การขยายตัว การกระจายผลประโยชน์และผลกระทบ ด้านการคลังของรายจ่ายสาธารณะ ด้านการศึกษา ด้านสาธารณสุข และด้านสวัสดิการสังคมในประเทศ
Explaining the Growth and Distributional and Fiscal Effects of Public Education, Health, and Welfare Spending in Thailand[1]

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บทคัดย่อ

รายจ่ายสาธารณะด้านสังคมในประเทศไทยถูกจัดสรรเพื่อตอบสนอง ต่อการเปลี่ยนแปลงของปัจจัยทั้งด้านอุปสงค์และอุปทาน การขยายตัวของ ความเป็นโลกาภิวัตน์ และความเหลื่อมล้ำทางเศรษฐกิจ มักเป็นปัจจัยที่ผลักดัน ให้รัฐบาลต้องพยายามขยายบริการด้านสังคมไปสู่ครัวเรือนที่ยากจนเพิ่มมากขึ้น นอกจากนั้น การเพิ่มขึ้นของรายได้ของรัฐบาลจากภาษีทางตรงตลอดจนขนาด ของรายจ่ายสาธารณะด้านสังคมในปีเดิมก็มีความสัมพันธ์ในทิศทางบวกกับราย จ่ายสาธารณะด้านสังคมในด้านต่างๆ อีกด้วย และถึงแม้สัดส่วนของรายจ่าย

ด้านการศึกษา ด้านการสาธารณสุข และด้านการสังคมสงเคราะห์ของรัฐบาล
ไทยจะมีแนวโน้มเพิ่มสูงขึ้นอย่างต่อเนื่อง ประกอบกับการที่รัฐบาลได้มีแผนงาน
โครงการทางสังคมใหม่ๆ ที่มีเป้าหมายในการช่วยเหลือครัวเรือนที่ยากจนให้เข้า
ถึงบริการด้านการศึกษา ด้านการสาธารณสุข และด้านสวัสดิการสังคมต่างๆ
เพิ่มมากขึ้น ซึ่งรวมถึงการขยายการศึกษาขั้นพื้นฐานจาก 9 ปี เป็น 12 ปี การ
จัดตั้งกองทุนเงินกู้ยืมเพื่อการศึกษา การจัดทำระบบหลักประกันสุขภาพถ้วนหน้า
ตลอดจนการขยายระบบการประกันสังคมและสวัสดิการสังคมให้ครอบคลุม
ประชากรกลุ่มต่างๆ มากขึ้นก็ตาม แต่จากการศึกษาพบว่าประเทศไทยยังมี
ปัญหาความเหลื่อมล้ำในการกระจายผลประโยชน์ของรายจ่ายสาธารณะในด้าน
สังคมอยู่มาก ถึงแม้การกระจายผลประโยชน์ของรายจ่ายด้านการศึกษาขั้นพื้น
ฐานจะมีลักษณะที่เอื้อประโยชน์แก่ครัวเรือนที่ยากจนมากกว่าครัวเรือนที่ร่ำรวย
ก็ตาม แต่โดยภาพรวมแล้วความเหลื่อมล้ำในโอกาสทางการศึกษาในประเทศ
ไทยก็ยังคงมีอยู่สูงในทุกระดับการศึกษา ส่วนการกระจายผลประโยชน์ของราย
จ่ายด้านการสาธารณสุขก็มีลักษณะที่เอื้อประโยชน์แก่ครัวเรือนที่มีรายได้สูงมาก
กว่าครัวเรือนที่มีรายได้ต่ำ ถึงแม้จะมีลักษณะที่เอื้อประโยชน์แก่ครัวเรือนที่มี
รายได้สูงลดลงก็ตาม ส่วนรายจ่ายด้านการประกันสังคมของประเทศไทยก็ยังคง
ครอบคลุมถึงแรงงานจำนวนน้อย นอกจากนั้นการขยายตัวเพิ่มสูงขึ้นของราย
จ่ายสาธารณะในประเทศไทยดังกล่าวยังมีแนวโน้มส่งผลให้รัฐบาลต้องจัดทำงบ
ประมาณแบบขาดดุลอย่างต่อเนื่อง และส่งผลให้หนี้สาธารณะของประเทศไทย
มีแนวโน้มเพิ่มสูงขึ้น ข้อค้นพบดังกล่าวนี้จึงเป็นสิ่งท้าทายให้กับผู้กำหนดนโยบาย
ดังนั้น รายงานการวิจัยชิ้นนี้จึงพยายามจัดทำข้อเสนอแนะเชิงนโยบายจากข้อ
ค้นพบดังกล่าว

คำสำคัญ: รายจ่ายสาธารณด้านการศึกษา การสาธารณสุข การสวัสดิการ
สังคม นโยบายสังคม ประเทศไทย

Abstract

Social spending in Thailand is allocated in response to several demand and supply factors. Globalization and inequality tend to compel governments, both elected and non-elected, to increase generous education, health, and welfare programs for social sectors that fall behind. An increase in revenue from direct taxes and the previous year's spending level also has had a positive effect on the current rate of public spending on education, health, and welfare in Thailand. Despite the increase in the shares of education, health, and welfare spending and the recent introduction of new social programs in Thailand, with the stated objective of increasing access of the poor to education, health, and welfare services, including an expansion of basic education from 9 to 12 years, a student loan program, a universal health insurance scheme, and the expansion of other welfare services, overall public spending on education, health, and welfare is not very well targeted. Public spending on basic education is primarily pro-poor, but disparities in access to education continue to exist at all levels of education. Although the resulting benefit incidence of public spending on health services is less pro-rich compared to the past, the majority of public health spending still favors the higher income classes. The social security scheme coverage is also limited to a small section of the Thai labor force. Moreover, the increase in social spending has also caused an increase in the deficit and public debt in Thailand. These findings pose a challenge to policymakers, and the paper therefore explores their policy implications.

Keywords: public spending on education, health, welfare, social policy, Thailand

1. Public Education, Health, and Welfare Spending in Thailand

Social spending in Thailand is often regarded as an important tool for fighting inequality and poverty. The Thai government has made a strong commitment to expanding the access of the Thai population to education, healthcare, and other welfare services. Further, basic education, mostly publicly financed, has been expanded from 6 to 9 years and then to 12 years as required by the constitution. And recently, the government has launched a student loan program and a 15-year free education program to reduce the financial burdens of parents and to enable their children to have equal access to education. Since 1988, the government has introduced a publicly-subsidized health card scheme to increase the access of low-income families to medical services. Additionally, after the financial crisis in 1997, the government began a universal health insurance scheme which covers every Thai citizen. Social security benefits have also been expanded to include sickness and old age. In addition, social welfare services for poor families, the elderly, and other disadvantaged individuals have been expanded.

Thailand's public spending allocation among sectors has broadly reflected its development priorities. Thailand allocates a relatively large share of government expenditures to education, health, and social welfare and community services. Social spending is clearly the most important area of expenditure, with almost half of expenditures accounted for by

education, health, and social welfare and community services (see table 1). Education accounts for the largest share of government expenditures. Public health was the second largest category in 2007. Social welfare and community services also accounted for 8.8 percent of the total expenditure in 2007.

Figures 1 and 2 also show the expansion of public spending by function from 1982 to 2007. From these figures, we can see that social spending (which includes education, health, and welfare expenditure) as a percentage of total spending has been increasing over time. That is, the shares of education (GEDU), health (GHA), and social welfare (GWLFR) have all increased, while the shares of economic services (GECO), defense, and public order (GSECR) have been reduced. Despite this increase in the shares of education, health, and welfare spending, very little research has been geared toward an explanation of the growth and the distributional as well as fiscal effects of the spending.

Public spending on education in Thailand includes spending on education from primary level to university level, and scholarships for students. In Thailand many programs have been in place to increase the access of the Thai population to education, particularly primary and secondary education. Prior to the financial crisis in 1997, basic education had been expanded from 6 to 9 years. The government has also provided a publicly-subsidized basic education in all public schools to increase the access of students from low-income families to basic education. Further, after the financial crisis in 1997, basic education in Thailand was expanded from 9 to 12 years as required by the constitution. And of the entire education budget, 70 percent is spent directly on primary and secondary

education (Bureau of the Budget, 2009).   A student loan program for students of low-income families at upper secondary and tertiary levels was also launched in 1997.

Table 1   The Sectoral Composition of Public Expenditure

Fiscal year	1993	1997	2007
Shares of public expenditure (percent)			
General Government Services	25.3	20.6	18.2
General public administration	4.6	4.5	5.3
Defense	15.4	10.5	7.3
Public order and safety	5.3	5.6	5.6
Community and Social Services	32.9	39.6	41.8
Education	18.6	21.5	22.7
Health	5.7	7.5	9.5
Social welfare, housing, and community services	7.8	9.2	8.8
Religious, cultural, and recreational services	0.8	1.4	0.8
Economic Services	26.3	28.1	21.2
Fuel and energy services	0.3	0.2	0.2
Agriculture	10.3	8.0	6.8
Mining, mineral, manufacturing, and construction services	0.6	0.4	0.7
Transportation and communication	11.0	10.3	5.4
Other economic services	4.1	9.2	8.1
Miscellaneous and Unclassified Items	15.5	11.7	18.8
Miscellaneous and unclassified items	15.5	11.7	18.8
Total	100.0	100.0	100.0

Source: Bureau of the Budget, Thailand's Budget in Brief, 1993 – 2007
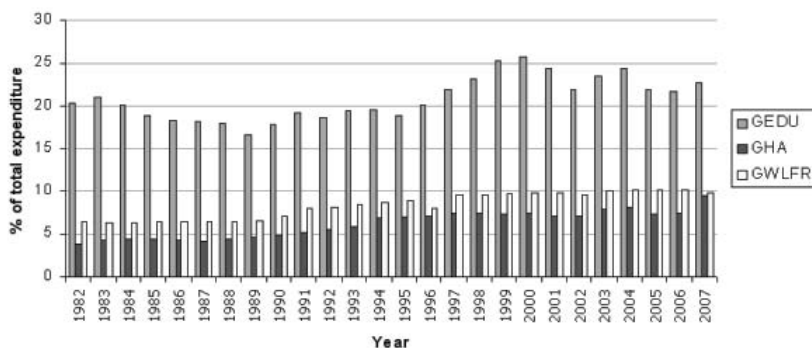
Figure 1: Public expenditure by function

GEDU   = Public spending on education as % of total spending

GHA   = Public spending on health as % of total spending

GWLFR = Public spending on social welfare, housing and community
            services as % of total spending

Source: Bureau of the Budget, Thailand's Budget in Brief, 1982-2008.
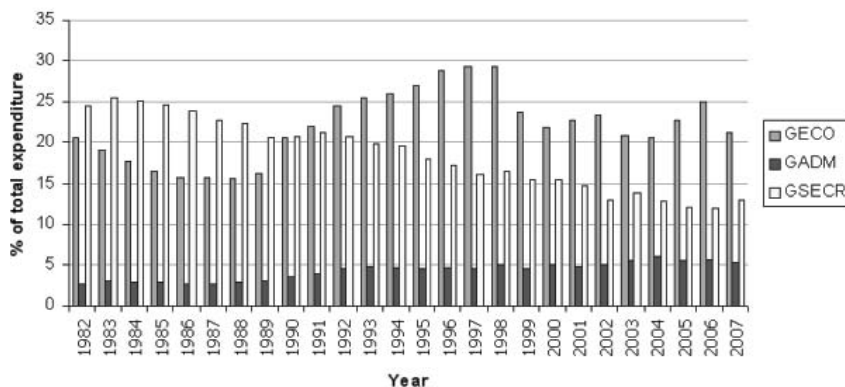

Figure 2: Public expenditure by function

GECO   = Public spending on economic services as % of total spending

GADM   = Public spending on general administration as % of total
            spending

GSECR = Public spending on defense and public order as % of total
            spending

Source: Bureau of the Budget, Thailand's Budget in Brief, 1982-2008.

In 2009, the government launched a 15-year free education program to reduce the financial burdens of parents and to enable their children to have equal access to education.

Public spending on health includes spending on hospital and health center operations, disease prevention and control, and health promotion. The Thai government has also made a strong commitment to expanding the access of the Thai population to healthcare services through the expansion of the health insurance scheme. Since 1988, the government has introduced a publicly- subsidized health card scheme to increase the access of low-income families to medical services. However, prior to the financial crisis in 1997, about 51 percent of the Thai population was covered by one of the many health insurance schemes, mainly tax-based financed. The 49 percent uninsured were mostly the low- and middle-income self-employed (Ministry of Public Health, 2008). Following the election of the government of Thaksin Shinawatra in 2001, the government therefore began a universal health insurance scheme which covers every Thai citizen.

Public spending on social welfare in Thailand consists of social security and other welfare service spending. The social security program accounts for 80 percent of the total spending on social welfare. Social security benefits are paid to those losing income resulting from illness and for compensation for retirement from the government and private sectors. Although the Thai government has a plan to increase the coverage of the scheme, at present the scheme coverage is limited to government employees and private sector employees in the formal economic sector. According to a report of the Social Security Office (2009), the social

security scheme covers only 28 percent of the labor force in Thailand. The majority of the poor which are mostly self-employed workers both in and outside the agricultural sector are not covered by this scheme.

Welfare services in Thailand include social assistance to poor families, the elderly, disabled persons, unemployed, and other contingency assistance such as compensation for loss due to disasters and economic crisis. These social welfare services were also expanded after the financial crisis in 1997.

2. Objectives of the Study

The study makes three contributions to the literature on social policy and social spending analysis. First, it studies the factors affecting the growth of public education, health, and welfare spending in Thailand from 1982 to 2007, and in doing this, an empirical model of both demand-side and supply-side factors are developed and tested. Second, the paper also explores the distributional effects of public education, health, and welfare spending in Thailand by using a benefit incidence analysis. Because the income gap between the rich and the poor in Thailand is widening (National Statistics Office, 2008) and the poor often have limited access to government services that could enable them to escape from poverty, the government is expected to target the provision of social services to the poor. But how does one ascertain the extent to which the benefit from social spending is actually reaching the poor? The benefit incidence analysis is a useful tool for addressing this question. It helps us to analyze the extent to which different income classes (e.g. the rich or the poor) are

benefiting from the current allocation of social spending. The analysis of benefit incidence in this study is for the year 2007. This is because many new social programs, with the stated objective of increasing access of the poor to education, health, and welfare services, including the extension of basic education to 12 years, a student loan program, a universal health insurance scheme, and the expansion of welfare services for poor families, the elderly, and other disadvantaged individuals, were implemented after the financial crisis in 1997 and following the election of the government of Thaksin Shinawatra in 2001. The resulting benefit incidence analysis in 2007 should therefore make it possible to evaluate how well government spending on these social services is targeted. Third, this article examines the fiscal effects of the growth of social spending in Thailand. Finally, the article also explores the policy implications of these findings.

3. Theoretical Framework

In studying social spending, two different conceptions of social spending can be put forward (Cameron, 1984; Tanzi and Schuknecht, 2000; and Lindert, 2004). Demand-side theory, based on traditional democratic theory, specifies that the government is simply an agent which carries out the will or demand of the people. In this view the government is considered to be a neutral and altruistic agent that responds to the needs of a society. And in this view, therefore, the shape of social expenditure is simply a response to the changing socio-economic demand of a society.

A second conception of social spending is called the supply-side theory. In this view, it is believed that the government is not simply

an instrument of a society but plays an important role in shaping social policy and social spending to serve its own interests. It is postulated that government has discretionary power to promote its own interests, whereas the preferences of the citizens are of secondary importance.

Because many studies on public spending in Thailand (Anusorn, 1984; Rangsan, 1990; Blondal and Kim, 2006; Ponlapat, 2007) tend to give primacy to the supply-side factors (e.g. the ability to raise taxes, the strength of the bureaucracy, elections, and parliamentary politics) in determining the growth of public spending, this paper attempts to study the explanatory power of both theories of social spending. In the first subsection, social spending theories acting on the demand side are reviewed and empirical indicators to be used in the testing are suggested. In the second subsection, this procedure is repeated for the supply side.

3.1 Demand-Side Explanations

Several theories can be classified under demand side explanations.

Wagner's Law

Adolph Wagner (1890), a German sociologist, formulated a "law of expanding public expenditure" over one hundred years ago. Wagner believed that there are several reasons why public expenditure (including social spending) tends to increase over time. First, industrialization, urbanization, and increased population density would give rise to a need for more provision of public facilities such as hospitals, housing, roads, and other infrastructures. Moreover, an increase in economic growth and income would facilitate the expansion of certain income-elastic demands such as demand for education and the redistribution of income.

In order to test the validity of Wagner's Law, four different variables are applied in the estimation model: the degree of urbanization, the degree of industrialization, the population growth rate, and the real GDP. All of these variables should have a positive relationship with social spending.

Median Voter Theory and the Demand for Income Distribution

There are many variants within public choice theory. One of the most important perspectives within the public choice school is the median voter theory developed by Downs (1957) and Meltzer and Richard (1981, 1983). According to this theory, it is believed that the government, in order to win an election, must try to respond to the demands of the voter. Consequently, two elements are important: the competition for votes and the distribution of income. Government spending grows when the franchise is extended to include more voters below the median income (the decisive voter) when the growth of incomes provides revenues for increased redistribution and when the income distribution becomes more uneven. As the market produces a distribution of income less equal than the distribution of votes, those with the lowest income use the political process to implement redistribution programs in their own favor and this causes social spending to expand.

To test the validity of this theory, researchers normally use the rate of voter turnout for elections as a measure of median voter participation. Due to the limitation of the data, however, the ratio of the GDP of the nonagricultural sector to the GDP of agricultural sector is used as a measure of economic inequality. This is simply because the majority of

the poor in Thailand live in the agricultural sector, and they are active voters. The higher inequality should increase the demand for redistribution programs. The ratio of the GDP of the non-agriculture to the GDP of agriculture is expected to have a positive relationship with social spending, particularly regarding education, health, and welfare spending.

Interest Group Theory

Interest groups are claimed to have an influence on public spending. Interest groups such as trade associations can and do influence legislation through their campaign contributions and lobbying efforts. Trade associations normally exert an influence on legislation concerning taxes, tariffs, price ceilings, and regulations. McCormick and Tollison (1981: 45-49), for example, found that the extent of economic regulation within a state in the U.S. varied directly with the number of trade associations registered in the state.

Rice (1986) presented evidence suggesting that labor unions and other interest groups are able to induce governments to introduce social programs to offset economic hardships, and that these programs help to explain the growth of public expenditure in European countries between 1950 and 1980. Naert (1990) also found that from 1961 to 1990, Belgian labor unions were able to secure significant increases in certain budgetary items, such as social services and public health that benefited their members.

In order to test this interest group theory, the percentage increase in the number of labor unions is used as a measure of the interest group effect. This percentage increase is expected to have a positive relationship with education, public health, and welfare spending.

Counter-Cyclical Theory

The government may respond to recessions and unemployment by increasing social spending. The rationale behind this Keynesian counter-cyclical theory is that an increase in public spending, such as welfare expenditure, can stimulate an increase in aggregate demand and thereby can stimulate higher economic growth and more employment. Some studies such as those of Henrekson (1988) and Cameron (1984) include unemployment rate in their estimation functions and found a positive relationship with social spending. In accordance, unemployment rate is included.

Compensation Theory

According to compensation theory, globalization has an influence on public spending. Rodrik (1998), Kaufman and Segura-Ubiergo (2001), and Garrett and Mitchell (2001) have shown that globalization has increased government intervention in the economy and has pressed the government to increase social programs.

Globalization here is defined as the integration of domestic markets with international trade and finance. Higher levels of international economic integration imply growing risks associated with the international business cycle, which in turn cause domestic economic volatility and thereby increasing economic insecurity and propelling demands for compensation via more generous social programs.

Countries with high exposure to international trade, for example, will experience market and social dislocation. The fluctuation in export and import prices creates economic instability, unequal income distribution, and unemployment problems. This instability will compel the government

not only to increase welfare spending for social sectors that fall behind, but also to increase expenditure on education and labor training programs so that the labor can move from the declining economic sectors to other sectors. According to compensation theory, therefore, globalization and expanding international markets will result in an expanding social spending.

To test this theory, trade openness (measured as exports plus imports as % of GDP) is used as a measure of globalization. Globalization is expected to have a positive relationship with education, public health, and welfare spending.

In addition to the above-mentioned independent demand variables, the percentage increase in the number of students, infant mortality rate, and the percentage of population over age 60 are also included in the estimation functions. The inclusion of the last three independent variables is due to the fact that the number of students should have a positive effect on education spending, infant mortality rate and the share of the elderly should also have a positive effect on public health, and welfare spending.

3.2 Supply-Side Explanations

There is no clear-cut distinction between demand-side and supply-side theories. Some variables or explanations can be classified under both the demand and the supply side. The following theories are classified as supply-side theories because all of them share the same idea: that the government has its own interest and plays an important role in shaping public spending to serve its own interest.

Fiscal Illusion Theory

Another variant of public choice theory is the so-called fiscal illusion theory proposed by Buchanan (1975), Marshall (1991), and Oates (1988). In this theory, it is believed that the government has preferences for expanding its public spending. These preferences for larger budgets (including social budgets) are said to be due to the need to satisfy the increasing demand of the voters. But in order to increase the budget, the government needs to increase taxes, and this action may cause dissatisfaction on the part of the voters. In order to reduce this dissatisfaction, the government normally tries to collect taxes which are less visible to the taxpayer. A renter, for example, pays no property tax directly. The renter may not have enough information to determine the extent to which a tax on the owner of the property that he or she rents gets passed on to him or her. The renter might then vote for increased education budgets – to be financed out of increased property taxes – not realizing that he or she will be paying more in taxes. Indirect taxes, such as value-added tax and import-export taxes, are also less visible to consumers. Consumers do not have enough information to determine the extent to which the burden of these taxes is passed on to them. Finally, public borrowing is also less visible to taxpayers because the debt burden is passed on to them in the future. For fiscal illusion theory, if tax burdens can be disguised in this way, the government can increase public expenditure without causing voter dissatisfaction.

In order to prove this theory, tax revenues as a percentage of the GDP, proportion of direct tax to total taxes, and budget deficit as a percentage of total expenditure are included in this study.

● Tax revenues as a percentage of the GDP represent a financial constraint on social spending. If the government can collect more taxes, the capability to increase social spending will also increase. Consequently, a positive relationship between taxes as a percentage of the GDP and education, public health, and welfare spending is expected.

● The proportion of direct tax to total taxes is expected to have a negative relationship with education, health, and welfare spending. If the government collects a small proportion of revenues from direct taxes (which means more reliance on indirect taxes), this should give the government more opportunity to increase social spending.

● Budget deficit is also expected to have a positive relationship with education, health, and welfare spending because public borrowing gives the government opportunity to increase social spending without the necessity of dissatisfying the present voters.

Incrementalism

Incrementalism views public spending as a continuation of past spending with only incremental modifications (Lindblom, 1959; Wildavsky, 1964). According to this theory, the government or policymakers does not have enough time, information, or money to investigate all of their alternatives in existing policy because there are so many uncertainties involved. In order to avoid these uncertainties and risks, public spending is made incrementally. That is, in making a budget, policymakers concentrate

their attention on modest changes – increase or decrease – in existing spending. For Wildavsky (1964), incrementalism is especially pervasive in budget making. Because of the constraints of time, information, and money, budget makers do not reconsider the value of all existing programs each year; rather, the previous year's expenditures are usually considered as a base of spending and the new spending is adjusted from that year's base.

Incrementalism therefore provides a good prediction of social spending. The previous year's social spending level is the best predictor of the next year's social spending level. Incrementalism is also an explanatory theory: it helps to explain the limited rationality in the budget-making process. Instead of responding to the demand of the society, social spending programs can persist and grow over time, long after their value to society has diminished.

In order to prove the validity of incrementalism, one-year lagged education, health, and welfare spending variables are employed as predictors of the current education, health, and welfare spending. A positive relationship between a lagged social spending variable and the current social spending is expected, if the argument of incrementalism is correct.

Budget-Maximizing Bureaucrat Theory

Public spending may grow not only because increasing expenditures are demanded by the citizens, interest groups, or legislators, but also because they are demanded by the bureaucracy itself. Niskanen (1971), Borcherding (1977), and Ferris and West (1999) believe that bureaucrats seek a larger budget. This larger budget can be used not only to offer

higher salaries and more leisure (because of a large staff), but can also create a higher public reputation and power for the bureau.

The empirical evidence to support this theory is mixed. Henrekson (1988) finds that public employment is positively related to local levels of government consumption expenditure in Sweden, but not to transfers. Renaud and Van Winden (1987), on the other hand, came up with entirely opposite results for the Netherlands. Ferris and West (1999) use U.S. time-series data from 1959-89 to support the theory, but when they expanded the data series to 1949-89, they were unable to uncover a significant relationship between the number of public employees and government expenditure.

However, in order to test this theory, a more simple measurement has been used. A one-year lagged social spending variable has also been used as a measurement of self-interested government/bureaucrats. A positive relationship between lagged education, health, and welfare spending and current education, health, and welfare spending implies that there is a tendency for the government and bureaucrats to seek larger social budgets over time.

Political Business Cycles Theory

The focus of political business cycles is on how politics affects public spending. Paldam (1997) and Alesina and Roubini (1992), for example, argue that a business cycle can also be created by the government or by competition for elections between political parties.

According to this view, the government and the political parties are assumed to be self-interested. Their main interest is to win an election. In this way, public spending is usually used by the government

or political party as an instrument to manipulate voters' support during an election. That is, during the period before the election, the government or government party will increase public spending (including social spending) to stimulate higher economic growth and to reduce unemployment in order to satisfy the voters and also to gain an advantage in the election. This action therefore tends to cause a business cycle.

In order to test this model, the year of the general election (dummy variable, 1 in the year before and the year of the election, 0 in the other years) is employed as a predictor of the growth of education, health, and welfare spending. A positive relationship is expected between the year of election and social spending growth.

Power Resources Theory

The power resources theory claims that the expansion of the welfare state and social spending in OECD countries is mainly the result of partisan politics (Korpi, 1978; Esping-Anderson, 1990; Garrett, 1998). When leftist or popularly- based parties (such as the social democrat party or labor party) came to power, there was a tendency for these governments to support and pursue state intervention and to prefer to increase social spending in order to channel benefits to labor and low-income citizens that were the sources of their power. On the other hand, when non-popularly based parties (e.g. parties with no connection with labor or the popular sector) came to power, they tended to favor least government and limited social spending.

Recently, some studies, such as those by Kaufman and Segura-Ubiergo (2001) and Brown and Hunter (1999), have tried to apply the power resources thesis to explain the expansion of social spending in

developing countries. According to these studies, partisanship in terms of popularly-based versus non-popularly-based governments may not be relevant to developing countries, where most governments lack broader-based popular support. In addition, a majority of developing countries were under authoritarian regimes before 1990, and the presence of democracy has varied broadly across developing countries. Thus, in order to test the power resources theory, regime type (democratic versus authoritarian) can be a main causal factor in explaining the growth of welfare and social spending in developing countries because democratic governments should be more responsive to the demands of broader-based voters and be more willing to increase social programs in order to gain or maintain electoral support in the face of electoral competition.

In accordance with the above argument, democratic government (dummy variable: 1 for years in which elected government is in office, 0 otherwise) is used as a measure of regime type. Democratic/elected governments are expected to have a positive relationship with education, public health, and welfare spending.

4. Specification of the Model

The aim of this section is to derive an empirically-testable model of the growth of social spending. Since social spending growth is the result of both demand-side as well as supply-side factors, an empirical model specifying the relationship between dependent and independent variables can be developed, as shown in Table 2.

Table 2 Dependent and Independent Variables Applied to Explaining Social Spending in Thailand, 1982-2007

Dependent Variables	Measurement	Data Source
GEDU	Public spending on education from primary to university level as % of total government spending	Bureau of the Budget, Thailand's Budget in Brief (1982-2010)
GHA	Public spending on hospital and health center operations, disease prevention, and health promotion as % of total government spending	
GWLFR	Public spending on social security, welfare services, housing, and community development as % of total government spending	

Independent Demand Variables and Expected Sign		Measurement	Data Source
GDP	+	Gross domestic product at current prices (in billion baht)	Bank of Thailand, Thailand's Key Economic Indicators (1982-2007)
POP	+	Population growth rate (%)	National Statistics Office,
URB	+	Growth rate of total population living in urban areas (%)	Thailand's Statistics Yearbook (1982-2007)
IND	+	Growth rate of labor in industrial sector (%)	
INEQTY	+	Ratio of the GDP of the non-agricultural sector to the GDP of agricultural sector	National Economic and Social Development Board, Thailand's Macro-Economic Data (1982-2007)
LABOR	+	% increase in number of labor unions	Ministry of Labor, Labor organization statistics (1985, 2010)

Independent Demand Variables and Expected Sign		Measurement	Data Source
UNEMP	+	Unemployment rate (%)	National Statistics Office, Thailand's Statistics Yearbook (1982-2007)
GLOBAL	+	Exports plus imports as % of GDP	National Economic and Social Development Board (1982-2007)
STU	+	% change in number of students	National Statistics Office, Thailand's Statistics Yearbook (1982-2007)
DEATH	+	Infant mortality rate (%)	Ministry of Public Health, Public Health Statistics (1995, 2010)
AGE	+	% of population over age 60	National Statistics Office, Thailand's Statistics Yearbook (1982-2007)
REV	+	Tax revenues as % of GDP	Bureau of the Budget,
DEFCT	+	Budget deficit as % of total government budget	Thailand's Budget in Brief (1982-2010)
DIRCT	-	Proportion of direct tax to total taxes (%)	
LGEDU	+	One-year lagged education spending as % of total spending	
LGHA	+	One-year lagged public health spending as % of total spending	
LGWLFR	+	One-year lagged social security and welfare spending as % of total spending	
ELEC	+	Election cycle (dummy variable: 1 in the year before and the year of election, 0 in other years)	King Prajadhipok's Institute, Thai General Elections: Experiences and Reform (2001)
DGOV	+	Democratic government (dummy variable: 1 for years in which elected government is in office, 0 otherwise)	Sombat Thamrongthanyawong, Politics and Government in Thailand (2005)

From the specifications of the dependent and independent variables in table 2, regression equations can be formulated as follows:

Demand-side explanation

$$\text{GEDU} = a + b_1 \text{ GDP} + b_2 \text{ POP} + b_3 \text{ URB} + b_4 \text{ IND} + b_5 \text{ INEQTY} + b_6 \text{ LABOR} + b_7 \text{ UNEMP} + b_8 \text{ GLOBAL} + b_9 \text{ STU} + e$$

$$\text{GHA} = a + b_1 \text{ GDP} + b_2 \text{ POP} + b_3 \text{ URB} + b_4 \text{ IND} + b_5 \text{ INEQTY} + b_6 \text{ LABOR} + b_7 \text{ UNEMP} + b_8 \text{ GLOBAL} + b_9 \text{ DEATH} + b_{10} \text{ AGE} + e$$

$$\text{GWLFR} = a + b_1 \text{ GDP} + b_2 \text{ POP} + b_3 \text{ URB} + b_4 \text{ IND} + b_5 \text{ INEQTY} + b_6 \text{ LABOR} + b_7 \text{ UNEMP} + b_8 \text{ GLOBAL} + b_9 \text{ AGE} + e$$

Supply-side explanation

$$\text{GUDU} = a + b_1 \text{ REV} + b_2 \text{ DEFCT} + b_3 \text{ DIRCT} + b_4 \text{ LGEDU} + b_5 \text{ ELEC} + b_6 \text{ DGOV} + e$$

$$\text{GHA} = a + b_1 \text{ REV} + b_2 \text{ DEFCT} + b_3 \text{ DIRCT} + b_4 \text{ LGHA} + b_5 \text{ ELEC} + b_6 \text{ DGOV} + e$$

$$\text{GWLFR} = a + b_1 \text{ REV} + b_2 \text{ DEFCT} + b_3 \text{ DIRCT} + b_4 \text{ LGWLFR} + b_5 \text{ ELEC} + b_6 \text{ DGOV} + e$$

5. Empirical Results

The empirical findings from the multiple regression can be summarized for each dependent variable as follows:

5.1 Educational Spending (GEDU)

Table 3 shows the coefficients from the regression analysis. The findings can be summarized as follows.

Demand-side explanation

Three demand-side variables have a significant positive relationship with public spending on education: inequality (INEQTY), globalization (GLOBAL), and percentage change in number of students (STU).

Table 3 Empirical Results of Regression on Public Educational Spending in Thailand, 1982-2007

Independent variables	Dependent variable: Educational spending (GEDU)		
	Coefficients (Beta)	T	Significance
Demand-side explanation			
GDP	- .077	- .116	.909
POP	- .091	- .315	.758
URB	- .370	- 1.401	.183
IND	- .096	- .611	.551
INEQTY	.209*	2.282	.048
LABOR	- .012	- .084	.934
UNEMP	- .433	- 1.353	.197
GLOBAL	.522*	2.945	.051
STU	.169*	2.180	.035
R^2 = .824 Adjusted R^2 = .686 F = 5.977 Sig = .001 n = 26 DW = 1.885			

Table 3 continue

Independent variables	Dependent variable: Educational spending (GEDU)		
	Coefficients (Beta)	T	Significance
Supply-side explanation			
REV	- .245	- 1.355	.191
DEFCT	- .188	- 1.332	.198
DIRCT	.247*	2.638	.021
LGEDU	.652**	3.704	.002
ELEC	- .096	- .888	.385
DGOV	- .008	- .061	.952
R^2 = .819 Adjusted R^2= .662 F = 14.307 Sig = .000 n = 26 DW = 2.048			

Notes: *   statistically significant at 0.05 level

       ** statistically significant at 0.01 level

Globalization has a strong significant effect on educational spending. This finding supports compensation theory. In Thailand exports and imports on average account for more than 80 percent of the GDP. Higher exposure to international trade, and vulnerability to foreign-trade shocks, could therefore force the government to be more sensitive to the need to increase the skills and education of the labor in order to help them adjust to changing demands from the world market. This finding is also consistent with the empirical findings from a cross-national study by Lindert (2004: 39).

Inequality also has a low but significant effect on educational spending. In Thailand, approximately 45 percent of the labor force works in the agricultural sector, but the ratio of the GDP of the nonagricultural

sector to the GDP of the agricultural sector was as high as 8.7-fold in 1998, and increased to 8.9-fold in 2002 (National Economic and Social Development Board, 2007). This increase in inequality has tended to compel the Thai government to increase expenditure on education and labor training programs so that labor can move from the declining economic sector to other sectors. This finding lends support to the median voter theory, and as expected, an increase in the number of students tends also to increase public spending on education.

However, contrary to Wagner's Law and other demand-side theories, no significant relationship was found between gross domestic product (GDP), population growth rate (POP), urbanization (URB), industrialization (IND), and educational spending. The increase in the number of labor unions (LABOR) and unemployment rate (UNEMP) also has no significant effect on educational spending.

Supply-side explanation

Table 3 also shows the relationship between the supple-side variables and educational spending. Only two supply-side variables have a significant effect on educational spending: proportion of direct tax to total taxes (DIRCT) and one-year lagged education spending (LGEDU).

Contrary to the fiscal illusion hypothesis, a significant positive relationship was found between direct tax and educational spending. The lack of empirical support for the fiscal illusion hypothesis may be due to the fact that, during the past two decades, several economic and social developments in Thailand have made it possible for the government to extract higher amounts of revenue from the population. The expansion of the formal economic sectors and the movement of labor from farms to

factories have made it easier for the government to measure and tax their income. Moreover, the movement of women from employment at home to employment in the marketplace has also allowed the government to measure and tax their income. This increase in the revenues from direct taxes has made it possible for the government to increase public spending, including public spending on education.

Another supply-side variable that has a high significant positive relationship with educational spending is one-year lagged education spending. This finding lends support to both incrementalism and budget-maximizing bureaucrat theories. On the one hand, it shows that the present level of Thai educational spending has been marginally adjusted from the previous year's level. On the other hand, it also implies a tendency of a self-interested government or bureaucrat in Thailand to seek larger educational budgets over time.

However, no significant relationship was found between democratic government (DGOV) and educational spending, which means that no significant differences in level of education spending seem to have emerged between elected and non-elected governments. This is therefore not supportive of the power resources hypothesis. The lack of empirical support may be due to the fact that education in Thailand is often regarded as an important tool for building human capital and for fighting poverty. Given the strong public support for education, both elected and non-elected governments have made a strong commitment to expanding access to education.

5.2 Public Health Spending (GHA)

Table 4 shows the relationship between the independent variables and public spending on health.

Demand-side explanation

Four demand-side variables have a significant relationship with public health spending: gross domestic product (GDP), inequality (INEQTY), unemployment rate (UNEMP), and globalization (GLOBAL).

Table 4 Empirical Results of Regression on Public Health Spending in Thailand, 1982-2007

Independent variables	Dependent variable: Public health spending (GHA)		
	Coefficients (Beta)	T	Significance
Demand-side explanation			
GDP	.359**	3.221	.002
POP	- .127	- .717	.411
URB	.033	.333	.679
IND	.051	.826	.345
INEQTY	.134*	2.097	.041
LABOR	- .048	- .713	.355
UNEMP	- .226*	- 2.098	.045
GLOBAL	.503*	2.340	.031
DEATH	- .023	- .081	.951
AGE	.041	.438	.646
R^2 = .958 Adjusted R^2 = .942 F = 33.361 Sig = .000 n = 26 DW = 2.256			

Table 4 continue

Independent variables	Dependent variable: Public health spending (GHA)		
	Coefficients (Beta)	T	Significance
Supply-side explanation			
REV	.080	.976	.341
DEFCT	.062	.756	.459
DIRCT	.368**	2.723	.014
LGHA	.653**	4.152	.001
ELEC	- .027	- .456	.654
DGOV	- .033	- .385	.705
R^2 = .942　Adjusted R^2 = .924　F = 51.710	Sig = .000　n = 26　DW = 1.854		

Notes:　*　statistically significant at 0.05 level

　　　　**　statistically significant at 0.01 level

　　　Globalization again has a strong significant relationship with public spending on health. Higher exposure to international trade, and vulnerability to the international business cycle, could force the Thai government to be more sensitive to the need to increase safety nets for the social sectors that fall behind. Globalization therefore tends to increase public spending on health.

　　　The GDP also has a significant positive effect on public spending on health. This means that the demand for healthcare services in Thailand has increased with economic growth. This finding is consistent with the empirical finding from a cross-national study by Gerdtham and Jonsson (2000) in the case of the OECD countries. Inequality is another factor which has a positive effect on public health spending. Higher inequality has forced the Thai government to increase public expenditure on health.

Finally, quite opposite the counter-cyclical hypothesis, unemployment rate has a significant negative effect on health expenditure. This may be simply because the revenue shortfall during a period of recession and unemployment tends to cut into the public health budget.

Supply-side explanation

Table 4 also shows the relationship between supply-side variables and public health spending. Two supply-side variables have a significant effect on health expenditure: the proportion of direct tax to total taxes (DIRCT), and one-year lagged public health spending (LGHA).

The significant positive relationship between the direct tax and public health expenditure indicates the importance of the elasticity of the direct tax system in Thailand. The increase in tax revenues has made it possible for the government to increase public health spending.

The positive relationship between the one-year lagged public health spending and public health expenditure indicates that the present level of health expenditure is marginally adjusted from the previous year's level. It also implies a tendency of self-interested government to seek larger budgets over time.

However, no significant relationship was found between democratic government (DGOV) and public health spending. This means that no significant differences in the level of public health spending emerged between elected and non-elected governments. This is therefore not supportive of the power resources hypothesis.

5.3 Social Welfare Spending (GWLFR)

Table 5 shows the coefficients of the relationship between independent variables and social welfare spending.

Demand-side explanation

For the demand-side variables, a significant relationship was found between inequality (INEQTY), globalization (GLOBAL), and social welfare spending (GWLFR). Inequality has a significant positive relationship with social welfare spending. This means that higher inequality has increased the demands for social welfare programs in Thailand. This is supportive of the median voter hypothesis. Globalization also has a very strong significant relationship with social welfare spending. Greater exposure to global markets implies growing risks associated with the international business cycle. This instability has compelled the Thai government to be more sensitive to the need for safety nets. This finding is therefore supportive of the compensation theory.

Table 5 Empirical Results of Regression on Social Welfare Spending in Thailand, 1982-2007

Independent variables	Dependent variable: Social welfare spending (GWLFR)		
	Coefficients (Beta)	T	Significance
Demand-side explanation			
GDP	- .034	- .178	.769
POP	.052	.187	.841
URB	- .061	- .444	.701
IND	- .023	- .267	.681
INEQTY	.334**	3.781	.003
LABOR	- .024	- .632	.486
UNEMP	- .041	- .341	.704
GLOBAL	.626**	2.890	.005
AGE	.055	.787	.564
R^2 = .977 Adjusted R^2 = .954 F = 46.239 Sig = .000 n = 26 DW = 2.234			

Table 5 continue

Independent variables	Dependent variable: Social welfare spending (GWLFR)		
	Coefficients (Beta)	T	Significance
Supply-side explanation			
REV	.089	.983	.338
DEFCT	- .012	- .149	.883
DIRCT	.117	.875	.393
LGWLFR	.522**	3.243	.002
ELEC	- .110	- 1.746	.097
DGOV	- .032	-.361	.722
R^2 = .940 Adjusted R^2 = .921 F = 49.804 Sig = .000 n = 26 DW = 2.178			

Notes: *   statistically significant at 0.05 level

**   statistically significant at 0.01 level

However, no significant relationship was found between the increase in the number of labor unions (LABOR) and social welfare spending. This lack of empirical support may be due to the weakness of the labor movement in Thailand. Despite the increasing in the number of labor unions, the labor unions in Thailand have failed to develop themselves into a strong labor movement.

Supply-side explanation

Only one supply-side variable had a significant effect on social welfare spending: one-year lagged social welfare spending (LGWLFR). This means that the present level of social welfare spending is marginally adjusted from the previous year's level. It also implies a tendency for the government or the bureaucracy to seek larger welfare budgets over time.

6. Distributional Effects of Public Education, Health, and Welfare Spending

The second objective of this study was to analyze the distributional effects of public education, health, and social welfare spending by using a benefit incidence analysis. Because the poor often have limited access to education, healthcare, and welfare services that would enable them to escape poverty, the government is therefore expected to target the provision of these social services to the poor. Benefit incidence is a useful tool for analyzing the extent to which different income classes (e.g. the rich and the poor) are benefiting from the current allocation of social spending.

The analysis of benefit incidence in this study is for the year 2007. This is because many new social programs, including the extension of basic education to 12 years, a student loan program, a universal health insurance scheme, and the expansion of welfare services to poor families, the elderly, and other disadvantaged individuals, have been implemented after the financial crisis in 1997 and following the election of the government of Thaksin Shinawatra in 2001. The resulting benefit incidence analysis in 2007 should make it possible to evaluate how well government spending on these social programs is targeted.

6.1 Methodology of Benefit Incidence Analysis

The earliest examples of analyses of the incidence of social spending are studies by Gillespie on Canada and the United States (1964 and 1965). The methodology of benefit incidence analysis in its present form was introduced in two studies of developing countries: Selowsky

(1979) on Colombia and Meerman (1979) on Malaysia. These two classic studies have been replicated in various country case studies. There are also two excellent surveys of benefit incidence analysis by Demery (2000) and Younger (1999). Interested readers are referred to the above literature for details.

Benefit incidence analysis typically involves a four-step process:

1. Average unit cost of providing a public service is obtained by dividing government spending on the service by the total number of users of the service. In case of public education and health, for example, users are students attending a school and patients receiving treatment, respectively.

2. Average benefit from government spending on a service is simply equated with the average unit cost of providing the service as derived from the previous step.

3. The population of users (individuals or households) is ranked from poorest to richest using an income measure and is aggregated into income classes. Income classes can be deciles or quintiles. The latter is widely used in the literature as is the case in this paper.

4. The distribution of benefits across income classes is obtained by multiplying the average benefit derived from the previous step by the number of users of the service in each income class. The quintile share of benefits accrued to each income class from a public service is simply the total benefits thus derived for each class divided by the total spending on the service across all income classes. By construction, quintile shares for a given service add up to unity.

From the above specification, the methods of benefit incidence estimation for public spending on education, health, and welfare can be specified as follows:

Public education spending

The beneficiaries of education spending are students that are enrolled in educational institutions. Thus, the benefit of public education spending is distributed in proportion to the number of students enrolled at each level of education in each income class.

● For primary and secondary education spending, the benefit is distributed in proportion to the number of students enrolled at each level of education in each income class.

● And for tertiary education spending, the benefit is also distributed according to the number of students at this level of education in each income class.

Public health spending

The beneficiaries of public health spending are the patients that receive medical services from public hospitals or health centers, and also households in general.

● For public spending on health services (curative programs), the beneficiaries of this spending are the patients that receive medical services from public hospitals and healthcare centers. Thus, the benefit from this spending is distributed in proportion to the household expenditure on medical services in public hospitals and health centers in each income class.

● Regarding disease prevention and health promotion

programs, public spending in these programs can be considered as pure public goods, goods or services that are provided to everyone in the society. Thus, the benefit of disease prevention and health promotion spending falls to everyone, and this benefit is distributed according to the number of households in each income class.

Social welfare spending

Social welfare spending includes spending on social security and other welfare services. The beneficiaries of this spending are the recipients of pensions and other compensation from the social security system. The beneficiaries of other welfare service spending include those that receive welfare assistance from the government.

● For social security spending, the benefit is therefore distributed in proportion to household income from pensions and other compensation in each income class.

● For other welfare service spending, the benefit is distributed proportionally to household income from government assistance.

Table 6 summarizes the variables and data sources used in the benefit incidence analysis. The year of the study is 2007.

Table 6   Data for the Benefit Incidence Analysis

Variables	Year Studied	Data Source
1. Incidence of spending on education		
● Public spending on primary and secondary education	2007	Bureau of the Budget, Thailand's Budget in Brief (2007-2008)
● Public spending on tertiary education	2007	
● Number of students enrolled at each level of education in each income class	2007	National Statistics Office, Socio-Economic Survey of Household (SES), 2007
2. Incidence of spending on health		
● Public spending on health services	2007	Ministry of Public Health, Thailand Health Profile (2008)
● Public spending on disease prevention and health promotion	2007	
● Household expenditure on medical services in public hospitals in each income class	2007	National Statistics Office, Socio-Economic Survey of Household (SES), 2007
● Number of households in each income class	2007	
3. Incidence of social welfare spending		
● Public spending on social security and other welfare services	2007	Bureau of the Budget, Thailand's Budget in Brief (2007-2008)
● Household income from pension and other compensation in each income class	2007	National Statistics Office, Socio-Economic Survey of Household (SES), 2007
● Household income from government assistance in each income class	2007	

6.2 Incidence of Educational Spending

Table 7 reports the benefit incidence of public spending on education for 5 income classes (lowest to highest income class). The analysis is for the year 2007.

Table 7   Benefit Incidence of Public Spending on Education by Income Class, 2007

Income class	Benefit incidence of public spending on education (percent of total spending)		
	Primary and secondary	Tertiary	All[1]
Lowest income	24.35	0.66	19.73
Low income	24.22	1.39	19.76
Middle income	20.25	3.73	17.01
High income	17.65	18.22	17.76
Highest income	13.53	76.00	25.74
Total	100.00	100.00	100 00

[1] consists of primary, secondary, and tertiary education

Public spending on primary and secondary education tends to benefit the poor more than the rich. About 24.35 percent of the benefit from primary and secondary education spending accrues to the lowest income class, compared with 20.25 percent and 13.53 percent to the middle and highest income class, respectively. Basic education, which includes both primary and secondary education in Thailand, is often regarded as an important tool for building human capital and for fighting poverty. The Thai government has made a strong commitment to expanding access to primary and secondary education, and basic education has

been expanded from 9 to 12 years. The government has also provided a publicly-subsidized basic education in all public schools to increase access of students from low-income families to basic education. And of the entire education budget, 70 percent is spent directly on primary and secondary education. This spending therefore tends to favor low-income families.

Spending on tertiary education is, on the other hand, pro-rich. It benefits the rich more than the poor. The highest income class obtains 76 percent of the benefit from tertiary education spending. On the other hand, the lowest income class receives only 0.66 percent of the benefit. This finding confirms the widely-held belief that higher education tends to benefit the wealthy. This is simply because the students from poor families seldom make it to this level of education.

Although the Thai government has previously introduced a student loan program which covers students from lower-income families in tertiary education, there is dispute as to whether the program is poverty-targeted or not. Although it was officially stated to be directed toward poorer students, the implementation of the program is left to the educational institutions themselves. These institutions report that they lack the resources to determine whether a student is or is not from a poorer household and therefore unable to target the program to the poor in any meaningful way.

Overall spending on education is on average pro-rich. The highest income group receives the highest benefit (25.74%). The distribution of the benefit, however, is fairly proportional to income in the rest of the income classes.

6.3 Incidence of Health Spending

Table 8 reports the benefit incidence of public spending on health for 5 income classes (lowest to highest income class). The analysis is for the year 2007.

Table 8 Benefit Incidence of Public Spending on Health by Income Class, 2007

Income class	Benefit incidence of public spending on health (percent of total spending)		
	Health services	Disease prevention and health promotion	All[1]
Lowest income	18.03	24.0	18.49
Low income	18.68	21.5	18.90
Middle income	19.62	20.2	19.66
High income	20.42	18.3	20.26
Highest income	23.25	16.0	22.69
Total	100.00	100.00	100.00

[1] consists of health services, disease prevention, and health promotion spending

Although the Thai government has previously introduced universal health insurance schemes (mostly publicly financed with some participant contribution) to increase access of the poor to medical services, public spending on health services (curative care programs) is primarily pro-rich. Twenty-three point two five percent of the benefit from health service spending accrues to the richest group as compared with 18.03% for the poorest group. This finding may not be surprising as it is generally known that spending on hospitals primarily benefits the rich while the

access of the poor is limited. Hospitals and healthcare centers tend to be concentrated in urban areas rather than rural areas, where the poor primarily live. This reduces the opportunity for poor families to obtain equal access to medical services.

However, it should be noted that the resulting benefit incidence of public spending on health services in 2007 was less pro-rich as compared to the past incidence of spending. For example, Direk (1999) reported that in 1995 about 33.72 percent of the benefit from health service spending accrued to the richest group, compared with only 15.53 percent to the poorest group. This less pro-rich incidence of public spending on health services in 2007 resulted from a better distribution of health facilities and personnel in recent years. The difference in the population-to-doctor ratio of the poorest region (the northeast) as compared to the richest region (Bangkok) used to be as high as 9-fold in 1998, but dropped to 6.5-fold in 2001. The number of district hospitals also doubled (Ministry of Public Health, 2008: 24).

Public spending on primary healthcare (e.g. disease prevention/control and health promotion), on the other hand, tends to benefit the poor more than the rich. This is also due to the fact that the spending on disease control, such as immunization programs and health promotion programs, can reach wider populations and keep disease incidence low. Thus, the spending on disease control and health promotion tends to favor lower income groups.

Finally, overall spending on health is on average pro-rich. The highest income class receives the highest benefit: 22.69% compared with 18.49% for the lowest income class. This pro-rich incidence is evident from

the fact that in Thailand about 75 percent of overall health expenditure is spent on curative care programs; and the bulk of the curative expenditure goes to secondary and tertiary facilities which are located in more urban areas and thus favor middle- and upper-income classes.

6.4 Incidence of Social Welfare Spending

Public spending on social welfare consists of social security and other welfare service spending. The social security program, the largest program, accounts for about 80 percent of total spending on social welfare. The social security program is actually not a welfare program because recipients do not have to be poor. Social security benefits are paid to those losing income resulting from illness and for compensation for retirement from the government and private sectors. In Thailand, the social security scheme coverage is limited to government employees and private sector employees in the formal economic sector. According to a report of the Social Security Office (2009), the social security scheme covers only 28 percent of the labor force in Thailand. The majority of the poor that are mostly self-employed workers both in and outside the agricultural sector are not covered by this scheme.

Welfare services, on the other hand, are to some extent means-tested. These programs include social assistance to poor families, the elderly, disabled persons, unemployed, and other contingency assistance such as compensation for loss due to disasters and economic crisis.

Table 9 reports the benefit incidence of public spending on social welfare for 5 income classes (lowest to highest income class). The analysis is for the year 2007. Consistent with the above observations, public spending on social security is pro-rich. The highest income class obtains

28.14 percent of the benefit from social security spending. On the other hand, the lowest income class receives 12.62 percent of the benefit. This pro-rich incidence is evident from the fact that the social security scheme coverage is limited to a small section of the Thai labor force.

Table 9 Benefit Incidence of Public Spending on Social Welfare by Income Class, 2007

Income class	Benefit incidence of public spending on social welfare (percent of total spending)		
	Social security	Other welfare services	All [1]
Lowest income	12.62	32.65	16.40
Low income	16.29	34.43	19.72
Middle income	19.79	19.29	19.69
High income	23.16	10.21	20.72
Highest income	28.14	3.42	23.47
Total	100.00	100.00	100.00

[1] consists of social security and other welfare service spending

Public spending on other welfare services is, on the other hand, pro-poor. Thirty-two point six five percent and 34.43 percent of the benefit from welfare services accrues to the poorest and poor group, respectively, compared with 3.42 percent to the highest income class. This pro-poor incidence is evident from the fact that the objective of this spending is to provide welfare services to disadvantaged groups.

Finally, overall spending on social welfare is on average pro-rich. Only 16.40 percent of the benefit accrues to the poorest group. In contrast, the richest group receives about 23.47 percent of the benefit. This finding

simply shows that overall social welfare spending in Thailand is still not well targeted towards the poor.

7. Fiscal Effects of Public Education, Health, and Welfare Spending

The growth of public spending, particularly the social spending from 1982 to the present, had to be financed. In the past, this was largely achieved through increased tax revenues. However, compared to other countries of the same income level, tax revenue in Thailand was relatively low. Table 10 shows comparative tax revenue and public expenditure as a percentage of GDP. From the table, it can be seen that the tax revenue in Thailand was only around 17.3 percent of the GDP on average which was relatively low compared to that in other countries. This lower tax revenue had made it very difficult for the government revenue to keep pace with expenditure. This gap between tax revenue and expenditure led the government to generate more budget deficits. These deficits, therefore, can accumulate to significant public debt burdens. The growth of public spending, therefore, can cause a risk to fiscal sustainability in Thailand.

Table 10 Tax Revenue and Public Spending as % of GDP (Year 2008)

Country	Tax revenue as % of GDP	Public spending as % of GDP
Sri Lanka	17.6	22.9
Indonesia	18.0	21.0
Philippines	17.6	18.4
Malaysia	23.7	22.1
Thailand	17.3	18.6
Argentina	18.7	19.4
Venezuela	24.0	24.6
United Kingdom	38.0	41.7
United States	32.6	34.2
Sweden	50.6	56.6

Source: World Bank, *World Development Indicators*, 2010

7.1 Budget Deficits in Thailand

The growth of public spending, together with the relatively limited tax revenue, forced the Thai government to generate more budget deficits. Table 11 illustrates the fiscal balance of the Thai government from 1996 to 2009. From the table, we can see that the Thai government has tended to have budget deficits on a regular basis since 1997. Before the financial crisis in 1997, the revenue had largely kept pace with public expenditure which made it possible for the Thai government to balance budgets or even to generate budget surpluses. However, during the period of the financial crisis from 1997 to 2002, the decrease in tax revenue forced the

government to adopt more budget deficits. After the period of financial crisis, from 2002 onward, Thailand began to experience economic recovery and also a recovery in the tax revenue again. However, during this period, the fiscal situation in Thailand continued to be in deficit. This chronic nature of budget deficits, even during times of normal economic growth, implies that public revenue in Thailand has not been able to keep up with the growing expenditure.

Table 11 Central Government Fiscal Balance, 1996-2009 (in million baht)

Fiscal year	Revenues	Expenditures	Fiscal balance
1996	850,176.8	777,245.6	72,931.2
1997	844,194.9	910,314.7	-66,119.8
1998	727,392.6	848,029.0	-120,636.4
1999	709,926.6	840,185.8	-130,259.2
2000	747,626.9	868,081.9	-120,392.0
2001	765,961.2	901,654.9	-135,693.7
2002	845,410.9	1,015,628.7	-170,271.8
2003	960,622.4	980,343.0	-19,720.6
2004	1,125,130.3	1,140,121.5	-14,991.2
2005	1,214,000.3	1,245,957.3	-31,957.0
2006	1,332,099.2	1,391,925.7	-59,826.5
2007	1,521,650.1	1,566,200.0	-44,594.9
2008	1,595,121.6	1,657,124.5	-62,002.9
2009	1,781,181.2	1,832,216.6	-51,035.4

Note: 1. Revenues mean actual revenues collected by central government in each fiscal year which consist of taxes and duties, sales of goods and services, and share of profits from state enterprises.

2. Expenditures mean actual expenditures from the budget appropriation in that fiscal year and those carried-over from the prior years.

Source: Bureau of the Budget, Thailand's Budget in Brief

7.2 Public Debt in Thailand

The chronic budget deficits in Thailand have tended to generate considerable problems of public debt. Table 12 shows public debt as percentage of GDP in Thailand form 1992 to 2010. Prior to the financial crisis in 1997, the fiscal position of Thailand was mainly in surplus. As a result, the public debt declined to only 20.8 percent of the GDP on the average from1992 to 1996. When the 1997 financial crisis occurred, the government absorbed substantial financial sector losses, coupled with conducting an expansionary fiscal policy. This resulted in a large increase in public debt to a peak at 58.9 percent of the GDP in 2001. However, public debt gradually declined to around 45 percent of the GDP from 2004 to 2010.

Table 12: Public Debt as % of GDP, 1992 – 2010

Year	Public debt as % of GDP
1992 – 1996	20.8
1997	35.6
1998	42.6
1999	54.4
2000	57.6
2001	58.9
2002	55.4
2003	54.3
2004	46.6
2005	47.6
2006	47.6
2007	43.5
2008	38.7
2009	43.3
2010	45.2

Source: Rattakul (2009: 1) and Public Debt Management Office (2011)

Although Thailand has been able to maintain modest levels of public debt relative to the GDP, the inability of the Thai government to balance the budgets would make it very difficult to bring down its debt burdens. Thus, in order to maintain fiscal sustainability, the government needs to lower its budget deficits so that the ratio of public debt to GDP can be brought down in the near future.

8. Conclusions and Policy Implications

Social spending in Thailand from 1982 to 2007 was allocated in response to both demand and supply factors. Globalization has a strong significant influence on social spending in Thailand. Greater exposure to the international market has tended to increase the demand for public education, health, and welfare spending. Inequality and the GDP also have had a significant positive effect on social spending. Inequality has a significant effect on public education, health, and welfare spending. The GDP has a significant relationship only with public health spending. All of these factors tend to force the governments, both elected and non-elected, to increase their social programs.

The supply-side factors, such as an increase in the revenue from direct taxes and the previous year's spending level, also have had a positive effect on social spending. This increase in the tax revenues has made it possible for the government to increase social spending. The positive relationship between the one-year lagged social spending and social expenditure indicates that the present level of social expenditure was marginally adjusted from the previous year's level. It also implies a tendency for self-interested governments to seek larger social budgets over time.

Despite this increase in the share of social expenditure and the recent implementation of many new social programs (e.g. the extension of basic education to 12 years, a student loan program, a universal health insurance scheme, and the expansion of other welfare services) after the financial crisis in 1997 and after 2001, overall public spending on education, health, and welfare was not very well targeted.

Although public spending on primary and secondary education in Thailand is pro-poor, the disparities in access to education continue to exist at all levels of education (see table 13). Thus, the government should consider targeting more education subsidies toward the lower-income population and areas.

Table 13 Years of Schooling of Thai Population over 15 Years of Age by Income Class in 2003

Income class	Years of schooling
Lowest income	4.6
Low income	5.2
Middle income	6.8
High income	10.1
Highest income	12.4
Average	7.8

Source: National Statistics Office, Thailand's Statistics Yearbook, 2008

In addition, university education tends to favor the wealthy. The emphasis on an increased cost recovery at this level of education should be continued. This would provide increased funding for the university and would free resources for support to poorer students. Moreover, the government should also consider targeting more student loans toward low-income families.

Public spending on health services is primarily pro-rich. The bulk of curative expenditure goes to secondary and tertiary facilities that are located in urban areas and thus favor higher-income classes. The government therefore should give poorer provinces as well as district and Tambon (rural) hospitals greater emphasis in receiving resources for curative care as well as primary healthcare.

Overall public spending on social welfare is also pro-rich. This is simply because the social security scheme covers only 28 percent of the labor force in Thailand. The government therefore should increase the coverage of the scheme to cover more groups, particularly self-employed workers both in and outside the agricultural sector. This would directly increase welfare to the poor.

The growth of social spending has also tended to increase the chronic deficits and public debt burdens, which may have an effect on Thailand's future fiscal sustainability. Thus, the increase in the demand for social spending also implies a need for growing revenues in Thailand. In order to meet the need for these revenues, reforms in the tax system, particularly by broadening income tax bases and reform in land and property tax, are needed. Broadening tax bases will enhance the equity of the tax system. It also makes revenues more responsive the increased demand for public spending.

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