

PART 4 Development Comparison: Choice of
Macroeconomic Policies : 10 A Fiscal
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journal or publication title	PERSPECTIVES ON THE PACIFIC BASIN ECONOMY : A COMPARISON OF ASIA AND LATIN AMERICA
page range	319-334
year	1990
URL	http://hdl.handle.net/2344/00010186

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A Fiscal Comparison of Asia and Latin America

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Introduction

The role of public finance is essential for economic development. In macroeconomic terms, growth, inflation, and debt are directly affected by government via revenues, expenditures, and public deficits. Output level, investment, savings, and consumption are influenced through government investments, government consumption, purchases of state-owned enterprises, and tax systems. In microeconomic terms, decisions concerning production, consumption and investment are encouraged (or discouraged) by taxes, subsidies and price controls. Public finance policies as well as monetary policies can therefore affect all sectors of the economy.

In this paper, a comparison between East and Southeast Asian countries (Asian hereafter) and Latin American countries is made with respect to public finance which covers current revenues, total expenditures and budget deficits. Special emphasis is placed on a fiscal management comparison during the 1970s and the 1980s. These contrasting periods, dominated by the second oil crisis and the succeeding external debt crisis, highlight the government's role in crisis management.

The rate of growth decelerated substantially, in particular in Latin America during the 1980s, while government expenditures expanded mainly due to increases in interest payments for public debts. Current revenues also increased but did not keep pace with expenditures, and as a result, overall deficits widened from one period to the other. Overall deficits seemed to cause an unprecedented rise in prices in Latin America. Under such circumstances, the problem is to determine how a government manages revenues and expenditures and how it attains stability in public finance.

The comparison between Asia and Latin America in terms of public finance was based on data of revenues, expenditures and budget deficits collected from

IMF statistics called “Government Finance Statistics Yearbook” (GFS hereafter) for two periods, 1970–79 and 1980–86. Fiscal data of selected countries were compiled from “Consolidated Central Government” figures in GFS, which are the sum of: (i) the budgetary central government account; (ii) the central government extrabudgetary account; and (iii) the central government social security account. In this paper, accounts for neither state and local governments nor state-owned enterprises are included. In addition, the comparison should be carefully prepared due to insufficient coverage within the extrabudgetary account category and the lack of social security account information in some countries. Countries chosen are as follows. Six Asian countries: Indonesia, Korea (Republic of), Malaysia, the Philippines, Singapore and Thailand. Eight Latin American countries: Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Uruguay and Venezuela.

During the whole period covered (1970–86), the sampling number differed slightly among countries due to differences in data availability.

We first analyze the relationships between the size of government and economic growth. Next, we compare overall deficits and their relationship with inflation and external debts between the two periods. Revenue analysis is performed by compiling information on revenue items such as income taxes, social security contributions, domestic taxes, trade taxes, and other taxes, as well as non-tax revenues for the two periods. Then, expenditure analysis follows by computing spending items such as defense, education, health, social security & welfare, housing & community services, economic services, and general public and miscellaneous services. Finally, the stability of fiscal management is analyzed by calculating coefficients of variation for budgetary items.

1. The size of government and growth

According to the World Bank (1988), there are two general views on the role of government in developing economies. One is the “public interest” view, and the other the “private interest” view. The “public interest” view emphasizes that free markets sometimes fail to allocate resources efficiently. At such times, government intervention is necessary. Market failures can be related to: (i) public goods; (ii) externalities; (iii) economies of scale; (iv) imperfect information; and (v) monopolies or oligopolies.

Goods and services such as defense, primary education, health and infrastructure are examples of “public goods” in which the private sector cannot participate in since these benefits go to the public and not to private producers or consumers. Likewise, private companies sometimes cannot bear costs, for example of external diseconomies and economies of scale, such as vast set-up costs, as well as research and development costs. When monopolies or monopsonies exist, market mechanisms can also fail. Furthermore, income disparity cannot be corrected by private interests. Therefore, the government must intervene via policy measures such as taxes, subsidies and regulations.

On the other hand, according to the “private interest” view, less government

intervention improves efficiency. Free competition of private interests leads to efficient allocation of resources although several cases of market failure may be taken into consideration. Therefore, the role of government should be limited as much as possible. The main criticism of this view is that exorbitant fiscal deficits, coupled with large spending by state-owned enterprises resulting in excessive external borrowings by the public sector, are not taken into account. Consequently, supporters of this view strongly advocate a smaller government in terms of government expenditures and a balanced budget in the public sector. They assume that smaller governments are advantageous because markets allocate resources more efficiently and result in growth rates higher than in countries with large and interventionist governments.

To examine the relationships between the size of government and growth, the ratio of total expenditure (current and capital expenditures) over GDP was taken as an index. The weighted average of total expenditure as a share of GDP for the six Asian countries during the period 1970–79 (the 70s hereafter) was 17.5% while that for the eight Latin American countries also showed an equivalent proportion during the same period. In the period 1980–86 (the 80s hereafter), the ratio diverged slightly to 20.1% for Asia and 22.1% for Latin America on an average; the difference between the two regions was almost nil even though the ratio differed among the countries. This implies that although the size of government of the two regions is almost equal, variations in economic growth rates can be observed (see Table 1).

Economic growth in Asia and Latin America decelerated during the 80s, as compared with the 70s, mainly due to the external debt crisis and the world recession caused by the second oil crisis. During the 70s, Asia grew at the rate of 8.1% on an average against 5.9% for Latin America. And during the 80s, Asia's growth rate fell to 4.9% while Latin America plunged into a negative growth rate of 0.1%.

As a result, the difference in the growth rate seems to be related to factors other than the size of government. Although the trend did show that the slow-down in economic growth was associated with an expansion in government expenditures, the pooled data for both regions in the two periods did not show a clear negative relation between the growth rate and the ratio of total expenditures over GDP¹ (see Figure 1).

Increases in total expenditures were mainly attributed to increases in interest payments on public debts of both foreign and domestic origins, especially in debt-stricken countries. Countries such as Mexico and Brazil showed a strikingly rapid increase in interest payments for public debts, measured as a percentage of current expenditures as follows: 15.0% (1979) to 45.1% (1985) and 11.5% (1979) to 43.9% (1985), respectively. In Asia, the highest ratio was recorded by the Philippines followed by Malaysia: 9.3% (1979) to 26.5% (1985) and 15.1% (1979) to 25.2% (1984), respectively.

Fixed capital formation by government, represented by its share against total expenditures was, on an average, higher in Asia (18.0% during the 70s and 17.1% during the 80s) than in Latin America. The latter recorded a noticeable decline

Figure 1. ASIA AND LATIN AMERICA: THE SIZE OF GOVERNMENT AND ECONOMIC GROWTH



Table 1. ASIA AND LATIN AMERICA: ECONOMIC GROWTH AND THE SIZE OF GOVERNMENT (Sample Averages for 1970–79 and 1980–86)*

	GDP Growth Rate		Total Expenditures over GDP		Fixed Gov. Capital Formation over Total Expenditures		Current Revenues over GDP		Number of Samples**	
	(%)		(%)		(%)		(%)		70s	80s
	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s
Asia:										
Korea	9.6	8.3	15.7	17.6	8.6	7.6	15.1	18.3	9	8***
Singapore	7.9	5.7	21.8	23.1	11.1	19.8	21.8	27.2	8	6
Indonesia	7.6	4.5	17.9	21.5	31.2	30.4	16.6	21.1	8	6
Malaysia	8.0	4.5	24.9	32.6	13.4	7.3	21.7	26.6	8	6
Philippines	7.0	-0.5	13.7	11.5	9.8	10.3	13.7	11.5	8	6
Thailand	7.7	5.1	16.5	19.9	19.4	17.7	13.4	15.2	8	6
Average (weighted)	8.1	4.9	17.5	20.1	18.0	17.1	16.2	19.1	—	—
Latin America:										
Argentina	2.6	-3.0	17.0	21.0	8.2	6.9	13.8	16.3	8	4
Brazil	8.3	0.2	17.8	20.7	9.1	3.1	20.0	24.2	10	5
Chile	3.4	0.9	33.5	31.0	13.4	6.6	29.8	29.3	8	7
Colombia	5.6	2.0	12.0	14.3	16.4	19.3	11.1	12.6	9	4
Mexico	6.4	1.7	14.5	23.8	16.8	13.4	12.1	16.6	8	6
Paraguay	9.0	2.3	11.2	10.8	19.2	17.2	11.4	10.4	8	5
Uruguay	3.4	-1.4	23.1	24.5	8.1	5.5	21.3	21.7	8	7
Venezuela	4.8	-1.3	22.2	25.9	13.5	8.5	26.7	29.3	10	6
Average (weighted)	5.9	-0.1	17.5	22.1	11.8	8.1	17.1	20.5	—	—
Reference:										
U.S.A.	3.0	2.7	21.1	24.4	1.4	1.2	19.4	20.5	8	7
Japan	5.2	3.4	13.9	18.0	6.8	4.7	10.4	12.0	10	6

Source: Government Finance Statistics (GFS), IMF.

* Fiscal data of each country are compiled from "Consolidated Central Government" figures (the sum of budgetary central government, extrabudgetary and social security accounts) of Government Finance Statistics, IMF, except the Philippines and Japan. Both countries only include the central government account throughout all tables.

** Number of samples differs according to data availability of each country.

*** Nine samples for the period 1971–79 and eight for 1980–87.

from 11.8% in the 70s to 8.1% in the 80s, partly due to a severe contraction in domestic demand and partly due to a reduction in the availability of financial resources. This implies that the higher growth rate in Asia was backed up by rather buoyant public investments in the region through a "pump-priming" policy.

2. Government deficits

Government deficits can be divided into two categories: current account deficits (or surpluses) and overall deficits (or surpluses). A current account deficit is the difference between current revenues and current expenditures. Current revenues

include tax and non-tax revenues. If the current account is positive, the surplus is a kind of savings which will be forwarded to public investments. An overall deficit (or surplus) is defined as follows:

$$\text{Overall deficit (or surplus)} = \text{Total revenues and grants} - \text{total expenditures and lending minus repayments}$$

where: total revenues = current revenues + capital revenues

total expenditures = current expenditures + capital expenditures

If an overall deficit emerges, the government has the following three options to finance it: (i) borrow from domestic markets; (ii) borrow from foreign markets; and (iii) print money. Domestic borrowing may result in higher interest rates and cause private investments to fall. Foreign borrowing may cause external debt accumulation. Printing money triggers inflation.

Overall deficits as a share of GDP were calculated for the two periods in both regions. Weighted averages of Asian countries were -2.4% for the 70s and -2.7% for the 80s. Those of Latin America showed a leap from -2.2% for the 70s to -5.1% for the 80s. These statistics are a reflection of the fact that total expenditures quickly expanded, while offsetting revenue did not keep pace but rather increased only modestly. Revenue is dependent mainly on income taxes, domestic taxes and social security contributions (in the case of Latin America) as will be explained later. These sources of income, in addition to other sources including value-added and sales taxes, are adversely affected by a recession, and thus yield low levels of revenue collection (see Table 2).

As the debt crisis generates further public expenditures for the purpose of paying interest on continuously expanding external and domestic debts, and since government expenditures have a countercyclical nature in times of recession (for example, to reduce the rate of unemployment through job creation and subsidy programs), deficits continue to grow.

Inflation figures measured by GDP deflators indicated a significantly different picture between the two regions. The rate subsided from 17.3% during the 70s to 8.6% during the 80s in Asia, while in Latin America it increased from 57.1% to an unprecedented triple-digit rate of 142.0% in the same period.

Moreover, indebtedness measured as external debt per capita also worsened in both regions, though Asian figures were smaller than those of Latin America. External debt per capita for the six Asian countries amounted to US\$479 at the end of 1986 as compared with US\$232 at the end of 1979, while that of the eight Latin American countries reached US\$1,056 in 1986 against US\$618 in 1979. Among the countries, Malaysia recorded the largest overall deficits (from -6.6% to -9.2%) and the largest increase in external debt per capita (more than fourfold) from one period to the other despite the fact that inflation in this country subsided.

Although a regression analysis between the inflation rate and overall deficits for the pooled data showed a very weak correlation, the parameter for overall deficits was significantly positive.² If the data are limited only to Latin America, this positive relation is strengthened. Consequently, it can be assumed that

Table 2. ASIA AND LATIN AMERICA: OVERALL DEFICITS, INFLATION AND EXTERNAL DEBTS PER CAPITA (Sample Averages for 1970–79 and 1980–86)

	Overall Deficits (as a Share of GDP) (%)		Inflation (GDP Deflator) (%)		Number of Samples		External Debt per Capita (Year-end, US\$)	
	70s	80s	70s	80s	70s	80s	1979	1986
Asia:								
Korea	-1.7	-1.8	20.6	6.0	9	8	610	1,124
Singapore	1.0	2.3	5.8	2.3	8	6	727	1,496
Indonesia	-2.6	-1.4	23.0	11.0	8	6	130	258
Malaysia	-6.6	-9.2	9.9	0.7	8	6	299	1,241
Philippines	-1.1	-2.5	14.4	19.8	8	6	283	515
Thailand	-3.1	-4.6	10.5	4.2	8	6	144	352
Average (weighted)	-2.4	-2.7	17.3	8.6	—	—	232	479
Latin America:								
Argentina	-4.2	-7.9	146.6	323.4	8	4	754	1,602
Brazil	-0.4	-3.3	35.8	158.9	10	5	522	814
Chile	-2.5	-0.3	134.1	19.8	8	7	857	1,641
Colombia	-0.7	-1.9	22.2	22.5	9	4	231	526
Mexico	-3.7	-8.2	19.8	59.4	8	6	634	1,270
Paraguay	0.1	-0.6	13.8	17.6	8	5	263	535
Uruguay	-2.0	-3.2	68.5	51.4	8	7	458	1,311
Venezuela	-0.3	-0.1	11.9	9.5	10	6	1,642	1,951
Average (weighted)	-2.2	-5.1	57.1	142.0	—	—	618	1,056
Reference:								
U.S.A.	-2.3	-4.4	7.3	5.2	8	7	—	—
Japan	-3.6	-6.2	7.5	2.0	10	6	—	—

Sources: GFS, IMF and World Debt Tables, the World Bank.

inflation is positively correlated with government deficits. On the other hand, the relation between external debt per capita and overall deficits was not clearly detected from the regression analysis.³

3. A comparison of tax systems

Current revenue sources consist of two parts: tax revenue and non-tax revenue. Tax revenue is classified as direct taxes on individuals and firms, and indirect taxes on goods and services. Non-tax revenue includes user charges and administrative fees for public goods and services plus fines and forfeits.

Direct taxes are imposed on personal and corporate income, as well as other direct taxes including social security contributions, payroll taxes, and taxes on property and wealth. Indirect taxes include domestic taxes on such items as turnover, value-added tax (VAT), and sales as well as excise taxes. International trade taxes include import duties, tariffs and export taxes.

According to this classification, the composition of each category presented as a share of current revenues was calculated for the two periods (the 70s and the

80s) in both regions. Weighted averages for Asia show that income taxes (40.5% during the 80s) and domestic taxes (29.6% during the same period) were the main sources of tax collection. On the other hand, Latin American countries show that domestic taxes were the main sources of tax collection (31.3% during the 80s) followed by income taxes and social security contributions (22.3% and 17.2%, respectively) (see Table 3).

The World Bank (1988) reported that; "Latin American countries are the dominant users, within developing countries, of social security taxes, which fall primarily on wage income." However, since the Asian countries in this study do not include the social security account category (except Korea and Malaysia) in the "consolidated central government" tables, true comparison seems difficult. In Kagami's (1989) method of calculation the social security contribution category was excluded from the current revenue of each country in both regions for data from 1970 to 1986. The author reported that "In Asia, the main sources of tax collection are again income taxes (39.8%) and domestic taxes (29.9%). In Latin America, domestic taxes (36.1%) are the main sources of tax revenue followed by income taxes (28.4%)."⁴

In general, industrial countries such as Japan and the U.S.A. depend mainly on income tax revenues (especially on personal income taxes) and middle income countries principally on domestic taxes, while lower income countries rely more on trade taxes (especially on import taxes). The comparatively high rates of income taxes in Indonesia and Venezuela reflect the increased collection of corporate income taxes with respect to petroleum.

Smaller shares in income tax collection in Latin America may suggest the difficulty in imposing personal income taxes on lower income strata when income disparity is very large and/or tax evasion is widely practiced. The World Bank (1988) wrote that "A 1978 study of income tax in Argentina found that 80 % of gross income was not reported and that only 30 % of 1.6 million people eligible to pay taxes on nonwage income did so."

Based on an analysis of tax composition, each tax item as a percentage of current revenue in Asia did not change appreciably during the two periods except in the area of trade taxes (from 19.4% to 14.6%, mainly due to a decline in export duties). Latin America, on the other hand, showed very different results. The share of social security contributions decreased from 22.0% to 17.2% while domestic taxes rose from 26.8% to 31.3%. Social security contributions reflect business ups-and-downs since they usually depend on an amount in proportion to both total sales for employers and earnings for employees. In the case of Chile, a decrease in this category was caused by a change in the social security system. In 1979, Chile introduced reforms with the intent of changing public pension programs to a private sector savings plan, and thus the government's role was subsequently reduced during the 1980s due to this switch.⁵

Among the Latin American countries, the share of domestic taxes drastically increased during the 80s in such countries as Uruguay (41.7%), Mexico (41.0%),

Table 3. ASIA AND LATIN AMERICA: COMPOSITION OF TAXES (Percentage of Current Revenues, Sample Averages for 1970-79 and 1980-86)

	Income Tax*		Social Security Contributions		Domestic Tax		Trade Tax		Other Tax		Non-tax Revenue		Number of Samples	
	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s
Asia:														
Korea	29.5	25.1	0.9	1.3	44.5	45.1	14.3	15.0	0.9	1.2	10.0	12.2	9	8
Singapore	44.1	44.2	—	—	16.1	14.2	8.9	5.1	2.2	3.0	28.8	33.5	8	6
Indonesia	63.9	68.8	—	—	14.9	12.3	12.7	4.6	0.6	0.4	7.8	13.9	8	7
Malaysia	32.5	39.7	0.4	0.5	22.1	17.5	32.5	24.4	1.1	1.6	11.5	16.3	8	7
Philippines	24.4	22.8	—	—	32.5	39.0	30.1	25.1	1.4	1.7	11.5	11.2	8	6
Thailand	16.4	20.8	—	—	45.9	46.6	27.8	22.5	0.7	0.6	9.2	9.4	8	6
Average (weighted)	39.0	40.5	0.3	0.4	29.9	29.6	19.4	14.6	0.9	1.1	10.5	13.7	—	—
Latin America:														
Argentina	5.0	7.4	26.2	20.2	16.9	40.9	16.6	12.6	3.0	4.1	32.4	14.7	10	5
Brazil	20.5	19.5	30.6	25.0	33.4	24.0	5.6	3.6	0.0	0.0	9.9	27.9	10	6
Chile	17.2	16.1	15.0	10.0	34.2	40.2	8.7	7.1	3.5	6.3	21.2	20.3	8	7
Colombia	36.0	26.2	13.1	10.6	18.9	23.6	21.6	15.9	3.9	2.1	6.5	21.7	9	4
Mexico	34.4	25.5	15.7	11.1	33.2	41.0	9.9	14.6	1.0	0.5	5.7	7.3	8	6
Paraguay	18.7	23.3	11.5	13.3	22.2	21.9	25.8	15.5	11.3	11.3	10.5	14.8	8	7
Uruguay	10.8	11.9	28.5	24.3	37.8	41.7	9.4	12.0	7.3	3.6	6.3	6.5	8	7
Venezuela	58.7	64.4	4.6	3.8	5.2	4.6	6.4	12.0	0.4	0.3	24.7	14.9	10	6
Average (weighted)	24.4	22.3	22.0	17.2	26.8	31.3	10.2	10.0	1.4	1.5	15.1	17.6	—	—
Reference:														
U.S.A.	59.0	52.8	26.9	31.0	5.4	5.0	1.6	1.5	0.0	0.0	7.1	9.7	8	7
Japan	68.8	70.1	—	—	21.5	19.3	3.2	2.0	3.2	3.5	3.4	5.1	10	6

Source: GFS, IMF.

*The first column (Income Tax) includes personal as well as corporate income taxes, payroll taxes and taxes on property and wealth.

Argentina (40.9%) and Chile (40.2%). In Mexico, value-added taxes were introduced in January 1980, as was a new tax on hydrocarbons in 1983. In Argentina, increases in an excise tax on fuels and a value-added tax greatly contributed to the bulge in the share of domestic taxes. In Uruguay and Chile, revenues from both value-added taxes and excise taxes were quite satisfactory during the 80s, particularly in the case of Uruguay where a consumer products tax on specified items increased remarkably. On the other hand, the share of domestic taxes in Brazil declined from 33.4% in the 70s to 24.0% in the 80s while that of non-tax revenues leaped from 9.9% in the 70s to 27.9% in the 80s reflecting increases in property income from social security funds.

4. A comparison of public spending

Total expenditures (current plus capital expenditures) are composed principally of seven items as follows: (i) defense; (ii) education; (iii) health; (iv) social security and welfare; (v) housing and community services; (vi) economic services; and (vii) general public services and other purposes. Economic services include public utilities, transportation, communication and industrial sector services. General public services include fiscal and budgetary services, external affairs services, fundamental research services and general personnel services. Therefore allocation of revenue to these items is a critical problem during the process of development which influences the economic characteristics of nations.

Using the same method as that for tax composition, calculations on the components of public spending as a share of total expenditures were carried out based on the seven items listed above (see Table 4).

In Asia, general public services and other purposes took the largest share (32.0% on an average for the 80s, of which general public services alone accounted for 16.9%), followed by economic services (26.1%) and defense (18.7%). In Latin America, priority was given to general public services and other purposes (32.5% for the 80s, of which general public services alone accounted for 10.9%), followed by social security and welfare (24.5%), and economic services (21.5%). Since tax revenues included social security accounts in the region, this item also reflected a large proportion of spending.

Generally speaking, some Latin American countries placed emphasis on social welfare spending. Sample averages of this category for Uruguay (49.2%), Chile (38.9%) and Argentina (33.5%) are higher than that of the U.S.A. (32.2%) during the 80s. Since these countries have built up their own social security system historically, its size and degree have matured and the roots have been grounded firmly within the society. Mackenzie (1988) wrote, for example, that "in Uruguay, the pension scheme is estimated to cover about 81% of the labor force (economically active population), and the sickness-maternity system about 68%."

By contrast, Korea spent only 6.4% of total expenditures for this category during the 80s, although the statistical coverage for Korea and Uruguay might be different.⁶ In a sense, social welfare programs seem to be sacrificed for development in Korea and Malaysia, although GFS data available for Asia are not sufficient

Table 4. ASIA AND LATIN AMERICA: COMPOSITION OF SPENDING (Percentage of Total Expenditures, Sample Averages for 1970-79 and 1980-86)

	Defense		Education		Health		Social Security & Welfare		Housing & Comm. Services		Economic Services		General Pub. Ser. & Others		Number of Samples	
	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s	70s	80s
Asia:																
Korea	31.0	31.2	16.0	18.6	1.3	1.6	5.2	6.4	2.0	1.8	21.0	15.4	23.4	25.0	9	8
Singapore	29.1	21.8	16.6	19.0	8.0	6.6	1.6	1.2	8.4	7.6	11.7	15.3	24.6	28.4	8	5
Indonesia	17.2	12.3	8.4	8.3	2.0	2.3	0.0	0.0	2.2	2.3	32.3	29.0	37.9	45.8	7	4
Malaysia	16.9	14.7	22.3	16.8	6.7	4.7	3.1	3.9	2.5	5.5	15.5	28.9	33.1	25.5	8	2
Philippines	16.7	10.9	14.4	13.9	4.2	4.2	0.0	0.0	2.2	3.5	39.8	43.0	22.7	24.6	8	6
Thailand	20.0	20.2	20.8	19.8	4.1	4.9	3.9	2.8	3.5	2.3	23.3	23.4	24.4	26.5	8	6
Average (weighted)	21.6	18.7	14.6	14.6	3.2	3.2	2.2	2.5	2.7	2.9	26.6	26.1	29.1	32.0	—	—
Latin America:																
Argentina	11.1	10.4	9.0	7.8	2.1	1.5	26.4	33.5	4.1	1.0	25.3	19.2	21.9	26.6	5	5
Brazil	6.7	3.6	6.1	3.5	6.9	7.0	36.0	31.3	0.1	0.5	22.2	19.6	22.0	34.6	10	6
Chile	12.3	11.7	14.2	13.8	7.4	6.4	25.1	38.9	7.0	4.7	15.1	9.2	18.8	15.2	8	7
Colombia	—	6.8	—	19.3	—	4.1	—	18.5	—	3.8	—	23.7	—	23.7	—	3
Mexico	3.4	2.2	17.1	13.6	4.1	1.6	22.7	11.5	0.0	3.2	31.6	27.9	21.0	40.0	8	6
Paraguay	12.9	11.9	13.1	12.1	3.0	4.2	17.5	26.5	1.9	2.9	20.2	16.4	31.4	25.9	8	6
Uruguay	9.6	12.2	10.2	7.0	4.0	3.9	44.5	49.2	0.9	0.9	9.9	8.9	20.9	17.9	8	7
Venezuela	8.0	6.2	16.3	18.1	9.9	8.0	6.8	7.0	3.2	6.5	28.7	21.8	27.1	32.4	10	6
Average (weighted)	7.2	5.6	11.1	9.5	5.3	4.3	27.2	24.5	1.5	2.1	25.5	21.5	22.1	32.5	—	—
Reference*:																
U.S.A.	24.8	23.6	3.2	2.1	9.4	10.9	34.1	32.2	3.1	2.9	10.1	9.0	15.3	19.3	8	7

Source: GFS, IMF.

*GFS does not include Japan's expenditure data.

compared with the abundant data on their Latin American counterparts for a precise conclusion.

A relatively high ratio of defense spending in Asia (18.7% for the 80s) as compared with Latin America (5.6%) suggests differences in the geopolitical considerations these countries have had to contend with historically.⁷

Asian countries again showed quite a stable position during the two periods. A three-point decrease in defense (21.6% to 18.7%) was offset by an equivalent increase in the general public services and "others" category (29.1% to 32.0%). On the other hand, in Latin America, the shares of almost all spending items declined except the general public services and "others" category (also housing and community services, but this can be overlooked because of the small ratio). The general public services and "others" category jumped from 22.1% to 32.5% in Latin America. This leap took place principally by increases in interest payments on public debts in major debt-stricken countries.

For instance, the share of the general public services and "others" category in Mexico increased from 21.0% during the 70s to 40.0% during the 80s, while that of the general public services alone changed only from 6.1% to 9.7% in the same period. The "others" category caused this jump because it includes public debt transactions (interest payments for public debts but not their redemption). In the case of Brazil, the share of the general public services and "others" category expanded from 22.0% in the 70s to 34.6% in the 80s, while that of the general public services alone rather decreased from 14.5% to 13.5%. Brazil's interest payments for government bonds (ORTN) are, in addition, associated with payments of the monetary correction system (indexed interest rates with respect to inflation). On the contrary, the comparatively high shares presented by Indonesia in this category (37.9% for the 70s and 45.8% for the 80s) can be explained by the fact that the share of the general public services itself was higher than that of any other countries in this study and it increased from 21.8% in the 70s to 31.1% in the 80s.

5. Stability of fiscal management

Another important factor to be considered is the stability in the structure of revenues as well as expenditures. If the tax structure changes frequently, budget planners can neither expect a stable revenue flow nor draft a stable spending plan. Similarly, a sudden introduction of new expenditure items and/or abolition of expenditure items may cause unstable expenditure patterns. Stability in the components of revenue and expenditure is therefore very important from the fiscal management point of view. This can be determined by calculating the coefficient of variation (expressed as standard deviations divided by means) of each revenue and expenditure item over the observed period (see Table 5).

Unweighted averages of these coefficients for both regions show two characteristics: one is that Asian average figures are lower than those of Latin America for both revenue and expenditure items in both periods; and the other is that average figures for the 80s are lower than those of the 70s in both revenue and expenditure items and in both regions. In the case of revenue items, Argentina and Mexico

Table 5. ASIA AND LATIN AMERICA: COEFFICIENTS OF VARIATION
(Sample Averages for 1970–79 and 1980–86)

	Averages for Revenue Items		Averages for Expenditure Items	
	70s	80s	70s	80s
Asia:				
Korea	18.107	31.597	19.428	12.947
Singapore	13.784	11.848	18.298	13.037
Indonesia	29.057	38.691	26.888	20.177
Malaysia	21.325	14.925	14.703	11.221
Philippines	23.816	9.143	32.617	20.423
Thailand	14.657	8.061	12.601	9.549
Average (unweighted)	20.124	19.044	20.756	14.559
Latin America:				
Argentina	93.203	27.902	31.096	17.994
Brazil	21.588	20.504	34.588	24.041
Chile	29.056	22.243	30.082	16.474
Colombia	19.543	21.220	—	10.673
Mexico	11.689	66.443	26.385	28.999
Paraguay	10.767	18.725	12.980	22.805
Uruguay	27.500	12.969	34.738	22.458
Venezuela	22.778	27.517	24.623	21.507
Average (unweighted)	29.516	27.190	27.785	20.619
Reference:				
U.S.A.	16.360	14.011	11.121	8.811
Japan	15.788	6.820	—	—

produced disturbing figures: the former reached the highest figure of 93.203 for the 70s and the latter 66.443 for the 80s, respectively. On an average, composition patterns in Asia changed less than in Latin America over the observation period. (If the highest figure is excluded, Latin American averages for revenue items which were 20.417 for the 70s and 21.583 for the 80s were slightly larger than Asian averages.)

Although both ratios of current revenues and total expenditures as a share of GDP increased during the two periods, coefficients show that the composition of the items changed less during the 80s than during the 70s as represented by smaller values. This might imply that the margin of choices in budgetary and fiscal policies was narrowed down during the 80s due to the recession and the external debt crisis. Korea, Indonesia, and Mexico, however, experienced a comparatively large increase in the coefficients. Especially in the case of Mexico, the value leaped from 11.689 to 66.443 for revenue averages mainly due to volatile movements in export duties and other tax categories.

To sum up, fiscal management appears to have been more stable in Asia than in Latin America during the observation period. It is further recognized that composition patterns regarding revenues and expenditures changed less during the 80s than during the 70s in both regions.

Summary

The role of public finance is essential for economic development. A comparison of government finance statistics was performed for the periods, 1970–79 and 1980–86 in Asian as well as Latin American countries. The following results were obtained from the comparison:

(i) The size of government represented by the total expenditures as a share of GDP was almost identical in Asia and Latin America (around 18% during the 70s and around 20–22% during the 80s for both regions).

(ii) The rate of growth differed. Higher rates in Asia contrasted with lower rates in Latin America. In particular, the latter recorded on an average a negative growth rate during the 80s. This implies that the size of government is not directly related to economic growth.

(iii) Overall deficits widened more in Latin America than in Asia in the corresponding two periods. This was further aggravated by an unprecedented price hike in Latin America. At the same time, external debt per capita increased from US\$618 in 1979 to US\$1,056 in 1986 in Latin America as against US\$232 and US\$479 in Asia for the corresponding year-end period. Our regression analysis shows that inflation is positively correlated with government deficits but the relation between debt per capita and overall deficits was not clearly detected.

(iv) The composition of each revenue item as a share of current revenues shows that income taxes are the main sources of tax collection in Asia while domestic taxes are the equivalent sources in Latin America. Lower rates of income tax collection in Latin America may suggest that there is a large income disparity in the region which hampers the levying of such taxes on the community.

(v) A comparison of the two periods shows that the composition of each tax item did not change appreciably in Asia except in the area of trade taxes due to the decline in export duties. Latin America, on the other hand, displayed changes in the composition of domestic taxes and social security contributions. The former rose while the latter declined due to dwindling flows affected by business downturns. Latin American governments introduced several new indirect taxes and emphasized a smooth collection in the form of domestic taxes in order to compensate for the reduction in the social security contributions category.

(vi) Relatively speaking, Asian expenditure patterns indicate that spending on defense is larger while that on social welfare is smaller than in Latin America. In the face of the communist bloc, the geopolitical position of some Asian countries became vulnerable, forcing them to spend more on military buildup. Although the lack of statistics on social welfare spending in Asia hampered a precise analysis of differences in spending patterns, it is relatively obvious that the Asian countries tended to spend less on social welfare programs than the Latin American countries, where such programs have been firmly rooted in a long tradition.

(vii) Asian countries showed a stable composition in each expenditure item in the two periods while the shares of almost all spending items in Latin America

declined from the 70s to the 80s except for the general public and "others" category. The category's share rose strikingly from 22% to 33% mainly due to remarkable increases in interest payments which are classified in this category. For example, interest payments for public debts measured as a percentage of current expenditures accounted for 45.1% in Mexico and 43.9% in Brazil in 1985, reflecting the large accumulation of external as well as internal public debts during the recent years.

(viii) A calculation of the coefficient of variation to measure the stability of composition in expenditure and revenue items indicates that Asian averages are lower than those of Latin America. This implies a more stable fiscal management in Asia than in Latin America during the observed periods. Lower values during the 80s than the 70s for both regions may imply that recession and the external debt crisis narrowed the margin of policy variation. In particular, remarkable increases in interest payments for public debts during the 80s restricted fiscal management in developing countries.

NOTES

1. A regression was made for variables between the GDP growth rate and total expenditures over GDP. Data used in the analysis came from Table 1. Six Asian countries, eight Latin American countries and two industrial countries (U.S.A. and Japan) were plotted with the corresponding data from the 70s and 80s (i.e., the number of samples is 32). The results were as follows:

$$GDP = 7.34 - 0.157 EXPEN$$

$$(t = -1.61) \qquad R^2 = 0.080$$

where

GDP: the rate of growth of GDP at 1980 prices;

EXPEN: total expenditures as a share of GDP.

For further studies, see also Daniel Landau, "Government and Economic Growth in the Less Developed Countries: An Empirical Study for 1960-80," *Economic Development and Cultural Change*, Vol. 35, No. 1, October 1986.

2. In the same manner as above, a regression was calculated for the pooled data which came from Table 2. The total number of samples is also 32. The results were as follows:

$$INF = 16.2 + 8.570 DEFICIT$$

$$(t = 2.03) \qquad R^2 = 0.121$$

where

INF: the rate of inflation measured by GDP deflators;

DEFICIT: overall deficits as a share of GDP.

If Latin American data only was used (i.e., the number of samples is 16), the following results were obtained:

$$INF = 15.1 + 22.266 DEFICIT$$

$$(t = 3.54) \qquad R^2 = 0.472$$

3. A regression was done for variables between external debt per capita and overall deficits from Table 2 (the number of samples is 28). The following results were obtained:

$$DEBT = 766.5 + 10.337 DEFICIT$$

$$(t = 0.27) \qquad R^2 = 0.003$$

where

DEBT: external debt per capita;

DEFICIT: overall deficits as a share of GDP.

4. M. Kagami, "The Role of Government in Developing Economies" in *The Role of Government in Economic Development* edited by A. Bianchi, M. Kagami and O. Munoz, JRP Series No. 77, Institute of Developing Economies (IDE), July 1989.
5. On this topic, see, for example, G.A. Mackenzie, "Social Security Issues in Developing Countries—The Latin American Experience—," *IMF Staff Papers*, Vol. 35, No. 3, September 1988.
6. The GFS data for Uruguay in the social security programs include the following boards and funds: Family Allowance Board (DAF); Civil Servants and School Employees Retirement and Pension Board (DPCE); Retirement and Pension Board for Industry and Commerce (DPIC); Retirement and Pension Board for Rural and Domestic Workers (RPRSD); Unemployment Insurance Board (DSD); Social Security Board for Health (DSSE); Retirement and Pension Fund for Bank Employees (CJPB); Notaries Retirement and Pension Fund (CJPN); and Retirement and Pension Fund for University Professionals (CJPPU). On the other hand, the GFS data for Korea include the following accounts and funds: Industrial Workers Accident Compensation Insurance Fund; Industrial Workers Accident Insurance Special Account; Military Personnel Pension Special Account and Fund; National Medical Center Special Account; National Welfare Pension Special Account and Fund; Social Welfare Service Fund; and Veterans Relief Fund.
7. See M. Kagami, "Guiding Principles for Development in Asia" in *A Comparative Study on Economic Development Between Asia and Latin America* edited by A. Bianchi and T. Nohara, JRP Series No. 67, IDE, 1988. On the relationships between the rate of growth and military spending, see, for example, Saadet Deger, "Economic Development and Defense Expenditure," *Economic Development and Cultural Change*, Vol. 35, No. 1, October 1986.

REFERENCES

- Deger, S. "Economic Development and Defence Expenditure," *Economic Development and Cultural Change*, Vol. 35, No. 1 (October 1986).
- Kagami, M. "Guiding Principles for Development in Asia," *A Comparative Study on Economic Development between Asia and Latin America*, ed. A. Bianchi and T. Nohara, JRP Series No. 67 (Tokyo: Institute of Developing Economies, 1988).
- Kagami, M. "The Role of Government in Developing Economies," *The Role of Government in Economic Development*, ed. A. Bianchi, M. Kagami and O. Munoz, JRP Series No. 77 (Tokyo: Institute of Developing Economies, July 1989).
- Laundau, D. "Government and Economic Growth in the Less Developed Countries: An Empirical Study for 1960–80," *Economic Development and Cultural Change*, Vol. 35, No. 1 (October 1986).
- Mackenzie, G. "Social Security Issues in Developing Countries—The Latin American Experience—," *IMF Staff Papers*, Vol. 35, No. 3 (September 1988).
- The World Bank, *World Development Report 1988*.