note: Numbers in parentheses are *t*-values.

12.5.2   The Rule of Foreign Exchange Allocation and Measurement of Marginal Rent

First, we regress the amount of foreign exchange (in yen) allocated to each firm on the firm's amount of actual exports (in yen) for the previous term and equipment capacity (in physical units) using cross-sectional data in order to examine how foreign exchange allocation was linked to these variables (table 12.7). The sample firms are those with available data concerning foreign exchange allotment, exports, and production capacity.[14] The data are taken from the original documents at MITI.

The coefficients of both the export (α) and the equipment capacity (β) variables show how much foreign exchange is additionally allocated given growth in the exports and increase in the equipment capacity of each firm. As indicated by the high adjusted R^2, the foreign exchange allocation to each firm is explained fully by its export performance and equipment capacity. This implies that foreign exchange was allocated to each firm according to the clear and objective rules discussed in the previous section. Moreover, it is notable that the movement of the coefficient α reflects the above-mentioned revision of the

14. In regard to the foreign exchange allocation to production capacity, production capacity in each firm was counted by mule-conversion unit (*mule-kanzan sui*) before the latter half of 1954 but by real unit (*jitsu sui*) after the first half of 1955 (Wool Spinning Association of Japan 1987, 107–8). In the regression we use the unit actually adopted during each term.
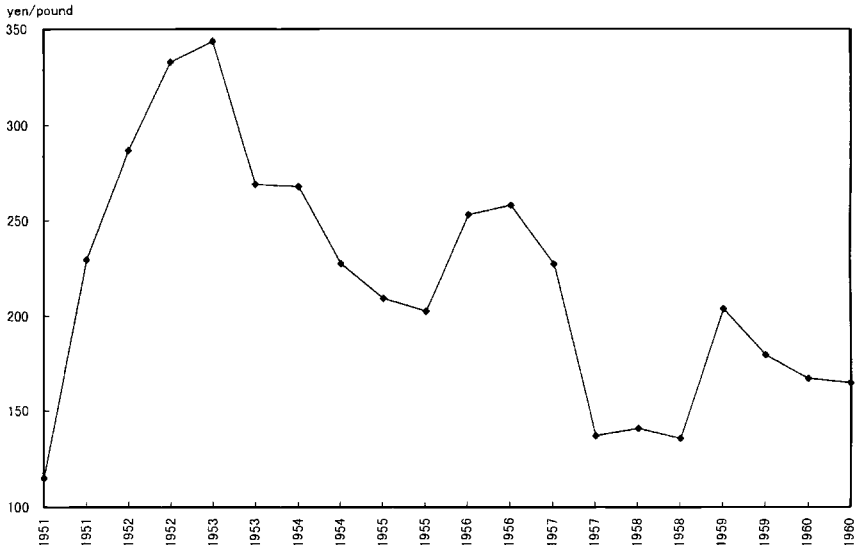
Fig. 12.3   Difference between domestic and import prices of wool

allocation method; that is, the rise in α from the first half of 1953 to the first half of 1955 roughly corresponds to the introduction of the new distribution method in August 1953. The method itself increases the allocation of foreign exchange to exports on a per yen basis.

Besides the coefficient α, the difference between the domestic and foreign prices of wool affects the size of the incentive to export as well as investment under the foreign exchange allotment system. We take the domestic price of wool (P_d^w) from the wholesale price statistics of the Bank of Japan and its import price (P_i^w) from the customs clearance statistics of MOF. The difference between them is illustrated in figure 12.3, and this price difference ($P_d^w - P_i^w$) denotes the size of the rents per pound of wool imported. This premium on imported wool is at least about 17 percent of its import price. If we denote the export price of wool products by P_e^y, the allocation of the rents per pound of wool yarn exported is

$$\alpha \cdot P_e^y \cdot (P_d^w - P_i^w)/P_i^w \; (= \; R_1).$$

Similarly, the allocation of the rents per unit of spinning equipment is

$$\beta \cdot (P_d^w - P_i^w)/P_i^w \; (= \; R_2)$$

with the physical units adjusted.

Figures 12.4 and 12.5 illustrate R_1 and the growth rate of wool yarn exports and R_2 and the increase in wool-spinning equipment, respectively. The data on exports and investment are taken from the customs clearance statistics of MOF and the *Monthly Statistical Bulletin of Textile Industry* (Sen'i Tokei Geppo) of
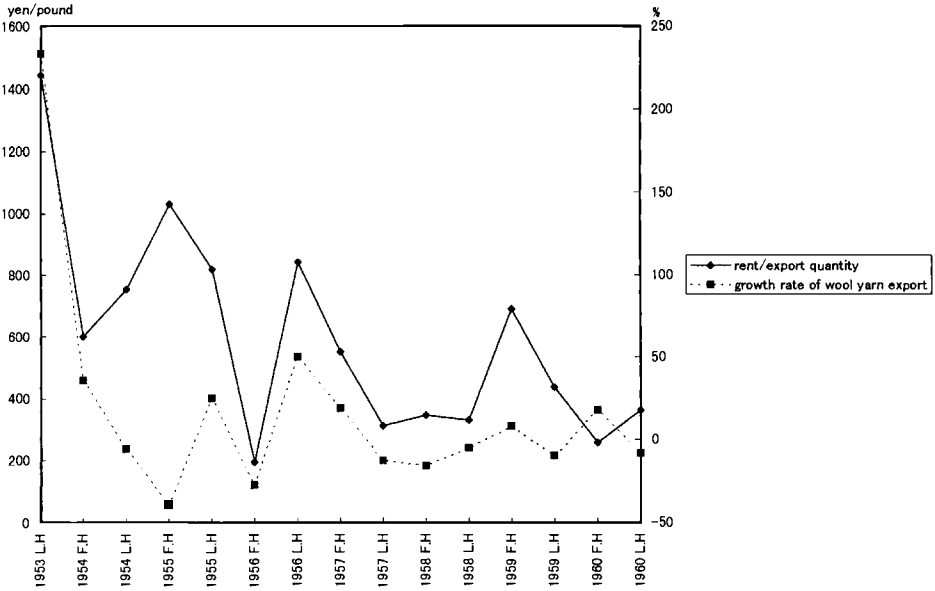
yen/pound   %
1600   250

Fig. 12.4   Rents (R_1) and exports of wool yarn

yen/capacity unit   capacity units
30000   700000
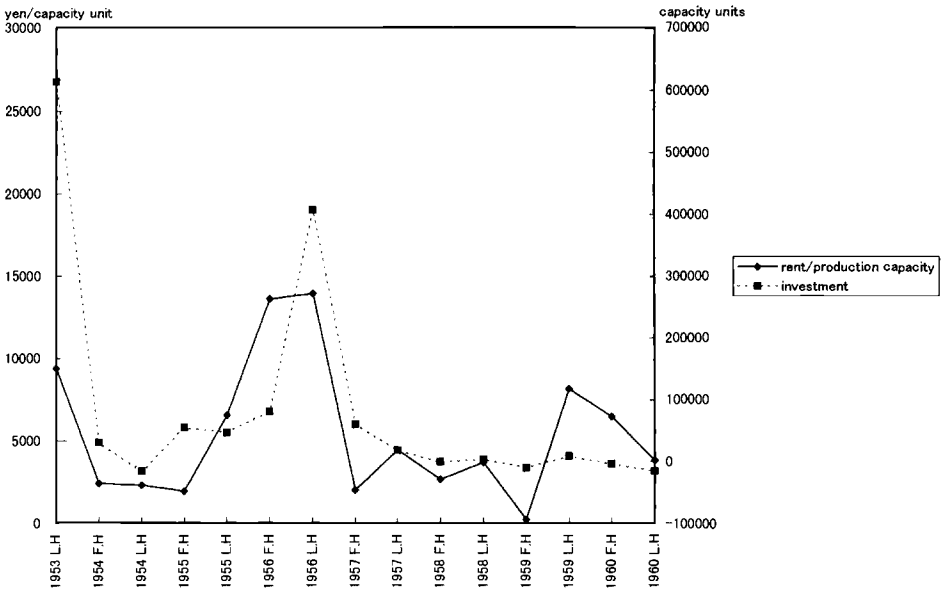

Fig. 12.5   Rents (R_2) and investment

MITI. The rise in the growth rate of exports in 1952–53 and the equipment increase in 1956 suggest a relation between the size of rents and exports and a relation between the size of rents and investment.

12.5.3   Estimation of Export Function

To test the former relation, we estimate a simple export function for wool yarn. In addition to R_1, other factors affecting the flow of exports must also be taken into account. Price and income variables, which are usually incorporated into an export function, are taken as ratios of foreign to domestic in this case because, in those days, the Japanese domestic market for wool products was blocked; that is, the foreign and domestic markets were separated. We also take the U.S. market as the foreign market because the United States had the largest share in Japan's exports of wool yarn in most of the periods under study.[15] In addition to the above factors, the effects of other export promotion policies must be also considered. Here, we take into account only the financial export subsidy offered by the export advance bill system (*yushutsu maegashi tegata seido*), one of the systems of export priority financing in Japan. The reason is that a great amount of subsidies from that system flowed into trading companies, and into producers, if at all, *through* trading companies, and many major trading companies assumed important roles in exporting textile products in particular (Taisa 1989, 211–2).[16]

To summarize, the dependent variable is export volume of wool yarn, and the independent variables are as follows: R_1, the relative export price of wool yarn (P_d^y/P_e^y); the ratio of U.S. GNP to Japanese GNP (NI_u/NI_j); and the rate of financial export subsidy by the advance bill system (sub). All the variables but the subsidy rate are transformed into the form of growth rates. The domestic price of wool yarn (P_d^y) is based on the wholesale price statistics of the Bank of Japan, and the export price (P_e^y) is available from the customs clearance statistics of MOF. GNP of the United States is quoted from U.S. Department of Commerce (1986) and converted to yen at the official exchange rate ($1 = ¥360). GNP of Japan is obtained from Economic Planning Agency (1965). With regard to the financial export subsidy, the subsidy rate is applied; it is the difference between the discount rate on Bank of Japan most favored commercial bills and that on Bank of Japan most favored export advance bills, both offered by commercial banks. Those data come from issues of the *Economic Statistics Monthly* (Bank of Japan).

15. The choice of the United States as foreign market is in part due to the availability of data. Though the major destinations of wool yarn exports in those days were the United States and some Asian countries, biannual data on national income for the latter countries are not available to us. Moreover, since a large share of exports to those Asian countries were via Hong Kong, it is impossible to construct an appropriate mixture of foreign income variables.

16. In regard to export promotion, it is generally acknowledged that the Japanese government had various export promotion policy tools other than foreign exchange allocation (Itoh and Kiyono 1988). But there is also much difficulty in using sectoral and biannual data on those policy variables. Further research in this direction would be of interest.

Table 12.8   **Estimation of Export Function**

Method	R_1	P^y_e/P^y_d	NI_u/NI_j	sub	Constant	Adjusted R^2	D.W.
Ordinary least	1.422***	1.982	−13.708	450.89	−964.73*	.355	1.542
squares	(3.014)	(0.335)	(−0.887)	(0.563)	(−1.492)		

Note: Numbers in parentheses are *t*-values.
*Significant at the 10 percent level.
**Significant at the 5 percent level.
***Significant at the 1 percent level.

The results are displayed in table 12.8. The estimating method adopted is ordinary least squares.[17] The coefficient of R_1 is positive and statistically significant, as expected, while the coefficients of relative price and relative income are insignificant. For the financial export subsidy, the sign of the coefficient is positive but statistically insignificant.[18] These results imply that the movement of wool yarn exports was basically determined by the size of allotted rents, not by the fundamental variables and not by the advance bill policy.[19]

12.5.4   Estimation of Investment Function

The investment effect of the allocation method based on production capacity cannot be tested simply by adding R_2 to the usual independent variables of the investment function—profit rate and interest rate—since the size of rents affects the profit rate itself. Therefore, we first adjust the profit rate by extracting the value of rents due to R_2 from the profit itself, and then we regress investment on the adjusted profit rate, the interest rate, and R_2.

We assume the business profits plus depreciation expenses and the total assets of the wool-spinning industry in Mitsubishi Economic Research Institute (various years) to be profits and total assets.[20] If we denote by K^y equipment capacity, the value of rents due to R_2 is $R_2 \cdot K^y$. The adjusted profit rate is obtained by extracting $R_2 \cdot K^y$ from profits and dividing the residual by total assets.

Next, we regress investment on the adjusted profit rate (π), R_2, and the inter-

17. The only second-order serial correlation of residuals is found in ordinary least squares estimation, partly because of using biannual data. The following results do not change even when we assume those serial correlations by the Pagan (1974) method. It should be noted, however, that in this estimation, by using a poor income variable, the income effect is not well captured, thus some reservation must be shown in interpreting the results.

18. Other formulas for the policy variables by that system, e.g., the total value of the subsidies, were also tested, but the results are similar.

19. We also estimated an export function for wool fabrics. The result is quite similar to the one above, except the significance of the size of rents, R_1, is a bit weaker. The difference in the incentives of rents to those wool product exports is probably due to the fact that foreign exchange was allocated basically to wool-spinning firms, not to wool-weaving firms.

20. Selection of sample firms is based on the availability of both financial data and export and equipment capacity data at the firm level. Then we aggregate these data in each term.

Table 12.9   **Estimation of Investment Function**

Method	π	R^2	i	Constant	Adjusted R^2	D.W.
Ordinary least	70.036***	105.66***	−179.49	407.63	.690	1.925
squares	(4.041)	(4.940)	(−1.351)	(0.688)		
Pagan (1974)	71.885***	107.94***	−174.23	374.21	.701	2.042
	(4.234)	(5.304)	(−1.350)	(0.662)		

Note: Numbers in parentheses are *t*-values.
***Significant at the 1 percent level.

est rate (i). The dependent variable is the increase in wool-spinning equipment. We assume financial costs over the total liability with interest of the wool-spinning industry to be i (Bank of Japan, various dates-c).[21]

The results are exhibited in table 12.9. We display two estimation results: ordinary least squares and Pagan's (1974) nonlinear least squares.[22] The results are quite similar. The coefficient of R_2 is positive and statistically significant at the 1 percent level, while that of π is significant at the 5 percent level. The coefficients of the other variables are less significant statistically. It is notable that R_2 is of greater significance than π in the investment decision, in a statistical sense. This suggests that the effect of investment promotion was larger because the allotment of rents was linked to equipment capacity.

12.6   Concluding Remarks

The foreign exchange allocation system functioned as one of the basic frameworks of the Japanese economy until trade liberalization progressed in the first half of the 1960s. Most imports were subject to de facto control by the government through this system, and MITI used the system as a tool of industrial policy. Consequently, for many important goods, substantial rents were generated. It is notable that the existence of rents, their danger, and their utility were clearly recognized by the people concerned. Therefore, MITI set clear and objective allocation criteria and committed to these criteria by announcing them publicly in order to restrain rent-seeking activities. This method caused competition for the allocation of rents among private enterprises. As criteria, export performance and production capacity were often adopted. The former was intentionally adopted as an export promotion measure, and its effect was quantitatively confirmed in the case of the wool-spinning industry. The latter had the effect of promoting investment not only by pushing up the profit rate

21. When we take the user cost of capital as the cost variable, the main results do not change.
22. The only second-order serial correlation of residuals is found in ordinary least squares estimation to some degree, which is statistically significant at the 20 percent significance level in the LM test proposed by Breusch and Pagan (1980). We apply Pagan's (1974) method by assuming that serial correlation. While the correlation is partly due to using six-month data, researchers have often found strong serial correlation of residuals in estimating investment functions.

but also by linking the allocation of rents with equipment capacity. In short, the foreign exchange allocation system in postwar Japan promoted exports and investment by stimulating competition to acquire rents.

To the above conclusions of this paper, certain qualifications should be added. First, the fact that the Japanese foreign exchange allocation system promoted exports and investment while restraining rent-seeking activities does not directly imply that the Japanese policy regime was the best and should be transmitted to present-day developing and transforming countries. The Japanese policy selection was made under historical conditions in which devaluation of the nominal exchange rate was difficult, there existed an effective bureaucracy and supporting private trade associations (Okazaki 1996), and so forth. Also we cannot deny that there were problems in the Japanese system. Unproductive rent-seeking activities did exist even in Japan, and as mentioned above, additional incentive to invest created excess capacity. Moreover, the export link system had the effect of increasing the welfare of export companies and overseas consumers at the expense of domestic consumers.[23]

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Comment   Ronald I. McKinnon

This careful study of a little-known part of Japanese history throws light on an important issue in development economics. To what extent can high growth in East Asian economies be attributed to astute government interventions in the early stages of economic development? In particular, was detailed foreign exchange allocation by an incorruptible MITI in the 1950s to early 1960s essential to Japan's successful development as a great industrial exporter in the postwar period?

The complex exchange allocation system, with different lists and eligibility criteria that Okazaki and Korenaga so carefully describe, was not instituted as part of a grand economic plan to spur economic development. Rather, it was an accidental outcome of the great inflation, macroeconomic instability, and (incipient) capital flight that Japan suffered in the late 1940s. In the successful Dodge stabilization of 1949, unifying the currency at 360 yen per dollar became the critically important nominal anchor for the Japanese price level. However valuable as a monetary anchor, the 360 yen rate was (perhaps accidentally) somewhat overvalued. Despite strict controls on capital account, shortages of foreign exchange persisted through the early and middle 1950s. Many key product prices—such as that for basic steel—were substantially

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above those prevailing on world markets. As late as 1957, there was specula-
tion that the yen might be devalued—which increased pressure for (covert)
capital flight. Because it was not easy to make a distinction between current
and capital account transactions, foreign exchange allocation, according to of-
ficially specified import lists, became a necessity.

According to Okazaki and Korenaga's analysis, MITI distinguished an auto-
matic approval (AA) list of imports permitted on a first come, first served basis.
But subject to an overall foreign exchange budgetary limitation, there was also
an FA list requiring detailed bureaucratic processing of each item. Liberaliza-
tion took the form of letting the AA list grow in size relative to the FA list until
more or less complete liberalization occurred in the early 1960s. After 1952, a
decade or more of deflationary pressure was necessary to allow the Japanese
economy to "grow into" the exchange rate of 360 yen per dollar so that ex-
change controls on current account could be relaxed in the 1960s.

In the 1950s, however, economic rents from foreign exchange allocation
were substantial, and who received them was (is) a matter of great interest to
development economists. Despite the possibilities for moral hazard in the situ-
ation, Okazaki and Korenaga show that MITI's licensing procedures were insu-
lated from political pressure on the one hand and corruption on the other—a
feat that most developing countries would envy. More positively, they indicate
two dominant criteria for allocating the rents: (1) inputs for exporters based on
past or prospective export performance and (2) inputs to support underutilized
investment capacity or new investment in certain areas—presumably including
tradable goods.

If the yen was indeed overvalued, then this is precisely the allocation of rents
one would want to compensate for that overvaluation. That is, the overvalu-
ation tends to make exporting look unduly unprofitable and also tends to de-
press investment—particularly in tradables. Thus, to a substantial extent,
MITI's allocation of economic rents pushed resource allocation in the Japanese
economy closer to what would have occurred if the real exchange rate in the
1950s had been correctly valued! By using foreign exchange allocations to
promote exports on the one hand and investment on the other, MITI was simply
compensating for the yen's overvaluation.

No doubt that MITI was reasonably clever, as well as incorruptible, in fol-
lowing this rent allocation strategy. However, developing economies would
hardly be advised to maintain overvalued currencies as a matter of deliberate
policy in order to put their industry ministries in the position of allocating
licenses for scarce foreign exchange over the whole range of industrial and
consumer imports. The result is much more likely to be serious decline in the
efficiency of the economy as rent seeking and corruption become rampant.
This was documented in gory detail by Bhagwati (1978) and Krueger (1978)
and further analyzed in McKinnon (1993).

For successful economic development, the first-best strategy is to operate
with a properly valued real exchange rate and to dispense with the elaborate

rent allocations that MITI so successfully undertook. In 1949, Japan faced very special circumstances when a major inflation and multiple exchange rate regime had to be overcome with a stabilization program that was, to some extent, externally imposed, that is, the Dodge plan. The fact that MITI's bureaucracy did very well in helping overcome the effects of currency overvaluation, which lasted almost a decade, is a tribute to Japan's civil service. Nevertheless, this is a second-best approach compared to maintaining an equilibrium exchange rate: Okazaki and Korenaga document some of its distortions by, for example, firms installing excess capacity because of the licensing procedures. The lesson for other developing countries is clear enough. In the 1950s, MITI's astute allocation of import licenses helped to overcome much of the allocative distortion from an overvalued yen. However, currency overvaluation itself, while sometimes unavoidable, is not generally a desirable policy for promoting economic development.

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Comment   Shinji Takagi

I recently prepared a paper on substantially the same topic, namely, the Japanese system of foreign exchange and trade control in the 1950s and early 1960s (see Takagi 1997). Fortunately, however, my paper and Okazaki and Korenaga's differ significantly in emphasis and purpose. While I emphasized how the system was used as a macroeconomic tool and was liberalized over time, the authors here emphasize how the system was used as a tool of industrial policy in allocating foreign exchange to different sectors of the economy.

With my previous exposure to the topic, I must first point out that the system of foreign exchange allocation in Japan that Okazaki and Korenaga talk about was never invariant throughout the period. Because regulations and institutional arrangements changed frequently, and many of these changes were unimportant for the purpose of this study, it is indeed proper that the authors consider only the essential features of the system. The only problem, however,

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comes from the fact that an intermediate category of goods was introduced into the import-licensing system in November 1959. The treatment of this group of goods, namely, those under the automatic fund allocation (AFA) system, should be made explicit in their discussions.

It is also important to note that the Japanese system of foreign exchange and trade control was never introduced as a tool of industrial policy. It may well be true that the Japanese authorities came to use the system as such. However, the system was introduced as a response to a perceived need, namely, the need to cope with the economic reality of the immediate post–World War II era in which the currencies of most major countries remained inconvertible. Given the inconvertibility of most major currencies, including sterling, the Japanese authorities had to devise and maintain a system under which foreign exchange earnings in sterling, for example, could somehow be allocated to finance imports from the sterling area.

Another important factor in the introduction and the operation of the system was the fact that Japan was a war-torn country with little production capacity for exports. It also took Japan years to establish normal commercial relationships with many of the world's leading economies. With the beginning of economic recovery and growth in the middle of the 1950s, Japan's independence and subsequent entry in the International Monetary Fund and General Agreement on Tariffs and Trade, and the restoration of convertibility for most European currencies in December 1958, however, the situation changed drastically. In the late 1950s, for example, the foreign exchange budget was routinely replenished when the ceiling was reached. It is thus not clear to what extent the import quotas or the foreign exchange allocation rules were binding in the latter part of the author's sample period. In this context, it is striking that the estimated rents (in table 12.5) do not seem large.

At least for the earlier period, the control procedures may have been binding, and there were probably potential rents to be exploited. An important contribution of Okazaki and Korenaga's has been to demonstrate quantitatively that the Japanese bureaucrats devised and then fairly strictly followed a foreign exchange allocation rule based on export performance and production capacity. This is an important discovery, and it throws new light on the never-ending debate about the role of the bureaucracy in the remarkable recovery and growth of the Japanese economy in the 1950s. Opinions differ as to the contribution of industrial policy and the bureaucracy in that process. Even the effectiveness of the allocation rule in promoting exports and investment can be questioned. Thanks to Okazaki and Korenaga's work, however, one thing seems clear: the bureaucracy was not excessively corrupt in the implementation of that policy.

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