Vol. 27 No. 2 Thailand Development Research Institute June 2012

TDRI Quarterly Review

Contents

A key stepping stone to improve the quality of Thai education system is to create a working educational accountability system. *See related article on page 3.*

ISSN 0857-2968

TDRI Council of Trustees and Board of Directors

The Thailand Development Research Institute Foundation was established in 1984 to conduct policy research and disseminate results to the public and private sectors. TDRI was conceived, created and registered as a non-profit, non-governmental foundation, and is recognized as such by the Royal Thai Government. The Institute does technical and policy analyses to support the formulation of policies with long-term implications for sustaining social and economic development. TDRI has six research programs: Human Resources and Social Development, International Economic Relations, Macroeconomic Policy, Natural Resources and Environment, Science and Technology Development, and Sectoral Economics.

Assistant: *Wattana Kanchananit* **Caption:** *Kwanjai Lekagul* **Editor:** *John Loftus*
Production Officer: *Jirakorn Yingpaiboonwong* **Director of Information Services:** *Poonsin Wongkoltoot*

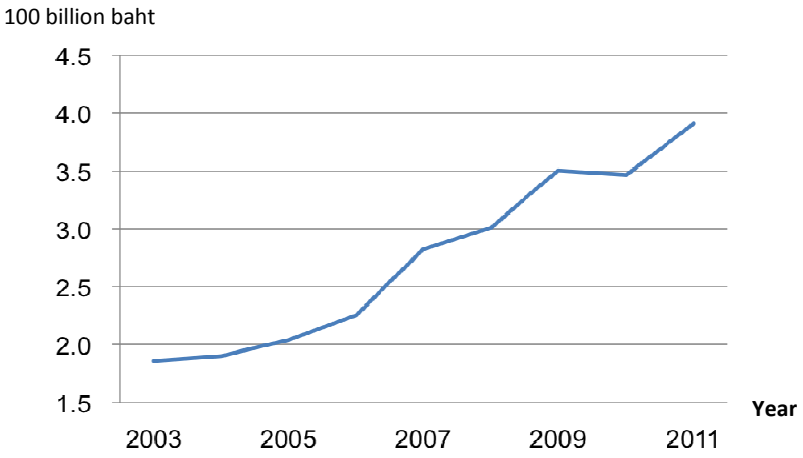
Revamping the Thai Education System: Quality for All

Somkiat Tangkitvanich
Supanutt Sasiwuttiwat*

1. INTRODUCTION

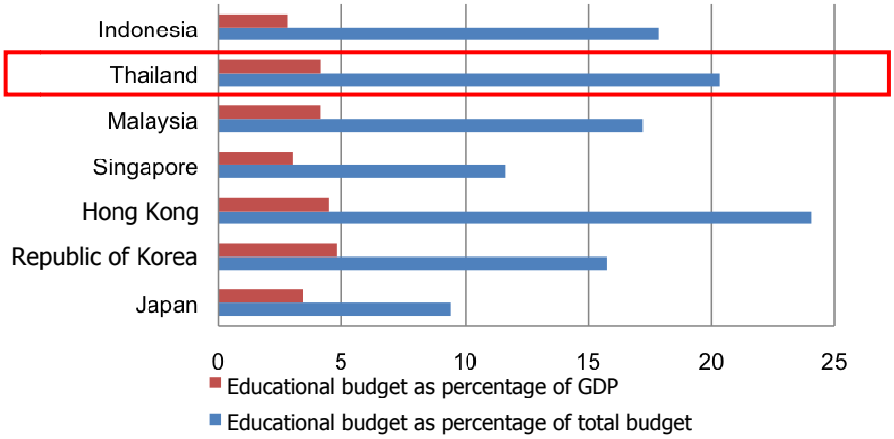
The Thai education system is widely perceived to be the inadequately financed, but the data on educational spending and student performance suggest otherwise (Figure 1). In the past 10 years, Thailand's education budget has more than doubled, reaching 4 percent of gross domestic product (GDP) and accounting for up to 20 percent of the total government budget (Figure 2), which is no less than that of most other Asian countries. In addition, many parents spend considerable amounts of money on private tutoring. Thai students also spend more time in class compared with students in other countries (Figure 3). In sum, the financial resources spent by the Thai government and households are substantial and cannot be considered inadequate.

Figure 1 Annual Budget of the Ministry of Education between 2003 and 2011



Source: Bureau of the Budget (various years).

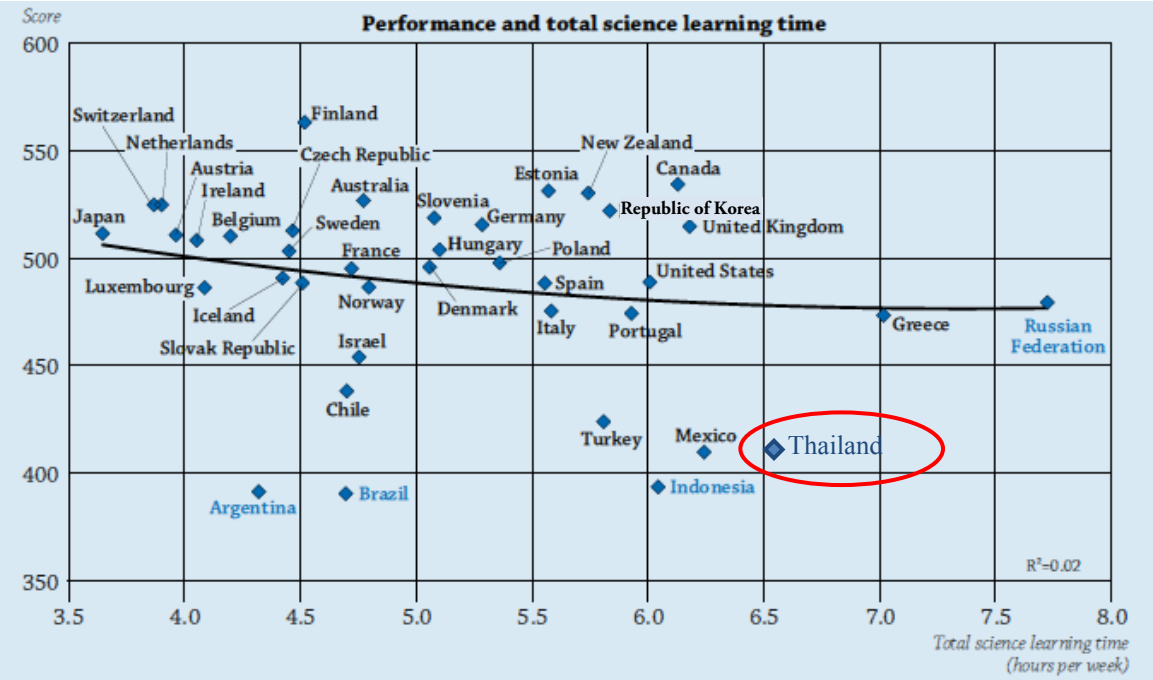
Figure 2 Educational Budgets as Percentage of GDP and Total Budgets of Thailand and Selected Asian Economies



Source: World Bank website at: data.worldbank.org/topic/education.

* *Dr. Somkiat is the Vice-President and Research Director for the Information Economy, and Mr. Supanutt is Researcher, Science and Technology Development Program, TDRI.* *The authors would like to thank Ms. Panchompoo Wisittanawat for her excellent help in preparing this article.*

Figure 3 Total Science Learning Time (hours/week) and Programme for International Student Assessment (PISA) Test Scores for Science, in Thailand and Other Countries

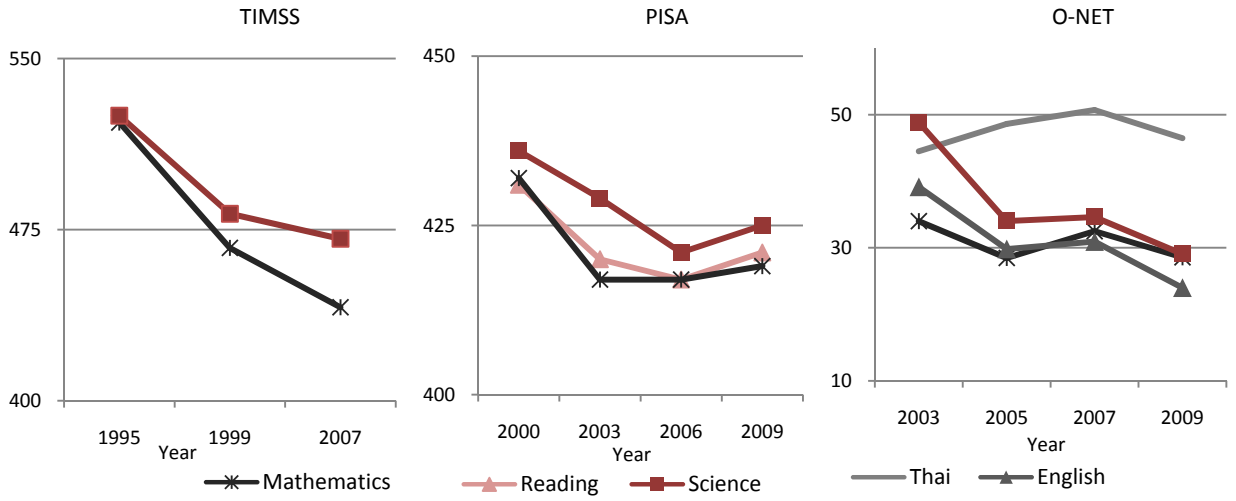


Source: OECD (2011).

However, the level of educational achievement of Thai students is not in line with the increase in financial resources, as student performance measured by both national and international standardized tests is declining (Figure 4). At the same time, certain groups of students continue to perform significantly better than the rest of their peers. Students in demonstration schools affiliated with universities and students in Bangkok score highest in all tests (see Figures 5 and 6).

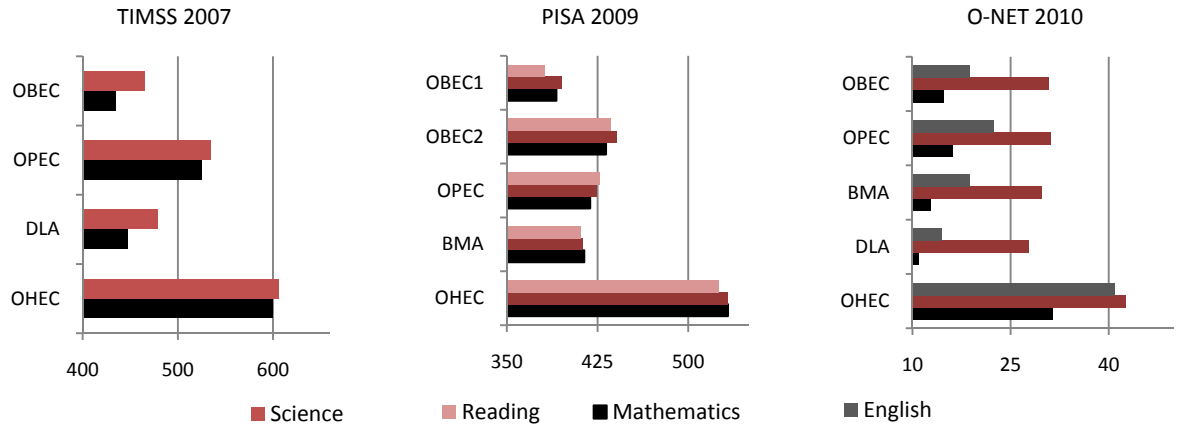
The data show that increasing financial resources alone would not improve the quality of education across the board. To provide access to good-quality education for all children, existing resources have to be utilized more efficiently. One way to do that is to create a system that fosters accountability. This article explores key challenges in school management and education financing in Thailand through an accountability perspective, and recommends policies to create an accountability system that would improve the quality of Thai education.

Figure 4 Scores of Thai 12th Grade Students, Taking the Trends in International Mathematics and Science Study (TIMSS), Programme for International Student Assessment (PISA) and Ordinary National Educational Test (O-NET)



Sources: TIMSS: nces.ed.gov/timss and timss.bu.edu, PISA: www.pisa.oecd.org, and O-NET: www.moe.go.th/data_stat/ and www.niets.or.th.

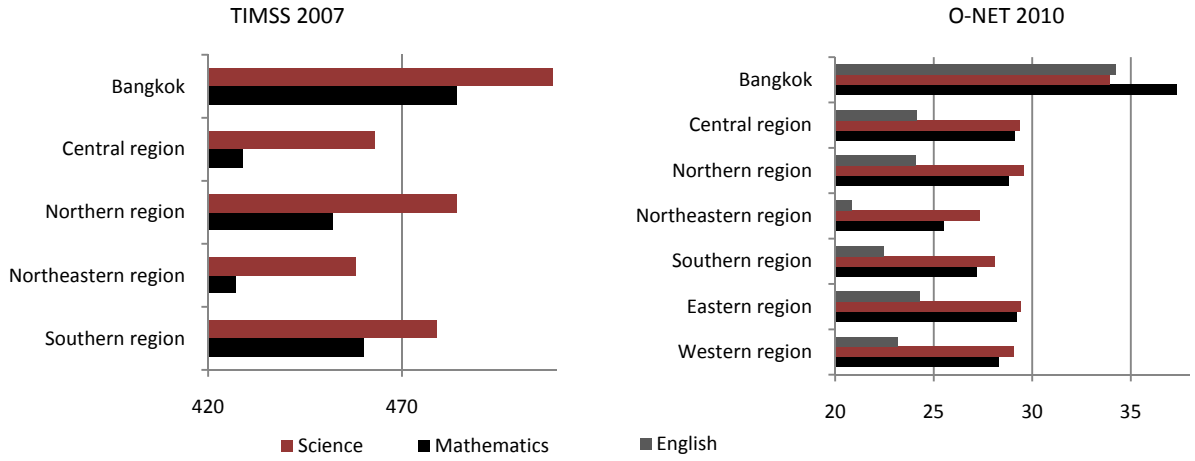
Figure 5 Average Scores, by School Affiliation, Achieved in Trends in International Mathematics and Science Study (TIMSS), Programme for International Student Assessment (PISA) and Ordinary National Educational Test (O-NET)



Notes: OBEC: Office of the Basic Education Commission, OPEC: Office of the Private Education Commission, DLA: Department of Local Administration, OHEC: Office of the Higher Education Commission, and BMA: Bangkok Metropolitan Administration.

Sources: TIMSS: IPST (2008), PISA: IPST (2010), and O-NET: www.niets.or.th.

Figure 6 Average Scores, by Region of Thailand, Achieved in Trends in International Mathematics and Science Study (TIMSS) and Ordinary National Educational Test (O-NET)



Sources: TIMSS: IPST (2008), and O-NET: www.niets.or.th.

2. THEORETICAL FRAMEWORK

2.1 General Framework for Improving the Quality of Education

A successful reform to improve the quality of education must start with accurate understanding of the issues. In this section, we summarize the main findings from recent studies.

- Education quality, not quantity, is the main contributing factor to long-term economic growth (Hanushek and Wößmann 2007 and 2011).
- Increasing financial resources alone does not guarantee success in improving the quality of education. The case of Thailand outlined above reflects this finding.
- Quality of teachers is significant with regard to student achievement (Hanushek 1992).
- Effective education reform must incorporate the creation of an accountability system. This is probably the most important component of educational reform, since a working accountability system is vital to the success of other reforms.

To repeat, the challenge Thailand is facing is not lack of resources, but inefficiency in utilizing existing resources as a result of the absence of an accountability system. Therefore, the first stepping stone to improve

the quality of education is to create a working accountability system which enables other reform initiatives.

2.2 Framework for Educational Accountability System

For a person or an organization to be accountable, the outcomes on assigned goals of that person or organization must be evaluated by the people who assigned the goals, and the evaluation must entail reward or punishment for the person or the organization.

In many countries, including Thailand, the state is heavily involved in administering and providing educational services. As a result, the state becomes the agent that must be accountable to parents. At the same time, public and private schools receiving full or partial funding from the state must be accountable to the state in providing students with good-quality education. Parents can reward or punish politicians through elections and other political activities. This creates a long route of a "parents-state-school-teachers" chain of accountability (Figure 7). In practice, there are many possible disconnects in this long chain of accountability. People do not always have access to politicians. Elected officials do not always have control over the Ministry of Education's policy. The Ministry cannot directly control the quality of all the schools. As a chain is only as strong as its weakest link, this long route of accountability is prone to breakdowns.

There are two possible ways we can strengthen the accountability chain. The first is to decentralize educational administration, allowing parents to gain more access to local politicians. However, this has not proved successful, since the problem of the disconnect between politicians and schools is still present. The second solution, which is more likely to be successful, is to create a short-route "parents-school-teachers" accountability chain, where a disconnect is less likely to occur.

Studies have shown that schools under an accountability system perform better than those outside such a system. For example, Hanushek and Raymond (2004), in studying schools in the United States, found that students in schools that publish their test scores perform better on standardized tests than those in schools without any accountability system, and students in schools that reward or punish teachers based on test scores perform even better (Figure 8).

2.3 Key Components in Creating a School Accountability System

Three reform components in creating the short-route accountability chain are as follows.

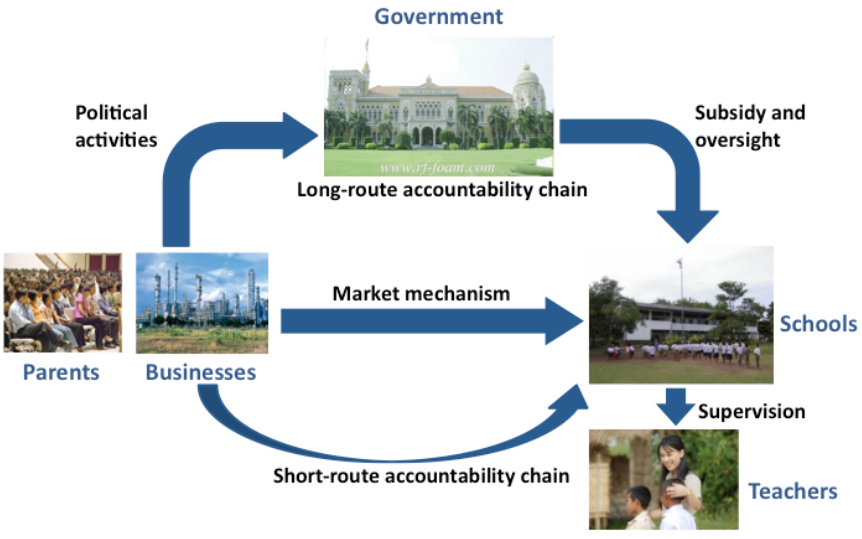
2.3.1 Information Reform

School information has to be transparent and available to parents. This includes information about responsibilities and rights of all stakeholders, school resources, school curriculum, and data on student performance. Transparency will mitigate the problem of information asymmetry between parents and schools. Parents will be able to choose high-quality schools for their children, and this will affect the subsidy that schools receive from the state under a demand-side financing scheme (see section 4.3).

2.3.2 School-based Management Reform

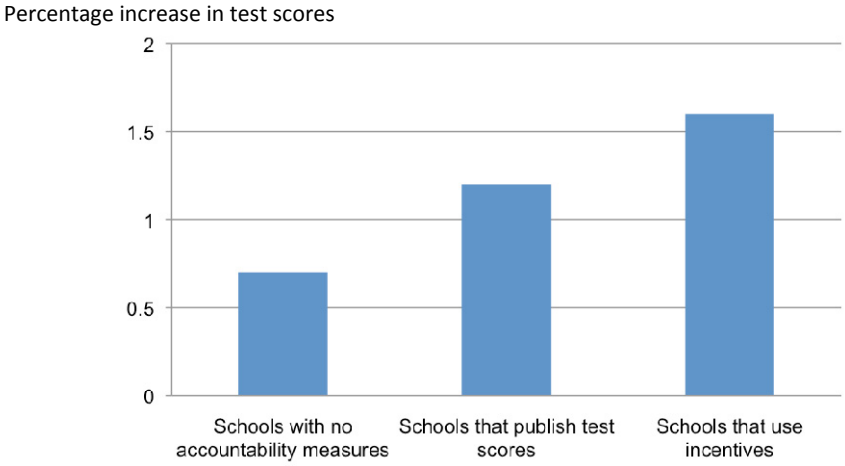
Because schools understand their own needs and constraints better than a centralized state administration, schools should have more academic and administrative autonomy. At the same time, the accountability chain can be strengthened by increasing parent involvement in school management.

Figure 7 Accountability Framework



Source: Modified from Bruns et al. (2011).

Figure 8 Effect of Educational Accountability on Student Achievement



Source: Hanushek and Raymond (2004).

2.3.3 Teacher Incentive Reform

No reform will improve student performance if it does not directly alter how teachers teach. Currently, as state employees, teachers enjoy the highest level of job security available in Thailand. In addition, the promotion of a teacher is not determined by student performance, but by how long a teacher has been in the teaching profession. The key to getting teachers to teach better is incentive reform. A pay-for-performance system, connecting hiring and promotion with student performance, will achieves the goal of altering how teachers teach.

A requisite for achieving any of these three types of reform is to obtain an accurate indicator of student performance, generally through standardized testing.

3. EXAMPLES FROM OTHER COUNTRIES

3.1 School Report Cards

In Paraná, Brazil, the state disseminates school report cards to parents. The report cards show the average score of students in the fourth and eighth grades, the grade repetition rate, and the dropout rate. The information is presented in comparison with school district and state averages. The effect of school report cards has not been studied, but initial evaluation indicates that they encourage parents to be more actively involved in public discussion about school management and policy (Bruns et al. 2011).

3.2 No Child Left Behind in the United States

The No Child Left Behind Act of 2001 was initiated under the administration of President George W. Bush. The United States federal government requires that all schools receiving state subsidies have their students participate in standardized testing administered by the state. Each school must make Adequate Yearly Progress in test scores for students in all racial groups. If a school continually fails to achieve progress, it suffers punitive measures. For example, if it fails for six consecutive years, the school can be closed down or turned into a charter school.

3.3 Teacher Incentives

Many countries have initiated pay-for-performance systems for their teachers, and there is evidence that incentives improve the quality of teaching. Pay-for-performance systems take various forms. Teachers can be rewarded individually or collectively. Criteria for teacher performance range from improvement in standardized test scores, difference between predicted and actual test scores, college/university admission rate, dropout rate, and graduation rate, to teacher absence record.

In the state of Andhra Pradesh, India, teachers are rewarded with a bonus, individually and collectively, when students' test scores improve by 5 percent. Teachers in this program are found to increase their workload and pay more attention to low-performing students; as a result, their students perform better compared with other students. In Pernambuco, Brazil, teachers are rewarded with a bonus collectively when schools reach 50 percent of the expected Index of Basic Education Development. Each teacher's individual reward depends on the teacher's attendance record. As a result, teachers increase class time spent on teaching, enabling students to participate more (Bruns et al. 2011).

There are benefits and drawbacks to each pay-for-performance model. For example, rewarding teachers as a group fosters collaboration, but this can lead to a so-called free-rider problem. Rewarding teachers individually can be counterproductive to collaboration, as it encourages teachers to favor teaching high-performing students. A combination of

individual and collective rewards could minimize the negative effects of both models.

The key to success in a pay-for-performance system is that the incentives ultimately alter teachers' behaviors. The incentives have to be compelling, attainable, and fair. Factors that are out of teachers' control must be excluded, and the model has to be culturally sensitive.

3.4 Criticism of Standardized Testing

As mentioned previously, standardized tests are crucial to educational accountability. It is important for standardized tests to be really indicative of the quality of learning and student performance.

One major criticism of standardized testing is "teaching to the test." However, teaching to the test should not be viewed as inherently damaging. Tests can be designed so that they stimulate the teaching of valuable skills, for example, by using literacy-based tests instead of content-based tests, and avoiding multiple-choice tests. Another criticism is that standardized testing narrows the curriculum, but this problem can be solved by broadening the scope of the tests.[1]

Schools and teachers may have conflicts of interest that lead them to game the system in order to inflate test scores, for example, by excluding low-performing students from the tests, pressuring low-performing students to drop out or even cheat. This problem can be solved by comparing test scores to other indicators that correlate highly with test scores.[2]

Another concern is that standardized tests put schools with a high percentage of students in low socio-economic status at a disadvantage, since test scores depend on many factors beyond their teachers' control. However, this problem can be avoided by using the change in test scores instead of raw test scores in teacher and school evaluations.

4. CURRENT EDUCATIONAL ACCOUNTABILITY SYSTEM IN THAILAND AND CHALLENGES

4.1 Decentralization of Education

Since the National Education Act of 1999 was legislated, three forms of decentralization have been put into effect. The three forms include transferring public schools under the Office of the Basic Education Commission (OBEC) to local administrations, increasing the autonomy of school districts, and increasing the autonomy of schools. However, overall decentralization measures have not yielded tangible improvement with regard to school accountability.

Transferring schools from OBEC to local administrations has had a limited beneficial effect. Only 3 percent of schools and 7 percent of students are affiliated with local administrations (Parandekar 2011). School districts have seen much improvement in terms of numbers; currently, there are 185 school districts in Thailand, which oversee 150-200 schools per district. However, in practice, decision-making is still centralized at higher levels of administration. While schools now have autonomy over their per capita subsidy and their curriculum, schools still do not have autonomy over the hiring and firing of teachers, which means teachers are not accountable to the schools. In addition, even though it is mandated by law that parents and community members serve on school boards, in practice involvement from the community is very limited.[3]

4.2 Evaluation System for Basic Education

In Thailand, there are three components of the evaluation system for basic education.

4.2.1 Student Evaluation

Students have to take multiple standardized tests. Nationally, the National Institute of Educational Testing Service (NIETS) administers the Ordinary National Educational Test (O-NET) tests in the 6th, 9th and 12th grades, and the National Tests (NTs) in the 3rd and 6th grades. Locally, there are tests that are part of the local assessment system (LAS) in the 2nd, 5th, and 8th grades. However, with the exception of O-NET, which is used for gaining admission to university, these tests do not have any effect on the students taking the tests or on their teachers. In addition, information about schools' average test scores is not publicly available.

4.2.2 Teacher Evaluation

For OBEC schools, school principals twice a year appoint a committee according to the Office of the Teacher Civil Service Commission's guideline to evaluate teachers' performance for the purpose of assessing whether they qualify for a salary increase. In addition, teachers are assessed in order to obtain different levels of accreditation, based on which they receive additional compensation. However, student performance carries little weight in both teacher evaluation schemes, so instead of focusing on teaching, teachers are incentivized to spend time and effort on producing paperwork, which matters more than other factors in the current evaluation system.

4.2.3 School Evaluation

The Office for National Education Standards and Quality Assessment (ONESQA) administers a nation-wide school quality assessment every five years. The first round of assessment was between 2001 and 2005, and the second was between 2006 and 2010. The assessments entail examining school documents, interviewing school personnel and students, and classroom observation. However, the results of the assessment

system as currently practiced did not reflect student performance. While student performance was declining, the number of schools of all school affiliations that passed the assessment increased dramatically (Figure 9).[4]

The assessments were not only ineffective in improving student performance but also created a burden on both schools and teachers. To prepare for school inspection, teachers had to spend a lot of time on paperwork. A study conducted by the Ramajitti Institute found that 83 percent of the teachers spent 20 percent of their time on paperwork, and 10 percent of the teachers spend 50 percent of their time on that activity (Wittayakorn 2009). In addition, the assessments were also costly for the state as each round of assessment costs 1.8 billion baht, or approximately 45,000 baht per school.

4.3 School Financing

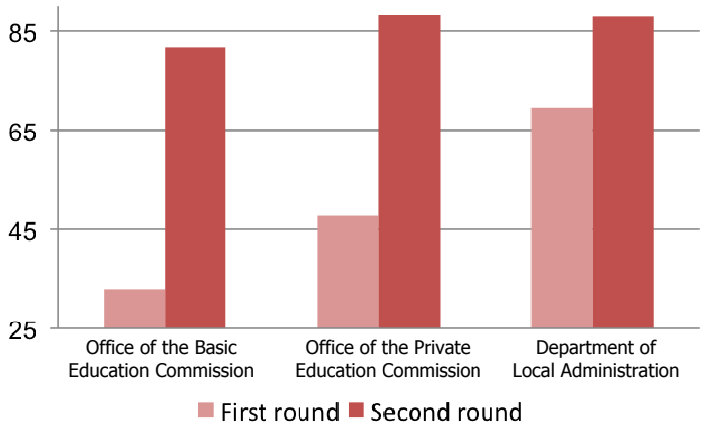
Currently, the school-financing system in Thailand is tilted toward a supply-side financing scheme. Of the total funding the state allocates to public schools, 75 percent of the money is for teachers' salaries and investment, and is not directly dependent on the number of students. Only 25 percent of the money represents a student per capita subsidy for school operational budgets. Since the number of students attending each school does not affect its funding in a significant way, there is no incentive for schools to improve their quality in order to retain or attract students.

The current financing system also puts private schools at a disadvantage vis-à-vis public schools. Private schools that choose to receive a subsidy from the state will receive the same student subsidy per capita as public schools. They would also receive marginally additional funding from the 15-year Free Education Project, and a small subsidy for teacher salaries. In return, the government imposes a cap on how much tuition these private schools can receive from parents.

Initially, the cap on tuition was aimed at preventing private schools from overcharging parents, and was set at such a level that the total per student income of private schools was equivalent to that of public schools. However, over the past 10 years, public school teachers' salaries grew significantly, while the subsidy to private school teachers remained stagnant (Figure 10). This creates a growing discrepancy in teacher salary between public schools and private schools (see Figure 11). As a result, there is a high turnover rate of teachers migrating from private to public schools. In 2011 alone, 2,000 private school teachers left to join public schools. Under such circumstances, private schools cannot compete with public schools. Private schools that decline government subsidies have more flexibility in setting their tuition fees and thus tend to offer higher-quality education, but are not accessible to students from low-income families.

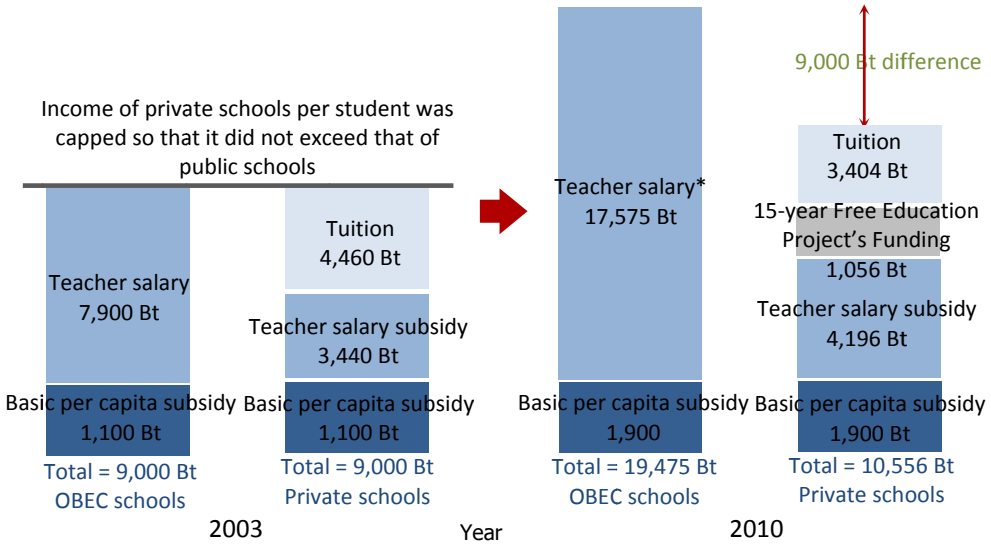
According to the accountability framework, demand-side financing is more compatible with the short-route accountability chain (Figure 12). Currently, the per capita subsidy is relatively insignificant compared with the total budget, and it gives no incentive for schools to improve. On the contrary, in demand-side financing, the school budget is contingent upon enrollment; therefore, demand-side financing will foster productive competition among schools. Schools will compete to attract students by improving the quality of education they offer students.

Figure 9 Percentage of Schools that Passed Quality Assessments by the Office for National Education Standards and Quality Assessment



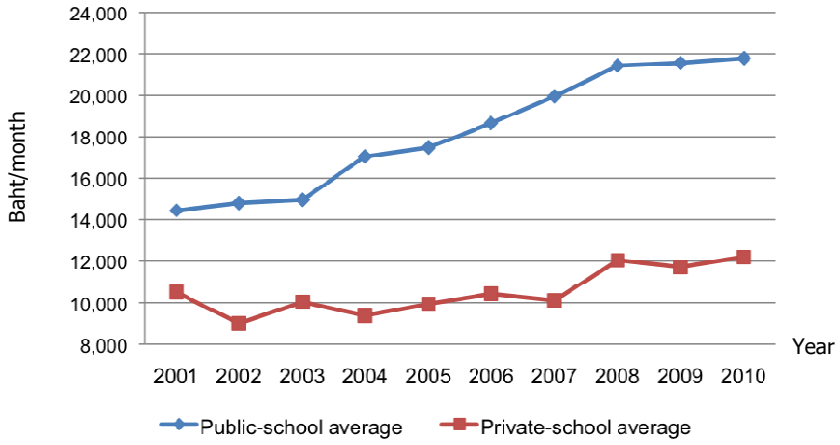
Source: ONESQA (2007 and 2010).

Figure 10 Comparing State Subsidies for Public and Private Schools in 2003 and 2010



Note: * Authors' calculation from data of the Bureau of the Budget.
Source: Notification of the Ministry of Education.

Figure 11 Average Salary of Public-school and Private-school Teachers



Source: Labor Force Survey, National Statistical Office (various years).

Figure 12 Accountability Mechanism under Demand-side Financing

Source: Authors.

4.4 Limitations on School Competition

While competition can improve school quality, there are certain factors that are currently limiting school competition:

1. *Transparency in test scores.* Currently, schools' average test scores are not publicly available. Without information on schools' average test scores, parents and students lack crucial information needed to choose schools.

2. *Criteria for admission mandated by OBEC.* Pre-elementary and elementary schools affiliated with OBEC have to grant admission by lottery first to students who reside in the school district area. Schools can accept students from other school districts only when there are additional seats available. This rule

imposes a constraint on students who reside in a district where there is no high-quality school.

For secondary schools, the rule is more relaxed. Schools are allowed to grant admission based on admission test score. However, many schools purposely schedule the test or interview dates so that they are in conflict with those of other schools. As a result, students' choice is limited (IPST 2011).

3. *Supply of good schools.* Even in an area where there are many schools from which students can choose, if all the schools are equally poor in terms of quality, students' real choice is limited.[5] Students might not be able to move out of a low-quality school, because there is no better one in the area.

5. POLICY RECOMMENDATIONS

To implement the accountability system, we propose the following policy recommendations:

1. *Mandate standardized tests.* The Ministry of Education should mandate a standardized test at every grade level, or at least one every three years, for all students of all school affiliations. In addition, standardized test scores should replace total grade point average (GPAX) and grade point average (GPA) in university admissions to ensure fair competition.
2. *Improve tests.* Standardized tests should be indicative of the quality of learning. We have to shift from content-based tests to literacy-based tests, in order to promote critical thinking skills rather than rote learning.
3. *Produce school report card.* The government should mandate that the standardized test scores of every school be available to the public. Each school should have to produce a school report card, which includes the school's average test scores compared with district and national averages.
4. *Revamp the current ONESQA school quality assurance system*. The current system places a fiscal burden on the state, and a time burden on schools and teachers; moreover, its results do not correlate with student performance.
5. *Use students' test scores to evaluate schools and teachers*. School and teacher evaluations should be linked to student performance as measured by standardized tests. Improvement in test scores, not raw test scores, should be used so that the evaluations account for different student backgrounds. In addition, an audit mechanism is necessary to discourage school administrators and teachers from gaming the system.
6. *Reward school administrators and teachers according to student performance*. The reward can take a monetary or other form, such as public recognition, or grant of autonomy in administration and teaching.
7. *Provide support for low-performing schools.* Such schools should receive administrative and curricular support for capacity-building. For example, they should receive support for conducting formative assessment to improve teaching and learning.
8. *Allow schools to have autonomy with regard to their personnel.* This will create a mechanism that holds teachers accountable to schools.
9. *Adjust school subsidy*. We need to shift to demand-side financing, because the current supply-side financing fails to create an accountability mechanism. The per capita subsidy needs to be adjusted to reflect actual costs.
10. *Provide equitable funding for both public and private schools*. The government should furnish funding equitably to both public and private schools. Otherwise, the government should eliminate the tuition cap on private school tuition, in order to allow fair competition between public and private schools.

ENDNOTES

[1] Still, there are some limitations. For example, it is difficult to design a test to measure students' sense of moral obligation and sense of civic responsibility. However, in our opinion, schools should not be solely responsible for educating youth on these issues.

[2] In the United States, indicators that highly correlate with test scores are grade repetition rate, suspension rate, and dropout rate. Indicators that moderately correlate with test scores are facilities, percentage of students taking the test, teacher and student absence rates, and length of school year. Indicators that do not correlate with test scores are college admission tests, number of programs offered, number of computers, number of uncertified teachers, parent satisfaction and school violence (see Hanushek and Raymond 2002).

[3] The school board for a small school consists of nine people: a chairperson, a parent, a teacher, a community member, a representative from local government, an alumnus, a representative from a religious community, an expert, and the school principal. In a large school, the board consists of 15 people: in

addition to the nine persons on a small school board, there would be an additional representative from a religious community and five more experts.

4 The results of the two rounds of quality assurance cannot be strictly compared as there were some minor methodology changes.

5 A survey by PISA (2009) (www.pisa.oecd.org) shows that 68 percent of schools have to compete with at least two other schools in the same area, and only 14 percent do not have to compete with any other school.

REFERENCES

Bruns, Barbara, Deon Filmer, and Harry Anthony Patrinos. 2011. *Making Schools Work*. Washington, D.C.: World Bank.

Hanushek, Eric A. 1992. "The Trade-off between Child Quantity and Quality." *Journal of Political Economy* 100(1): 84-117.

Hanushek, Eric A., and Ludger Wößmann. 2007. *The Role of Education Quality in Economic Growth*. Washington, D.C.: World Bank.

_____. 2011. "How Much Do Educational Outcomes Matter in OECD Countries?" *Economic Policy* 26(67): 427-491.

Hanushek, Eric A., and Margaret E. Raymond. 2002. "Improving Education Quality: How Best to Evaluate Our Schools?" Pp. 117-130 in Kodrzycki, Yolanda K. (ed.), *Education in the 21st Century: Meeting the Challenges of a Changing World*. 47th Economic Conference. Boston: Federal Reserve Bank of Boston.

_____. 2004. "Shopping for Evidence against School Accountability." Pp. 119-130 in William J. Fowler, Jr. (ed.), *Developments in School Finance: 2003*. Washington, D.C.: National Center for Education Statistics.

Institute for the Promotion of Teaching Science and Technology (IPST). 2008. *Report on TIMSS Performance.* Bangkok. (in Thai)

_____. 2010. *Report on PISA Performance.* Bangkok. (in Thai)

_____. 2011. *Success Factors for School System*. Bangkok.

Office for National Education Standards and Quality Assessment (ONESQA). 2007. *Annual Report 2007*. Bangkok.

_____. 2010. *Report of External Quality Assessment (2006-2010)*. Bangkok.

Organisation for Economic Co-operation and Development (OECD). 2011. *Education at a Glance 2011: OECD Indicators*. Paris: OECD Publishing.

Parandekar, Suhas. 2011. *Analysis of Efficiency of Education Expenditures Thailand: Public Finance Management Report*. Washington, D.C.: World Bank.

Wittayakorn Chiengkul. 2009. *The Current Situation of the Thai Education System 2007-2008: Inequality and Quality*. Bangkok: Office of Education Council. (in Thai)

Thailand in a Middle-income Trap

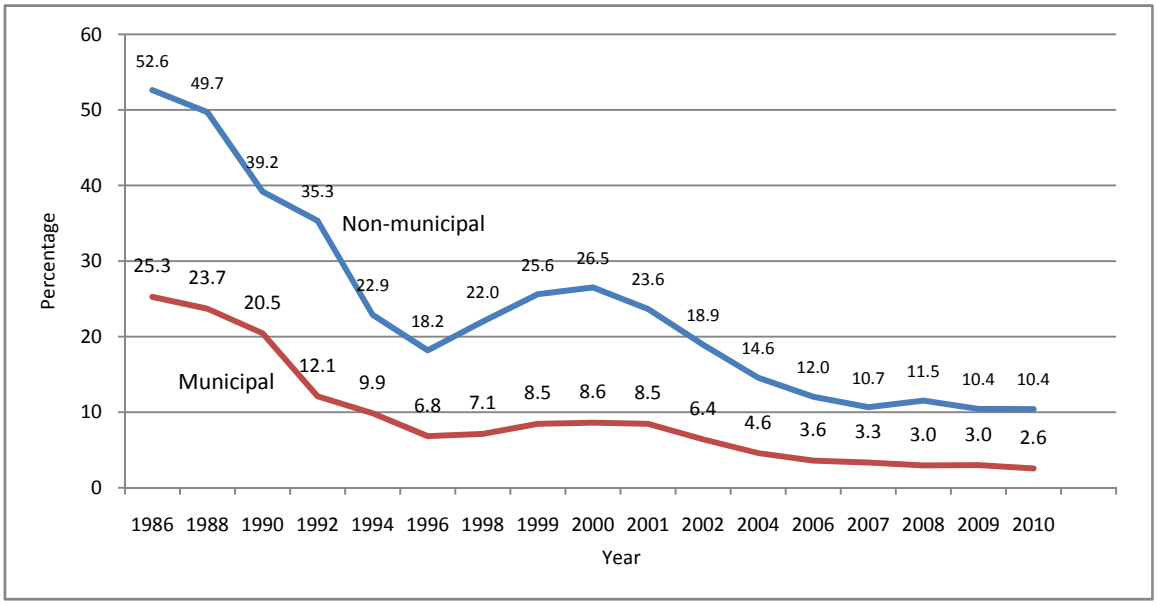
Somchai Jitsuchon*

1. INTRODUCTION

On the first of July 2011, the World Bank announced that Thailand had moved up from being a lower-middle-income category economy to an upper-income one. To some, the upgrading was reassurance that this country is moving toward becoming a developed, high-income economy. This is even more reassuring if one looks back to the past half century (1952-2011), during which period the country enjoyed an average economic growth rate of 6.2 percent per annum in real terms. Indeed, this stellar performance has placed Thailand as one of the most successful economies after the Second World War. The economic progress has translated into many other achievements, such as a reduction in poverty—more than 40 percent of the Thai population were able to escape poverty in the past 25 years (see Figure 1)—improvements in well-being, and greater access to public goods and services, to name only a few.

The recent performance of Thailand, however, has been quite the opposite from its long-term past. Economic growth rates have been on a roller-coaster ride, as shown in Figure 2, where annual growth tumbled from close to 10 percent in the early and mid-1990s to much lower rates afterward due to economic crises in 1997/98, 2001, and 2008/9. Since 1996, Thailand has never seen a growth rate above 8 percent. In years when growth rates exceeded 6 percent, the growth was achieved only during recovery from an earlier deep crisis. Figure 3 makes this point even clearer. Since 1997, Thailand's medium-term growth, as measured by an 11-year moving average of annual growth rates, has been only about 4 percent. This is a sharp decrease from the approximately 7 percent or higher that was the case during the period 1963-1993.

Figure 1 Poverty Headcount Ratio, 1986-2010

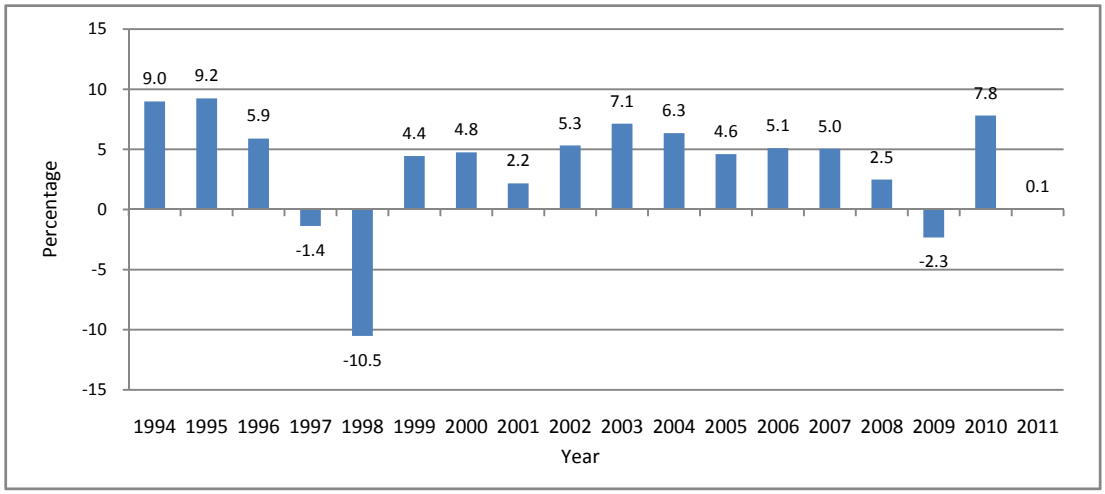


Note: A household is defined as poor if monthly consumption falls below the household-specific poverty line.

Source: Author's calculation using Socio-Economic Household Surveys (various years) from the National Statistical Office, Thailand.

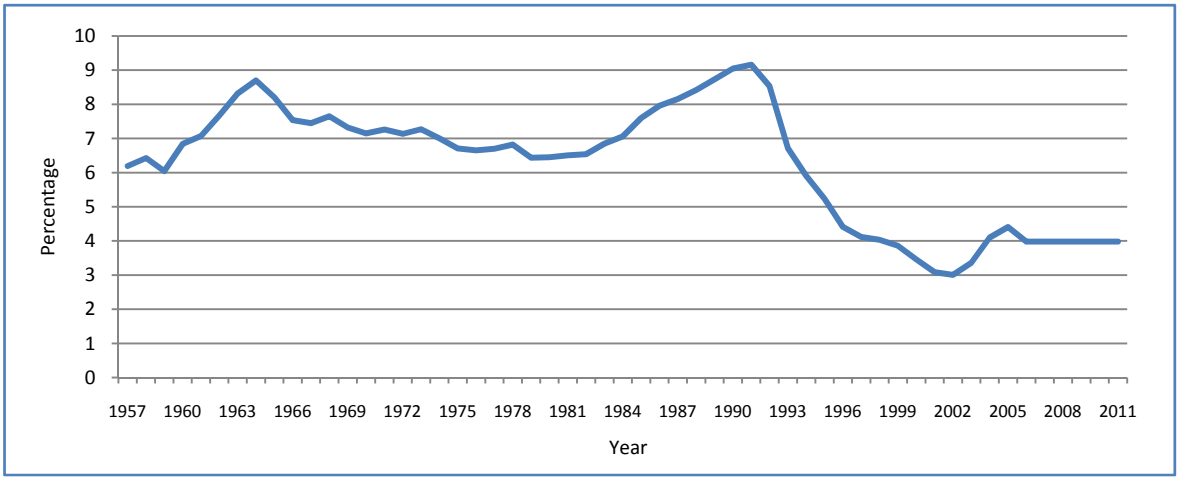
* *Dr. Somchai is Research Director for Inclusive Development, Macroeconomic Policy Program, TDRI.*

Figure 2 Annual Real GDP Growth Rates, 1952-2011



Source: National Income Statistics, Office of the National Economic and Social Development Board, Thailand (various years).

Figure 3 Medium-term Growth Rates, 1950s-Present, 11-year Moving Average



Note: The moving averages for the years 2006-2011 are calculated using 2001-2011 data.

Source: Calculated by the author using national income data from the Office of the National Economic and Social Development Board, Thailand.

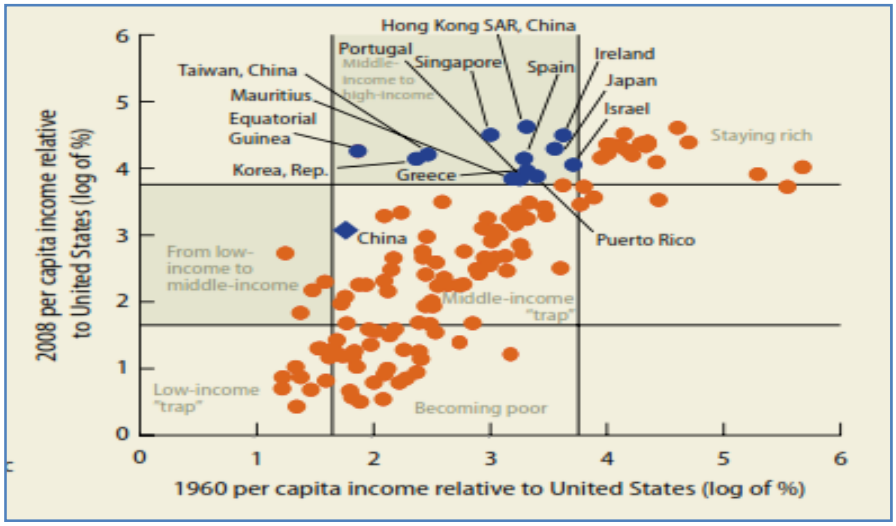
2. MIDDLE-INCOME TRAP: IS THAILAND IN ONE?

Increased growth uncertainly and, more importantly, the prospect of lower medium-term growth indicate fundamental problems with the country's current state of development. Specifically, these aspects raise the possibility that Thailand might now be falling into a middle-income trap.[1] A middle-income trap is commonly defined as a situation in which a country that is successful in lifting its economy from the status of being a least developed or low-income country to a middle-income one but remains at that level without much prospect of becoming an advanced, rich country. Although the general meaning of the term is clear, its operational definition is not. One problem arises from the fact that "middle-income country" can be either a relative or an absolute concept. If we use the relative concept, the phenomenon is perhaps best depicted by Figure 4. When economic performance is measured against the United States economy, only 13 countries managed to close the gap with the United States in 1960 and 2008 in such a way that they rose from being "middle-income" compared with the United States in 1960 to become more or less equally rich as the United States in 2008. Many more countries remained in a relative middle-income position throughout the period (those in the middle box), including Thailand.

Figure 5 illustrates the absolute concept of the middle-income trap. Japan and the Republic of Korea were successful in raising their per capita income steadily during the period 1950-2008, leaving behind many other countries that had a similar income in 1950. Again, this indicates that Thailand is indeed in a middle-income trap.

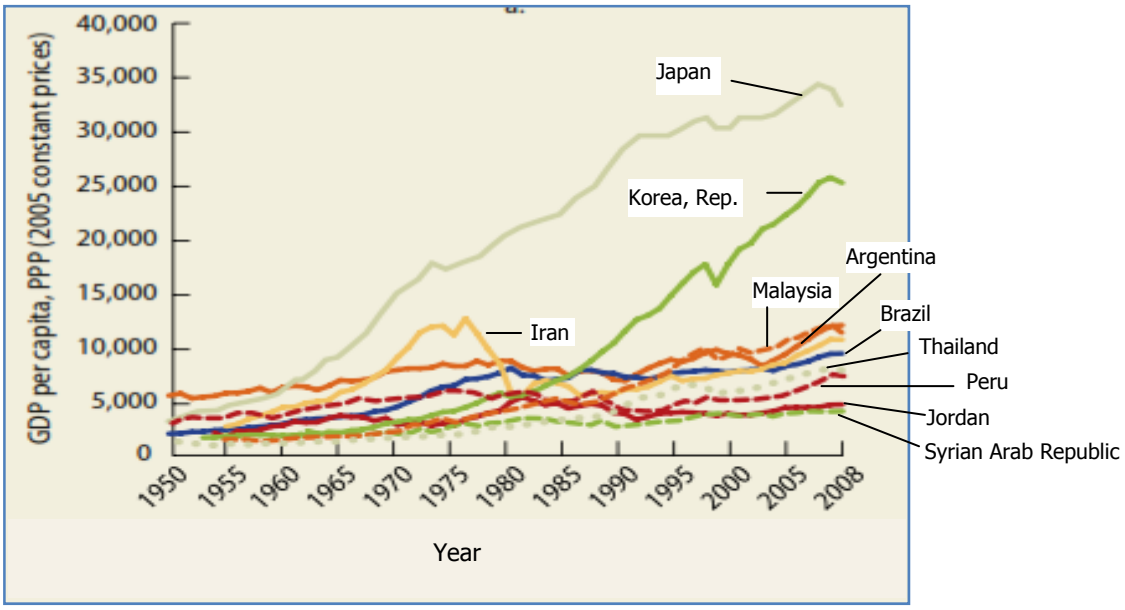
A simple methodology suggested by Eichengreen et al. (2011) can be used to determine when Thailand entered the middle-income trap. Somchai et al. (2012) applied such a method and found that Thailand is likely to have fallen into the trap around 1994-1995.

Figure 4 Position of Countries in Relation to the United States Economy, 1960 and 2008



Source: World Bank (2012), Box 1.

Figure 5 Per Capita GDP of Selected Countries (2005 constant purchasing power parity)



Source: World Bank (2012), Box 1.

3. WHAT MADE THAILAND FALL INTO THE TRAP?

There is no consensus yet as to what causes a country to fall into a middle-income trap. Casual comparisons with those countries that are never caught in such a trap seem to lead to the observation that economic dynamism perhaps plays an important role. The dynamism applies to both the dynamic adjustment of the private sector and the policy-making process of the public sector. The corollary of this observation is that a country is more likely to fall into such a trap if it fails to adjust its national economic model and policies to fit changing environments. Unfortunately, that corollary seems to be applicable to Thailand. The country continues to depend on the same model of development that lifted it out of poverty—cheap labor, and low innovation, with technological acquisition mainly through technology importation. The old model does not work any more and will be increasingly limiting in the future, for the following reasons.

- Labor shortage. Thailand has experienced a shortage of both skilled and unskilled labor for many years. Future demographic changes will exacerbate the shortage in line with the increasing average age of workers. Relying on foreign workers is not a real alternative solution as doing so merely prolongs the "cheap-labor" development model, which is not sustainable. Besides, the current trend of rapid economic prosperity in neighboring countries will restrain the supply of foreign

workers, as they would rather work in their home country when their salary at home would potentially start to get closer to the amount they would earn working in Thailand.

- There seems to be an "incomplete market" in skills training as a public service in the sense that supply does not meet demand. This is particularly true for low-skilled workers who seek to obtain public training opportunities to make them more suitable to the market, as the existing training courses offered by the government are not demand driven. The problem is less acute for higher skills training, because modern firms are increasingly training their own employees to meet their needs more precisely.[2]

- Education. Thailand's education system is unable to prepare graduates suitable for the labor market, which is increasingly facing global competition. Relevant skills such as those needed for information technology, communication, and leadership are all lacking. This situation partly forces investors, foreign and domestic, to eschew investing in production that makes use of highly skilled workers and employees. Investing in highly capital-intensive or high-tech industries is not widespread either, because they do not fit Thailand's main export markets. In a sense, Thailand is caught between being a labor-intensive and capital-intensive economy. Unfortunately, we have been in this "transitional" period for far too long.

- Low level of research and development (R&D) activities and spending. The ratio of R&D spending to GDP has stagnated at around 0.2 percent annually for years. The Thai business sector might have been successful in making organizational and marketing innovations, as evinced by the previously mentioned high average long-term growth rates, but going upward to the next level of competition will need more product and process innovation.

- Spurring growth by depleting natural resources is also no longer an option, simply because their depletion is almost complete—there are not too many such resources left nowadays. On the contrary, demanding that businesses limit their environmentally harmful activities would add more costs. Until a realistic green technology is successfully developed and utilized, this situation will reduce future economic growth.

- It is more difficult to maintain macroeconomic stability. In the past, stability was linked to a fixed exchange rate and prudent fiscal policy. Under the current "managed flexible exchange rate system," monetary stability hinges on the Bank of Thailand's success in formulating policy according to an "inflation targeting" framework. Under such a framework, the Bank must command a high level of credibility and an appropriate level of independence. These two requirements are not met automatically, and become more questionable in the context of the current political situation. Political reality also poses a severe challenge to prudential fiscal policy; there appears a temptation to enter into a "political cycle of fiscal deficits," most notably characterized by populist policies.

- The fiscal structure of Thailand is also a major obstacle to long-term growth. The country is collecting much less in the way of tax than it should according to international norms. Consequently, the Thai government does not have enough resources to invest either in developing infrastructure that would guide future long-term growth or in decent social welfare and social protection programs that would enhance the accumulation of human resources which, in turn, would also boost long-term growth.

- Monopolistic power still exists among state-owned enterprises, and there are regulations prohibiting full competition in some vital economic sectors, most notably the high-value service sectors, such as finance and those having to do with and capital, as well as telecommunications.

- The private sector, which has been at the forefront of economic growth in the past several decades, has been dichotomous in nature: while limited numbers of big firms are competing in global markets, vast numbers of small and medium-sized firms are locked into low levels of innovation. Failing to climb up the global product ladder is one of the reasons why private investment, along with public investment, has been quite subdued compared with the levels that existed in the 1990s.

Perhaps the most important obstacle to long-term growth is Thailand's institutional weaknesses. All the above issues can be seen as failures on the part of those who are responsible for making crucial policy choices. For example, no governments in the past or present have ever had proactive innovation and R&D policies. There is simply no political will to make the country more innovative.

4. HOW TO ESCAPE FROM THE MIDDLE-INCOME TRAP

Escaping from the middle-income trap requires strong institutions in both the public and private sectors. In this context Thailand needs a public sector that is visionary, transparent and efficient in implementation, and a private sector that is vibrant, innovative and well adaptive. A visionary public sector is important so that the strategic role of the public sector—in providing necessary public goods and public services that would boost the country's long-term competitiveness—would be clearly mapped out.

Transparency and efficiency are necessary to avoid rent-seeking activities and ensuring the least cost during the implementation of long-term strategies. Preventing rent-seeking behavior is particular important, as numerous examples show that excessive rent-seeking not only jeopardizes implementation but also deflects the overall path of development into a prolonged slump instead of high growth.

Long-term strategy must cover measures that avoid either the repetition of inaction and passivity or even the mistakes made since mid-1990s. We highlight four important areas that we believe are keys to ensuring high and sustained long-term economic growth.

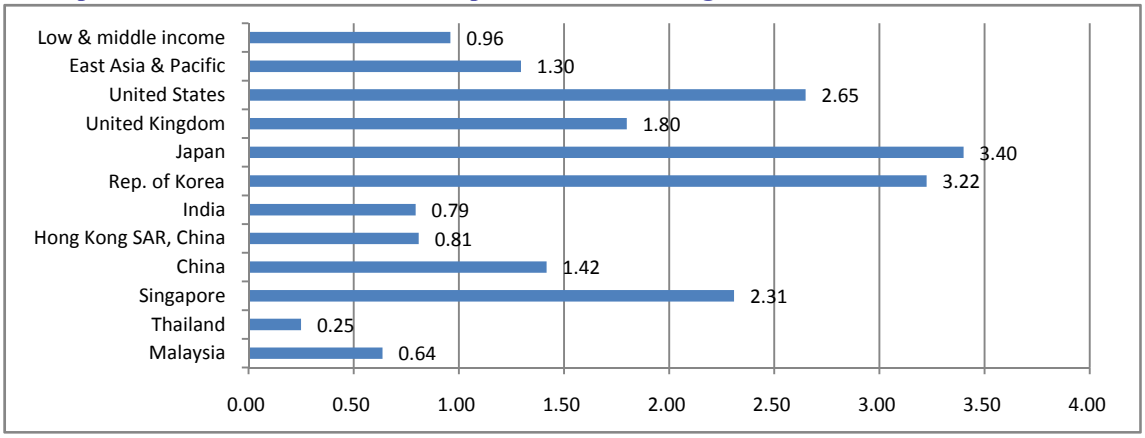
4.1 Proactive Policy on Innovation

Innovation is almost always at the top of the list of factors that ensure high and sustainable long-term economic growth. An innovative economy will command high productivity, measured by total factor productivity (TFP) in growth accounting, and is thus competitive in the global market. Countries that have not been caught in a middle-income trap are commonly found to have high TFP growth spanning several decades, a phenomenon usually associated with their continued ascent in terms of the product cycle, from labor-intensive products to high technology ones. Thailand certainly does not fit such a profile.

This does not mean that Thailand lacks innovation, but rather the country might be focusing too much on non-technological innovation, such as organizational and market innovations.[3] While such innovations lifted Thailand out of poverty, they are unlikely to push the country toward the production frontier that would enable it to earn a decent position in the global market. To excel in product and process innovation, a proactive policy on R&D is sorely needed. Thailand has been lagging behind many countries in the region in terms of R&D. Figure 6 shows that Thailand spent only 0.25 percent of its GDP on R&D, which is lower than countries with a lower per capita GDP, such as China and India. China spent almost six times as much on R&D as a percentage of GDP. Thus, lacking financial resources is not a good excuse for not spending sufficiently on R&D. The reason has more to do with the lack of political will in the public sector, and the lack of appropriate incentives in the private sector. In some developed countries, such as Denmark, the decision on how much to spend on R&D is the subject of a critical annual budget debate in parliament.

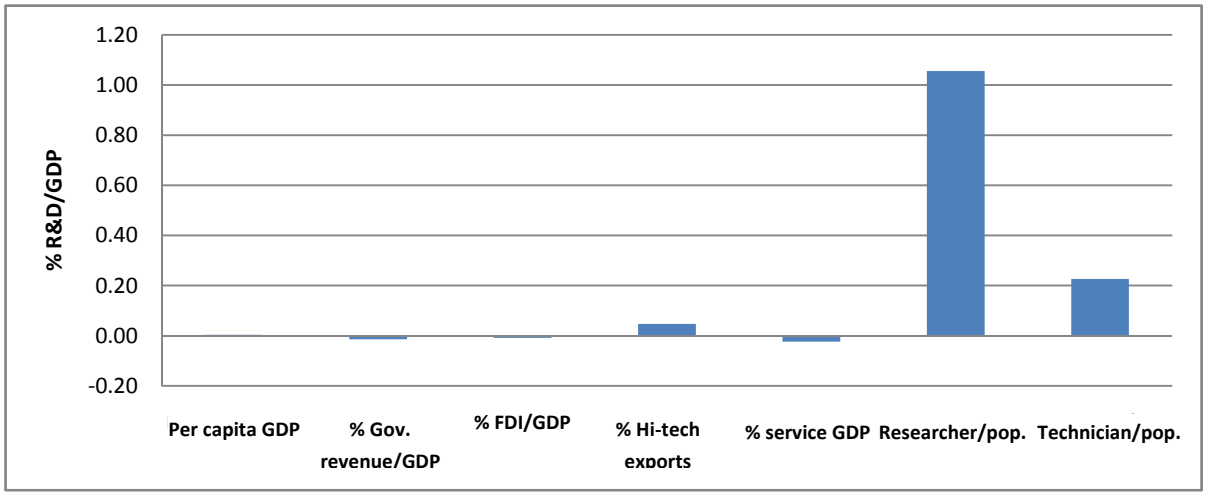
Many other factors have been cited as obstacles to increasing R&D. These factors include limited access to foreign technology (through foreign direct investment: FDI) and global market high-technology products and production structure (demand side), and insufficient research infrastructure. Using international regression, Somchai et al. (2011) found that research infrastructure, as represented by the number of researchers and technicians, is the key determinant of the percentage of R&D spending to GDP. Figure 7 shows the projected impacts on R&D of each factor when taking the value that is most plausible in the year 2020; an exception is made for researchers and technicians where values similar to those of the Republic of Korea in 2005/6 were used. The importance of the numbers of researchers and technicians is overwhelmingly clear; increasing the researchers to the level of the Republic of Korea (around 4,000 per one million population) would increase the country's spending on R&D by about 1 percent of GDP, or four times greater than the current level. The number of technicians is also important, although not as much as the number of researchers.

Figure 6 Expenditure on Research and Development as a Percentage of GDP, 2006



Source: Extracted from Word Development Indicators (2011) database.

Figure 7 Projected Impacts on R&D/GDP of Plausible Values of Determinants



Source: Somchai et al. (2001).

The results by Somchai et al. (2011) support the notion that Thailand needs to develop its research capacity, especially by increasing the size of its pool of researchers and technicians. They also proposed that a separate budget should be allocated solely for creating new researchers, and showed that to reach in 10 years the current level of Korean researchers per population, such a separate budget equaling only 15 percent of the total research budget each year would need to be set up.

4.2 Human Capital Accumulation and Improvement

An innovative economy needs innovative people, with creative and entrepreneurial minds. The development of human capital would thus be very important in helping Thailand escape the middle-income trap, and it is clearly an area badly in need of reform. Starting with education, it has been pointed out numerous times that Thailand's education system does not need more budget but rather management reform. TDRI (2012) argues that accountability in the education system would help increase the quality of education. It proposes that rewards/punishments should be introduced and linked to the students' performance.

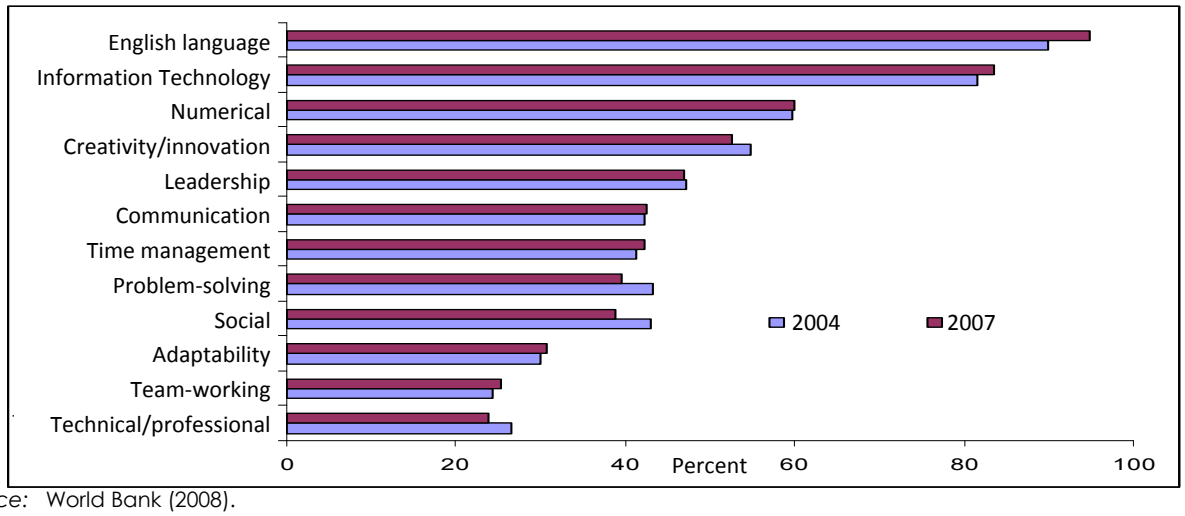
The next question is what kind of "education quality" is most relevant in enhancing Thailand's potential economic growth. Acemoglu and Zillibotti (1999) argued that education must provide skills that are compatible with changes in technology in the modern world, in order to avoid the "technology-skill-mismatch" problem. Surveys of foreign firms operating in Thailand revealed that the type of skills they desire from their employees are foreign language skills, information technology skills, communication skills, problem-solving skills and leadership (Figure 8). The World Economic Forum (2009) suggested "entrepreneurship education" in which education must prepare students to possess an entrepreneurial spirit and the ability to "think outside the box."

Education is not the only way to acquire skills, as shown in Figure 8. There are currently many channels through which Thai workers can obtain additional skills. The government provides skills training at no or low cost for both low-educated and highly-educated workers, through the Department of Skill Development under the Ministry of Labor, and also through various "centers of excellence." Private companies with more than 100 workers are also required by law to support skills training for their workers, either by themselves or by hiring external training services. A tax benefit is given as an incentive to such companies. Although access to skills training is much better now than it had been in the past, a problem remains in terms of the effectiveness of the trainings. Many trainees cannot use the skills they obtain to advance their career or increase their pay scale. Somchai et al. (2009) suggested that training programs should be demand driven, where workers and small firms can initiate the programs and ask for full financial support from the government.

4.3 Physical Capital Accumulation and Improvement

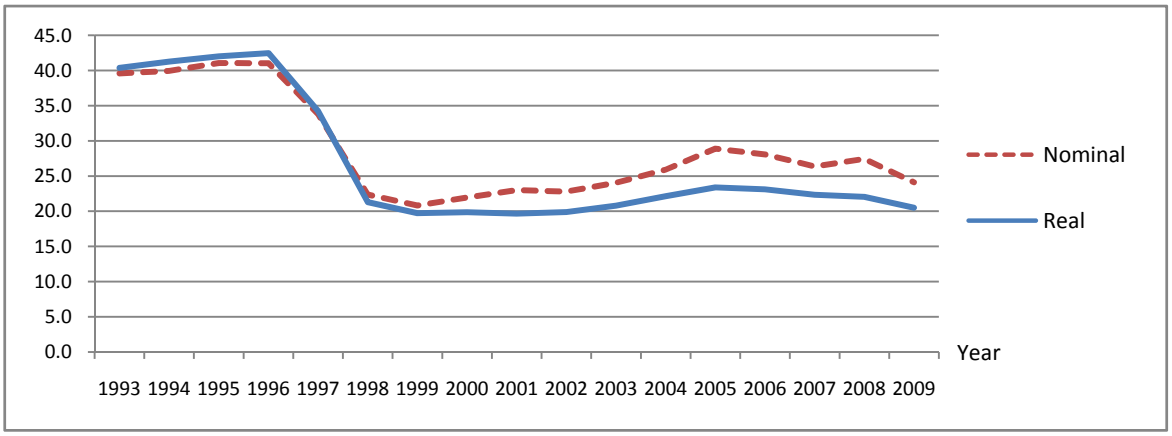
One of the reasons Thailand has performed much worse since the mid-1990s is the declining trend in investment (Figure 9). As is the case with overall economic growth, investment in Thailand has also been "trapped" at a low level, which translates into decelerating accumulation of physical capital. Getting the investment back to about 30-35 percent of GDP, a level between the "bubble" level of the early 1990s and the post-crisis level, should help boost the economy both in the short- and long-run. It will also make economic growth more balanced by increasing the role of domestic demand vis-à-vis external demand.

Figure 8 Type of Skills Thai Workers Lack, as Reported by Foreign Investors in Thailand



Source: World Bank (2008).

Figure 9 Percentage Share of Investment Spending in GDP



Source: National Income Statistics, Office of the National Economic and Social Development Board, Thailand (various years).

The contribution to growth of investment in GDP has been confirmed in numerous studies. A recent one by Somchai et al. (2012), using panel regression of 93 countries spanning the period 1960-2005, found a positive contribution of investment share to labor productivity.

The quality aspect of capital is also important. In the world of highly fluctuating capital flows, the movement of capital can be too rapid for the real sector to adjust accordingly. Although exchange rate risk management tools are steadily being developed, the country still needs a more elaborate plan to deal with capital flows.

4.4 Making the Incentive System Right

The theme of the present paper from the beginning is that good institutions will play vital roles in helping Thailand escape the middle-income trap. One such role would be to devise the right incentive system so that economic agents would want to pursue their own prosperity, which would also be instrumental in improving overall economic growth. Providing public research infrastructure and tax benefits for implementing innovation and R&D activities is an example. Another critical issue is related to barriers to entry. Somchai (2011) pointed out that there are still restrictions on foreigners investing in some critical sectors, mostly high-value service ones, such as the financial sector, telecommunications, education, and aviation. This has resulted in stagnation of the share of the service sector to GDP in Thailand over the past five decades; meanwhile this share has gone up in countries that are not in a middle-income trap. We believe that the barriers to entry in high-value service sectors are the key explanation of why Thailand has to depend too much on exports, since exports are mostly manufactured goods for which the barriers to entry are much fewer.

Another wrong incentive policy is populist fiscal policy. Somchai (2012) argued that the current populist policy is not only expensively wasteful, but it also does not solve any of the country's problems. Such policies are not redistributive, and unnecessarily interfere with the market mechanism. Unfortunately, these policies seem to be in a vicious cycle, similar to the spirit of Alesina and Tabellini (1987). Thailand needs to break out of this cycle so that resources can be allocated to promote long-term growth, such as investment in infrastructure and a decent social protection system.

4.5 Taking Advantage of New Environments

One key property that makes countries that never fall into a middle-income trap stand out is their ability not only to adapt to, but also to take advantage of, new environments. Thailand must do the same in looking ahead to the future. The most notable new environment is perhaps regional integration among the countries of East Asia, Southeast Asia, and South Asia. Increased regionalization reflects the recent fall of the G-7's economic power, especially in countries of the West, a development that is likely to continue into the foreseeable future. For Southeast Asia, the full formation of the ASEAN Economic Community (AEC) is eagerly awaited by the private sector in most countries in the Association of Southeast Asian Nations (ASEAN), including Thailand. What remains to be done is for the public sector to catalyze the induced changes in order to maximize the benefits from this development.

Other new environments worth taking note of are climate change, alternative energy technology, and the increasing sense of democracy.

ENDNOTES

1 The term "middle-income trap" was first used by Gill et al. (2007).

2 This is perhaps one of the reasons why the adverse employment impact of the latest subprime crisis was minimal; firms that already invested in training wanted to keep their employees as long as they could.

3 For a complete classification of innovation activities, see OECD (2005).

REFERENCES

Acemoglu, Daron, and Fabrizio Zillibotti. 1999. *Productivity Differences*. NBER Working Paper No. 6879. Cambridge MA: National Bureau of Economic Research.

Alesina, Alberto, and Guido Tabellini. 1987. *A Positive Theory of Fiscal Deficits and Government Debt in a Democracy*. UCLA Working Paper No. 435. Los Angeles: University of California.

Eichengreen, Barry, Donghyun Park, and Kwanho Shin. 2011. *When Fast Growing Economies Slow Down: International Evidence and Implications for China*. NBER Working Paper no.16919. Cambridge MA: National Bureau of Economic Research.

Gill, Indermit et al. 2007. *East Asian Renaissance: Ideas for Economic Growth*. Washington, D.C.: World Bank.

Organisation for Economic Co-operation and Development (OECD). 2005. *Oslo Manual*. 3rd ed. Paris: OECD.

Oslo, M. 1997. *European Commission*. 2nd ed. Luxembourg: Eurostat.

Somchai Jitsuchon. 2011. Aspirations and challenges for economic and social development in Thailand towards 2030. A country paper for the project ASEAN 2030: Growing Together for Shared Prosperity, supported by ADBI. Manuscript.

_____. 2012. How can Thailand escape the populist policy trap? A short article to be presented at Sasin Bangkok Forum, "Asia in Transition," July.

Somchai Jitsuchon, Jiraporn Plangprapan, Yos Vajagupta, and Nuntaporn Methakunavut. 2009. Social Investment under the Changing Social Conditions and Adjustment toward Knowledge-based Society. A research paper supported by the Office of the National Economic and Social Development Board. December. (in Thai)

Somchai Jitsuchon, Nonarit Bisonyabut, and Nuntaporn Methakunavut. 2011. Financing Research and Development in Thailand. Research report submitted to the Knowledge Network Institute of Thailand, September. (in Thai)

Somchai Jitsuchon, Nonarit Bisonyabut, Nuntaporn Methakunavut, and Yos Vajragupta. 2012. Public policy to escape middle-income-trap: a study of growth factors. Manuscript. (in Thai)

Thailand Development Research Institute (TDRI). 2012. *Revamping the Thai Education System: Quality for All*. A collection of research papers for TDRI 2011 Year-end Conference. Bangkok. (in Thai)

World Bank. 2008. *Thailand Investment Climate Assessment Update, Poverty Reduction and Economic Management Sector Unit, East Asia and Pacific Region*. Washington, D.C.

_____. 2012. China 2030: building a modern, harmonious and creative high-income society. Manuscript.

World Economic Forum. 2009. *Creating the Next Wave of Entrepreneurs: Unlocking Entrepreneurial Capabilities to Meet the Global Challenges of the 21 Century*. Geneva.