Distributive Utilization of Local Public Investment in Japan

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1. Introduction

Public investment has assumed an important position in Japan's fiscal activities throughout the postwar period.[1] It has been used to implement various economic policies such as anti-cyclical and distributive measures as well as to achieve its original objective-improving the efficiency of the infrastructure for economic activities. Local government has provided a large share of public investment, but such investment more or less has been controlled by the central government in order to coordinate policy with national economic plans and the long-term projects of compartmentalized national ministries.

Such public investment policy in Japan reflecting national policy initiatives has been in question in recent years. This is because the pump-priming effects of public investment have fallen off in accordance with a change in economic structure; in addition, distributive factors adjusting regional economic discrepancies and employment opportunities have become dominant in the allocation of public investment (Yoshino and Nakajima 1999; Hanai, Tajika, and Yui 2000; Hanai 2001; and others). The decentralized allocation of public investment is thus required to answer region-

1) Public investment in this paper stands for an expenditure flow of the government for the improvement of 'social overhead capital' which is a public capital for the improvement of economic growth and people's welfare. There are various measures to represent public investment or public work expenditure in Japan. Measures are (1) 'public capital formation (Ig)' in the national account (SNA), (2) 'public investment' defined in national economic plans and basic plans for public investment, (3) 'administrative investment' being categorized in the performance record of administrative investment published by Ministry of Home Affairs, (4) 'public work expenditure or expenditure related to public works' in national public finance and also 'investment expenditure or ordinary public construction expenditure' in local public finance (Economic Planning Agency 1998).

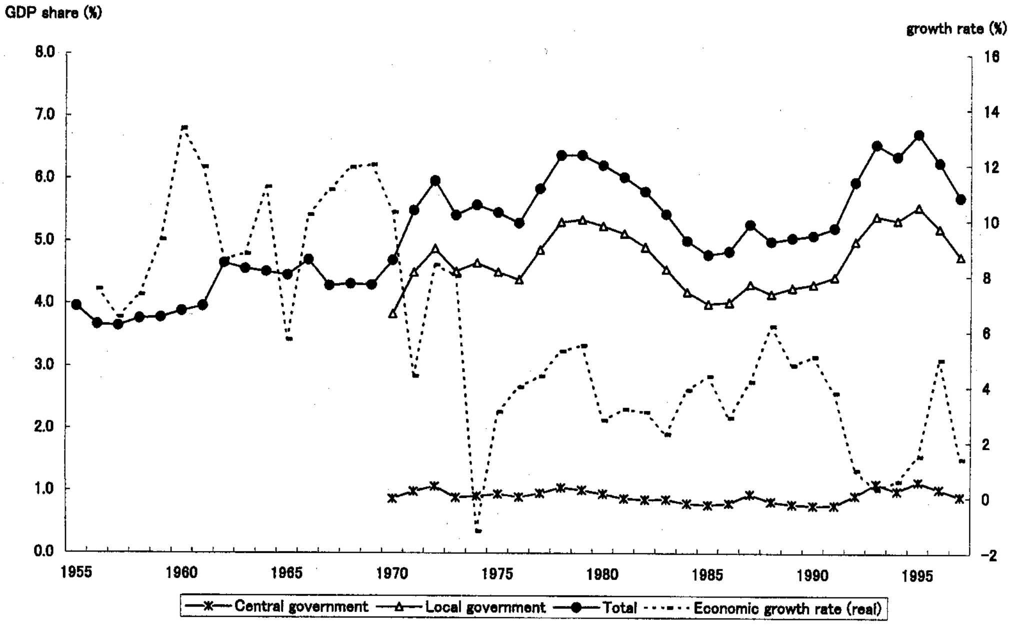
ally diversified infrastructure needs.

This paper tackles the distributive issues of local public investment in Japan. We pay particular attention to such investment's funding structure in relation to the development of the Japanese economy, and we identify the shift from financial dependence on specific purpose grants being subject to ensure national policy objectives to local bonds in the intergovernmental financial relationship since the late 1970s. The emergence of such active bond financing in the slow and stable Japanese economy does not necessarily mean that local governments have increased their financial accountability by deepening their service commitment and revenue responsibility. On the contrary, it has enabled the central government to control and mobilize local public investment to serve national policies. The policy participation of the Ministry of Home Affairs by requiring the approval of local bond financing has diversified national policy objectives. In its role in the provision of local public investment, the Ministry of Home Affairs has pursued regional development as well as countercyclical policies by guaranteeing financial resources for the amortization of local bonds through the future payment to local governments of local allocation taxes.[2] Such centralized control of bond financing, moreover, has brought about soft budget problems causing a disincentive trap for local governments by accompanying the national financial guarantee.

2. Provision of Public Investment in Japan

The quantitative level of public investment and its local participation in the Japanese economy can be seen in Fig. 1. The figure measures a gross fixed capital formation by general government (public investment) as a percentage of GDP and Japan's economic growth between 1956 and 1997. The left-hand axis shows public capital formation as a percentage of GDP, and the right-hand axis shows the growth rate of the Japanese economy (in real terms).

2) The local allocation tax is a financial transfer provided by the central government (general revenue grants) to local governments. Local allocation tax aims to secure equitable distribution of financial resources among local governments and to guarantee sufficient revenue to carry out planned administration in each locality. The use of the fund, in principle, is not tied to any specific category of local public expenditure. However, the use of the fund for guaranteeing the future payment of the amortization of local bonds has changed its policy role.



Source : Economic Planning Agency, *Annual Report on National Accounts* (*Kokumin Keizaikeisan Nenpo*), 1999.
Fig. 1 Gross Capital Formation as a share of GDP and Economic Growth Rate

Public investment as a percentage of GDP in Japan has stayed at 3.6 to 6.7 percent throughout the postwar period. The rate is higher than in other developed countries such as the United States and the United Kingdom. This is because Japan, as a late starter in economic development, has lagged behind in economic and social infrastructure. Public capital formation's share of GDP continuously increased during the Japanese economy's period of high growth. The trend continued during the period of low growth until the early 1980s. The experience of two oil shocks in the 1970s and the subsequent economic downturn necessitated public investment for the stimulation of the Japanese economy. The administrative and fiscal reforms started in the mid and late 1980s show signs of putting the brakes on the expansion of public investment in Japan. However, the revenue windfall that accompanied the Japanese "bubble economy" again accelerated the expansion of public investment, and repeated countercyclical measures implemented after the bubble's collapse also mobilized public investment.

The figure breaks down public investment according to supplier–i. e., the central government and local government–for the period 1970 to 1997. Three distinct observations can be made with respect to local government as a supplier of public investment. First, local government has played an important role in delivering public investment in Japan. It consistently provided a large share of public investment (82 to 85 percent) throughout the research period. Second, a trend is evident throughout the research period. Except for the late 1980s, during which government energetically pursued financial restructure and reconstruction, and the late 1990s, during which local government streamlined budgets because of financial shortages, local government's share of public investment has gradually increased, contributing to the growth of overall public investment in Japan. Third, there was a big fluctuation in local government's share (as a percentage of GDP) compared with that of the central government.

Does local government's large share in the provision of public investment indicate that Japanese local governments take a leading role in formulating infrastructure policies in the intergovernmental financial relationship? On the other hand, does a significant fluctuation in local government's share in the provision of public investment indicate that public investment in Japan is used for countercyclical policies or other national policies? If so, how does the central government mobilize local public investment to accomplish national policy objectives? To answer these questions we must look further into the financial structure of the local provision of public investment and such investment's association with the intergovernmental financial relationship.

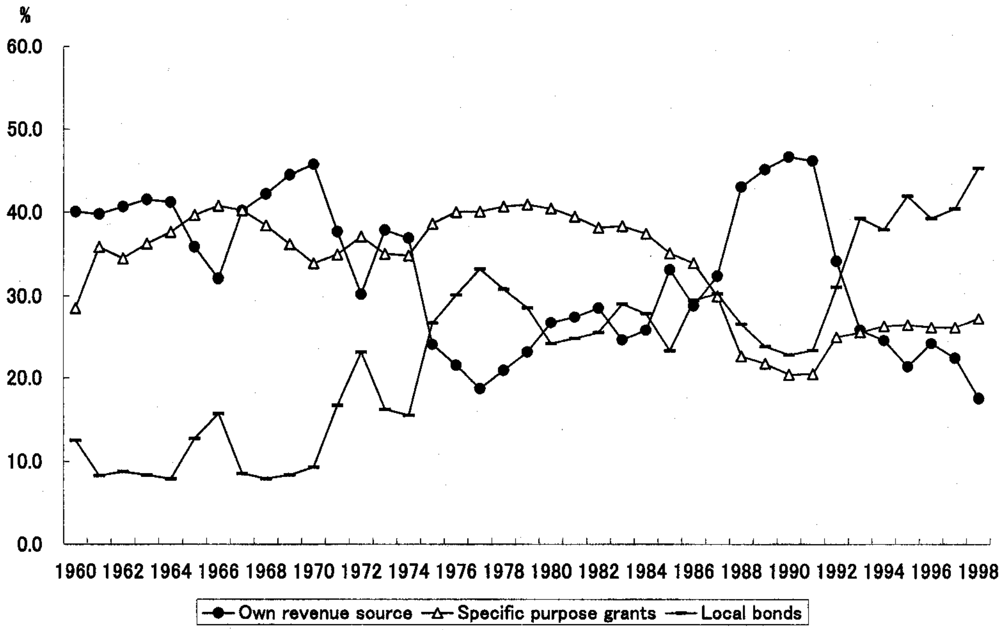
3. Financing Local Public Investment

Fig. 2 and 3 show the financial structure of local public investment of prefectures and municipalities. Because System of National Accounts (SNA) statistics in Japan do not provide a detailed decomposition of the financing structure of public investment, we investigated the financial statistics of local governments.[3]

Fig. 2 shows the financial structure for local ordinary public construction expenditures of prefectures for the period 1960 to 1998.[4] Local public investment was

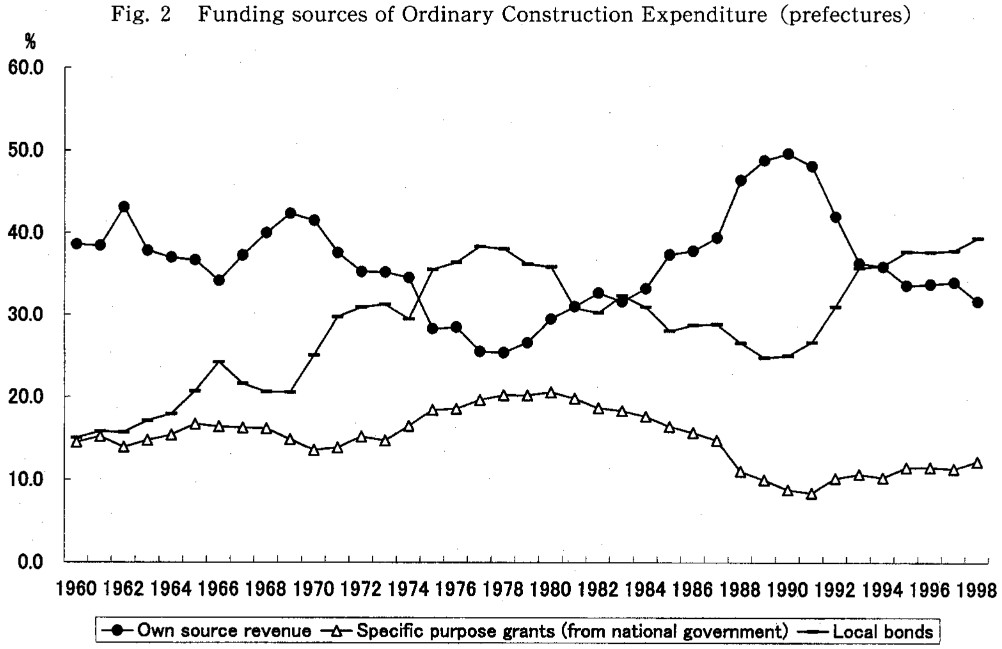
3) There are two tiers of local government in Japan: the prefecture and the municipality. As of 2000, Japan comprised 47 prefectures and 3,229 municipalities (671 cities and 2,558 towns and villages).

4) The financial statistics for local ordinary public construction expenditure contain land costs that are not included in public capital formation in SNA statistics.



Source: Ministry of Home Affairs, *White Paper on Local Public Finance* (*Chiho Zasisei Hakusho*), various editions.

Fig. 2 Funding sources of Ordinary Construction Expenditure (prefectures)



Source: Ministry of Home Affairs, *White Paper on Local Public Finance* (*Chiho Zasisei Hakusho*), various editions.

Fig. 3 Funding sources of Ordinary Construction Expenditure (municipalities) financed through three major funding sources[5]: local revenue sources (that is, tax revenue and the local allocation tax), specific purpose grants, and local bonds. Local governments energetically mobilized their own revenue sources during the 1960s and early 1970s (a high-growth economic period) as well as during the bubble economy of the late 1980s. Specific purpose grants constituted a large share of local public investment during the Japanese economy's high-growth period and during the 1970s. The large share indicates that provision of local public investment in Japan was controlled by the central government during that period. The share of specific purpose grants fell sharply in the late 1980s. This is because the central government streamlined specific purpose grants to carry out fiscal reconstruction and reform during that period. The share of local bonds sharply increased starting in the mid-1970s, and the share further increased in the 1990s. Local governments have thus deepened their dependence on local bonds while enduring a structural change of the Japanese economy, two oil shocks in the 1970s, and recent economic sluggishness after the collapse of the bubble economy.

Fig. 3 shows the financial structure of local ordinary public construction expenditure of municipalities for the period 1960 to 1998. Similar to the financing structure of prefectures, we commonly observe the repeated mobilization of local revenue sources during the economic booms of the high-growth period and the bubble period. The share of specific purpose grants in local public investment declined in the late 1980s, though those grants' share in municipal public investment has been relatively smaller than in prefectures. There was also an increase in the share of local bonds in public investment since the 1970s, and a further increase in the 1990s.

Thus, it is possible to say that a change occurred in the financing structure of local public investment of both prefectures and municipalities in accordance with transitions in the Japanese economy. The change can be observed in the intergovernmental financial relationship, where there occurred a shift away from the use of specific purpose grants to the use of local bonds. The central government has

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5) Other funding sources for local public investment are earmarked revenues for the construction of roads, fees, specific purpose grants from a prefecture (in the case of municipal public investment), and so on. The revenue shares of these sources are relatively small.

strategically issued local bonds since the late 1970s. This revenue source has compensated for the reduction of specific purpose grants.

4. Distributive Utilization of Local Public Investment: Central Control and Local Dependency

The major role specific purpose grants played in financing local public investment in the 1960s and early 1970s indicates that local public investment was mobilized on behalf of national policies during the high-growth period of Japan's economy. Local public investment was used to improve industry infrastructure during the period (e. g., for road, bridge, and harbor construction and river improvements etc.). Local governments, moreover, contributed their own revenue to meet matching requirements of specific purpose grants.

The economic success, on the other hand, brought an emergence of the civil movement requesting the improvement of living environment and pork-barrel politics responding to the diversified regional financial needs in the 1970s.[6] These issues had been postponed behind industry policies which obtained policy priorities during the high growth period. The central government continuously subsidized public investment by means of specific purpose grants shifting policy priority from industry infrastructure to social infrastructure during the low and stable growth period.

Thus, specific purpose grants were the main device by which the central government mobilized local public investment to carry out national policies related to infrastructure improvement until the 1970s. The central line ministries took on initiatives reflecting their bureaucratic turf rivalry in the distribution of grants. This department-based distribution of Japanese specific purpose grants has been denoted as a slivered department administration (*Tatewari gyosei*).

However, the slowdown of Japan's economy, which experienced two oil shocks in the 1970s, changed the financial situation of the central government. It was inevitable that the central government would ration public expenditure to overcome its stringent financial situation. As a result, local government's share of specific

6) The central government had actively promoted regional developments in national comprehensive development plan and long-term plans for public works aiming to restrain the concentration of both population and industrials into large cities.

purpose grants declined sharply in the 1980s and early 1990s.

The central control in the provision of local public investment continued under the slowdown of Japan's economy in the 1980s to carry out economic stimulus packages and regional policies. The central government has strategically used local bonds to mobilize local public investment in support of national policies since the mid–1970s, as the following paragraphs explain.

First, local bonds were issued to compensate for revenue shortfalls incurred by local government during Japan's economic slowdown. Japan's economy experienced an unprecedented distress after the first oil shock. The transformation of the Japanese economy from one of high growth to one of slow and stable growth changed the financial pictures of both the central and local governments. The financial reconstruction of the central government in the late 1980s also restricted the central government's ability to provide financial transfers to local governments. The central government borrowed fund for local government beyond its original funding pool in its special account of local allocation tax to compensate its financial shortage.[7] The central fund transferring to local public finance had reached its limit. Instead, local bonds began to be issued to recompense shortages in local public finance in the mid–1970s.

Second, the use of local bonds to finance public investment enabled the central government to pursue diversified national policies. The rationing of specific purpose grants in the late 1980s lessened the control the central line ministries exercised. But the local bonds enabled the Ministry of Home Affairs to participate in national policy formulation by mobilizing local public investment in support of national policies. The Ministry of Home Affairs, which is in charge of controlling local bonds, could promote regional policies through the deregulation of issuing bonds. The ministry established such national initiatives as hometown revitalization activities to correct the overconcentration of the city facilities of metropolitan Tokyo and to

7) The funding pool of local allocation tax is, in principle, fixed as a certain percentage of the national taxes. Since the establishment of local allocation tax in 1954, the central government raised fixed rates to meet the financial shortage of local public finance until 1965. The fixed rates, however, were maintained 32% of the total yields of income tax and liquor tax since 1964 until consumption tax was introduced in 1989. The rates are now 32% of the total yields of income tax and liquor tax. 35.8% of corporation tax. 29.5% of consumption tax and 25% of tobacco tax.

carry out regional developments aiming the tourism and resort area developments in the late 1980s and early 1990s.[8] As a result, prefectures and municipalities have built physical plants such as recreation centers and concert halls with one accord.

Third, local bonds were used to finance local public investment in concert with the central government's countercyclical policies. The central government took anti-cyclical measure by starting public works projects and enacting tax reductions both at the central and local levels to help the ailing economy recover after the collapse of the bubble economy. Local bond revenue also compensated for the subsequent local financial shortages in the 1990s.[9] As a result, local governments' dependency on local bonds to finance local public investment has increased.

The central government can control local bonds by using legal regulation, and administrative permissions, and also by offering financial endorsements in Japan, as described in this and following paragraphs. Clause 5 of the Local Public Finance Law is a central government regulation applying to local government's issuance of local bonds.[10] In principle it stipulates that local governments have to finance revenues other than local bonds for the expenditures. The clause, however, accepts the following expenditure financing through local bonds: (1) expenditure necessary for public enterprises; (2) investment and loans; (3) expenditure required to repay local loans; (4) national disaster response project costs, natural disaster restoration costs, and natural disaster relief project costs; and (5) construction project costs for public facilities.[11]

The central government also regulates bond issuance with regard to the sound financial management of local governments. Local governments with less than the standard tax rate for ordinary taxes or that record a deficit beyond a specified level without carrying out financial reconstruction cannot issue local bonds even though the expenditure category satisfies one of the previously mentioned eligibility criteria, such as financing the construction of public facilities.

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8) Private resources were also mobilized by deregulation for urban renewal and resort development projects thanks to the bubble economic boom in the late 1980s.

9) Local bonds for supporting revenue resources were repeatedly issued in the 1990s.

10) The approving system, in principle, will be abolished after fiscal year 2006.

11) Local governments can issue local bonds to answer special financial needs stipulated by specific laws. Examples are retirement allowance bonds and remote area depopulation countermeasures project bonds.

Moreover, the central government regulates local bond issuance by requiring permission from the Ministry of Home Affairs. The Local Autonomy Law stipulates that "at the present time, prefectures, designated cities, and special wards require the permission of the Ministry of Home Affairs to issue bonds, while other municipalities require the permission of the governor of the relevant prefecture (Clause 174)." The Ministry of Home Affairs has taken an active role in controlling the issuance of local bonds since the late–1970s, such as by manipulating the approval shares that enable local governments to allot local bonds in carrying out their activities.[12)]

Since the 1980s, the Ministry of Home Affairs guaranteed the payment of the principal and interest of local bonds from national financial sources by allocating future financial resources (local allocation tax) in order to obtain local compliance with national policy objectives.[13)]

Fig. 4 describes an example of such a financial guarantee by the central government to carry out local public investment. The figure shows a comparison between the orthodox grant–subsidized activity and a newly promoted activity with the financial support of a local bond and the financial guarantee for its amortization by the future payment of local allocation tax.

In the case of activities subsidized by specific purpose grants, local governments have to contribute their funds to answer their matching requirement. Different matching requirements are applied to local governments in accordance with the application of a special law on the central government's financial burden with regard to public works projects used to develop remote places and sparsely populated areas etc. The central ministries providing specific purpose grants take policy initiatives

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12) The legal restriction limiting the issuance of local bonds for local governments that record a high debt dependency (*kisai seigen hiritsu*) was deregulated after 1977. The central government also deregulated the issuance of bonds for local governments recording a high debt dependency in the 1980s.

13) Bonds for working on comprehensive area development (*Chiikisougou Seibi Jigyosai*) were established in 1978 to assist the autonomous regional development of local governments. The use of the bonds furthered national policy by promoting a suitable area for habitation corresponding to the Third National Comprehensive Development Plan. Measures guaranteeing the amortization of local bonds by the future payment of local allocation have been taken by the central government since 1984 by establishing a special grouping for bonds to promote hometown revitalization activities.

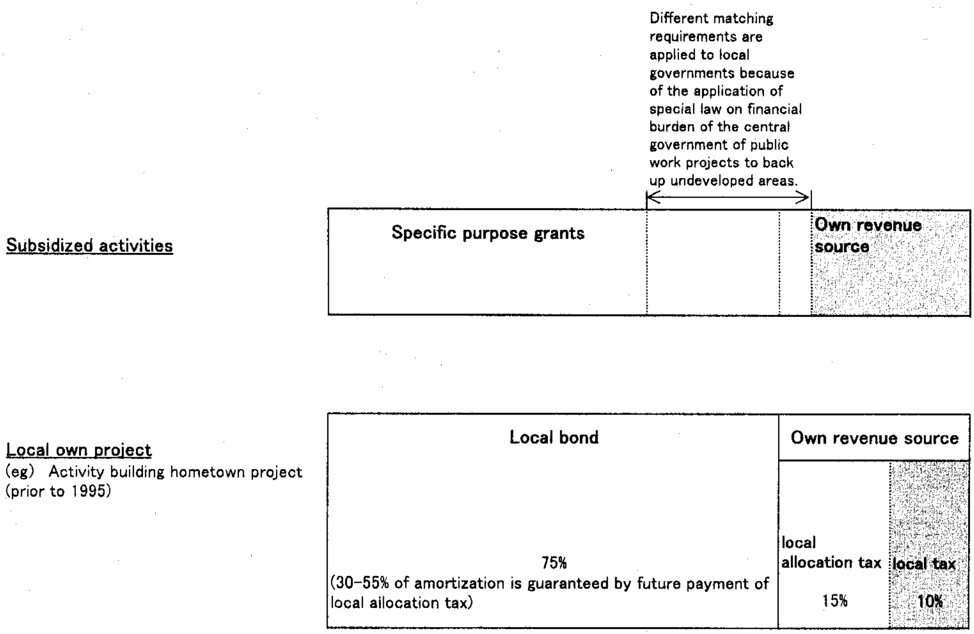


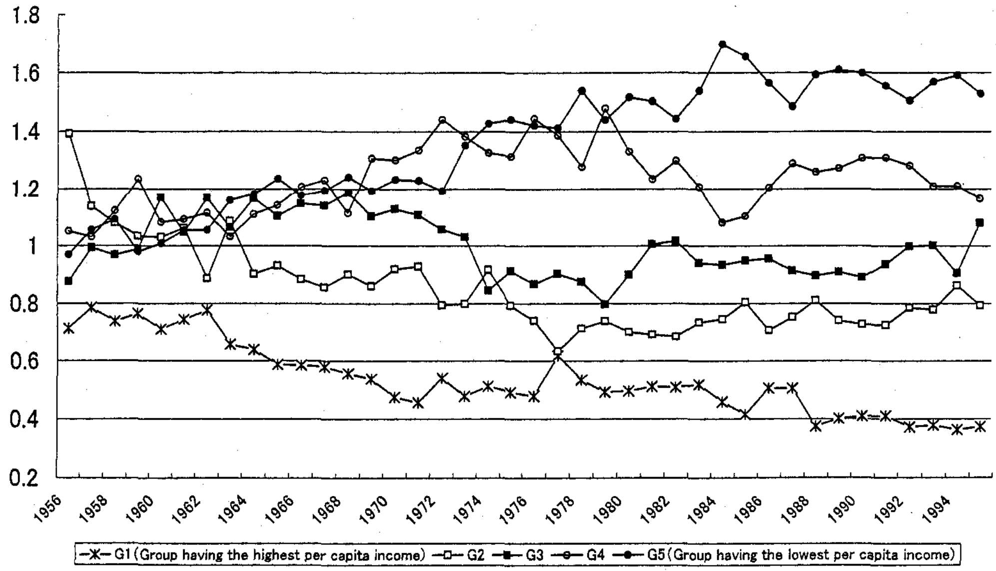
Fig. 4 Financial measures to lessening local financial burden of public investment

and cooperating local government contributes its own revenue sources including local tax revenue, local allocation tax and local bond in case permission is given by the central government.

Since the 1980s, the central government has mobilized local public investment for regional development initiatives by guaranteeing financial resources for local governments both through local bonds and the future payment of local allocation tax. The example shows the financing structure of a hometown revitalization project (prior to 1995). The project records 75 percent of the local bonds allotment. Thus, 75 percent of the project is financed by local bond and 25 percent of it is financed by local financial sources. Local governments can finance through a comprehensive area development works loan, which guarantees 30 to 55 percent of its amortization and interest payments by means of the future payment of the local allocation tax. The Ministry of Home Affairs which is in charge of permitting local bonds and of allocating local allocation tax can take policy initiative in mobilizing local public investment. As a result, the scheme provides the incentive for financially poor local governments to cooperate national policies and to conduct their activities with contributing their small own financial resources.

We examined the distributive impact of local public investment among regions (prefectures) to examine the influence of its funding structure by conducting a quintile analysis. We organized prefectures into five groups, G 1 to G5, for the period between 1956 and 1995 on the basis of their per capita income levels for each year. The G 1 group contains the highest-income prefecture, G 2 the second highest, and G 5 the lowest-income prefectures.[14] There are 9 or 10 prefectures in each group.

The index showing the level of each group's local public investment is measured as follows. First, we calculated a standardized per capita investment, dividing each prefecture's level of public investment by the national average. Second, we obtained the group's allocation level by averaging the standardized allocation levels of each group.



Source: Economic Planning Agency, *Annual Report on Prefecture Income Accounts* (*Kenmin Keizai Keisan Nenpo*), various editions, and the Ministry of Home Affairs, *Annual Report on Local Public Finance* (*Chihouzaisei Tokei Nenpo*), various editions.

Fig. 5 Regional Allocation of Ordinary Construction Expenditure

14) The analysis here used prefecture data excluding Tokyo's prefectural government. The Hiroshima prefecture was excluded for the period 1971 to 1974. This is because the Hiroshima prefecture's prefectural income was not obtained for the period. For the period after 1972, the Okinawa prefecture was included in the analysis because Okinawa was included in the analysis in accordance with the reversion of Okinawa to Japan.

Fig. 5 shows a result of the ordinary construction expenditure. The result shows that the highest–income group, G1, records the lowest investment level throughout the whole period of the development of the Japanese economy. The G 2 group recorded the highest until 1958; it declined throughout the economy's high–growth and stable periods until the late 1970s. G 3 became the highest–investment group in the early 1960s but maintained the national average afterward. The most striking results are obtained for G 4 and G5, the low–income groups, indicating that they increased investment levels since the 1960s and 1970s. They recorded the highest investment levels since the late 1970s.

The results show that local public investment has been allocated to relatively low–income prefectures since the mid–1970s. Judging from the heavy dependence on local bonds and their tied financial guarantee (with the future payment of the local allocation tax) in local governments' financing local public investment, the findings indicate that backward prefectures depend heavily on local public investment since the mid–1970s. The strengthening of the distributive function implies that public investment in Japan has been used as an implicit transfer to maintain local employment and local income levels, irrespective of the central government's policy exploration for the pump–priming effect and regional development.[15]

5. Conclusion

The change in the rate of growth of Japan's economy from high growth to slow and stable growth during the mid–1970s changed the distributional pattern of local public investment in Japan. This is partly due to the shift of the means of the central government's control from specific purpose grants and local bonds to the mobi-

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15) The seminal work showing that public expenditure whose original purpose was not distributive is in practice used as a transfer measure is that of Tullock (1983). He demonstrates how such disguised transfer causes the government failure seen in the expansion and inefficiency of government activities. The study further addresses such disguised transfers in the United States and Europe. Alesina, Baqir, and Easterly (1998) show how public service employment has been used as a distributive measure by analyzing population and city and county census data in 1990. Alesina, Danninger, and Rostagno (1999) also show that government employment compensates for income gaps between northern and southern regions in Italy.

lization of local public investment on behalf of national policies.

The revenue shortfalls caused by the central government's rationing specific purpose grants so as to carry out its fiscal reconstruction, however, have been more or less compensated for by local bonds and borrowings in special accounts created by the local allocation tax.

The central government's aggressive use of local bond policy, and the central control that affords, has diversified national policy through the mobilization of local public investment. This is because the more direct participation of the Ministry of Home Affairs in national policy formation, with the help of local bonds, enables the government to put policy emphasis on regional development to help a slumped Japanese economy recover. The ministry not only employs administrative control by using its administrative power to control local bonds but also mobilizes local governments by giving a financial guarantee for the redemption of principal and interest payments of local bond issues.

The financial device of mobilizing local public investment on behalf of national policies, however, has more or less brought about a moral hazard for local governments in that it creates in those governments a dependence on local public expenditure beyond their financial capabilities.

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