

Taxes and Transfers in Japan's Local Public Finances

Nobuki Mochida

Abstract

A strong inter-regional equity bias has been a distinctive feature of the Japanese local public finance system. This paper shows that substantial equalization of revenues per capita is achieved via transfers from the central government and that, over time, this appears to have substantially improved the regional distribution of income: the Gini coefficient of per capita regional income declined from around 0.17 in 1950 to 0.10 in 1990. Now that considerable regional equality has been achieved, a greater concern for the exercise of local preferences is being voiced.

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Foreword

This paper was prepared for a project on Local Government Development in Japan. The project was organized by the World Bank Institute under the auspices of the Program for the Study of Japanese Development Management Experience financed by the Policy and Human Resources Development Trust Fund of the Government of Japan.

The principal objectives of this Program are to conduct studies on Japanese and East Asian development management experience and to disseminate the lessons of this experience to developing and transition economies. Typically, the experiences of other countries are also covered in order to ensure that these lessons are placed in the proper context. This comparative method helps identify factors that influence the effectiveness of specific institutional mechanisms, governance structures, and policy reforms in different contexts. A related and equally important objective of the Program is to promote the exchange of ideas among Japanese and non-Japanese scholars, technical experts and policy makers.

The papers commissioned for this project cover a number of important issues related to local government development in Japan. These issues include: the process of controlled decentralization; increasing political inclusiveness; redistributive impact of local taxes and transfers; allocation of grants; municipal amalgamation; personnel exchanges; personnel policies; agency-delegated functions; and local policy initiatives.

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Taxes and Transfers in Japan's Local Public Finances

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Japanese local public finances account for roughly 70 percent of general public expenditure and 80 percent of public capital formation. This suggests that, in implementation terms at least, local governments play an important role in the provision of public services. The efficiency and equity characteristics of the Japanese local government system are, therefore, likely to have an important effect on regional and national development. The purpose of this paper is to examine Japan's intergovernmental relations from a fiscal viewpoint. It is divided into four sections. The first section provides an outline of the basic framework of the system. The second provides an analysis of the local tax system. The third provides data on the regional equalization effect of intergovernmental transfers. The fourth and concluding section discusses some lessons of experience to date for other countries as well as for Japan.

Basic Framework of the Current System

Centralized and Decentralized Aspects

The main features of the Japanese system are centralized tax administration, decentralized provision of public services, and dependence of local government on intergovernmental transfers. In other words, intergovernmental fiscal relations are marked by a vertical fiscal imbalance in Japan.¹ Table 1 provides comparative data on vertical fiscal imbalance in 10 major countries based on national accounts. It can be seen that the average amount of imbalance is quite large although the degree does vary from country to country. In particular, three countries, Japan, England, and Australia, exhibit the highest levels of imbalance between expenditure responsibilities of local governments and their tax resources. In Sweden and France the imbalance is more moderate, while in federal states, except Australia, the level of imbalance is relatively low.

Vertical fiscal imbalance can be high if tax shares of local governments are very low and/or if their expenditure responsibilities are very high. In the case of Japan, the latter is more likely to be the reason. The local tax share of total tax revenues in Japan is 36.5 percent, which is on the high side for OECD countries. On the other hand, as already noted, expenditures channeled through local governments are very high, at 70% of the total. Indeed, this share is the highest among OECD countries, higher even than the 50-60 percent observed in the Scandinavian countries. Despite this high rate of spending through local governments, it

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would be inaccurate to characterize Japan as a decentralized system because a considerable amount of decision-making authority has tended to rest with central units. In Japan, the central government exercises its discretionary powers on local expenditure through delegation of program implementation responsibilities to local chief executives financed, at least in part, by specific-purpose grants.

Table 1: Vertical Fiscal Imbalance in Selected OECD Countries (FY 1992) (%)

Country	(a) Expenditure share of subnational government	(b) Revenue Share of Subnational government	Vertical fiscal imbalance	
			Surplus/Deficit	Dependence on Central transfer
			(b) – (a)	Grants as % of current receipts
United States	51.4	45.9	- 5.5	20.9
Canada	65.3	53.2	- 12.1	35.4
Australia	48.6	23.0	- 25.6	40.3
Germany	58.6	47.2	- 11.4	18.5
Denmark	57.3	32.3	- 25.0	45.5
Sweden	47.6	38.7	- 8.9	22.2
United Kingdom	31.9	0.07	- 31.2	79.8
France	31.1	18.0	- 13.1	38.6
Spain	43.6	19.7	- 23.9	46.6
Japan	69.2	36.5	- 32.7	39.6
Average	47.3	27.0	- 20.3	36.0

Source: OECD, National Accounts, 1996; IMF, Government Finance Statistics, 1996.

Large Scale Redistribution of Sources of Revenue²

The above-noted imbalance is addressed by intergovernmental transfers. There is large-scale reallocation of revenue through earmarked and general subsidies in Japan. Table 2 shows the distribution of tax share and fiscal transfer between central and local government. In 1993,

total tax revenues were ¥90,705 billion, which is divided into national and local taxes. Before fiscal transfers, local taxes account for only 37.0 percent of total revenue. However, a substantial portion of national taxes is transferred to the local governments. Major fiscal transfers are of two broad types. Unconditional transfers are tax-sharing grants on a lump-sum basis financed by the local allocation tax. Conditional grants are matching categorical grants that are known as specific-purpose grant. After reallocating the tax sources among levels of government, the final share of total tax revenue accruing to local governments increases to 52.5 percent. This means that one-fourth of central tax revenue is used at the local level.

Table 2: Redistribution of Tax Revenue between National and Local Government (%)

	1950	1960	1970	1980	1985	1993
(1) Government Expenditure						
Net Total/GNP	23.6	18.8	20.3	29.4	27.6	30.0
Net National/GNP	10.4	5.9	5.9	9.9	10.2	10.3
Net Local/GNP	13.2	12.8	14.4	19.5	17.4	19.6
(2) Tax Allocation before Fiscal Transfer						
National Tax/Total Tax	75.2	70.8	67.5	64.1	62.6	63.0
Local Tax/Total Tax	24.8	29.2	32.5	35.9	37.4	37.0
Income Tax/Total Tax	38.6	21.7	31.2	38.1	39.4	36.9
(3) Fiscal Transfers						
Transfer as % of general account	35.1	47.2	48.7	44.0	38.5	36.0
Local allocation tax as % of general account	17.1	17.8	22.0	18.7	17.8	20.4
Transfer as % of local revenues	40.8	39.3	37.7	40.8	34.7	31.8
Local allocation tax as % of local revenues	19.9	14.8	17.0	17.3	15.5	18.0
(4) Final Share of tax after Fiscal Transfer						
of National government	65.2	57.0	51.1	46.0	45.3	47.5
of Local government	34.8	43.0	48.9	54.0	54.7	52.5

Source: Mochida, N. (1993), p. 57.

Note: Transfer includes both local allocation tax and specific-purpose grant.

Intergovernmental transfers are needed not only to balance the budget at the sub-national level, but also to offset regional inequalities arising from differences in physical and demographic endowments. Given regional gaps in tax revenues and financial needs, some means of fiscal equalization is necessary to provide local public services in poor areas. The

most important means devised to handle this problem is the unconditional tax-sharing grant. In Japan, the local allocation tax system plays a key role through the equalization transfer scheme. Although specific-purpose grants, local transfer taxes, and even some local taxes also have the effect of equalization, to some extent the discussion in Japan concerns the local allocation tax because of its key role in the equalization transfer system.

A comparison of per capita local tax revenue and per capita revenue from general fiscal sources (that is, local taxes and local allocation tax) of prefectures shows a substantial reduction of disparities. This can be seen in Table 3 which groups prefectures into five categories according to the index of fiscal capacity, which is defined as the basic fiscal capacity divided by basic fiscal need of each local government. A marked difference is observed in per capita prefectural tax revenues among localities in fiscal year 1993, the largest in Tokyo, ¥196,000, the smallest in Okinawa, ¥60,000, corresponding closely to the difference in their economic resources and the per capita income of their inhabitants. Disproportionate local allocation tax is provided to areas with lower resource bases to achieve some degree of equalization. The correlation between per capita prefectural tax revenue and per capita local allocation tax is -0.71 .

As a result, per capita revenues from general sources in the area with low tax bases increases considerably. A surprise is that the coefficient of variation in prefectural tax revenue, accounting for 0.2408, differs little with that in general revenue, which accounts for 0.2293. This phenomenon resulted in a reversal of the rank-ordering of disparities among prefectures rather than a deterioration of the equalization effect. The degree of reversal in the relative wealth of prefectures can be measured by the rank-ordering correlation. The rank order correlation between per capita prefectural tax and per capita general revenue is -0.5195 . After fiscal transfer, the prefectures with lower tax capacity, as measured by prefectural tax revenue, had the higher total resources, as measured by general revenue. General resources of Aichi, Osaka, and Kanagawa are only a half those of Tottori, Shimane, and Kochi. It may be assumed that the Japanese equalization system reduces geographical fiscal inequalities quite extensively, although many questions about the mechanism remain unsettled.³

MoHA's Role

Two ministries dominate when it comes to local fiscal matters in Japan. One is the Ministry of Finance (MoF) and the other is the Ministry of Home Affairs (MoHA). There is often conflict between the two as the latter plays the role of a counterpower in the central bureaucracy against MoF incursions into local matters. Therefore, MoHA is often said to be "an opposition party within the national government." Today, MoHA has a secretariat, three bureaus, two departments, and a college. Two of these bureaus, the Local Finance Bureau and the Local Tax Bureau, are intimately connected with local fiscal matters. The former deals with planning and implementation of the local finance system. The local allocation tax is the most important fiscal transfer the bureau has devised. The latter is charged with planning and implementation of the local tax system. Since the taxpayer and tax base are the same for national and local taxes, this bureau establishes the organization for

national, prefectural, and municipal levels. Based on the framework provided by the Local Tax Law, each local government prepares its own tax bylaws for its tax administration.

Table 3: Fiscal Equalization by Local Allocation Tax (47 Prefectures, FY 1993)

Classification		Prefectural tax revenue (hundred million)	Local allocation tax (hundred million)	General revenue (hundred million)	Per capita (thousand of Yen)		
					Prefectural tax	Local allocation tax	General revenue
A	Aichi	9,552	69	10,017	143	1	150
	Osaka	11,369	272	12,232	130	3	140
	Kanagawa	9,210	124	9,765	115	2	122
B	Shizuoka	4,495	927	5,853	122	25	159
	Saitama	6,286	1,563	8,145	98	24	127
	Chiba	5,652	1,448	7,408	102	26	133
	Hyogo	5,738	2,286	8,400	106	42	155
	Kyoto	2,800	1,213	4,221	108	47	162
	Tochigi	2,188	1,240	3,621	113	64	187
	Ibaragi	3,122	1,742	5,049	110	61	177
	Fukuoka	4,363	2,394	7,039	91	50	146
	Gunma	2,121	1,203	3,513	108	61	179
	Hiroshima	2,930	1,837	4,971	103	64	174
	Gifu	2,201	1,546	3,927	107	75	190
	Shiga	1,398	1,079	2,574	114	88	211
	Mie	1,949	1,469	3,586	109	82	200
Miyagi	2,342	1,661	4,183	104	74	186	
C	Okayama	1,925	1,752	3,830	100	91	199
	Ishikawa	1,290	1,217	2,688	111	105	231
	Nagano	2,266	2,116	4,606	105	98	214
	Kagawa	1,064	1,072	2,220	104	105	217
	Toyama	1,261	1,388	2,750	113	124	246
	Fukushima	2,120	2,222	4,549	101	106	216
	Nara	1,150	1,348	2,580	84	98	288
	Fukui	1,082	1,152	2,317	131	140	281
	Yamaguchi	1,505	1,757	3,394	96	112	216
	Niigata	2,539	2,828	5,607	103	114	227
	Yamanashi	879	1,228	2,202	103	144	258
D	Hokkaido	5,205	7,114	12,837	92	126	227
	Ehime	1,253	1,854	3,224	83	122	213
	Wakayama	941	1,560	2,600	88	145	242
	Kumamoto	1,364	2,306	3,816	74	125	207

Classification		Prefectural tax revenue (hundred million)	Local allocation tax (hundred million)	General revenue (hundred million)	Per capita (thousand of Yen)		
					Prefectural tax	Local allocation tax	General revenue
	Oita	1,003	1,865	2,984	81	151	241
E	Yamagata	1,007	1,938	3,068	80	154	244
	Saga	740	1,476	2,288	84	168	261
	Nagasaki	1,095	2,320	3,528	70	148	226
	Iwate	1,093	2,489	2,714	77	176	262
	Kagoshima	1,200	2,743	4,085	67	153	227
	Tokushima	688	1,565	2,319	83	188	279
	Miyazaki	815	1,958	2,862	70	167	245
	Okinawa	735	1,800	2,605	60	147	213
	Akita	919	2,198	3,218	75	179	262
	Aomori	1,041	2,471	2,626	70	167	245
	Tottori	486	1,356	1,914	79	220	311
	Shimane	615	1,848	2,546	79	237	326
	Kochi	590	1,863	2,531	71	226	307
F	Tokyo	23,191	-	24,447	196	-	206
	Average	138,779	80,878	229,456	112	65	186

Source: Ministry of Home Affairs

Note 1: general revenue means the sum of prefectural tax, local allocation tax, and local transfer tax.

Note 2: 47 prefectures are grouped into 5 categories based on the index of fiscal capacity.

A 1.0~, B 0.5~1.0, C 0.4~0.5, D 0.3~0.4, E~0.3

Division of Expenditure Responsibility

It is local government that shoulders the responsibility of Japan's domestic administration. Almost all administrative functions closely connected with the daily life of the nation are carried out by local government. As a result, local public finance accounts for approximately two-thirds of the public expenditure burden, on the basis of final disbursement. Table 4 shows how expenditure responsibilities are shared between national and local governments across a range of public services. As can be seen, the central government directly performs relatively few public functions such as national defense, pension-related public welfare expenditure, and expenditure to repay a debt. About 80 percent of the disbursements of the national government's general account are simply transferred to other accounts, with local government gaining the largest share. In contrast, local governments are responsible for a major share of public spending, including that for

national land conservation and development, school education, social education, police and fire-defense, social welfare, sanitation, and general administration.

The strength of Japan's system is that considerably more public spending takes place at the local level than at the national level. The assignment of expenditure responsibilities is determined by national legislation (such as the Local Finance Law and the Local Autonomy Law) and cannot be altered at the discretion of the central government. The central government has no legal right to issue unfunded mandates to local government. Nevertheless, the national government remains heavily involved in almost every aspect of local public spending. Unlike the American and Canadian systems, there is no clear separation of central and local function. As a result, major programs (education, health, public works) are formulated by national ministries and financed by many specific grants. Therefore, the issue for Japan is not so much to change/enlarge the expenditure assignments themselves, but to redefine responsibilities for designing, implementing, and financing these assignments.

Table 4: Expenditure Shares between National and Local Governments (FY1994)

Expenditure Category (Percent share of total in parenthesis)	Percent Spent Through	
	National Government	Local Government
General government (13.2)	19	81
National defense (3.3)	19	81
National land conservation (21.2)	21	79
Industry and economy (7.1)	21	79
Education (14.8)	13	87
Social welfare (22.5)	33	67
Pension (1.3)	92	8
Debt service (15.2)	62	38
Other (1.4)	100	0
Average	34.5	65.5

Source: Ministry of Home Affairs, Local Public Finance System, 1996.

In this respect, both the reform of agency delegated functions and reduction of the national government disbursement for specific purposes are of great importance. In addition to ADF, specific-purpose grants are distributed on the condition that the recipient follow the directives issued by the national government. If a local government fails to observe national directives, it is asked to refund the disbursement in whole or in part. A basic principle that underlies national government control seems to be uniformity throughout the country. However, detailed conditions attached to grants lead to waste and administrative inefficiency, and they do not sufficiently take local preferences into account.

Characteristics of Local Tax System in Japan

*Tax Assignment*⁴

In Japan, the ratio of total tax burden to GDP of 27–28 percent does not seem as high as those of other major OECD countries. Total tax revenue in fiscal year 1994 amounted to ¥86.5 trillion, 62.4 percent is national taxes and 37.6 percent is local taxes.⁵ The ratio of local tax of local governments total revenue is 35.2 percent, which is not always low from the viewpoint of international comparison.⁶ Every local government is authorized by the Local Tax Law to levy and collect several kind of local taxes. Final authority to levy local tax, however, is guaranteed by local ordinances and bylaws enacted by each local assembly. If a local assembly does not establish local ordinances and bylaws, the taxpayer has no obligation to pay taxes to the local government.

A good local tax system should satisfy several criteria. The first is revenue response to economic growth. In the long run, it is desirable that local revenue increase and decrease in line with local expenditure needs. Although a buoyant tax base allows windfall revenue gains to local government, this problem can be overcome provided that the long-run local elasticity of the tax base to economic growth is equal to one (Bennett and Krebs 1987, p. 251). It should be noted that unlike United States and the United Kingdom, where local governments rely predominantly on property tax, Japan's local tax system does well in revenue response to economic growth. This is mainly because the major source of local own-revenue is a kind of tax-base sharing that is similar to a surtax on the national income tax base. Approximately 60 percent of prefectural taxes revenue and 40 percent of municipal tax revenues are imposed on the income of individuals and corporations.

There is good evidence to show that elasticities of local taxes are higher than unity. Table 5 indicates that elasticity of tax revenue to economic growth is 1.26 and 1.35, respectively, for prefectures and municipalities during 1971–90. Among local taxes, municipal individual inhabitants tax is highest, at 1.74, prefectural individual inhabitants tax accounts for 1.43, and municipal corporation inhabitants tax accounts for 1.42. Contrary to general belief, the responsiveness of property tax, which is called the fixed-assets tax by MoHA, is not less than unity, primarily because of the sharp rise in market value of land in the late 1980s and the assessments made at regular intervals. According to these elasticities, the share of local tax in total tax revenue is relatively high in comparison with other unitary states.

The individual inhabitant tax is a burden-sharing tax—all residents are required to share the cost of maintaining local community functions according to their ability to pay. It can be likened to a membership fee for being a part of the local community.⁷ The inhabitants tax has two forms, each based on a different tax source: per capita and income. The former is a lump-sum component, while the latter is levied on income in a manner similar to the collection of the national individual income tax. The inhabitants' income tax, however, is assessed on the income of a year previous to the income assessed in the national income tax. Generally speaking, the inhabitants' tax is the best choice for raising a large amount of local tax revenue, because it places the responsibility on as many inhabitants as possible to finance local public services.

The second criteria is small revenue fluctuations over time. Strong fluctuations in revenue during the business cycle can be regarded positively for a national tax, but is not for local taxes. First, local expenditures are fairly continuous and revenue fluctuation makes planning difficult. Second, local expenditures should not run contrary to national economic policy, although the scope for local authority to pursue a countercyclical budget policy is rather limited. As Table 5 indicates, the fixed-assets tax produces fairly stable revenue. In contrast, corporation inhabitants tax and enterprise tax fluctuate strongly during business cycle, since these taxes are generally imposed on net income, not on sales or turnover. Individual inhabitants tax fluctuates less than corporation inhabitants' tax and enterprise tax. Apparently the instability of enterprise tax revenue is its most serious problem, because of its large share in prefectural tax revenue.⁸ Introduction of a new tax base such as sales, capital, or value added taxes has been suggested in order to make tax revenue less sensitive to business conditions. The introduction of a local consumption tax in fiscal year 1997 may also be a first step toward revenue stability.⁹

The third criteria is distribution among local authorities. A local tax system should produce a relatively balanced distribution of revenue among local government in relation to their expenditure needs. Large differences in the tax base between localities may cause many undesirable effects that require intergovernmental fiscal equalization. Tobacco tax levied on the number of cigarettes score highly in balanced distribution of tax revenue among localities. The base of the fixed-assets tax is also evenly distributed throughout the country. It should be stressed that regional disparity in financial capacity has been gradually reduced during postwar, high economic growth era. Table 5 indicates that the Gini coefficient of per capita prefectural tax revenue decreased from 0.2297 in fiscal year 1965 to 0.1113 in fiscal year 1994. However, a marked difference is still observed in per capita prefectural tax revenues among localities in fiscal year 1994, the largest in Tokyo, ¥183,000, the smallest in Okinawa, ¥56,000, corresponding closely to the difference in their economic resources and the per capita income of the inhabitants.

The fourth criteria is local fiscal autonomy and fiscal equivalence. The power to determine the tax rate and base allows local variations in fiscal burdens to be sensitive to local preferences, which should encourage fiscal accountability. Despite strict uniformity,¹⁰ there are two options available to local government for setting the tax rate and base in Japan. One is that the central government sets fixed tax rate for a number of local taxes, but provides ranges for some others. Each local authority can use the standard tax rate with an upper-limit set by MoHA and MoF.

Table 5: Evaluation of Local Tax System

	Tax revenue in FY 1995		Criteria for local tax system						Revenue Elasticity ¹	Fluctuation ²
			Distribution among localities		Fiscal equivalence					
	million Yen	%	FY1965	FY 1994	Actual range of tax rate (number of localities)					
(Gini coefficient)			(Gini coefficient)	below standard tax rate	at standard tax rate	over standard tax rate				
Prefectural tax										
Inhabitants tax										
individual	2,662	19.1	0.261	0.1504	0	47	0	1.43	0.88	
interest rate	991	7.1	-	0.1760	0	47	0	-	-	
corporation rate	805	5.7	0.3192	0.1374	0	1	46	1.13	1.49	
Enterprise tax	4,235	30.4	0.3225	0.1708	0	40	7	1.26	1.28	
Prefectural tobacco tax	378	2.7	0.0823	0.0583	0	47	0	0.90	1.52	
Light oil delivery tax	1,332	9.5	0.1446	0.1403	0	47	0	1.15	0.99	
Automobile tax	1,587	11.4	0.1924	0.0829	0	40	0	1.08	0.86	
Real property acquisition tax	787	5.6	0.2540	0.1557	0	47	0	1.27	1.05	
Automobile acquisition tax	611	4.3	-	0.1132	0	47	0	1.21	0.77	
Others	520	3.7	-	-	-	-	-	-	-	
Sub-total (A)	13,908	100.0	0.2297	0.1113	-	-	-	1.26	0.74	
Municipal tax										
Inhabitants tax										
individual	6,532	33.0	0.2184	0.1661	0	3237	0	1.74	0.75	
corporation rate	2,273	11.4	0.3017	0.1611	0	1785	1237	1.42	1.04	
Municipal tobacco tax	669	3.3	0.0827	0.0583	0	3237	0	0.90	1.50	
Fixed assets tax	8,429	42.6	0.1552	0.1268	0	2944	289	1.40	0.52	
City planning tax	1,304	6.5	-	0.4031	-	-	-	1.49	1.05	
Others	559	2.8	-	-	-	-	-	-	-	
Sub-total (B)	19,766	100.0	0.1694	0.1441	-	-	-	1.35	0.61	

Source: MOHA, Statistical yearbook for local tax (Chihozei ni kansuru sankokeisusiryō), for each year.

Notes: 1) Measured as elasticity of tax revenue to growth during 1971-90.

2) Measured as the coefficient of variation during 1971-90.

But principle and practice differ. Good evidence for this is presented in Table 5. There are no localities with a tax rate below the standard tax rate, because these localities are prohibited from issuing local bonds by the Local Public Finance Law.¹¹ It is difficult to find any tax competition among local governments in Japan. At the same time, all but one prefecture raised corporate tax over the standard tax rate, but they did not increase personal tax for fear of the electoral consequences. Excess tax revenues levied by local governments over the standard tax rate represent only ¥1,878 hundred-million at the prefectural level and ¥4,751 hundred-million at the municipal level. The former accounts for only 1.3 percent of total prefectural tax revenue, and latter for 2.3 percent of total municipal tax revenue. As a result, almost all localities use a uniform rate for the same tax base. For example, in fiscal year 1996, 2,944 out of 3,233 municipalities applied the same standard tax rate to the property tax base. This suggests that there is strong preference for equal access to public services and equitable sharing of the burden in Japan.

The other option is concerned with the imposition of new taxes not listed in the law. Local government is given the authority to propose new taxes, but must seek the approval of the MoHA and MoF. In fiscal year 1996, only 14 prefectures and 21 municipalities were given permission to use nonlisted taxes such as a nuclear fuel tax on nuclear power plants. Local governments in Japan have relatively large receipts from local taxes, but since the flexibility in determining the tax base and rate is strictly limited, it is difficult to see how they can be accountable to their constituents at the margin, as both efficiency and local autonomy require.¹²

Local Public Finance Program

Japan's intergovernmental system is well-designed to enforce fiscal responsibility. The probability of a local government going bankrupt or getting itself into severe financial difficulties is less than in North America or Western Europe. As Reed (1986) points out very clearly, Japan is like France in the sense that the central government takes responsibility for enforcing proper financial practices on local government, while in other countries this responsibility lies more with the local electorate and the banking system.

In this regard, attention should be paid to the role of the Local Public Finance Program. The Local Public Finance Program serves as a tool to estimate annual aggregate local revenue sources to cover standardized local spending. MoHA assumes the role of formulating the Local Public Finance Program every year, and it has primary responsibility for ensuring that local governments have enough revenue to balance the program. On the expenditure side, the Local Public Finance Program covers the whole of local governments' standard activities except for special local public enterprise accounts, which are run on an independent profit system, and a few other special accounts. On the revenue side of the program, it covers all the standard local revenue sources such as local taxes, local allocation tax, national disbursement, local loans, fees, and tuition. The most important function of the Local Public Finance Program is to ensure fiscal responsibility, because if the estimated program does not balance in the year, MoHA must propose

some measure such as local tax amendments, increases in the Local Allocation Tax, or an increase in local loans.

As the following episode indicates, a kind of special measure, such as borrowing from the Fund Management Board of the MoF and a deficit-covering bond issue, is not determined automatically, but is based on arbitrary political negotiation between MoHA and MoF. MoHA is responsible for the Local Public Finance Program, and it negotiates very hard with the MoF in order to secure sources of revenue for local governments. In principle, the tax-sharing ratio of Local Allocation Tax must remain unchanged, even if the total amount of the financial shortage exceeds the legal amount of local allocation tax. The national government is required to raise the tax-sharing ratio if the legal amount of local allocation tax differs "continuously" and "remarkably" from the financial shortage. But this fundamental principle could not be applied strictly in the post-rapid-growth era. In practice, the short-term borrowing from the Fund Management Board of the MoF and issue of deficit-covering local bonds played a key role in local public finance in addition to raising the tax-sharing ratio.

This can be found in table 6 which summarizes the "Special Measure concerning Local Public Finance" after the oil crises. The discussion was focused on whether the tax-sharing ratio would be altered based on the provision of local allocation tax law (clause 2, article 6-3). By fiscal year 1984, both short-term borrowing from the Fund Management Board of the MoF and the issue of deficit-covering local bonds played a key role in the local public finance. In fiscal year 1977, while MoHA and the representatives of local authorities claimed a rise in the tax-sharing ratio of 5 percent, MoF has rejected this request because of the huge financial deficit in the national budget. As a result, the following memorandum was confirmed between the minister of finance and the minister of home affairs in 1977: (a) to make up for the amount of financial shortage by increases in both the local allocation tax and deficit-covering local bonds; and (b) to increase the amount of local allocation tax by transferring provisional local grants from the general account and by borrowing from the Fund Management Board of the MoF. In the latter case, it was agreed to redeem a half amount of the principal and the total amount of interest by the burden of the general account of national budget.¹³

However, revenue of the three national taxes increased steadily in the "bubble economy" of the late 1980s. The amount of financial shortage, therefore, has been reduced quite extensively. In fiscal year 1984, the following new memorandum was confirmed between the two ministers: (a) to suspend borrowing from the Fund Management Board of the MoF as a rule after fiscal year 1984; (b) to redeem half the amount of both principal and interest by the burden of each national and local government; and (c) to transfer a special addition of local allocation tax from the general account of national budget, in place of borrowing from the Fund Management Board of the MoF.

Table 6: Special Measure Concerning Local Public Finance (hundred million yen)

Fiscal Year	1975-79	1980-84	1985-89	1990-97
1. Amount of financial shortage	28,046 (100)	20,593 (100)	16,514 (100)	46,213 (100)
2. Increase in local allocation tax	15,413 (54.9)	9,757 (47.4)	2,709 (16.4)	24,783 (53.4)
-borrowing from Trust Fund Bureau	14,408 (51.3)	8,932 (43.3)	900 (5.4)	20,812 (45.6)
-other	1,005 (3.5)	825 (4.0)	1,809 (10.9)	3,971 (8.6)
3. Increase in local bond	12,676 (100)	10,836 (52.6)	11,872 (71.9)	21,430 (46.4)
4. Increase in local tax	0 (0)	0 (0)	1,933 (11.7)	0 (0)

Note: Figures in parentheses are percentage of the amount of financial shortage. All figures are average per year.

Source: Ministry of Home Affairs, 1989..

Intergovernmental Fiscal Transfer and Regional Disparity¹⁴

Evolution of Fiscal Equalization

The first regular scheme for equalizing local finance was the local distribution tax in 1940, which was carried out in connection with tax reform of central and local governments corresponding to the quasi-war situation.¹⁵ The local distribution tax was a kind of national tax, and the proceeds were shared with local units. The funds were distributed among localities without restriction, not by the tax source principle, but by a formula designed to provide equalization. However, the local distribution tax had some defects from the viewpoint of local autonomy. First, the tax-sharing ratio varied in practice from year to year, partially in accordance with the fluctuation in receipts caused by the sensitivity of income taxation, and partially in keeping with the fiscal deficit in national finance. Second, in the distribution tax, the total amount to be given to individual local units was divided into two parts, which were apportioned separately: one according to the need for services, the other according to fiscal capacity, and these parts had no relationship with each other.

A big change in the basic structure of the fiscal equalization system was brought about by the U.S. Occupation after World War II. Great stress was placed on the importance of local autonomy in a democratic nation, and the prewar system was completely restructured in order to encourage decentralization. In accordance with the

Shoup Recommendation, the distribution tax was converted to the local finance equalization grant in 1950 (*chihozaisei heiko-kofukin*).¹⁶

It is true that the equalization grant was more reasonable than the distribution tax. The equalization grant was computed by means of a formula that contained two parts, the first relating to the measure of the local need for basic services, and second relating to the measure of local financial ability.¹⁷ The total financial capacity was then subtracted from total financial need, and the difference served as the basis for computing the grant for each locality. In the case of the equalization grant, the total amount was determined more closely in accordance with the difference between fiscal needs and resources of localities, irrespective of national tax revenue.

Four years of experience revealed that it had not worked as well as had been hoped. The aggregate sum of the grant was not paid out of the general funds of national government as computed by the formula, but was determined every year, taking into consideration, among other things, the degree of stringency in national finance. So, every year it gave rise to friction between local and national officials in the determination of the total amount. In view of these considerations, the equalization grant was abolished in 1953, and in its place the local allocation tax (LAT) was introduced in 1954.

*Legal Framework and Operation*¹⁸

LAT is governed by the local allocation tax law. This law stipulates that LAT should be based on a uniform formula; the final authority to approve the distribution lies with the National Assembly. According to the law, the MoHA is responsible for the operation (calculating the amount of LAT) of the transfer and for determining modification coefficients.¹⁹ Not granting MoHA the final authority to approve the formula and unit costs is an important mechanism to deter any attempt to manipulate distribution. A certain degree of flexibility is also given to MoHA, because it has the authority of determine modification coefficients, which marginally affect the distribution of LAT.

In addition, MoHA has the responsibility to collect data, which are used for the calculation of LAT and to put them in order. And each governor is duty-bound to present these data to MoHA, and each mayor is obligated to present these data to the governor. What kind of role do local governments have on operating LAT? In the LAT for prefectural government, all staff are bound only to collect data and present them to MoHA and the Local Autonomy Information Center. Paradoxically, only MoHA is calculating LAT.²⁰

This legal framework ensures that no single locality or senior official effectively influences the distribution of LAT in favor of a particular region without affecting many other regions.

*Practical Effects of Fiscal Equalization*²¹

Now we proceed to analyze the practical effects of the Japanese system on the general revenue of local bodies. To determine the actual degree of equalization achieved, per capita local allocation tax is added to the per capita local tax in order to obtain a notional total reflecting the area's resources after the addition of the local allocation tax—this is termed general financial resources (GFR). The disparity is then determined, as measured by the Gini coefficient, in the GFR, and it is compared with the initial disparity in local tax per capita. The extent of the improvement (or deterioration) can then be measured as the difference between the Gini coefficient of local tax and that of GFR, divided by the former. This measure can be expressed by the following equation:

$$\phi = (G_2 - G_1) / G_2$$

Where G_1 stands for the Gini coefficient of GFR, G_2 for the Gini coefficient in local tax, and ϕ denotes the extent of the improvement (I have termed this the equalization coefficient in this chapter). Figure 1 indicates the change in the extent of improvement measured by the Equalization Coefficient. As Figure 1 demonstrates, the extent of improvement has changed drastically every ten years.

Figure 1. Extent of Equalization by LAT

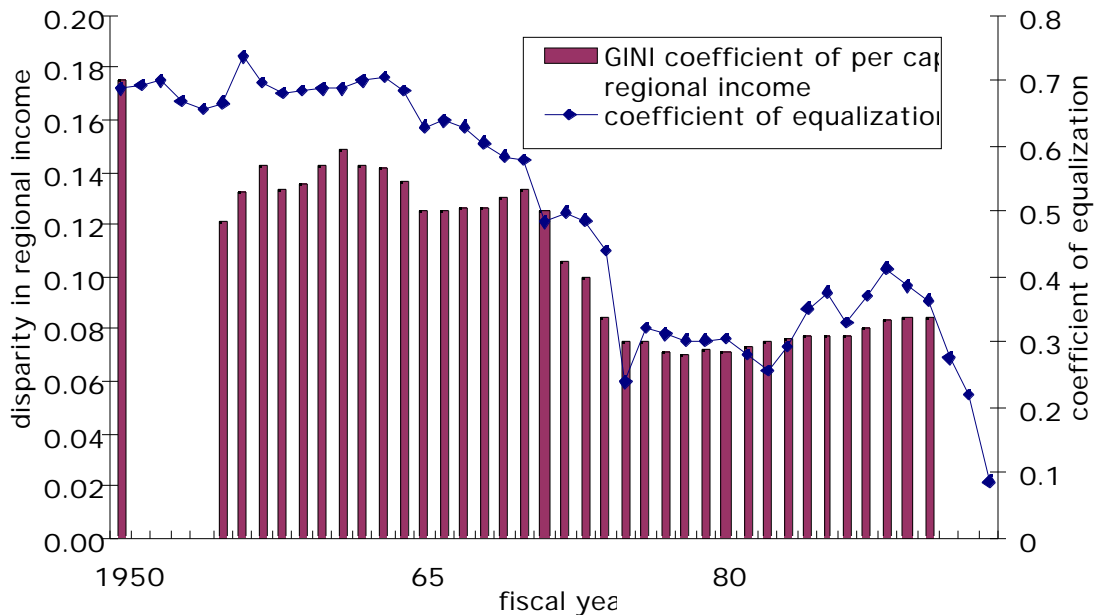
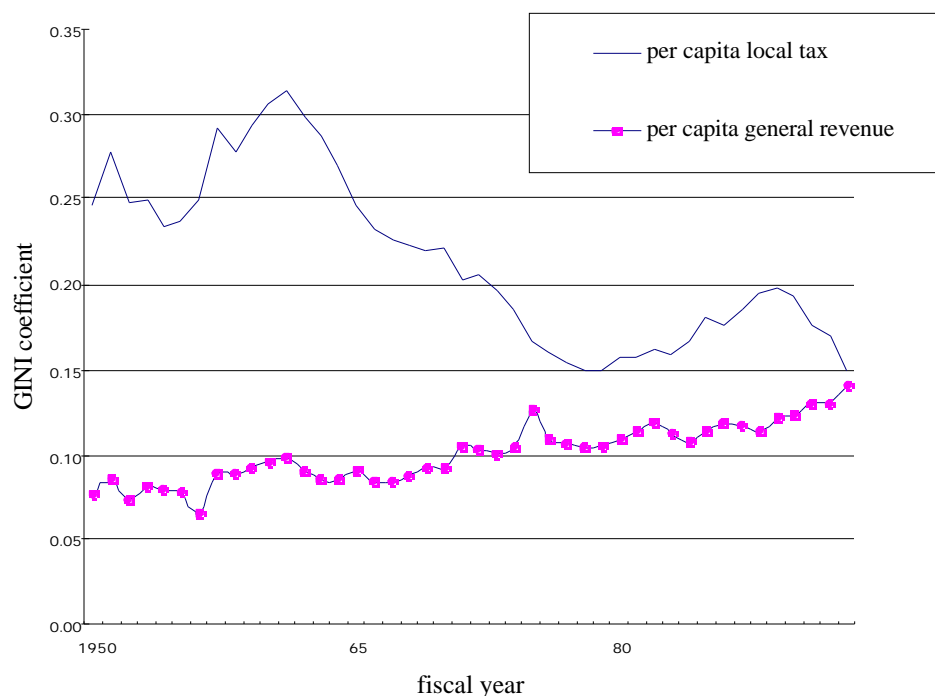


Figure 2: Regional distribution of fiscal resources

THE FIRST HALF OF THE RAPID-GROWTH ERA (1954 TO 1964). Increase in pre-grant disparity is a feature of this period. The disparity in financial resources among rich and poor local authorities became larger and was maintained at a high level. A large number of young people moved from rural areas to the metropolitan areas such as Tokyo, Osaka, and Nagoya. To deal with this social problem, the political slogan of "Improvement of Regional Disparity" became one of the main national policy goals and was embodied in the National Comprehensive Development Plan, established in October 1962. In line with this national policy guideline, local allocation tax was distributed mainly to the backward districts in inverse proportion to their financial capacities. As a result, local allocation tax served to reduce resource disparities by 70 percent each year.

THE SECOND HALF OF THE RAPID GROWTH ERA (1965–74). The reduction of pregnant disparities and the reversal of the rank-ordering is a distinctive characteristic of this period. There was a sharp decrease in the disparities among rich and poor districts. The Gini coefficient of per capita regional income decreased from 0.1248 in fiscal year 1965 to 0.0753 in fiscal year 1975. This improvement in regional disparities was not caused by the success of the National Comprehensive Development Plan, but by the dispersion of factories around the country and the increase in the number of people employed in the local public works. Nevertheless, the distribution of the local allocation tax followed the principle of equalization all the more. As a result, resources disparities actually increased after the equalizing effect of the local allocation tax is taken into

account (see figure 2). However, this increase actually resulted in a reversal of the rank-ordering of disparities among prefectures. We should notice that the sharp decline in the equalization coefficients means enforcement of improvement rather than the deterioration of the equalizing effect.

THE OIL CRISES AND AFTERWARDS (THE MID-1970S TO THE MID-1980S). Gradual increase in pregnant disparity is a characteristic of this period. During this time, the disparities in the per capita local tax began to increase again as a result of population concentration in the Tokyo metropolitan area caused by the internationalization of financial market. As figure 2 demonstrates, the Gini coefficient of the per capita local tax increased gradually after the oil crises. At the same time, the negative correlation between per capita tax revenue and the per capita local allocation tax became weaker, because of a shortage in the total amount of local allocation tax. As a result of these trends, reversal of the rank-ordering of disparities among prefectures was corrected somewhat.

THE BUBBLE ECONOMY AND THEREAFTER (1985 TO THE PRESENT). A sharp reduction of pre-grant disparities and a reversal of rank-ordering is a characteristic of this period. There was a marked decrease in the regional disparities, as figure 2 indicates. The Gini coefficient of local tax declined from 0.19 in fiscal year 1988 to 0.15 in fiscal 1993. As a result, the equalization coefficient has dropped drastically, from 0.4120 in fiscal year 1988 to 0.085 in fiscal 1993. It is noteworthy that there is little difference between pre-grant disparities and the area's resource disparities after the addition of local allocation tax. However, these trends do not mean there was a deterioration of the equalization effect, as mentioned above, but instead a reversal of the rank-ordering of disparities among prefectures. These trends can be explained by both fundamental tax reform and the collapse of the bubble economy.

Implications of the Japanese Experience

Relevance to Developing and Transitional Economies

The defining characteristic of Japan's system of intergovernmental fiscal relation has been the strong collective preference for equal access to public goods. While local autonomy was also a popular objective, especially among progressive or left-wing politicians, equal access to public goods and fair sharing of the burden of financing these goods were viewed as essential for economic and social development. Interregional redistribution was, therefore, the central issue for Japan's system of intergovernmental fiscal relations. A Japanese-style approach, with the assignment of expenditure responsibilities determined by national legislation (such as the local finance law and the local autonomy law), and not alterable at the discretion of the central government, may be a good solution for societies that have substantial regional tensions. The central government must have no legal right to place unfunded mandates on local government, but

the central government does exercise its discretionary powers on local expenditure through the delegated function, financed by specific-purpose grants.

In developing and transitional economies, income disparity across regions tends to worsen after the initial decentralization efforts. Japan experienced large regional disparities in the early stage of postwar economic development. The Japanese government responded, and attention should be paid to the significant role played by the local allocation tax.²² LAT is distributed according to a uniform formula based on basic financial need and basic financial capacity. The application of the formula contributed to the removal of intense negotiation and lobbying during postwar development. LAT is also paid annually to local governments with basic financial needs that exceed their financial capacity, and it varies directly with local fiscal needs and inversely with local fiscal capacity. Such an approach corrected horizontal fiscal imbalance in Japan. Finally, LAT is not a kind of general grant, but a shared-tax system. An automatic increase in major national taxes was the cause of a continuous increase in the financial pool of the local allocation tax during the rapid growth era.

Current Issues in Japanese Local Finance

The current system faces considerable challenges in the medium term, given the changing preference of the public with respect to local autonomy. In the 1990s, Japan has faced the second transitional phase since World War II. This means a shift away from a society that emphasizes equal access to public services and equitable sharing of the burden of paying for them, toward a society that gives priority to the individual citizen's expressed preference. Where local governments are unable to set their own tax rates, the concept of local accountability does not function effectively. The current system needs to evolve during the process of fiscal decentralization in order to redefine expenditure responsibilities, gain more flexibility in tax rate setting, and to enhance transparency in the equalization transfer scheme.

In Japan, the national government remains heavily involved in almost every aspect of local public spending. Unlike the American and Canadian systems, there is no clear separation of central and local function. As a result, major programs (education, health, public works) are formulated by national ministries and financed by many specific grants. Therefore, the issue for Japan is not so much to change and enlarge the expenditure assignments themselves, but to redefine responsibilities for designing, implementing, and financing these assignments. In this respect, both reexamination of agency-delegated functions and reduction of the national government disbursement for specific purposes are important. Detailed conditions attached to grants lead to waste and administrative inefficiency, and they do not sufficiently take into account local preferences.

Japan's local tax system scores highly in revenue response to economic growth. However, the corporation inhabitants tax and the enterprise tax fluctuate greatly during the business cycle, since these taxes are generally imposed on net income, not on sales or turnover. A marked difference is still observed in per capita prefectural tax revenues among localities. Local governments in Japan have relatively large receipts from local

taxes, but since the flexibility in determining the tax base and rate is strictly limited, it is difficult to see how they can be accountable to their constituents at the margin, as both efficiency and local autonomy require. Therefore, the issue for Japan is how to make the local tax system more accountable and ensure stability of tax revenue.

Local accountability is indispensable not only for taking into account local preference but also for macroeconomic control. We can draw some relevant points from European experience for Japan facing with heavy fiscal deficit. As measured by the real rate of growth in local government spending, both England and Norway are countries where control appear to be easy to apply because their local governments do not have their own taxation of much importance. On the other hand, Denmark and Sweden, who rely on their own taxation and local accountability, did better. This seems to confirm that even when local authorities are free to decide on their own income tax rate, it is through negotiations would it be possible to have the necessary macroeconomic control.

After the burst of so called bubble economy at the beginning of 1990, financial shortage of Japan's local finance has been increasing drastically as indicated by Table 6. On this background local governments as a whole had to borrow huge amounts of short-term money from Fiscal Investment and Loan Program of MoF and had to issue deficit-covering local bonds almost every year. The weight of local bond revenue to total local revenues has reached 15.2 percentage which is the worst since the World War II. In 1998, fiscal deficit of Japan's general government accounted for 4.7 percentage of GDP, of which 1.9 percentage was the share of local government. Of course there are many policy options to reduce fiscal deficit, but it should be stressed that own taxation results in local accountability and that negotiation system is better than formal control through grants and tax ceiling (on this point, see Mochida and Lotz 1999).

Given Japan's history of strong collective preference for equal access to public goods, it is unrealistic to imagine that local autonomy will evolve toward a system that will allow substantial regional differences to reemerge. Therefore, a role for LAT will remain. However, the present LAT system is not a complete one, but is still evolving.

An effective intergovernmental transfer system, in general, should satisfy several criteria. The first criteria is revenue adequacy. The local allocation tax is not a kind of general grant, but a shared-tax system. An automatic increase in major national taxes was the cause of a continuous increase in the financial pool of the local allocation tax during the rapid growth era. At the same time, total fund of transfer is sensitive to business conditions because a major component of the fund is income-elastic national taxes. During the period of 1970–95, the rate of increase in the financial pool for transfer has changed between –14.1 percent and 43.5 percent every year. Indeed, both short-term borrowing from the Fund Management Board of the MoF and deficit-covering local bond issues play a key role in filling the gap between total entitlement of local allocation tax and the financial pool of the transfer in the post-rapid-growth era. A future reform necessary for revenue adequacy is to make the financial pool less sensitive to business conditions and more stable.²³

The second criteria is local tax effort. Basic financial revenue is measured by using figures of the major tax base and the standard tax rate. To retain incentives for local

government to collect their own tax, basic financial revenue is calculated based on the prescribed percentage of the sum of local tax revenues. Regions with high tax effort are not penalized, and regions with low tax effort are not encouraged. As for tax effort, however, the local tax system is a question. Concerning local taxes, the base and rates of general taxes cannot be determined by the independent initiatives of local government under the local tax law. The tax base and the tax rates can be altered by the proposal of both the MoHA and the MoF. This implies that a uniform rate is levied on the same tax base in all prefecture and municipalities. Present local tax systems should be changed into more flexible systems, in which the tax rate is determined at the discretion of local governments. In order to win national taxpayer's confidence, on the other hand, recipient local governments should express their efforts to reduce LAT by enlarging the relevant tax bases or using a non-listed local tax.

The third criteria is equity. Because local allocation tax is paid annually to local governments with basic financial needs that exceed their basic financial capacity, it varies directly with local fiscal needs and inversely with local fiscal capacity. Such an approach actually corrected horizontal fiscal imbalance in Japan. Before the 1970s, the transfer system contributed significantly to equality. But after that, as regional fiscal disparities have fallen over time, there has been less inequality to fix through local allocation tax and the intensity of the equalization effect has fallen. Future reform, therefore, should be carried out based not only on equity criteria, but also on efficiency grounds in order to eliminate or reduce "differential net fiscal benefits" which encourage fiscally induced migration.

The fourth criteria is transparency and stability. Local allocation tax is distributed according to a uniform formula based on basic financial need and basic financial capacity. The application of the formula contributed to removing intense negotiation and lobbying during postwar development. However, calculation of the transfer became too complicated for local governments to forecast their own revenue(including the transfer) in order to prepare their budgets. A kind of special measure, such as borrowing from the Fund Management Board of the MoF and deficit-covering bond issues, is not determined automatically, but based on arbitrary political negotiation between MoHA and MoF. Future reform is necessary to strengthen the transparency of the present system.

Endnotes

1. Vertical fiscal imbalance is the disparity between revenue means and expenditure needs at various levels of government. This results from the division of expenditure responsibilities and revenue-raising powers between the central and local governments.
2. For the historical development of the equalization scheme in Japan, see Mochida 1993 chapters 4 and 5.
3. It is to be noted that these figures refer merely to the per capita amount of the prefecture. Financial needs for local function are not necessarily proportional to the number of inhabitants. In a sparsely populated district, for example, per capita revenue

produces a large figure, in spite of the low level of accomplishment of services. A densely settled district, however, requires fiscal means beyond the average.

4. This section is based on Ishi (1993) and MoHA (1996a, b, c).

5. The major components of total tax revenue are income tax, consumption tax, and property tax. The amount of income tax was ¥50.2 trillion in fiscal 1994, of which 65.3 percent is national tax, 18.7 percent is prefectural tax, and 16.0 percent is municipal tax. The amount of consumption tax is ¥20.7 trillion, of which 76.8 percent is national tax, 19.3 percent is prefectural tax, and 3.9 percent is municipal tax. The amount of property tax is ¥15.6 trillion, of which 34.0 percent is national tax, 4.5 percent is prefectural tax, and 61.5 percent is municipal tax. See MoHA (1996b).

6. Major sources of total annual local government revenues in fiscal year 1993 are local taxes (35.2 percent), local allocation tax (16.2 percent), central government disbursements (14.3 percent), loans (14.0 percent), charges and fees (2.3 percent), and local transfer tax (2.1 percent).

7. The inhabitants' tax is collected by both prefectures and municipalities. In levying this tax, mutual cooperation is established among the municipal, prefectural, and national governments. When the municipal governments levy their inhabitants' tax on individuals, they collect the prefectural inhabitants' tax as well, using the same tax base. Information on taxable income necessary for computing the local inhabitants' tax is given by the national government.

8. In calculating the tax base of the corporate tax at the national level, the prefectural enterprise tax is allowed as a deduction. If a taxpayer has an office within the jurisdiction of two or more prefectures, the tax base is allocated to all prefectures concerned. The allocation is made on the bases of number of employees.

9. For local consumption tax, see MoHA (1996a).

10. All revenue sources are subject to control by the national government under the local tax law. The tax base and rates of major items are legislated by the Diet and can be altered by the proposal of both the MoHA and MoF.

11. Local governments that collect local tax below the standard tax rate cannot apply for permission for debt financing. (See local public finance law, article 5.1.)

12. It should be noted that in the prewar period, the local surtax method, in which a piggyback surtax was applied to the national tax, played a key role, but it was abolished in the postwar era to support local autonomy. Today, each level of local government levies its own taxes, including local income tax, separate from the collection of national taxes.

13. The third point is to carry over special addition of local allocation tax in order to make up for the difference in interest between local bonds placed on the market and those absorbed by the Fund Management Board of the MoF.

14. This section is based on mainly Mochida (1996). There is valuable literature, written in English, concerning the local allocation tax. See, for example, Ito (1967), Yonehara (1987), and Ishi (1993).

15. But we had already had grants as forerunners in the 1930s. Marked territorial inequalities in per capita prefectural tax revenue were seen during the Great Depression.

As device to counter depression, the provisional grant (*rinji-chihozaisei hokyukin*) was introduced. These grants were used for the salaries of primary school teachers and natural disaster rehabilitation, and they were apportioned among rural districts.

16. The 1949 Shoup Mission played a significant role in shaping the style of the tax system in postwar Japan. On this subject, see Ishi (1993, chapter 2).

17. The local need for each item was computed as the number of units of the service, multiplied by the standard cost per unit of the service at an acceptable, but minimal, quantity and quality. The total need for each locality was the sum of the amounts needed for all basic services combined. The financial capacity of each locality was computed as 70 percent of revenues that all regular local taxes would yield, assuming that they were levied at a standard rate with standard levels of assessment and collection.

18. This section is based on mainly Yamauchi (1996).

19. MoHA has four bureaus; one is the Local Finance Bureau. Within the bureau, there are eight divisions. The Local Finance Division and the Local Allocation Tax Division, which belong to the Local Finance Bureau, are in charge of LAT. The former manages the affairs of the special local allocation tax; the latter, the ordinary allocation tax. The Local Allocation Tax Division employs 18 persons, including a director, 2 assistant directors, and 15 staff members.

20. But the MoHA makes its own opportunity to hear wishes of local governments. It holds a conference at least four times a year to make information available to them formally and informally, and the parties sometimes discuss the matter together during the process of calculation.

21. For detailed arguments for this section, see Mochida. (1996, 1993, 1990), Kaizuka and others (1987), and Ishikawa (1995).

22. For the role of LAT in the Welfare State, see Hayashi (1992).

23. To stabilize the financial pool for LAT, Fujita examined a number of methods, including creating a new special account, calculating the tax base with a 5-year moving average, and returning to the equalization grant introduced by the Shoup recommendation. See Fujita (1972, pp. 143–47).

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Appendix

Computation Formula of Local Allocation Tax

LAT has continued to the present with some minor alterations. The framework of the local allocation tax is founded on the former distribution tax, enforced between 1940 and 1949, while retaining the formula used in the equalization grant for the distribution of funds to localities. In the LAT system, the total amount to be distributed to local authorities is a fraction of yields from major national taxes. The present system is a shared tax, in which a share in the proceeds of national taxes is granted to poor localities, without limitation on use. The calculation proceeds as follows. First, the total amount of the local allocation tax is calculated according to the formula below:

$$(1) \quad TT = 0.32 * (NT_y + NT_c + NT_a) + 0.29 * NT_v + 0.25 * NT_t$$

Where TT denotes total financial pool of transfer, NT_y is the total yield of personal income tax, NT_c is that of corporate income tax, NT_a is that of alcohol tax, NT_v is 80 percent of consumption tax revenue, NT_t is total yield of the tobacco tax. These prescribed percentages of five major national taxes are apportioned among local bodies in proportion to the amount of the difference between need and revenue. This is expressed by following equation.

$$(2) \quad LAT_i = N_i - C_i$$

Where LAT_i denotes local allocation tax to i th region, N_i is basic financial need of i th region, and C_i is the basic financial capacity of i th region. It is annually paid to local governments whose basic financial needs exceed their basic financial revenues. Rich localities with revenue that exceeds need are neither eligible for the grants nor liable to contribute money for fiscal adjustment, as is the case in some countries.

Before calculating basic financial needs, public services for each prefecture and municipality are divided into some service items (*gyôsei-kômoku*). In the prefectures, there are 24 service items such as police, roads and bridges, and primary school; for each municipality there are 24 service items such as city planning, parks, garbage collection, and so on. Basic financial needs of i th local authority are calculated according to following formula:

$$(3) \quad N_i = \sum_k (I_{ik} * U_{ik} * M_{ik})$$

Where I_{ik} is a measurement unit for service K of i th region, U_{ik} is unit cost for service K of i th region, and M_{ik} is a modification coefficient for service K of i th region. For each local body, according to the formula mentioned above, basic financial needs for each service item are calculated as the number of measurement units by multiplying the unit cost, adjusted by modification coefficients. The total basic need in each locality is the

sum of the amounts needed for all service items combined. The first step is to select measurement units. A measurement unit reflects the number or size of the beneficiaries of a particular expenditure. For example, a measurement unit for education is number of teachers, that of police is number of policemen, and that of roads is length of roads.

The second step is to determine a unit cost. Unit cost is a kind of net standard cost per measurement unit for each service item. Assuming a certain local body with standard conditions and scale, the unit cost for each service item is calculated based on following formula. In a prefecture, only one fictitious local body with a population of 1.7 million and a land area of 6,500 square kilometers is assumed as a "standard local body"; in a municipality, population is 0.1 million and land area 160 square kilometers.

$$(4) \quad U = (C_g - R_s) / S$$

Where U is unit cost, C_g is gross standard cost, R_s is special revenue, and S is a figure of measurement unit. The third step is to determine modification coefficients. The unit cost, however, is uniform throughout the country, and no regard is given to either the unique services nor to the special circumstances of localities. So an exceedingly complex adjustment is made of the unit cost applicable to such services and localities by means of detailed modifiers determined in accordance with their differences. Modification coefficients are currently classified according to eight categories.

On the other side, the basic financial revenue of each locality is expressed as a combined total of two types of revenue: (1) 80 percent in the case of prefectures, and 75 percent in municipalities of the sum of the yields of all regular local taxes, assuming that each is levied at the uniform rate or standard rate prescribed in the local tax law, and (2) the sum of revenues from local transfer taxes. This is expressed in the following equation:

$$(5) \quad C_i = G (B_{ij} * t_j) + LTT_i$$

Where G is 0.75 (for a municipality) and 0.80 (for a prefecture), B_{ij} is i th region's j th tax base, t_j is the standard tax rate on the j th tax base, and LTT_i is revenue from the local transfer tax. There are two reason for adopting such prescribed percentages. First, it is impossible to measure completely the basic financial needs of all local governments with a uniform formula. Second, it is necessary to retain incentives for local governments to collect their own taxes. At the same time, all revenues allotted from the local transfer tax are included, mainly because it is collected by the national government and has no relation to the tax collection effort at the local level.

The funds available for transfer calculated in advance, however, do not necessarily cover the sum of the entitlement—that is, the aggregate amount of the deficiencies of local governments with basic financial needs that exceed their basic revenues. The method currently used is either to increase the size of the fund or to adjust the size of the entitlement proportionally, according to the size of the fund. First, some special measure has been taken every year without changing the tax-sharing ratio to increase the size of the

pool. These special measures, which will be explained later from an historical perspective, can be divided into following five types:

Borrowing from a special account of the Fund Management Board of the MoF
 Carrying forward local allocation tax
 Cancellation of a local allocation tax cut
 Transfer of a provisional local grant
 Special addition/reduction of the local allocation tax.

In addition to the above-mentioned special measure, final adjustment is necessary to adjust the size of the entitlement proportionally, according to the size of the fund, by using an adjustment coefficient. The actual amount of ordinary allocation tax granted to a local government is calculated according to following formula:

$$(6) \quad LAT_i = (N_i - C_i) - \alpha N_i$$

Where LAT_i denotes local allocation tax to i th region, N_i is the basic financial needs of i th region, C_i is the basic financial capacity of i th region, and α is the adjustment coefficient.