

Study of the Thai Government Budget Allocation: An International Comparison*

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The role of government in providing public goods and merit goods has long been accepted by economists. There are also other economic reasons for public provision of private goods, such as natural monopolies, externalities, and cost of social inequity. Given this role, it is interesting to ask whether the Thai government has allocated its budget to suit the need of its population. Although the need of a country's population is diverse, its various needs should depend on the level of income and economic development and also on other demographic and socioeconomic factors. For example, if the majority of a country's population is under the school age, one would expect a high fiscal budget share for education. The structure of economy, financial constraints, and other current problems facing the country are also influential factors.

At the household level, one can evaluate its expenditure by comparing it with those of other households having similar characteristics, which reflect similar needs. In the case of a country, we need an international comparison among countries that are not too different from each other.

SAMPLE DATA

Based on the above reasoning, this study collected the most recent data on developing countries' public expenditure as reported by the International Monetary Fund in *Government Finance Statistics Yearbook*. Due to time lag in data reporting, it is found that the 1990 data provide us with a higher number of observations, even though for some countries the 1992 data are already available. In an attempt to have a pool of countries not too different from each other, the developing countries with any of the following three characteristics are excluded from the sample.

- a) Countries in Eastern Europe—with the reason that they have or had different political ideology which may have had an effect on their budget allocation.
- b) Countries at war or facing high risks of war—with the reason that they may have had to put a lot of resources into defense activity.
- c) Countries with population less than three million—with the reason that they are too small.

With the above considerations, there are 28 developing countries included in our sample. Their geographical distribution is as follows: six countries in Africa, 10 countries in Asia, two countries in Europe and 10 countries in Central and South America. Details are provided in [Table 1](#).

FACTORS INFLUENCING PUBLIC EXPENDITURE

To avoid confusion in cross-country comparison, the ratio of government expenditure to gross domestic product (GDP) is commonly used instead of the expenditure values expressed in different currencies. In general, we observe that as income increases the ratio of government expenditure also increases. As the data in [Table 2](#) shows, this positive relationship seems to hold both across different groups of countries within a given period (cross-section data) and within the same group of countries across time when their

income increases (time series data).

However, income is not the only factor that influences expenditure. Just as the number of household members, their age structure, their educational background, their location, etc., exert influences on the household expenditure, similar attributes at the country level exert influences on public expenditure. The major factors influencing public expenditure of a country may be grouped as follows.

1. **Level of income and development.** The increase in a country's income generally leads to an increase in government revenue which enables it to have a higher expenditure level. As early as in 1880, a German economist named Adolph Wagner proposed a so-called "Wagner's law of increasing public expenditures."¹ He felt that the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of economic activities. In consequence, continual expansion of the public sector and its share in the economy should be expected. One cannot expect this share to increase without limit as we can observe from the data included in [Table 2](#) that when income has reached some level, the ratio of the central government expenditure to GDP tends to grow at a slower pace and may remain constant. This means that the relationship between income and the ratio of public expenditure to GDP may not be a linear one. In this study, we try to capture this relationship by including the square of income per capita as an explanatory variable.
2. **Demographic influences.** The size of the population, its age structure and geographical concentration should influence certain types of public expenditure, such as education and public health.
3. **Sociological influences.** The social structure of a country also affects the pattern of public expenditure. In a society where extended family is widespread, the need for public social welfare may not be as high as in others since family members tend to bear the cost of social welfare.
4. **Structure of economy.** The production structure of an economy can influence the pattern of public expenditure. In a country where agriculture is dominant, it is likely that a large portion of public expenditure will be put in this area.
5. **Other influences.** The above list is, of course, not inclusive of all possible factors that can influence public expenditure. Financial constraints, technological constraints, legal constraints, political constraints, income distribution, among other things, can also affect how a country allocates its public expenditure.

On average, one would expect that differences in the above factors would lead to different levels and patterns of public expenditure while countries with similar characteristics should have similar needs and, therefore, similar patterns of expenditure. In this study, the variables representing the above influential factors or their proxies are collected from World Bank, *World Development Report, 1992*.

EMPIRICAL ESTIMATES OF INTERNATIONAL EXPENDITURE COMPARISON INDEX

The central government expenditure of each country within the sample is separated into seven major functional classifications: general public services and internal order, defense, education, health, social security and welfare, housing and community amenities, and economic affairs and services. The economic expenditure is further split into four categories: fuel and energy; agriculture, forestry, fishing and hunting; mining, manufacturing and construction; and transportation and communication. The ratio of each of these expenditure categories to GDP is regressed on the level of income per capita and a set of variables representing the above discussed influences.

[Table 3](#) presents the regression estimates for the total expenditure and the individual expenditure by function. Some of the regressions presented in [Table 2](#) may not appear to meet high statistical standard tests but most estimates meet the 90 percent confidence level for t - test except for a few coefficients. As in most cross-section estimates, very high values of R^2 cannot be expected from our sample. The direction of influence of the explanatory variables is according to our expectation and quite similar to the estimates done by Heller and Diamond (1990) for a different group of countries during 1975-1986. The regional dummy variables appear statistically significant for certain expenditure functions. They are supposed to capture the

differences in the social, political, and cultural context among countries in different regions that are not accounted for by the other included explanatory variables.

The estimated expenditure equations can be used to compute the international expenditure comparison index (IEC) for a country j in the expenditure category i as follows:

$$IEC_{j}^{i} = \left[\frac{\text{Actual Ratio of Expenditure to GDP}}{\text{Predicted Ratio of Expenditure to GDP}} \right]_{j}^{i} \times 100$$

If IEC is below 100, that would mean the actual expenditure is below the average pattern among the developing countries included in the sample. If IEC is above 100, the country is spending above the average pattern. [Table 4](#) presents the calculated IEC for each expenditure category for Thailand in 1990.

The categories of which the indices are below the average pattern are total expenditure (IEC = 67.1); general public services (IEC = 56.7); health (IEC = 51.8); social security and welfare (IEC = 33.9); housing and community amenities (IEC = 33.6); fuel and energy (IEC = 53.7); mining, manufacturing and construction (IEC = 47.3); and transportation and communication (IEC = 71.4). The categories of which the indices are about average are education (IEC = 96.4) and the economic expenditure on agriculture, forestry, fishing and hunting (IEC = 102.7). The only category of expenditure that Thailand has above the average pattern is defense (IEC = 131.3).

The finding on high defense expenditure in Thailand is in line with that found by Heller and Diamond (1990) in which the IEC for Thailand's defense expenditure is found to be 144.2 during 1978-1980, 144.9 during 1981-1983 and 150.5 during 1984-1986. The findings on other social and economic expenditures are also similar but with different magnitudes.

OBSERVATIONS ON SOME TYPES OF EXPENDITURE

The above indices of the Thai government budget allocation should be considered with some caution since there are several factors that cannot be accounted for in the cross-country regression estimates. For example, some particular problems facing a country (such as floods or earthquakes) in the sample year may cause the budget allocation to be different from the average pattern. Another important consideration is the different organization or different roles taken by existing institutions within a country. The international differences in the role between the public and private sectors, between the public and state enterprises, and between the central and local government, can be major causes for the differences in budget allocation. For example, in a country where the public enterprises are major providers of public utilities, we may observe a lower than average public spending in this function by the central government. Two more considerations to be taken into account are the public expenditure occurred under the extra-budgetary account and not included in the central government budget, and implicit government subsidy given under tax privileges or tax exemptions and therefore excluded from the normal government budget.

With these considerations in mind, the results of this study may serve as the first step in pointing out where Thailand stands in comparison to the average fiscal expenditure of other developing countries. One needs to go into in-depth analysis of each type of expenditure to determine whether the different pattern of Thailand's expenditure is justified or not. Although it is not possible for this study to conduct an in-depth analysis on each type of public expenditure, a few explanations can be offered for the above findings based on past studies of socioeconomic problems facing Thailand.

Consider the total central government expenditure which is found to be below the average pattern of developing countries. This can be understood by the fact that stabilization has been a central concern in Thailand's macroeconomic policies.² At the same time, the strong private sector performance had contributed significantly to growth which implied that a budget deficit was not needed as a growth stimulant. In fact Thailand's fiscal budget has been in surplus in the past seven to eight years. The fact that the ratio of government expenditure to GDP in Thailand is below the average pattern does not mean that it

should be increased. Thailand's macroeconomic experiences have shown that lower than average public expenditure does not hurt the economy's growth. The active role of the private sector, the supportive role of the government, and the concern for economic stability seemed to have worked well for the Thai economy. The authors believe that the government should remain cautious in its spending amidst the current problem of the current account deficit.

As for the functional classification, it is found in this study that most expenditures are below the average pattern or close to the average pattern of the developing countries with the exception of defense expenditure, which is well above the average. In-depth analysis would suggest asking whether Thailand faces high risks for war. If so, such a high defense expenditure may be justified. However, under the circumstances of the 1980s up to the present time it is hard to believe that the country has faced high risks for war. Instead, it appears that Thailand's high defense expenditure can be explained by at least two historical facts. One is the high risks the country faced during the Vietnam war and its immediate aftermath and the other is the active political role of the military in the past. Both factors inflated military expenditure above the average pattern in the past. Since the budgeting process in Thailand is, in practice, "incremental" budgeting,³ budget shares of various categories change slowly and the large share of defense expenditure takes a long time to bring down. However, an examination of the present data shows that Thailand's defense expenditure expressed as a ratio to GDP or as a share to the total expenditure appears to have been declining in the recent years. This trend seems appropriate.

Economic expenditure on agriculture, forestry, fishing and hunting has an IEC index of 102.7, or close to the average pattern, which should come as no surprise since agriculture has been an important sector in the Thai economy. The Thai government has put a substantial amount of resources into irrigation and agricultural research and extension. Given that the majority of the labor force still remains in agriculture and there exists large income disparities between the agricultural and non-agricultural sectors, one would expect an even higher proportion of public expenditure in agriculture than the present level.

Another type of expenditure with an IEC index close to the average pattern is education (IEC = 96.4). Yet, Thailand may need to spend on education more than the average pattern of developing countries as several reports on education in Thailand⁴ point to the need of giving high priority to education. The main reason is that the role of the private sector in providing education in Thailand is small in comparison to other countries, such as South Korea or the Philippines. In addition, if we include skill training as part of the education system, Thailand still lags behind in this respect, especially in the private sector.

For most other types of public expenditure with the international comparison indices below the developing countries' average pattern, the reason may be partly due to the low total expenditure which acted as an overall constraint on detailed expenditure categories. However, one still needs to inquire further into other factors to determine whether such patterns are justified. For example, in Thailand, the activities in fuel and energy are mainly under state enterprises and excluded from the central government budget. One needs to have such information from other developing countries to evaluate whether Thailand's pattern is really off the average pattern.

Another important observation to be made is that this study is rather quantitative in nature. Yet the qualitative aspect of public expenditure is another dimension that needs to be examined. A given budget if expended efficiently may achieve the same target as a much larger budget expended inefficiently or corruptly. In fact, fiscal economists already offer three criteria to judge public expenditure which are effectiveness (the budget is spent on appropriate activities and targets achieved), efficiency (the least cost to achieve a given target), and equity (benefits are distributed equally among the target population).

In summary, this study may serve as an initial stimulus for further in-depth analysis of public expenditure in each function. The lower than average IEC index may point to the need for further inquiry into the quality of that spending including other circumstantial factors.

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