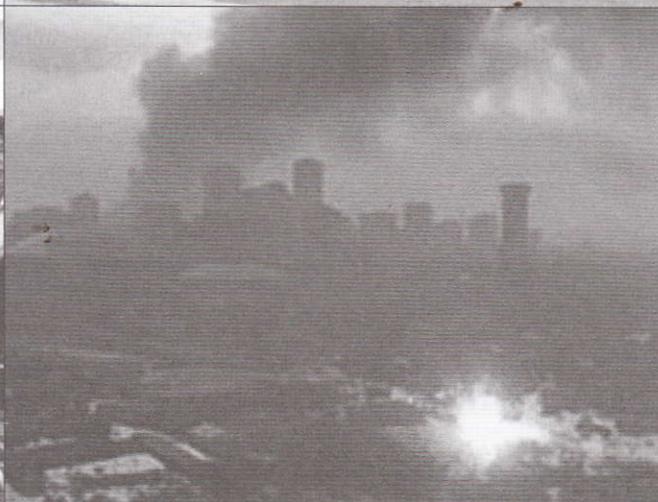
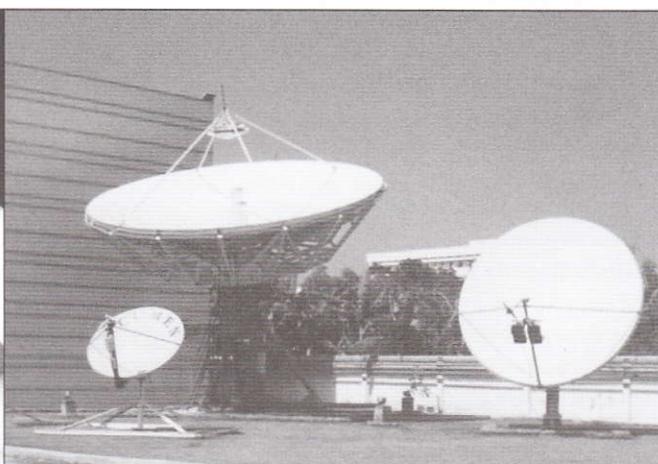
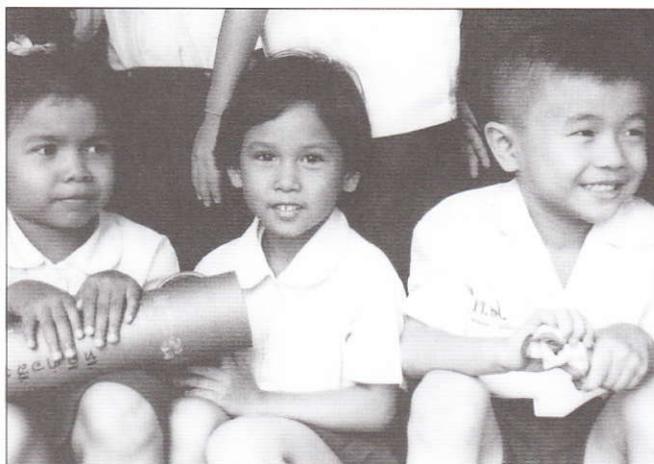


TDRI Quarterly Review

Contents

Telecom Regulatory and Policy Environment in Thailand: Results and Analysis of the 2008 Telecom Regulatory Environment Survey <i>by Deunden Nikomborirak and Saowaluk Cheevasittiyanon</i>	3
Summary of Papers Presented at the 2008 TDRI Year-end Conference on “Sustaining Long-term Growth” <i>by Kwanjai Lekagul</i>	16



Thailand now faces a number of problems that undermine its future growth potential. What are these problems and what are policy recommendations? See related article on page 16

TDRI Council of Trustees and Board of Directors

- | | | |
|---|--|---|
| <p>* Mr. Kosit Panpiemras
Chairman
TDRI Council of Trustees and Board of Directors; and Executive Chairman
Bangkok Bank Public Company Limited</p> | <p>Mr. Teisuke Kitayama
Chairman of the Board
The Sumitomo Mitsui Banking Corporation, Japan</p> | <p>* Dr. Pranee Tinakorn
Professor of Economics
Faculty of Economics
Thammasat University</p> |
| <p>* Dr. Ammar Siamwalla
Vice Chairman
TDRI Council of Trustees and Board of Directors; and Distinguished Scholar</p> | <p>H.E. Mr. Kyoji Komachi
Ambassador
Embassy of Japan</p> | <p>* Dr. Snoh Unakul
Chairman
TDRI Foundation</p> |
| <p>* Dr. Anat Arbhabhrama
Advisor to the Board of Directors
Bangkok Mass Transit System Public Company Limited</p> | <p>Mr. Mechai Viravaidya
Chairman
Population and Community Development Association</p> | <p>Mr. Sompop Amatayakul
Executive Chairman
B.B. Business Management Co., Ltd.</p> |
| <p>* Mr. Apilas Osatananda
Chairman
Development Cooperation Foundation</p> | <p>* Dr. Narongchai Akrasanee
Chairman
Seranee Holdings Co., Ltd.</p> | <p>H.E. Mr. David Sproule
Ambassador
Canadian Embassy</p> |
| <p>M.R. Chatu Mongol Sonakul
Chairman
C.M. Solutions Co., Ltd.</p> | <p>* Ms. Nawaaporn Ryanskul
Chairperson of the Board of Directors
Kiatnakin Bank Public Company Limited</p> | <p>Dr. Sumet Tantivejkul
Member and Secretary-General
Chaipattana Foundation</p> |
| <p>Dr. Chirayu Isarangkun Na Ayuthaya
Director-General
Crown Property Bureau</p> | <p>* Dr. Nipon Poapongsakorn
President, TDRI</p> | <p>* Dr. Twatchai Yongkittikul
Secretary-General
Thai Bankers' Association</p> |
| <p>* Dr. Juree Vichit-Vadakan
Associate Professor
School of Public Administration
National Institute of Development Administration (NIDA)</p> | <p>Dr. Pasuk Phongpaichit
Professor
Faculty of Economics
Chulalongkorn University</p> | <p>* Dr. Virabongsa Ramangkura
Chairman of the Executive Board
Advanced Agro Public Company Limited</p> |
| <p>Mr. Kasem Narongdej
Chairman, KPN Group</p> | <p>* Dr. Phaichitr Uathavikul
Chairman of the Board of Directors
Thailand Environment Institute</p> | <p>* Prof. Dr. Yongyuth Yuthavong
Senior Advisor to President
National Science and Technology Development Agency</p> |
| | <p>Dr. Piyasvasti Amranand
Chairman of the Advisory Panel to the CEO, KASIKORNBANK Public Company Limited</p> | |

* Indicates membership on the TDRI 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.

Telecom Regulatory and Policy Environment in Thailand: Results and Analysis of the 2008 Telecom Regulatory Environment Survey

Deunden Nikomborirak
Saowaluk Cheevasittiyanon *

INTRODUCTION

This paper is part of the Telecom Regulatory Environment (TRE) Assessment Project conducted by LIRNE Asia, a non-profit organization specializing in information and communication technology (ICT) policy issues based in Colombo, Sri Lanka. The project involves assessment of the quality of telecom regulations in nine countries in Asia, including Thailand, based on perception surveys designed by LIRNE Asia.¹ It was carried out with the aid of a grant from the International Development Research Centre (IDRC), Ottawa, Canada.

A perception survey of informed stakeholders of Thailand's telecom sector was conducted during the period June-August 2008; they represented service providers, academics, security analysts, companies, journalists, and civil society. They were asked to evaluate the regulatory and policy environment in Thailand's mobile, fixed and broadband markets according to seven different dimensions, namely market entry, access to scarce resources, interconnection, tariff regulation, regulation of anti-competitive practices, universal service obligation (USO) and quality of service (QoS). The evaluation was done on a Lickert scale of 1 to 5, with 1 being "highly ineffective" and 5 being "highly effective." A total of 72 responses were received. Since

each respondent category should contribute equally to the final score in each dimension, and since it was not possible to pre-plan the number of completed questionnaires that would be received in each category, weights were assigned to equalize the contribution from each sector's score. These weights are shown in Table 1.

The structure of this article is as follows. The first section provides an overview of the Thai telecommunications (telecom) market. The second and third sections summarize the results and conclude key findings from the survey respectively. The final section provides recommendations to the Thai government and the Thai regulatory body, the National Telecommunications Commission (NTC).

1. INTRODUCTION: THE DEVELOPMENT OF THE THAI TELECOM MARKET

Telecommunications services in Thailand were once provided exclusively by two State-owned enterprises (SOEs): the Telephone Organization of Thailand (TOT), which held a monopoly on domestic telephony, and the Communication Authority of Thailand (CAT), which had a monopoly on international gateway services. The market division between the two

Table 1 Number of Respondents

	No. of Respondents	Weighted by LIRNEasia
Category 1: stakeholders directly affected by sector regulation, i.e., operators	40	0.60
Category 2: stakeholders who analyze the sector with broader interests, i.e., analysts	15	1.60
Category 3: stakeholders with an interest in improving the sector to help the public, i.e., academics, journalists, civil society, etc.	17	1.41
Total	72	

* Dr. Deunden is Research Director for Economic Governance, and Ms. Saowaluk is Senior Researcher, Sectoral Economics Program, TDRI.

SOEs held throughout the early development of the telecommunications sector in Thailand, but in the early 1990s, it was recognized that the industry could grow further through the infusion of private capital.

Over time a unique scheme evolved to preserve the statutory monopoly of the two SOEs while accommodating the private sector. Starting in 1992, TOT and CAT awarded concessions to private companies to undertake network development and provide fixed-line, mobile, satellite, paging and other communication services, under build-transfer-operate (BTO) agreements. Under such agreements, private concessionaires invested in infrastructure and transferred legal ownership of the installed network to the state operator upon completion. In exchange, they were granted 25-30 years' exclusive operation of the network. Over 30 telecom concessions were signed and implemented in the 1990s.

The entry of the private sector into the Thai telecom landscape via BTO concessions ushered in an era of remarkable expansion in the subscriber base of both the fixed and the cellular networks, as can be seen in Figure 1. The figure reveals a striking divergence in the growth paths of fixed-line versus mobile services. This was because the fixed-line concessions specified the maximum number of lines that each private operator was allowed to install. Since no new concessions were granted during the latter half of the 1990s, the roll-out of the fixed-line network stalled when the number of installed lines reached the ceiling.

The concession era came to an end with the promulgation of the Telecommunications Act in 2001, which terminated statutory state monopolies by empowering NTC to issue new telecom licenses. The law, however, also upholds the legal legitimacy of the BTO concessions, meaning that all terms and conditions

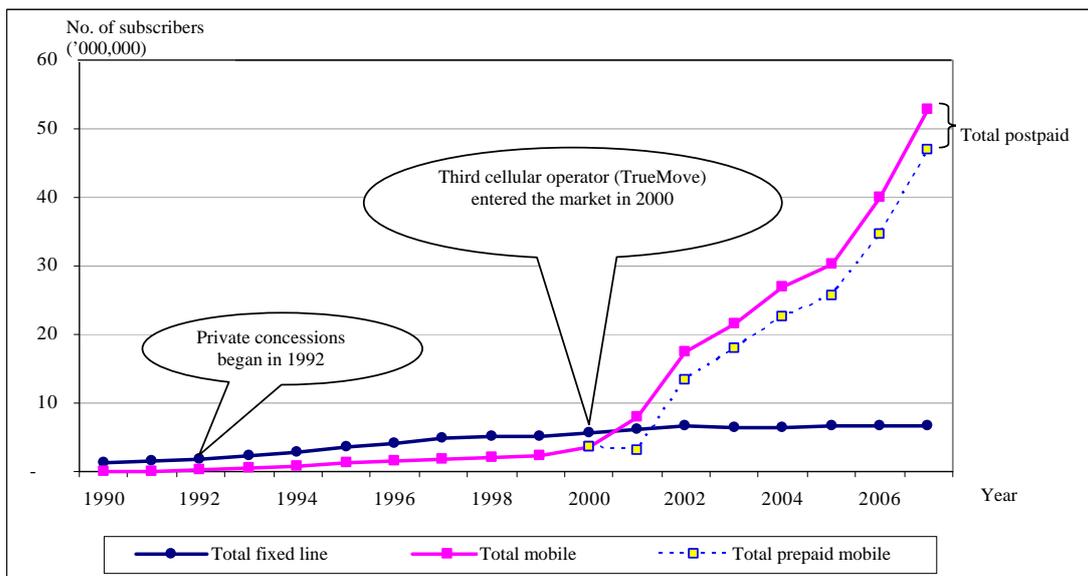
stipulated in the telecom concessions signed in the past by the state telecom operators, TOT and CAT, and the private telecom operators remain effective.

This has been a major regulatory problem as these concessions contain provisions that are inconsistent with regulatory rules established by NTC. Since BTO concessions were written up during the time when state enterprises were monopolies and assumed a certain regulatory role, they contain several clauses that overlap with the regulatory functions of NTC. For example, private operators were required to obtain permission from the state-owned operators for any price changes, network expansion or introduction of new services, and pay access charges according to the terms and conditions of the concessions. This requirement has posed a major obstacle for NTC in introducing interconnection charges and regulating prices. Much of the discontent expressed by respondents is a result of this particular problem which can be solved only at the policy rather than the regulatory level.

Private sector entry into the telecom sector has introduced competition into what was once a monopolistic market. The degree of competition in each sector varies, however, according to the number of concessions handed out and the terms and conditions of the concessions.

The fixed-line market is divided into two separate geographical markets: the greater Bangkok market and the provincial market. Both markets are duopolistic. This is because the two private concessionaires, Telecom Asia Corporation PLC (TA)² and TT&T PLC (TT&T), are allowed to provide services only in their respective area, while the state operator, TOT, operates nationwide and thus competes directly with its private concessionaires in both markets.

Figure 1 Telecom Market Development: 1990-2007



Sources: Companies' data (TOT, TT&T, AIS, DTAC, TrueMove).

The level of competition in the fixed-line markets, as measured by the Herfindahl-Hirschman Index (HHI) for the Bangkok market, increased (HHI declined) during the period 2003-2007, as can be seen in Figure 2. This was due to the fact that the market share of the two providers in the market – the state (TOT) and the private operator (TA) – had been converging. On the contrary, in the provinces, the state operator’s market share had continued to climb at the expense of its financially strapped private concessionaire, TT&T. Indeed, the lack of competition in this duopoly has led to much lethargy in the fixed-line market. Several network licenses that allow a broad service category had been granted by NTC but no new fixed-line roll-out is anticipated. This may be due to the extremely low regulated fixed-line call tariff rates, which make any investment in the service commercially unviable. New network service providers are badly needed in the fixed-line sector.

The mobile telephone market has three major service suppliers, all of which are private concessionaires. Advanced Info Service PLC (AIS), Total Access Communication PLC (TAC or DTAC), and True Corporation (TrueMove). The fourth player that is trying to establish a foothold in the market is the state-owned Thai Mobile, currently the only operator with a 3G (third generation) license. The latter had been a joint venture between the two state operators, the TOT and the CAT until mid-2008 when TOT acquired the entire equity stake because the partnership had encountered many problems.

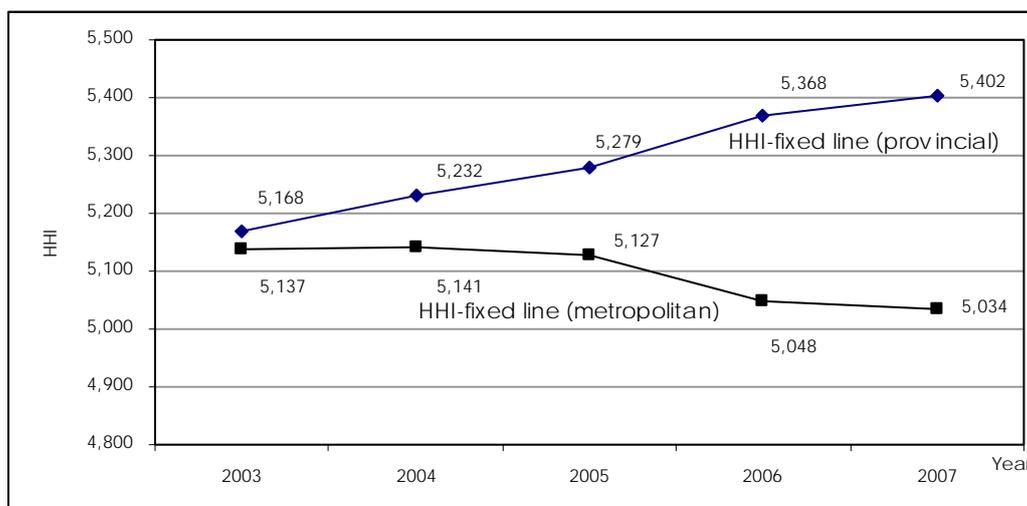
In terms of past trends, the level of competition in the cellular market, measured by the HHI, increased markedly after 2001 following the entrance of the third major mobile operator in the market, as can be seen in Figure 3. Since then, competition between the three major private suppliers has been so fierce that each

provider’s market share has become more comparable as the dominance of the once formidable AIS fades away. The HHI is likely to continue to fall with the continued decline in the market share of AIS. However, in the absence of a fourth player in the market, the index cannot fall below 3333. A potential major entrant in the market is TOT’s Thai Mobile, the only operator with a 3G license, as mentioned previously. However, the only state operator is still saddled with legal problems concerning the transfer of the 1900 megahertz frequency from CAT, its former joint venture partner which pulled out in mid-2008. NTC will have to decide whether to allow the requested transfer or re-open an auction for the said frequency. The whole process is likely to take several months as public hearings are required.

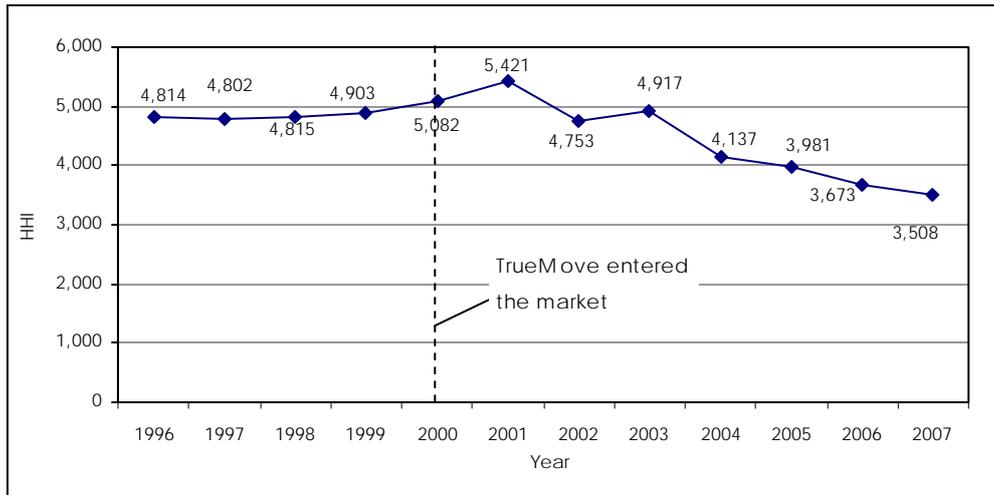
The broadband market has been booming owing to the new Internet licenses handed out by the regulatory body over the last two years. Nevertheless, the incumbent providers with an extensive existing fixed-line network, such as True and TOT, were able to capture the main market share, with the state-owned operator, TOT, trailing well behind. Newcomers will face right-of-way problems and will have to spend significant time and resources on network installation.

Potential competitors with extensive right-of-way in hand, such as the state electricity distributors, were able to secure licenses from NTC. However, they have been mired in legal problems as it is not clear whether the law allows them to be engaged in services unrelated to their core activity: the generation and distribution of electricity. In the absence of a new effective entrant, the private incumbent continues to capture an ever-larger share of the market from the rapid roll-out of its broadband network: hence, the higher HHI, as shown in Figure 4. Over time the index will likely begin to fall as new entrants begin to install networks.

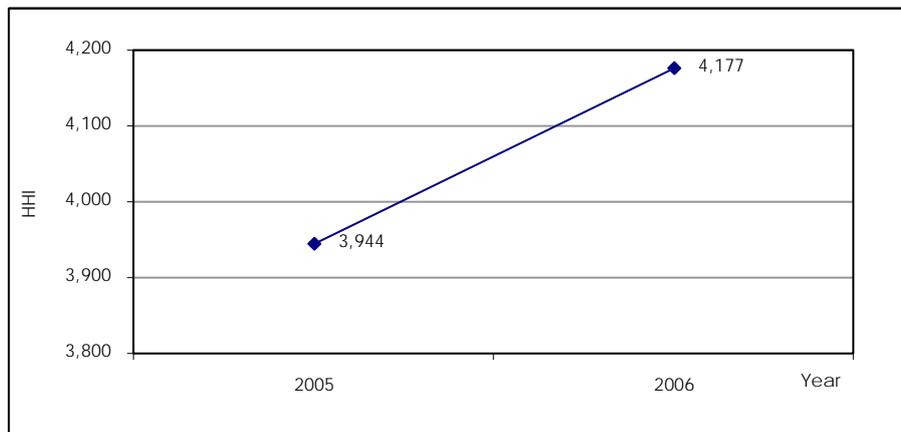
Figure 2 Herfindahl-Hirschman Index – Fixed Line



Source: Calculated by authors using data from TOT, TT&T and True Corporation.

Figure 3 Herfindahl-Hirschman Index – Mobile

Source: Calculated using data from AIS, DTAC and TrueMove.

Figure 4 Herfindahl-Hirschman Index – Internet Broadband

Source: Calculated using data from IDC Thailand.

In summary, Thailand's telecom industry has benefited greatly from private sector participation for over a decade. Competition among private sector firms has resulted in a cellular boom that has markedly improved the connectivity of the general public. In contrast, the fixed-line roll-out has been constrained by the conditions stipulated in the concessions, which limited the number of lines that private concessionaires may roll out, and by the lack of new entrants into a lethargic market. Nevertheless, given the numerous network licenses handed out by NTC over the past three years, more competition is anticipated in all markets.

2. FINDINGS/RESULTS FROM THE SURVEY

2.1 Overall Results

The average TRE score for all three telecom sectors in all seven regulatory dimensions is 2.8. The lowest score was for the mobile sector, as can be seen in

Figure 5. This is because the size and the level of dynamism and competition in this particular market require sophisticated and effective regulation in many areas, such as frequency allocation and assignment, number portability and interconnection, which may be lacking in the view of the respondents. Also, no new mobile or 3G licenses have been handed out thus far owing to legal complications that will be elaborated later.

The highest score went to broadband services. This is because Internet services, unlike fixed-line and cellular services, are not subject to regulatory complications associated with the concession terms and conditions. Also, several new type-3 licenses were handed out to new operators in 2007, providing consumers with alternative broadband suppliers with their own networks.

Among the different regulatory dimensions surveyed, the highest score went to market entry, as can be seen in Figure 6. This reflects the fact that many licenses were issued by NTC during the last three and a half years, as shown in Table 2. At the same time,

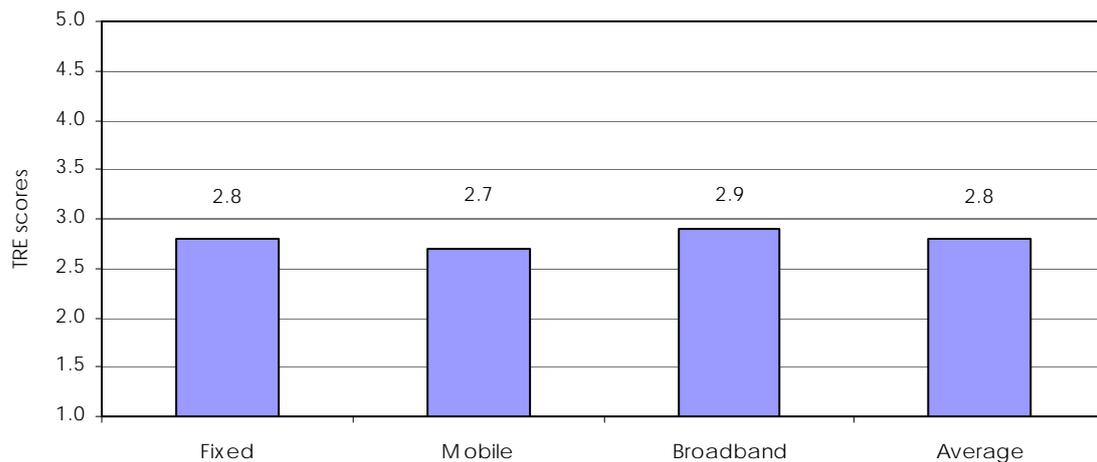
however, most of the licenses handed out thus far have been type-1, non-network services such as Internet services, resale services and broadband services for small operators. Type-3 network-based services have been much more limited, as can be seen in Table 2.

The lowest score went to interconnection issues because of the long-standing disputes and pending court case concerning interconnection and access charges between private telecom concessionaires and state

operators. The relatively low USO score also reveals the shortcomings of the current universal service regime established by NTC.

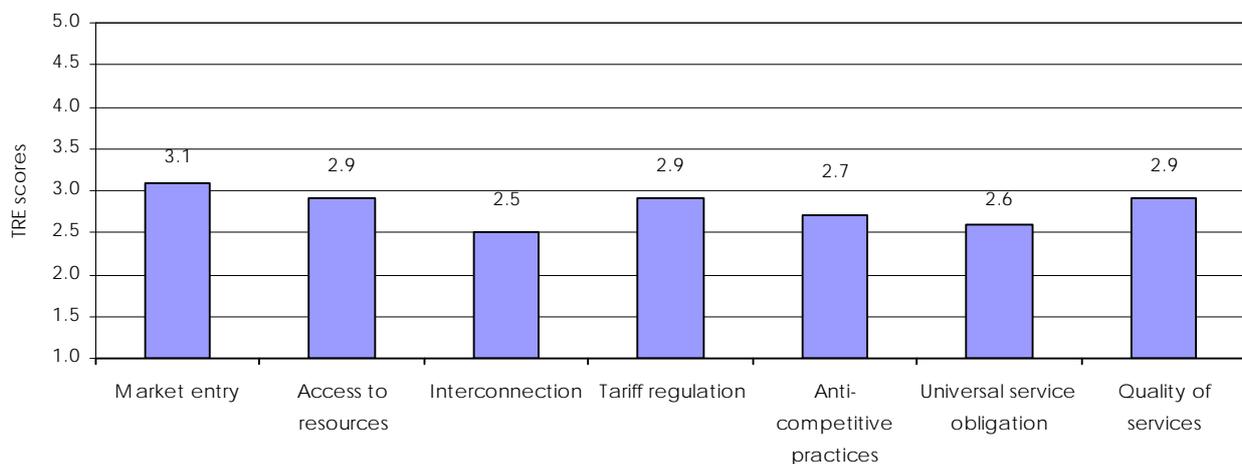
On the whole, only one dimension (market entry) received a score above the mid-point of 3.0. The low overall scores reflect the fact that NTC is seen to be “slow” and “ineffective,” as is evident in the comments made by respondents summarized in Table 3 under the category “others.”

Figure 5 Average Telecom Regulatory Environment Scores by Sector



Source: Scores from perception survey results.

Figure 6 Telecom Regulatory Environment Scores by Regulatory Dimension



Source: Scores from perception survey results.

Table 2 Number of Licenses Handed out by National Telecommunications Commission 2005-2008

	2005	2006	2007	2008 (as of August)	Total
Type-1 licenses (service without network)	23	26	62	32	143
Type-2 licenses (private telecom services)	1	6	13	2	22
Type-3 licenses (public network telecom services)	2	5	9	3	19

Source: National Telecommunications Commission.

Table 3 Comments Made by Respondents

	Fixed line	Mobile	Broadband
Market entry	<ul style="list-style-type: none"> Licensing regime is inefficient and not up to international standards, in particular concerning the amount of time taken to deliver a decision. There are no clear rules regarding the right of way. Although several new fixed-line operators have been granted (licenses), few roll-outs materialized thus far. 	<ul style="list-style-type: none"> No new mobile licenses have been issued thus far. Regulatory permission for Advanced Info Service PLC to launch commercial 3G (third generation) pilot project in northern Thailand is discriminatory. Thailand lags behind others due to the delay in issuing 3G licenses. Number portability policy should be implemented as soon as possible. 	<ul style="list-style-type: none"> In many areas of Bangkok, there is only one choice of asymmetric digital subscriber line (ADSL) providers. The issuance of worldwide interoperability for microwave access (WiMAX) licenses should be accelerated in order to support the surge in the demand for Internet bandwidth in the near future. Although several broadband licenses have been issued, small operators face unfavorable regulatory rules.
Access to scarce resources		<ul style="list-style-type: none"> The delay in frequency allocation delayed network upgrade from the current 2-2.5G to high speed packet access (HSPA). 	<ul style="list-style-type: none"> Lack of "right-of-way" regulations hinder expansion of wired network
Inter-connection	<ul style="list-style-type: none"> Fixed-line services do not comply with the cost based interconnection rules established by the National Telecommunications Commission (NTC) (because of the concession contracts). 	<ul style="list-style-type: none"> NTC does not intervene in the setting of the interconnection charge by larger players in the market, which could be unfair to small players. NTC has not been able to bring in State-owned enterprises under its interconnection rule. 	<ul style="list-style-type: none"> NTC has not taken any action regarding legal disputes between state operators and private concessionaires regarding the use of networks under the build-transfer-operate scheme. Interconnection rules for Internet services are unclear.
Tariffs	<ul style="list-style-type: none"> No clear tariff regulation. 	<ul style="list-style-type: none"> Maximum prices for mobile services established by NTC in 2008 are replicas of those stipulated in the concession, which does not reflect the market environment. 	
Anti-competitive practices	<ul style="list-style-type: none"> No clear anti-trust regulations and no definition of a dominant player. 	<ul style="list-style-type: none"> No clear anti-trust regulations and no definition of a dominant player. No competition rules for anti-competitive or discriminatory behavior of vertically integrated operators. No definition of a dominant player. No decision has been made on complaints on predatory pricing. 	<ul style="list-style-type: none"> NTC chooses not to regulate price and let price be determined by the market.
Universal service obligation (USO)	<ul style="list-style-type: none"> NTC has not yet passed clear rules or guidelines regarding the operation and management of USO. NTC should urgently promote the roll-out of fixed-line services to all regions. NTC does not regulate the quality of USO services. Communication Authority of Thailand and Telephone Organization of Thailand, the only two state-owned operators in the market, are assigned USO without a financial subsidy from NTC. The USO contribution is too high. 	<ul style="list-style-type: none"> NTC has not yet passed clear rules or guidelines regarding the operation and management of USO. 	<ul style="list-style-type: none"> NTC should allow all licensed operators to participate in USO projects. Service fees may vary according to the nature of the service provided.

(Continued on page 9)

Table 3 (Continued)

	Fixed line	Mobile	Broadband
Quality of Services (QoS)	<ul style="list-style-type: none"> No QoS regulation yet exists. 	<ul style="list-style-type: none"> No proper QoS regulation yet exists. 	<ul style="list-style-type: none"> NTC has not yet announced QoS for Internet services.
Others	<ul style="list-style-type: none"> NTC is slow to respond to the regulatory needs of a dynamic sector. 	<ul style="list-style-type: none"> The establishment of the Telecommunications Consumer Association by NTC, as stipulated by the telecom act, is to be applauded. NTC cannot respond to regulatory problems effectively and in a timely manner. 	<ul style="list-style-type: none"> NTC is slow in performing its tasks and has not yet produced any visible performance results.

Scores do not seem to fluctuate too much across different types of services for each regulatory dimension, as shown in Figure 7. The bottom score went to the interconnection problem in fixed-line services arising from concession provisions that are inconsistent with NTC’s interconnection rules, as reflected in the respondents’ comments shown in Table 3. The top score went to market entry for broadband, as previously explained.

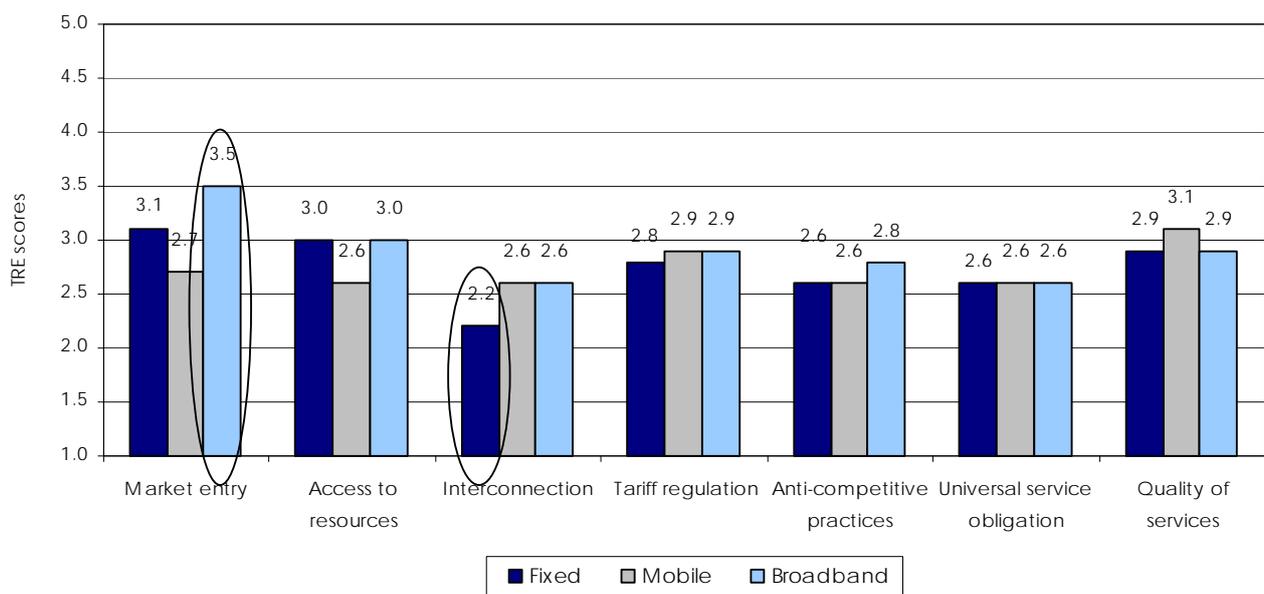
2.2 Market Entry

Market entry received the highest score among all regulatory dimensions of NTC, which reflects the regulatory body’s relatively generous licensing policy. As can be seen in Figure 7, scores for market entry are highest for broadband and lowest for mobile. Although several general network licenses have been granted, no new cellular services have been possible owing to the problems NTC faces concerning frequency assignment

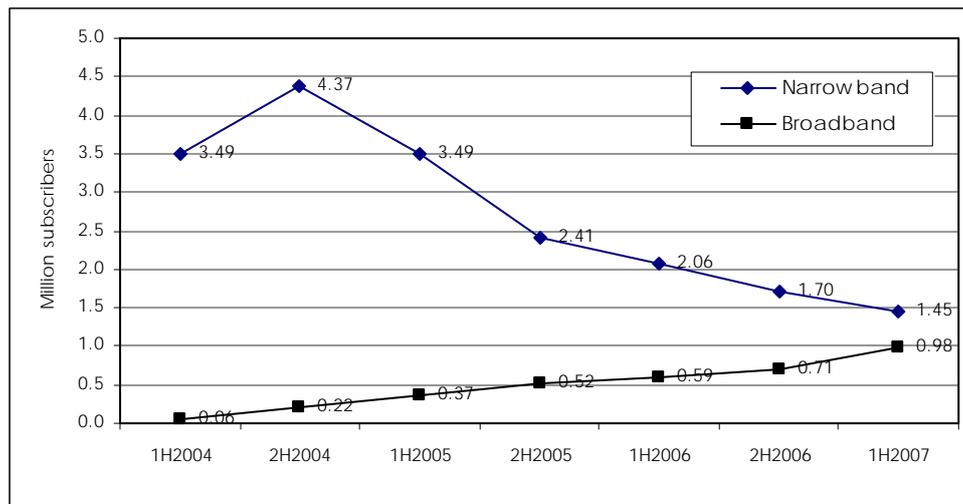
and management, as will be discussed later. On the contrary, there is no such restriction to the roll-out of broadband services, except perhaps for the right-of-way problems.

Most new broadband providers have not yet rolled out their own networks, however. This means that they have to rely on the wired network of existing fixed-line operators in combination with other wireless technology for the last mile, such as worldwide interoperability for microwave access (WiMAX). NTC has not yet handed out full WiMAX licenses. In April 2008, NTC issued 14 temporary (90-day) WiMAX licenses to test the technology. Incumbent fixed-line operators, namely True Corporation and TT&T as well as the state-owned TOT, have been putting much effort into expanding and upgrading their broadband networks to accommodate the surge in demand for broadband Internet services in place of narrowband dial-up services, as can be seen in Figure 8.

Figure 7 Telecom Regulatory Environment Scores by Sector and by Regulatory Dimension



Source: Scores calculated from results from the perception survey.

Figure 8 Number of Internet Subscribers

Note: The number of narrowband Internet subscribers was estimated based on the number of dial-up Internet cards sold, most of which were prepaid. However, the number of broadband Internet subscribers was based on the number of accounts registered for monthly fee payment.

Source: IDC Thailand.

Telephone number portability was also a concern of several respondents. NTC recently (August 2008) arranged for a public hearing of its draft regulations on number portability for mobile telephones. Although the draft regulations were delayed for two years, they were welcomed by all stakeholders when formulated. However, experts have several reservations concerning the draft regulation, as follows:

- The draft regulations do not require that the number portability fee charged be cost-based. Rather, they establish a price ceiling for fees charged at 300 baht, or approximately US\$8.71.³ The set price by no means reflects the underlying costs. Rather, it is the maximum price that subscribers are willing to pay expressed in their responses to NTC questionnaires. International best practices, such as the European Union's Universal Directive, require that service charges must be cost-based.
- The draft regulations set the maximum number of days that service providers may take to transfer a number to the new provider at three days. However, they fail to specify penalties for non-compliance.
- Since mobile service providers currently set call charges based on whether the number called is within or outside its own network, the transfer of a number from one service provider to another may lead to additional costs for unsuspecting callers. The draft regulation does not require the service provider to notify callers that the number called is now subject to higher rates.

2.3 Access to Scarce Resources

2.3.1 Frequency Allocation

According to the TRE Survey results, the allocation of frequency for cellular services seemed to be the single most serious concern regarding access to scarce resources among respondents. The delay since 2005 in auctioning the 3G license has arisen from legal uncertainties surrounding the authority of NTC to allocate frequencies. The Frequency Allocation Act 2000 mandates that NTC and the National Broadcasting Commission (NBC) jointly develop a national frequency table, manage the telecom and broadcasting spectrums and prescribe spectrum regulations. NBC was supposed to have been formed years ago, but claims of conflict of interest and political interference brought the process to a halt. As a result, NTC was not able to assign and manage frequencies in the absence of its broadcasting counterpart.

To avoid deadlock, NTC asked the Council of State, the government's legal advisory body, to determine whether in the absence of NBC it has the legal authority to allocate and manage frequencies. In 2006, the Council ruled that NTC may manage frequencies for telecom use. Following this decision NTC handed out WiMAX licenses to incumbent operators. However, because 3G licenses involve the allocation of 2.1 – 2.5 megahertz frequencies, which can be used jointly with broadcasting, NTC has been more cautious in exercising its authority and submitted additional queries to the Council of State regarding the interpretation of the Council's earlier decision. It was only in mid-2008 after it had received a positive response from the Council that NTC decided to go ahead with the planned auctioning of

the 3G licenses. In short, the 3G crisis has been a result mainly of legal problems external to the control of NTC.

The Broadcasting Act was finally promulgated in March 2008. However, the Constitution of 2007 stipulates that the allocation and assignment of frequencies are to be managed by a single agency, namely the National Telecommunications and Broadcasting Commission (NTBC), which will be established by an amendment to the Frequency Allocation Act. However, the draft act, which was approved by the Cabinet in August 2008, faced so much criticism from both the general public and the media that the Ministry of Information and Communication Technology had to remove the act from the legislative pipeline and hold new rounds of public hearings on the matter. Hence, the prospect of having a proper body that will oversee frequency allocation in the near future is rather bleak.

2.3.2 International Internet Gateway

NTC has handed the International Internet Gateway (IIG) license rather liberally to all Internet and broadband service providers. As of October 2008, 12 type-2 IIG licenses had been granted.

2.3.3 Local Loop Unbundling

The Telecommunications Business Act 2001 (TBA) stipulates that interconnection is mandatory at all “technically feasible” points, which is consistent with the Telecommunications “Reference Paper” of the World Trade Organization. That paper established standard telecom regulations for member states that are signatories to the telecommunications agreement. However, the law allows network owners to deny access or interconnection in cases of limited capacity or where technical problems exist.

To implement this particular clause, NTC requires that network licensees ensure fair and equal access to networks and facilities which supply asymmetric digital subscriber line (ADSL) Internet services:

- *Network licensees must allow other licensees to interconnect with the telecommunications network (under specified technical criteria);*
- *Access/interconnection conditions and charges must be on an equal and non-discrimination basis; and*
- *Access/interconnection conditions and charges must be disclosed.*

However, the quality and consistency of the last-mile copper wire service may be an issue. As a result, many Internet service providers (ISPs) have requested WiMAX licenses. As of October 2008, 18 trial WiMAX licenses have been issued to ISPs.⁴

2.3.4 Right of Way

TBA stipulates that licensees have the right to install poles or lay cables or wires on state and private property if the network roll-out plan is approved by NTC. However, the licensee will have to negotiate compensation for land usage with the property owner. In case agreement on appropriate compensation cannot be reached, NTC can establish a rate which it considers to be appropriate. If the land or property owner is dissatisfied with the proposed compensation rate, he/she may lodge an appeal with NTC. If the appellate decision is unsatisfactory, the property owner may file a complaint with the Administrative Court. To implement this particular provision, NTC has drafted “right-of-way regulations” that will be subject to public hearings before becoming effective.

While the right of way of telecom licensees, i.e., the right to hang wires or fiber optic cables over utility poles or ducts, and the right to install public telephone booths, may not be an issue of disputes, the rate of compensation will likely be the subject of intense negotiation. As in the case of interconnection, NTC will need to establish clear rules and principles in determining “fair” compensation rates that will be acceptable to both parties. Until the draft NTC rules governing right of way are passed, disputes about compensation for right of way would seem to be inevitable.⁵

2.4 Interconnection

Among all the regulatory dimensions surveyed, interconnection received the lowest score, 2.5. Concerns expressed by the respondents included the inability of NTC to enforce its interconnection rules on state operators that are protected by the terms and conditions of the concessions that grant them regulatory rights, unclear interconnection rules and the failure of NTC to intervene in the setting of interconnection charges by large private mobile players in the market. As interconnection problems in Thailand are rather complicated, because the several laws and regulations that are involved are inconsistent with each other, it is perhaps best to lay out the background of the problem.

TBA mandates that interconnection is mandatory for all license holders and that interconnection charges are to be negotiated privately. Interconnection terms and rates are supposed to be non-discriminatory. No method for calculating interconnection fees is prescribed, but the law requires that the interconnection rates be reasonable and fair to all the licensees concerned.

TBA sets procedures for resolving disputes on interconnection agreements and requires NTC to issue a decision within 30 days. The law does not require the disputing parties to make an effort to reach a resolution before appealing to NTC; consequently, private carriers may seek the intervention of NTC at any time during the interconnection negotiations.

While interconnection rules set out in TBA are clear, all telecom concessions are exempted from such rules.⁶ This is because all the networks installed under concessions are legally owned by the two state enterprises, TOT and CAT; private operators are mere subcontractors. Hence, all interconnection charges must be negotiated and paid only by the two legal license holders. The concession mandates that private cellular concessionaires of CAT (the gateway operator without a domestic network), namely DTAC and TrueMove, pay TOT (the domestic fixed-line operator with a network) a hefty fee of 200 baht per month as a flat rate per post-paid subscriber and 18 percent of the revenue for pre-paid users, while its own concessionaire, AIS, does not have to pay such a fee.

The lack of an access or interconnection charge among cellular providers proved chaotic as mobile operators engaged in a price war in the quest to expand their own market share. This overburdened the network's capacity, leading to a sharp deterioration in the quality of calls. In struggling to compete in cost, the two mobile operators stopped paying interconnection charges to TOT in November 2006, referring to the NTC rule on interconnection. The three operators successfully agreed on bilateral interconnection charges among themselves in early 2007. Subsequently, TOT filed a civil suit against them to demand outstanding access fees of 10 billion baht, or about US\$290 million, from DTAC, and 4 billion baht, or US\$116 million, from TrueMove. At the same time, TOT submitted a petition to the Administrative Court requesting withdrawal of NTC's interconnection regulation which allows the substitution of interconnection charges for access charges stipulated under the concession agreement.

To sum up, the interconnection chaos has very much to do with conflicting rules and regulations that are well outside the scope of NTC's authority. However, concerns about NTC's lack of supervision of privately established interconnection fee calls may reflect the authority's failure to enforce its cost-based interconnection rules.

2.5 Tariffs

Tariff regulation received average scores compared with other regulatory dimensions, as can be seen in Figure 6. Respondents complained about the lack of clear tariff regulation and the arbitrary tariff ceilings established by NTC.

So far, NTC has taken a hands-off approach in tariff regulation and has allowed prices to be determined by competition in the market. Although it recently established ceiling prices for several services, most are non-binding, with the exception of local fixed-line services as will be elaborated in greater detail below.

In September 2006, NTC announced a tariff rule that required operators to submit tariff schedules and their cost structure in order to assist NTC in setting maximum prices for all services. In May 2008, NTC

announced price ceilings for all major voice services, including fixed-line local and long distance, cellular (pre-paid and post-paid), and public telephone services. The maximum rates established were by no means rates that reflect the underlying cost and rate of return of the investors, as specified in the tariffs regulation. They are merely rates currently charged by incumbent operators. For cellular, the tariff ceiling was not made binding, as it accommodates all rates currently set by various providers.

The maximum rate for fixed line, however, was set at 3 baht per call (less than 10 US cents), a rate which was approved by the Cabinet some 20 years ago. It is therefore not surprising that fixed-line tariff regulation received the lowest score, as shown in Figure 7.

The regulation of tariffs based purely on private operators' submission of tariff information and benchmarking them against those in foreign countries clearly reflects the limited capability of NTC to examine the detailed cost structure of telecom operators. While the non-binding maximum bodes well for the dynamic and competitive cellular market that requires no regulation, the same cannot be assumed for fixed-line services. By setting arbitrary prices without any regard to costs, NTC had set the stage for serious under-investment in the roll-out of fixed-line services that are much needed after many years of restrictive investment conditions under the concession schemes.

To conclude, NTC displays clear inability to set telecom tariffs due to a lack of data and information, and it has set fixed-line service fees well below cost. Fortunately, it has at least kept its hands-off tariff regulation in the mobile sector as the ceiling rates set were non-binding and hence pose no threat of market distortion.

2.6 Anti-competitive Practices

Results from the survey indicate that NTC has failed to establish proper rules to address anti-competitive practices in the telecom sector, in particular for fixed-line and cellular services. Most complaints concern the following issues:

- (1) The absence of a definition of a "dominant provider;"
- (2) The absence of rules addressing vertical restrictions, such as discriminatory practices or refusal to deal;
- (3) Unclear rules in general.

Two pieces of legislation provide safeguards for competition in the Thai telecommunications market: the Trade Competition Act of 1999 and TBA. TBA requires that telecom businesses be subject to all provisions under the general competition law.

The Trade Competition Act contains provisions against the following five types of anti-competitive behavior:

- *Abuse of market dominance:* A business entity that has market power is prohibited from fixing prices, setting conditions that limit the provision of goods or services, and interfering with business operations of other parties without reasonable grounds.
- *Merger and acquisition:* A business entity is prohibited from merging with other operators in a way that could reduce competition, unless permitted by the Trade Competition Commission.
- *Collusion:* A business entity is prohibited from colluding with other business operators to conduct any act of monopolizing, reducing or limiting competition in the market.
- *Cross-border provision:* A business entity having a business relationship with a business operator outside the country is prohibited from performing any activity that would restrict the freedom of a person in the country with regard to purchasing goods and services.
- *Unfair competition:* A business entity is prohibited from carrying out any act that ruins market competition and has the effect of destroying, impairing, or restricting the business operations of other businesses. The use of information obtained from competitors with anti-competitive results can also be considered an unfair practice.

Although the Act does address all dimensions of restrictive practices, it still lacks guidelines for the implementation of the above prohibitions. For example, the law prohibits charging “unfair prices,” but there is no concrete description of what price level would be considered “unfair.” Similarly, the law requires pre-merger notification, but the threshold market share that would trigger the notification has not yet been determined. As a result, all mergers, including those in the telecom sector, are currently unregulated or supervised. In the absence of clear rules, the current competition regime is highly arbitrary and unpredictable, a situation that fuels the discontent of those governed by it.

TBA mandates that the telecom sector be subject to the Trade Competition Act. It also empowers NTC to undertake specific measures that prevent a licensee from carrying out acts that have the effect of restricting market competition. This law may provide adequate competitive safeguards for the telecommunications sector.

In September 2006, NTC announced its Rules on Monopolistic or Unfair Trade Practices in the Telecommunications Market, which stipulate that all license holders as well as concessionaires are subject to the Trade Competition Act 1999, the national competition law. They also contain provisions that restrict cross-equity holding in telecom businesses, prohibit cross-subsidies except for USO, and specify several trade practices that are deemed anti-competitive.

Contrary to the complaints found among the questionnaire responses (shown in the section on Anti-competitive Practices in Table 3: Comments Made by Respondents), NTC’s competition regulation *does specify* the definition of dominant service providers, i.e., those with a market share greater than 25 percent, *or* those that NTC declares to be dominant. Perhaps it is the latter part with which operators are not too comfortable, as it appears to be overly subjective in the absence of any guidelines.

Also, in contradiction of the concerns expressed by some respondents, NTC’s competition rules do address practices that are considered to be vertical restrictions. The language used is very imprecise, however, which effectively allows NTC to exercise broad discretion. For example, it is unclear to what the terms “unfair price discrimination,” “unfair prices,” “predatory pricing,” and “unfair conditions in dealing with other operators” refer. In the absence of implementing guidelines that clearly specify what “fair” or “predatory” means, service providers cannot assess whether, say, a price cut would be deemed unfair or anti-competitive rather than competitive. Perhaps it is the subjective interpretation and unpredictability of the rule rather than its absence that bothered most respondents about NTC’s competition rules.

2.7 Universal Service Obligation

Survey results indicate that USO regulation received the second lowest score, 2.6, following that of interconnection regulations. The major complaints expressed (as shown in Table 3) concerned unclear rules and selective implementation through incumbent state operators only. It is interesting to note that, while state operators complained about having to implement USO without a financial subsidy from NTC, other operators complained about having to pay a hefty contribution fee when they prefer to deliver the services themselves. Perhaps discontent on both sides results owing to the lack of transparency in the implementation of the USO scheme.

Traditionally, TOT, the state monopoly in fixed-line services, was the sole provider of USO, with financing coming from relatively expensive long-distance calls and the hefty access charges imposed on overseas calls operated by its counterpart providing overseas voice services, CAT. This cross-subsidy arrangement has fallen apart as the international and long-distance markets have been liberalized. TOT then turned to the massive financial surpluses generated from revenue-sharing schemes under private concession contracts. However, this financial source also started drying up as private concessionaires began refusing to pay the fees or charges stipulated in the terms and conditions of the concessions that they deemed “unfair,” such as the hefty and discriminatory access charges discussed previously.

Starting in 2001 TBA provided a new framework for universal service provision by setting up the

Universal Service Fund, which can be dispensed for USO. It also empowers NTC to require a licensee to provide universal service, but specifies that the obligation must not cause an inappropriate investment burden on the licensee; that aspect should be the same for all operators providing the same services. NTC has the authority to decide how the Fund will be used to provide universal services. The Act is ambiguous with regard to the mechanics for the disbursement of the Fund; this might be a source of contention in the future.

In August 2005, NTC announced its USO Rule, which specifies a number of points as outlined below.

(1) The scope of USOs that must be carried out by license holders includes the following.

- (a) The installation of at least 3 public telephones per village, not exceeding 6,000 villages, within 30 months of having obtained the operating license in areas and within the time limit specified by NTC;
- (b) The installment of at least 2 fixed-line or public telephones in educational institutions, hospitals and other social service organizations, but not more than 4,000 sites, within 30 months of having obtained the operating license in areas and within the time limit specified by NTC;
- (c) The provision of free telephone cards for not more than 1 million handicapped and elderly persons registered with the Ministry of Social Development and Human Security per month for 30 consecutive months.

(2) All type-3 license holders and type-2 license holders with their own network are required to contribute to USO by providing services as specified above, or contribute the 4 percent of their revenue. So far TOT and CAT are the only license holders that have chosen to provide USO with those services instead of paying the 4 percent contribution. They do so by installing facilities in remote areas or in public places such as educational institutions, schools and hospitals. Other operators, most of which are not in a position to provide the required social service obligations that often involve the installation of fixed-line or Internet services networks, have had to make financial contributions set at 4 percent of revenue. The figure has resulted in widespread criticism from operators as it is rather high compared with fees of 1-2 percent set in most other countries.

To sum up, the relatively low USO score is a result of the unclear and opaque rules and regulations of NTC that leave all operators as well as academics and other stakeholders dissatisfied with the regime.

2.8 Quality of Services Regulation

It is rather surprising that QoS ranked second highest after market entry given that QoS regulation by

NTC is basically non-existent today. Mobile service received the highest score, 3.1, while broadband received the lowest score, 2.9. Perhaps competition in the cellular market has prompted service providers to maintain service quality in order to gain or secure their market share. Lower quality for broadband reflects the lack of competition in the service as the market is currently dominated by a single provider, True, with a much smaller market share being held by TOT. NTC has handed out several broadband licenses to new entrants; however, the installation of a network is time-consuming. Competition in the market is likely to intensify in the near future; hence, consumers can expect service quality to be improved eventually.

Prior to TBA, responsibility for quality regulation rested with the state-owned operators providing the service. Hence, the rates of dropped calls and unsuccessful calls were monitored by TOT. However, TOT has ceased to monitor the QoS of private operators altogether. Unfortunately, NTC has failed to regulate QoS as it has not yet set up a proper system to collect information and monitor service quality. As a result, broadband users of certain private operators have had to put up with Internet speeds well below the advertised capacity for which they paid because of the providers' aggressive promotional campaigns aimed at expanding their customer base (hence, the low broadband score). Likewise, in the past, cellular phone subscribers have had to put up with dropped calls and unsuccessful calls during peak periods because of the providers' overloading of the network as there is no monitoring of the subscriber-to-bandwidth ratio.

To sum up, the QoS score reflects market forces rather than the regulatory oversight of NTC. The Thai case goes to show that market forces can substitute for regulatory failure.

3. CONCLUSION

Results of the TRE Survey in Thailand paint a mixed picture of the country's first truly independent regulatory body, NTC, in all regulatory dimensions. The poor performance of NTC is attributed to three major factors:

- (1) Unfavorable regulatory environment associated with the legacy of telecom concessions;
- (2) Political interference in the setting up of proper institutions that facilitate an effective regulatory regime;
- (3) NTC's capacity constraints in handling complex but important issues such as pricing which requires detailed examination of cost data.

The TRE performance assessment has revealed NTC's inability to deal with more complicated regulatory issues, such as competition regulation, tariff regulation, quality of service monitoring, and USO. In all of these areas, NTC has merely announced rules that provide broad guidelines but lack detailed implementation

regulations. It has therefore failed to establish a transparent, effective and predictable regulatory regime.

Handing out licensing appears to be the only regulatory dimension that NTC was able to perform relatively well, but even then there has been much criticism about the vagueness and arbitrariness of assigning different types of licenses.

One major lesson learned in the Thai case is that, while independence is often emphasized as one of the most important characteristics of a regulatory body, it by no means guarantees regulatory success.

4. RECOMMENDATIONS

Although NTC has contributed significantly to a more competitive telecom market, with its relatively liberal licensing policy, the unclear and in some cases complete lack of required regulatory rules pose a major problem for telecom operators. The absence of proper quality regulation has left consumers at the mercy of service providers. The lack of right-of-way regulations leaves broadband operators at the mercy of utility service providers, and, without competition rules, smaller or new players are at the mercy of larger or incumbent competitors.

Nevertheless, the Thai experience shows that competition can go a long way in protecting consumers despite the absence of proper regulatory oversight. High TRE scores for market entry, tariff regulation and QoS can be linked to the level of competition in the market. On the other hand, in areas where regulatory rules are required as market forces fail to function, such as interconnection, USO and anti-competitive practices, the TRE scores are lower, reflecting how urgent is the need to improve the relevant rules and regulations.

It should be noted, however, that the low TRE scores in certain categories, in particular interconnection and access to resources (frequency allocation), reflect to a large extent constraints that are external to the regulatory body. Concession contracts written up over a decade ago during the era of state monopoly operators contain many clauses, such as those on access charges, that are inconsistent with modern regulatory rules. As these concessions are upheld by the Constitution, there is not much that NTC can do. Similarly, the considerable delay in the planned promulgation of the Broadcasting Act that will establish NBC has left frequency allocation and assignment in suspension, as the law requires that the task is to be carried out jointly between the two commissions.

Going forward, in order to improve the current regulatory environment, it is recommended that the Thai government and NTC take the following key measures or steps:

Thai Government

1. Devise a concession conversion scheme that will eliminate clauses that are inconsistent with NTC rules, in particular those concerning arbitrary access charges that are levied on certain mobile operators, price regulations by TOT and revenue-sharing schemes between state enterprises and private concessionaires. There has been no major progress in this area thus far since the last failed attempt in 1999. Any conversion scheme would have to be perceived as transparent and fair, not only by the private concessionaires and the SOEs, but also by the general public. Past attempts at converting these concessions have allegedly become subject to money politics and vested interests.

2. Urgently pass the draft amendment of the Frequency Allocation Act in order to establish NTBC so that frequency allocation and assignment can be undertaken properly.

NTC

1. Provide clear definitions of types 1, 2 and 3 licenses in order to promote transparency in the granting of licenses.

2. Urgently build up a cost database for key services that will enable effective cost-based price regulation, in particular for interconnection charges and fixed-line services.

3. Urgently build up the industry's database so that it will contain detailed data about service providers, their revenues, capacity, output, prices, and QoS.

4. Urgently formulate rules for "right-of-way," competition, and number portability.

5. Establish a clear and transparent accounting system for the management of the Universal Service Fund.

ENDNOTES

¹ The TRE Assessment Manual may be viewed at http://www.lirneasia.net/wp-content/uploads/2008/04/lirneasia_tremanual_v21.pdf

² The TA company name was later changed to "True Corporation."

³ The reference exchange rate of the Bank of Thailand in October 2008 was US\$1.00 = 34.43 baht.

⁴ www.ntc.or.th

⁵ Recently, there was a dispute between private fixed-line service providers and the Bangkok Metropolitan Administration (BMA) about the location of telephone booths and whether the operator needed to pay BMA for the use of such sites.

⁶ The 1997 and 2007 Constitutions protect the legal enforcement of all provisions stipulated in all telecom concessions.



Summary of Papers Presented at the 2008 TDRI Year-end Conference on “Sustaining Long-term Growth”*

Kwanjai Lekagul**

Tackling poverty and raising the quality of life of the people are Thailand’s ultimate development goals. The Thailand Development Research Institute (TDRI) has been working continuously on various aspects related to these issues. For example, in 2007, TDRI organized the Year-end Conference on “Tackling Poverty: Liberalism, Populism, or the Welfare State.” An interesting conclusion from that conference was that, regardless of how poverty is tackled, a large fiscal budget would be required for implementing the task. If Thailand would like to become a welfare state like those belonging to the Organisation for Economic Co-operation and Development (OECD), it would need to allocate a budget of at least 440,000 million baht a year. As tackling poverty and raising the quality of life of its citizens are indeed expensive goals, sustaining long-term economic growth is necessary to ensure the availability of the financial resources required.

Thailand now faces a number of problems that undermine its future growth potential. The list includes an uncertain and volatile global economy, declining competitiveness of local industries, insufficient investment in human resources, inadequate infrastructure, deteriorating natural resources and ineffective economic institutions that impose high transaction costs on the country’s economic and social systems. In keeping with the current global economic turmoil that is forcing many countries to re-evaluate their development policy, TDRI, in cooperation with the Chaipattana Foundation and the Office of the National Economic and Social Development Board (NESDB), organized the 2008 Year-end Conference on “Sustaining Long-term Growth” at the Ambassador City Hotel, Jomtien, Chon Buri, November 29-30, 2008. The main goal of the conference was to address fundamental economic problems that the country needs to tackle in order to ensure the sustainability of its economic growth in the long run.



FORMAT AND THEMES OF THE CONFERENCE

In the morning session of Saturday, November 29, the conference started with opening remarks by Mr. Kosit Panpiemras, TDRI Chairman of the Council of Trustees and the Board of Directors. This was followed by panel discussions on “Sustaining Long-term Growth” and on “What Governments Should Do and Not Do to Deal with the Global Financial Crisis.”

For the afternoon session, the conference was split into two group sessions: “Enhancing Competitiveness of Thai Industries for Sustainable Growth” and “How Can Thailand Cope with the Volatility of Global Energy Prices and Global Warming?” In the morning of Sunday, November 30, the conference was again split into two group sessions: “Human Capital and Sustainable Growth” and “Economic Institutions for Sustainable Economic Development.”

* This article was summarized and translated from TDRI Report, No. 67, February 2009 (Special Issue) on Summary of Papers Presented at the 2008 TDRI Year-end Conference: “Sustaining Long-term Growth.”

** Ms. Kwanjai is Assistant to the President, TDRI.

The group sessions were divided up as follows:

1. Enhancing Competitiveness of Thai Industries for Sustainable Growth
2. How Can Thailand Cope with the Volatility of Global Energy Prices and Global Warming?
3. Human Capital and Sustainable Growth
4. Economic Institutions for Sustainable Economic Development.

PARTICIPANTS

The conference attracted about 500 participants from the public and private sectors, academia, including university students, and representatives of the general public, and the media.

Group 1 ENHANCING COMPETITIVENESS OF THAI INDUSTRIES FOR SUSTAINABLE GROWTH

The competitiveness of Thai industries is one of the key factors that promote sustainable growth. This theme explored the overall picture of Thai industries' competitiveness in comparison with that of other countries, and addressed relevant policy issues for enhancing competitiveness. These included infrastructure development, the role of financial and capital markets, and total factor productivity growth (TFPG). Six papers were discussed in this group.

1. The Competitiveness of Thailand: Economic Analysis from Competitiveness Reports

The competitiveness of nations was a topic receiving growing attention among businesspersons and policy makers worldwide. The paper drew on national competitiveness statistics published in the Global Competitiveness Reports of the World Economic Forum (WEF) and the World Competitiveness Yearbooks of the International Institute for Management Development (IMD). The data were used to evaluate the overall competitiveness of Thailand against the rest of the world and especially major countries in Asia. Subcomponents of the national competitiveness statistics were also used to evaluate Thailand's important strengths and weaknesses.

In terms of overall competitiveness, WEF ranked Thailand 34th out of 134 countries in 2008 and IMD ranked it 27th out of 55 countries in the same year. In view of those rankings, Thailand's competitive position was found to be at the middle tier among developed and emerging countries. However, when compared with a broader group of countries, Thailand's competitiveness position was in the top tier.

In relying on the subcomponents of the national competitiveness statistics, the paper identified the country's various strengths and weaknesses. The strengths of Thailand were its large market size, strong labor market conditions and good infrastructure system, while its weaknesses included its poor health-related factors, its level of technological readiness and that of its institutions. The current level of Thailand's national competitiveness could be promoted by: (1) improving institutions by applying the sufficiency economy philosophy; (2) constructing only necessary physical infrastructure and maintaining the existing physical infrastructure; (3) enhancing the physical infrastructure that was conducive to innovation and for promoting innovation readiness; (4) overcoming severe health-related problems, especially those related to the human immunodeficiency virus (HIV), malaria and tuberculosis; and (5) promoting the quality, reliability, and safety of Thai exports.

2. Enhancing Thai Industries' Competitiveness in the World of Globalization

For some decades, Thailand had been actively participating in multilateral trade negotiations. However, those negotiations had come to a halt, and many countries, including Thailand, had shifted their strategies toward bilateral and regional trade agreements instead. Thailand had entered into various bilateral agreements with Japan, China, India and Australia, and those were expected to bring about many advantages. However, the paper found that Thailand had not fully utilized the advantages of those agreements due to problems and limitations with different structures of duty rates and definitions of the rule of origin. That situation resulted in complicated and cost-adding procedures, distorted resource allocation, and introduced disadvantages for small entrepreneurs. In order for Thailand to utilize the benefits offered by those agreements and raise its competitiveness, the paper argued that the country should harmonize all custom duty structures into one structure, improve the infrastructure and the efficiency of services in public agencies, encourage good governance practices, support good competition policies, protect property rights, and promote information and communication technology (ICT) as well as innovation.

3. Economic Management for Competitiveness

Good economic management must follow the principles of development, as suggested by Amartya Sen. All individual and economic agents must be granted equal economic opportunities, political freedom, security protection, and social facilities, and they must operate under transparent management. The paper discussed economic management in three areas: macroeconomic management, risk management at the macro and micro levels, and the guarantee of equal economic opportunities.

With regard to macroeconomic management, it argued that both fiscal and monetary policies must share the objective of maintaining economic stability. Fiscal policy must adhere to transparency and discipline in both spending and revenue collection. Monetary policy must meet new challenges under an inflation-targeting framework; those challenges included exchange rate management, how to deal with supply-side inflation, and asset price inflation.

Because risk management had become increasingly important in the modern economic world, there must be sensible risk management at both the macro and micro levels. Only a couple of macro measures were discussed under that group: the strengthening of financial institutions in risk handling and the promotion of savings among big savers as well as those at risk of savings insufficiently. At the micro level, the paper found that it was urgent for the government to build institutional capability in identifying those eligible for assistance at a time of negative economic shocks and in mobilizing such assistance effectively. Without such institutional capability, risk mitigation measures would fail to reach the truly needy. Special attention must be given to the chronically poor and permanently vulnerable groups, such as the poor elderly, the disabled, and orphaned children.

The paper stated that equal economic opportunities were among the best guarantees for attaining sustainable growth through several channels. The first channel was through better allocation of human resources in realizing the potential of many more people. Better equality also would enable the government to collect more income and then spend it in building up economic and social infrastructure for further growth. On the social and political fronts, equality would help in reducing social conflicts and political abnormalities, such as the one Thailand was currently facing, which hindered economic development. Measures must be taken to reduce the injustice that came with inequality, not the inequality itself. Redistribution through fiscal policy was the best measure in economic management, but it must be accompanied by social and political measures, such as the promotion of broad participation in economic development and grass-roots democracy.

4. The Development of Infrastructure for Enhancing Thai Industries' Competitiveness

Because infrastructure was a fundamental factor for a country's economic development, the paper argued that good and sufficient infrastructure would enhance Thailand's competitiveness. In order to promote the country as a regional hub for production and logistics, the following were recommended for further infrastructure development. Thailand should (1) promote public transport and multimodal logistics; (2) improve and connect infrastructure between Thailand and neighboring countries (through mechanisms such as the east-west economic corridor, north-south economic

corridor, and southern corridor); (3) use renewable and alternative sources of energy instead of fossil fuel; (4) focus on demand-side rather than supply-side management (such as promoting energy-saving campaigns, improving the railway system and logistics, and supporting "green" industries); (5) encourage public-private partnerships in infrastructure investment in order to reduce the financial burden on the government and increase efficiency in management; (6) develop the business model of State-owned enterprises in order to increase management efficiency; (7) promote community participation by organizing public hearings to solicit ideas and comments for further infrastructure plans; (8) improve rules and regulations, and ensure that the management of the infrastructure system was in line with the rules and regulations of the free trade agreements to which Thailand was committed; and (9) support research and development (R&D) in developing the infrastructure system.

5. The Role of Financial and Capital Markets in Improving the Competitiveness of Thai Industries

The paper stated that financial and capital markets were important factors for improving the competitiveness of Thai industries. Their role in enhancing competitiveness included the following: such markets should (1) be a major mechanism in allocating the limited resources needed for developmental projects; (2) diversify risk in the economy and develop new financial tools which would help the public and private sectors to manage their risks more effectively; (3) improve the efficiency of government measures, especially monetary policy; (4) reduce the operational and fund-raising costs of the public and private sectors; and (5) enhance the practice of good governance.

The paper provided a number of guidelines to improve the efficiency of the financial system and bring about sustainable growth in Thailand: (1) costs incurred by adhering to rules and regulations should be reduced; (2) costs arising from existing non-performing loans should also be reduced; (3) competition among financial institutions should be encouraged by expanding the scope and types of financial activities; (4) easier access to micro finance should be provided; (5) those aspects of the financial system related to risk management should be restructured; (6) the credit bureau system should also be restructured to provide credible and sufficient information to banks before they approve loans and when considering risk management plans; (7) financial laws should be revised; (8) a savings system should be developed; and (9) the technological infrastructure should be improved in order to serve the establishment of electronic banking services.

For the capital market, the paper recognized the need to improve various items of the fundamental infrastructure in order to serve the needs of investors and fund raisers. It recommended that (1) the Stock

Exchange of Thailand (SET) be demutualized; (2) the capital market be liberalized and the financial activities of securities and asset management companies be expanded; (3) the regulatory system be reformed in order to facilitate the development of the capital market; (4) the tax system be improved to help develop the capital market; (5) laws that were obstacles to the operation of the capital market be revised; (6) the number of listed companies be increased; (7) the fixed income market be reformed; (8) the investor base for both individuals and institutions be expanded; (9) the rights and benefits of investors be protected; (10) new financial products be developed; and (11) venture capital, private equity, securitization, and necessary infrastructure, including an accounting system, good governance, and technology, also be developed.

6. Total Factor Productivity Growth of Thai Manufacturing Firms

Several factors contributed to a country's economic development, such as labor, capital and TFPG, according to the paper. In order to improve the competitiveness of Thai manufacturing firms, it was necessary to study which factors contributed to economic development. In overview, it was found that value-added output, which grew by 1.84 percent in 2003, was the result of three factors: capital growth (1.4%), TFPG (0.44%), and skilled labor growth (0.0024%). That finding was also in line with other studies which concluded that the growth of value-added output of Thai manufacturing firms resulted from capital growth and TFPG. In terms of manufacturing types, the productivity growth of 15 out of 22 types of manufacturing resulted from TFPG. Therefore, it was very important to improve TFPG in order to develop the competitiveness of Thai manufacturing firms.

Group 2

HOW CAN THAILAND COPE WITH THE VOLATILITY OF GLOBAL ENERGY PRICES AND GLOBAL WARMING?

Thailand had always relied on imported energy, according to the paper. Past trends showed that the domestic demand for energy would continue to climb incessantly, especially in the industrial and transport sectors. From an economic perspective, the country's dependence on imported energy posed an external risk factor to the stability of the domestic economy owing to the volatility of global energy prices. From an environmental perspective, energy consumption led to air pollution, which exacerbated the problem of global warming, which had become serious. In order to cope with such economic and environmental problems, all stakeholders and government authorities needed to cooperate in order to formulate appropriate and sustainable strategies.

Examined under that theme were issues concerning the development of alternative energy sources in line with the country's agricultural sector, as well as policy needs to address global warming issues, and Thailand's emissions of greenhouse gases (GHGs). Three papers were discussed under the group.

1. Alternative Energy and Policy on Reducing Global Warming

The main cause of the greenhouse effect or global warming was the use of fossil fuel as the major energy source for industrial development during the past two centuries. There were several ways to reduce carbon dioxide emissions which cause global warming, such as the use of nuclear fission, carbon dioxide capture and sequestration, hydrogen economy, energy efficiency, and renewable energy (including wind and solar energy, and biofuel). However, all those ways, except for energy efficiency, involved higher costs than the use of fossil fuel. Therefore, the paper recommended that energy efficiency should be promoted.

The energy plan for the next 50-100 years might be considered to be a plan for a very distant future, but it was still important for the government to develop an insightful vision for a long-term energy plan. Currently, the energy policy of developed countries focused on climate change, renewable energy, and energy efficiency. Thailand's policy had emphasized energy security: the government was concerned only about the impacts of energy prices on the economy and the cost of living. However, as energy prices had become more volatile, Thailand's energy policy also needed to be concerned about renewable energy and energy efficiency. Moreover, it needed to make a projection of energy consumption for the next 10 years and beyond.

The paper noted that Thailand's energy sector emitted the most GHG, accounting for 56 percent of all GHGs. It also projected that, under conditions in which the population kept growing, when GDP had reached 5 percent and there was no appropriate energy plan in place, GHG emissions from the energy sector would increase from 170 million tons per year currently to 234 million tons in 2011. Therefore, if Thailand increased the use of renewable energy in energy transformation industries, transport, and manufacturing from 0.5 percent to 8 percent of all energy used in 2011, as planned by the Ministry of Energy, GHG emissions would drop by about 16 percent.

The paper noted, in sum, that the most effective and the lowest cost strategy for reducing energy consumption and GHGs would be to reduce energy demand and promote energy efficiency at the end user stage. In 2012, the Kyoto Protocol would come to an end and there would be a new round of discussion soon after that to reinforce once again the commitment of all parties to reduce GHG emissions. That might also include revising the list of countries that would be required to comply with the Protocol, and Thailand

could possibly be included on the list as it had been emitting increasing amounts of GHGs in the past several years. Therefore, the paper stated that all stakeholders, both public and private agencies as well as the general public and communities, needed to cooperate in helping to reduce GHG emissions.

2. Situation and Strategy of Biofuel Development in Thailand

Biofuel was a renewable source of energy which could replace fossil fuel and help in reducing GHG emissions. Biofuel was used mainly in two sectors: transport, and energy transformation industries.

Two biofuels that were used in the transport sector were ethanol and biodiesel. With regard to ethanol, Thailand was competitive in terms of raw materials, such as sugar cane and cassava. With such abundant raw materials, Thailand could produce almost 10 million liters of ethanol per day, which corresponded to 50 percent of current benzene consumption. However, there was a problem with regard to the price structure for ethanol, as many licensed entrepreneurs could not set up plants and start operations. The benefits derived from the added value of molasses, which was used for producing ethanol, were not yet considered in the benefit apportionment system between sugar plant owners and sugar cane farmers. Accordingly, farmers would not benefit directly from increasing ethanol production. As for biodiesel, the paper noted that there was no problem with its price and production, but its competitiveness in terms of raw materials needed to be considered. Because the raw material for producing biodiesel was palm oil, palm plantations would have to be expanded if the government wanted to switch to the use of biodiesel as an energy source. There was concern that rice fields, forests and buffer zones would be replaced by palm plantations.

The paper found that, in energy transformation industries, most of the generators that used renewable energy to generate electricity in 2008, used biomass, solar energy, and biogas. Furthermore, it found that 80 percent of the biomass comprised bagasse and rice husks. Although the number of generators using renewable sources of energy had grown rapidly, the Ministry of Energy still overlooked those promising businesses and focused instead on nuclear fission.

The strategy for adopting the use of biofuel could be classified into three levels: national development strategy, policy and policy mechanism, and policy research.

In terms of the national development strategy, there were three strategies: (1) to reduce GHG emissions; (2) to reduce imported energy; and (3) to cope with the volatility of the global economy.

In respect of policy and the policy mechanisms, the following steps were recommended: (1) set up a core

center to coordinate the policies of all related agencies; (2) launch campaigns to encourage all sectors to participate in developing biofuel; (3) establish goals and policy mechanisms which were based on policy research; (4) reduce the monopoly on the energy market, especially that for biofuel; (5) strengthen the agricultural sector by establishing a fair structure for biofuel prices; and (6) mitigate the negative impacts on the environment and encourage communities to manage conflicts by themselves.

With regard to policy research, six guidelines were suggested: (1) set up an R&D system; (2) systematically collect and develop a knowledge base on biomass and its quality; (3) try to reduce the cost of biofuel by using R&D advances; (4) conduct R&D on the logistics system to produce an increasing supply of biofuel; (5) develop a knowledge base on the mutual benefits offered by biofuel development in order to set up an appropriate pricing system; (6) develop a knowledge base on biofuel based on local wisdom and explore an appropriate model for biofuel investment in local communities; and (7) improve the techniques and technologies for bio-energy plant production.

3. Rights and Responsibilities of Thailand Regarding Greenhouse Gas Emissions

A recent study showed that implementation of the production-based accounting rule, which adopted the “polluter pays” principle described in the Kyoto Protocol, caused the problem of carbon leakage. That was because some countries listed in Annex B of the Protocol tried to avoid paying by moving their production bases to non-Annex B countries that did not have to abide by that rule, which was a problem called “carbon offshoring.” Furthermore, that rule caused other problems. For instance, it ignored GHGs emitted as a result of international transport and trading, and reduced the competitiveness of Annex B countries. The latter problem also led to another problem in that Annex B countries compensated their losses in competitiveness by setting up a new trade barrier to products from non-Annex B countries, a process called “border carbon adjustment.”

Therefore, the use of firm ownership-based and consumption-based accounting was proposed instead. The first method would force investor countries to be responsible for their GHG emissions and thus solve the problem of carbon offshoring; however, it was recognized that it would be very difficult to acquire information on ownership as such investors normally used nominees to own the firm on their behalf. Unlike in the first method, consumption-based accounting would be the most appropriate principle for various reasons. For example, consumers who were the real polluters would pay the cost, which would solve the problems of both carbon leakage and carbon offshoring.

Group 3 HUMAN CAPITAL AND SUSTAINABLE GROWTH

Human capital was both fundamental to and the goal of sustainable economic development. On one hand, the country needed to provide good-quality basic education in order to facilitate the accumulation of skills required for employment. With sufficient basic education, workers could expect a reasonable income and be able to enhance their own productivity. On the other, the country needed to raise the quality of life of its people by providing social safety nets, such as affordable health services, unemployment insurance and pension plans for the elderly. Under that theme were discussed the economic returns from building human capital through education and the provision of various forms of social security that would raise the quality of life of workers and citizens. Six papers were presented under the group.

1. An Overview of the Quality of Labor in Thailand

In order to assess the quality of Thai labor, many criteria must be considered, such as knowledge, skills, attributes, productivity, and development. Overall, most Thai workers were educated at a low level (lower than high school) and their language and ICT skills were low. Sometimes, there were shortages in skilled labor. In terms of attributes, though there was no clear conclusion, problems existed such as a lack of good attitudes, enthusiasm, responsibility, discipline, and creativity. In sum, the quality of Thai labor was considered moderate.

To improve the quality of Thai labor, the following were proposed: (1) development of labor, including improvement of the quality of teachers and educational institutions, developing the necessary skills for workers at every level, both in public and private agencies, and enhancing their quality of life and health; (2) human resources development; (3) technology development; (4) investment adjustment, such as relocation and outsourcing; (5) labor management by promoting the private sector for making improvements in the quality of labor; and (6) adjustment of labor and population policies consisting of policies on incentives, alien workers, and circular migration.

2. Human Capital and the Economic Return from Education

In Thailand, the economic return on investing in education had proven worthwhile. Highly educated workers were better rewarded than low-skilled workers. In terms of individuals, the private rates of return from education ranged from 11 to 12.4 percent. During the past decade, that trend remained unchanged and, on average, the economic return from female workers was higher than that from male workers. In terms of social returns from education, the result was questionable as no

research in that field had been conducted in Thailand. However, if research results from abroad were examined, one interesting observation showed that the positive impacts that contributed to social benefits from education were relatively small. Thus, the social rates of return were almost the same as private ones. The average private rates of return in several countries ranged between 7 and 12 percent. The following were recommended as guidelines for investing in education.

(1) Basic education – The government had invested quite a large amount of resources in basic education, but its quality was still low because of inefficient management. The resources for education had not been effectively mobilized and there was an urgent need to use the budgets more efficiently. The quality of education did not reach the required standards, with the effect that students faced problems when they pursued higher education, a situation that also reduced the returns from education.

(2) Vocational education – The main problem with vocational education was that relatively few students were interested in that type of education, which resulted in a shortage of semi-skilled laborers. The reason was that the private rate of return from higher education was considerably higher than that from vocational education.

(3) Higher education (university degree) – The private rate of return from higher education was very high and it was believed that the social benefit was also high. Therefore, the government should create incentives for students to seek higher education. However, the government currently spent quite a large budget on higher education, so it might consider reducing that budget and letting students pay part of the cost. Another problem found in higher education was that universities could not produce graduates that served the needs of the Thai market. The government should urgently encourage universities to produce graduates in fields that lacked personnel with expertise and reduce the number of students in those areas with low market demand. The last problem was that promoting higher education would widen the income gap even further; the students who could access higher-level education were mainly from the privileged classes in society.

(4) Resource mobilization for education according to the National Education Act 1999 (revised in 2002) had not been fully implemented. For basic education, as the social benefits were higher than individual benefits, society should be responsible for the cost of education through the utilization of taxes for that purpose. In higher education, students should be responsible for covering some of the costs because individual benefits were quite high. However, the cost of tertiary education was high and it was a fact that society also benefited from it. Tax revenues should therefore be used for paying part of those costs, while the rest of the funds required should be provided by the university students themselves. It was recommended that, because

that resource allocation strategy was very interesting, it should be considered for implementation.

3. Competency of Labor and Competitiveness of Thai Industries

Thai industry was currently facing aggressive competition owing to the major economic, political, and social changes that were taking shape around the world. Major factors that would determine its strength in competing amid those changes were its technology, its human resources and their capabilities. Building such strength would require cooperation from all parties in the public, private, and educational sectors, thus paving the way for Thailand's further industrial development as well as that of its human resources, which would contribute to the country's development as a whole.

The most competitive industries in Thailand were those related to food and tourism. At the same time, however, many industries were not as competitive as they had been previously owing to their inability to effectively develop their human resources.

In developing the capability and competitiveness of the country's industries, technology development was a major determinant of the industries' success in terms of their four stages of development, namely acquisition, application, adaptation, and innovation. Overall, Thailand's core industries were competent in terms of the procurement of technology. However, an urgent need was the ability to understand and transfer that technology, as well as the ability to acquire it. With regard to technology application, another vital need was for development in the usage and management of machinery and the ability to transfer technology alone or with the help of outside parties. Besides, in adapting technology, development was needed in adapting and changing production methods and machinery, as well as products themselves. Finally, commercial innovation and new product patents were needed.

In terms of the capabilities of industrial workers, assessing the whole value chain of Thailand's industries revealed a shortage in both job categories and positions in value chains. Overall, the most common job categories found in value chains included those related to sales and marketing, R&D, and quality assurance. Apart from those aspects, some industries faced problems in designing products, such as those in the machinery, ceramic, and wooden furniture industry groups.

With regard to the strategies needed for the development of industrial technology and the capabilities of industrial workers, cooperation was required from the education sector and its participants: the Ministry of Education, universities, and vocational schools. Besides those, some strategies called for the cooperation of the public sector at the ministerial level as well as that of the private sector.

4. Social Capital and Human Capital Development

The principle of social capital was recognized by many international development organizations as a key factor in bringing about sustainable economic development. In the Thai context, social capital was considered to be important in creating a decent way of life, helping in the development of the country and in particular improving the quality of services and production processes in the economic sector. In addition, social capital contributed to lessening violence and to solving problems when economic and social conflicts arose.

As defined by NESDB, social capital referred to the social networks of individuals, institutions, cultural identities, and local wisdom, which was drawn from collective thinking and action based upon trust, positive relationships, and good culture. An assessment of social capital in Thailand at both the micro and macro levels had been made. At the micro level, the paper evaluated social capital by considering human capital, since humans were the main players who had a role to play in developing organizations and the country. The assessment revealed that Thailand had a moderate level of social capital; the strength of its social capital was that people tended to participate in social networks. Most Thais were kind, hospitable, lived together in harmony, participated in community development, joined activities for the public interest, and were public minded. However, a weakness of Thai social capital was that Thais tended not to be disciplined and to not follow rules and regulations. Moreover, they overspent, were materialistic, loved only fun and easy activities, and gave importance to nepotism and the patronage system. At the same time, there was a tendency for social conflict to increase. At the macro level, the assessment considered environmental factors that influenced the development of human resources, such as social institutions, cultural identity, and local wisdom. According to the assessment, social institutions in Thailand, including family, religion, educational institutions, private firms, and the media, had become weaker, which lessened the accumulation of human capital. Further, there were many factors that would have impacts on human and social capital, such as the advancement of technology and telecommunication, the relocation of labor, the post-knowledge base era, and urbanization. Therefore, two issues were currently challenging Thailand in the development of human and social capital.

First, there was a need for increasing social productivity, which could be achieved in the following ways: (1) establishing core values by combining social capital, human capital and local wisdom; (2) enhancing human capital by encouraging Thais to develop five types of public mindedness: a disciplined mind, a synthesizing mind, a creative mind, a respectful mind,

and an ethical mind; (3) strengthening the role of the family, community, religious institutions, and the media in developing human and social capital; and (4) supporting community networks throughout the country and encouraging communities to identify their market position based upon their own capital.

Second, there was a need to improve environmental factors in order to strengthen human capital so that people could eventually serve the needs of the market. Some rules, regulations, and bad aspects of the culture, such as the patronage system, were obstacles to the development of human and social capital; therefore, it was necessary to change them.

5. Health and Human Capital

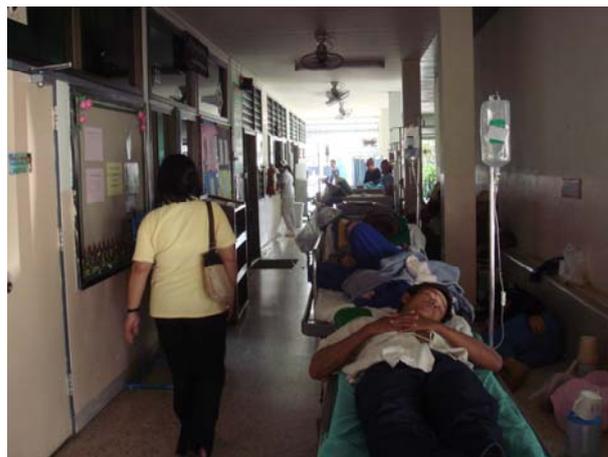
Investing in healthcare services was considered a means of enhancing human capital. However, a good health system was not only the means but also the ultimate goal of enhancing human capital. Healthcare services should therefore not be aimed at being successful in terms of cost containment or cost effectiveness, but rather at enabling people to attain good health and a good quality of life, which was a desirable entity in itself.

If good health was considered as a desirable entity in itself, the following myths or fallacy traps could be avoided:

(1) *The main goal of healthcare services was to contain costs at low levels.* It could be argued that, although keeping costs low was desirable, that should not be the main goal of healthcare services; otherwise, problems concerning quality would arise as would problems limiting access to such services.

(2) *As the rate of healthcare expenditure was growing faster than the growth rate of economic, healthcare coverage for all would create a financial burden for the government and thus lead to financial instability for the country.* It could be argued that several developing countries currently spent little for healthcare services as they lacked both human and financial resources. Therefore they could not provide good universal healthcare services. However, when a country had become developed and its financial status was better, the government and people would be likely to invest more in healthcare services.

(3) *A high expenditure on healthcare services would seriously affect a country's competitiveness.* It could be argued that a country's competitiveness depended on various factors. High expenditure on healthcare services, of course, could increase labor costs, but labor costs were not a decisive factor in terms of competitiveness. Many countries had higher labor costs than Thailand, but could still compete very well in the global economy. Moreover, high investments in healthcare services might increase productivity as workers would have better health.



(4) *Most people believed that the real cost of healthcare services was significantly higher than what the government was expending. Thus, they believed that the government should not spend more on healthcare as that would increase its financial burden and lead to financial instability or fiscal failure.* It could be argued that the tendency was to consider only the limit or ceiling of government expenditures, and to overlook the fact that the government had power over people and could collect taxes to cover its expenditures. Thus, although limited budgets posed a problem for certain governments at various periods, that problem could not be an absolute limitation lasting as long as the society existed. Nonetheless, it was not that easy for the government to increase taxes in order to invest more in healthcare services because most people might not be willing to pay higher taxes and they also did not believe in the quality of the healthcare services. Some people thus preferred to save their money for private healthcare services. In sum, if Thailand would like to become a social democratic state or social welfare state like many in Europe, citizens would have to come to a consensus on paying higher taxes to enable the improvement of public healthcare services.

6. Decent Work

According to the International Labour Organisation (ILO), "decent work" could be defined as work which summed up the aspirations of people in their working lives – their aspirations for opportunity and income; rights, voice and recognition; family stability and personal development; and fairness and gender equality. ILO had set up four guidelines for country members to promote decent work: (1) promote and realize standards and fundamental principles and rights at work; (2) create greater opportunities for women and men to secure decent employment and income; (3) enhance the coverage and effectiveness of social protection for everyone; and (4) strengthen tripartism and social dialogue.

The economic achievements of the past decades had assisted in the development of the labor market. Although the market mechanism had produced decent work for a number of Thai workers, there were still people employed in non-decent jobs and those who could not gain access to decent work. The following were obstacles to the promotion of decent work in Thailand:

(1) Thailand did not follow international labor standards as it had not ratified three conventions: the Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87); the Right to Organise and Collective Bargaining Convention, 1949 (No. 98); and the Discrimination (Employment and Occupation) Convention, 1958 (No. 111).

(2) Thailand did not promote freedom of association, the right to collective bargaining, and tripartite consultation, perhaps because employers and employer groups had stronger bargaining power with the government.

(3) The child labor problem. Following enforcement of the Labour Protection Act 1998, which prevented employers from hiring children under 15 years of age to work, and the National Education Act 1999, which extended compulsory education from six to nine years (students would finish their compulsory education at the age of 14-15 years), the number of child labor incidents decreased. The two acts were aimed at protecting children of any nationality living in Thailand. In practice, however, the child labor laws were not enforced effectively with regard to children from neighboring countries.

(4) Discrimination against alien workers. Although the Labour Protection Act 1998 did not allow any form of discrimination because of sex, age, religion and nationality, discrimination was practiced against alien workers, especially unregistered ones.

(5) Ineffective enforcement of the minimum wage. Although Thailand had passed laws on minimum wages starting in 1972, a survey undertaken in 2007 found that about 3 million workers in the private sector (or 20% of all workers in the private sector) were paid less than the minimum wages required by law. Moreover, the Labour Protection Act 1998 exempted employers from complying with minimum wage requirements for seasonal workers in the agricultural sector and for freelancers. That exemption also contradicted the ILO convention on discrimination.

(6) Unfair remuneration. The adjustment of minimum wages was not in line with the inflation rate so that real minimum wages actually decreased. Moreover, the income gap between workers with different levels of education had become wider.

(7) Time for family. In the third quarter of 2007, it was found that most unskilled workers in the private sector worked for more than 48 hours a week so that they had less time to spend with their families.

(8) Insufficient social protection. Many workers still did not receive sufficient social protection. In 2006,

it was found that only 8.5 million workers out of 10.3 million in the private sector were registered for social insurance. Most of the unregistered workers were in small firms that employed fewer than 10 workers, freelancers, and subcontractors.

Group 4 ECONOMIC INSTITUTIONS FOR SUSTAINABLE ECONOMIC DEVELOPMENT

Economic institutions referred to rules and regulations governing an economic system which included laws, regulations of private enterprises, and norms. Such rules and regulations ensured the proper behavior of economic agents. For example, effective rules and regulations could motivate people to cooperate rather than take advantage of one another. Therefore, the quality of economic institutions had a direct impact on sustainability and economic development. A clear, transparent, and effective economic institution would reduce the transaction costs in an economic system and facilitate cooperation among agents. That theme looked at key economic institutions that had a major influence on broad economic activities, in particular policy coordination among government agencies, the effectiveness of the legal system and the implementation of rules by regulatory agencies. Four papers were discussed under the group.

1. The Thai Government and Thailand's Uneven Economic Development

Thailand's loss of comparative advantage in labor-intensive manufactured goods was reflected in the 1997 financial crisis and had become increasingly visible in the past few years. Therefore, Thailand needed to improve its productivity and competitiveness if it was to avoid being stuck in a middle-income level trap, as had happened for several decades in many Latin American countries. The emphasis was on the need for progress in skills and knowledge, areas in which Thailand had continued to decline relative to competitors such as China, and Vietnam. It had also failed in the creation of technologically competent indigenous final producers and suppliers. Put differently, Thailand had not done well at upgrading – at moving into higher value-added products, at high levels of efficiency, with local inputs. Indeed, Thailand conformed to what had been labeled as “technology-less industrialization.”

Puzzlingly, Thailand was facing those problems even though two sets of conditions – rising labor costs and access to foreign technology – should facilitate the growth of such capacities. When other East Asian countries, such as South Korea, experienced increases in real wages and losses of comparative advantage in simple, labor-intensive activities, they invested heavily in public education and other forms of human resources

development. At a similar stage of growth, Thailand had not made such investments, nor had Thailand's participation in global value chains resulted in the expansion of local capacities. A recent joint study by NESDB and the World Bank had concluded that foreign investment in Thailand had "transferred amazingly little tacit knowledge and technology through vertical or horizontal spillovers." Another puzzle about Thailand was that it had succeeded brilliantly in transforming itself from a quasi-mono-crop economy to a world leader in products ranging from rice to rubber, sugar, prawns, tourism, automobile assembly, and garments.

The question of why Thailand had been able to diversify so well but had lagged behind in upgrading its economy could possibly be explained as follows. First, upgrading posed different and more difficult challenges than those required for diversification. It involved the ongoing process of "mutual discovery" and "strategic collaboration" on the part of the government and private actors. Second, overcoming the challenges of upgrading required significant institutional capacities in areas such as monitoring and consultation. Finally, such capacities could not simply develop as the natural response to changing market conditions. They required the response of political pressures on leaders and opportunities for leaders to act.

Therefore, it was believed that Thailand's future economic growth would stem from an assessment of those pressures and opportunities. In the past, problems such as market slumps, foreign exchange shortages, external security threats, and popular pressures prompted Thai leaders to undertake institutional reforms. Today, however, three sets of factors made such a constructive response less likely than in the past: (1) the changes required for upgrading were in many ways more difficult than those involved in identifying and promoting new sectors; (2) the capacity of Thai leaders to promote such reforms was not forthcoming owing to the country's fragmented politics; and (3) the willingness of Thai leaders to expend political capital in undertaking reforms was limited because pressures on them to do so were only moderate as well as fragmented. In sum, the failure of the Thai industrialization process to upgrade itself mattered because that failure might well pose economic and political constraints on Thailand's future development.

In that regard, four economic concerns were noted. First, research had demonstrated that sectoral diversification constituted the key force for national growth up to a certain income level, past which growth occurred through greater concentration, involving domestic linkages and agglomerations. Second, a combination of reliance on foreign technology without local linkages and low innovation in agriculture promoted capital-intensive manufacturing and failed to absorb rural populations. Third, the persistence of low productivity in agriculture and weak labor absorption in industry contributed to inequality which in turn discouraged growth. Finally, the lack of a "dense set of

input-output linkage between sectors" limited the expansion of domestic demand and thus increased vulnerability to export volatility.

2. Thai Laws and Economic Efficiency: A Case Study of the Criminal System

The Thai criminal system faced many problems in its structure, direction, cooperation among agencies, and delayed processes. That was partly due to the problems in human resources management and the incentive system. Therefore, it was proposed to apply economic methods to analyze the criminal system to come up with recommendations for its further revision from a new perspective. Problems in the Thai criminal system included the following:

(1) The law and justice systems in Thailand relied too much on the criminal process to settle disputes. Therefore, most claimants chose to file a lawsuit in the criminal court, although in many cases that was not necessary. Such a situation occurred also because the criminal process employed public resources, such as police and prosecutor, so that the claimant would pay less than if filing a lawsuit with the civil court; accordingly, the public sector had to bear excessive financial burdens. It was found that, in cases where the claimant chose to follow a criminal process, the public sector had to expend an average of 144,947 baht per case, which was 22 times the cost of a civil process (average 6,576 baht per case).

(2) Fines were exceedingly low, so that they had become ineffective as a preventive measure. That situation had occurred because the fines were not adjusted according to the inflation rate and the probability that the police could arrest the wrongdoer.

(3) The court tended to use jail punishment as it considered that to be an effective deterrent. However, jailing the wrongdoer placed a high cost on the public sector.

As seen above, the Thai justice system was too widely expanded and it used a large amount of resources. For instance, the total expenditure for the justice system in 2003 was over 64 billion baht, which accounted for 1.26 percent of GDP. The proportion was higher than that of developed countries, except the United States of America. Despite the high expenditure, however, the court could not serve all cases. The number of overdue cases was likely to increase every year. Already that number was considerable: 116,075 overdue cases in 2006. The number of prisoners that year was 210,395, or 339 prisoners per 100,000 population, a rate also higher than that of developed countries, with the exception of the United States.

In order to solve the aforementioned problems in the Thai justice system, the following measures were recommended: (1) the Law Reform Commission, which was set up by the good will of the Constitution 2007, and other related agencies should consider reducing unnecessary criminal penalties, such as individual cases

which did not cause damage to the society, such as libel cases; (2) fines should be adjusted appropriately by considering the level of inflation (utilizing the consumer price index for the purpose) and the probability that police could arrest the criminals; and (3) alternative ways of dispute settlement should be found in order to reduce the number of cases entering the justice system, such as settling disputes at the prosecutor stage, or through case diversion, delaying lawsuits, and behavior control.

3. Should We Be Concerned about Our Regulatory System for the Provision of Public Utilities?

In 1991, the Thai government adopted a policy of promoting the role of the private sector in the provision of public utilities by granting concessions and through joint ventures between the public and private sectors. That resulted in an expansion of public utility provision, especially in telecommunications. Moreover, State-owned enterprises had become more commercially oriented, which resulted in revision of some rules and regulations of the regulatory system in order to protect the public interest.

With regard to the regulatory system, when the State-owned enterprise was the sole operator in the public utility market, there was no formal regulatory system in place, except supervision by senior government officers who had been appointed by the government to participate on the board of directors of the enterprise. However, most of those officers lacked expertise in such fields, and they did not have exceptional technical and operational knowledge, such as how to set up service standards and interconnections, or how to calculate service costs. Therefore, in practice the State-owned enterprise regulated itself, with the exception that it could not establish service prices as that was a sensitive issue which needed Cabinet approval.

Since the State-owned enterprise had a better understanding of that business, when the private providers started their operation, the government let the State-owned enterprise supervise them, a situation that resulted in a lack of qualified personnel and insufficient knowledge base among civil servants. However, the regulatory regime faced problems when the State-owned enterprise became more commercially oriented. Senior government officers were considered to be impartial and in favor of the State-owned enterprise's interest. Moreover, the enterprise, as simultaneous provider and regulator, faced the issue of conflict of interest. That problem dragged out without any solution because it was difficult to design an effective regulatory system and there was no incentive to improve the system such as through the initiation of an infrastructure mega project. Thailand's regulatory bodies were not set up according to the political will of the government, but for other reasons. For instance, the regulatory commission on

broadcasting, television, and telecommunications was set up according to the Constitution 1997 and the regulatory commission on energy was set up by an unelected energy minister.

Currently, the lack of qualified personnel and knowledge base had become major obstacles to further development of the regulatory system in Thailand. Legal experts with exceptional technical and operational knowledge were needed along with economists who understood the rules and regulations of the regulatory system and had operational knowledge.

According to an assessment of the efficiency of the regulatory commissions on telecommunication in eight Asian countries (Bangladesh, India, Indonesia, Maldives, Pakistan, Philippines, Sri Lanka, and Thailand), it was found that Thailand ranked third, with a score of 2.8 out of 5, although the regulatory commission in Thailand had been in operation for four years.

Despite the fact that the lack of qualified personnel and knowledge base was a severe problem for the Thai regulatory body, a considerable amount of time would be needed to solve the problem. Therefore, in the short term, it was recommended that it was necessary to reform the existing regulatory system in order to reduce or prevent problems from arising related to conflicts of interest. In terms of the regulatory structure, the following were suggested.

(1) Appointments of senior government officers who had conflicts of interest, to sit in the board of directors of State-owned enterprises should be revised as well as the appointment of enterprise executives to sit on many executive boards of their subsidiaries.

(2) A regulatory body should be set up for some State-owned enterprises which currently had no regulator in place, such as the waterworks authority and State Railways of Thailand.

(3) In the case of State-owned enterprises which were currently performing as regulators in practice, such as the Transport Company Limited and the Bangkok Mass Transit Authority, there was a need to transfer its regulatory responsibility and personnel responsible for quality and standards control to the regulatory bodies that would be set up in the future.

(4) Concessions needed to be revised according to the establishment of new regulatory bodies in order to promote transparency in the system.

In terms of the operating quality of the regulatory agencies, the following could be recommended: (1) the nomination process of regulatory commissions should be reformed, such as nominating qualified persons having no conflicts of interest and ensuring transparency in the nomination process; (2) the regulatory framework and process should be transparent and accountable; (3) rules and regulations should be based on the results of research; and (4) the performance of the regulatory bodies should be assessed by an independent academic institution acknowledged for its expertise by the public.

4. The Development of Financial Markets for Sustaining Long-term Growth: The Case Study of Information Disclosure in the Capital Market

In the era of globalization, financial markets were an indispensable factor for economic development. Therefore, to sustain long-term growth, financial markets must be developed. However, the financial crisis which had erupted in the United States starting in mid-2006 had clearly shown that a lack of transparency in those markets could lead to disaster. That situation made clear the importance of the quality of information in the capital markets; it was at the heart of sustainable economic development.

The study explored information disclosure in Thailand's capital market by comparing information disclosed on 27 stocks, which were on a turnover list for 12 weeks during the period 2005-2007 on the SetSmart website (www.setsmart.com) and the Kaohoon website (www.kaohoon.com). The SetSmart website was being operated by SET, while the Kaohoon website was run by a newspaper which was very popular among individual investors. The following observations were made in the study.

(1) Most listed companies ignored the SET guideline on information disclosure for listed companies, especially when their stocks presented irregular price movements.

(2) The proportion of dates on which some stocks were presenting irregular trading movements but disclosing no information on both websites was quite high for some listed companies, especially securities firms, a situation which brought up the question of whether SET used a double standard with regard to the guideline.

(3) Stock news that was reported during the period of irregular trading movements (from T-3 to T+1) on the Kaohoon website accounted for over 54 percent of all its stock news, while that of the SetSmart website accounted for only 31 percent. That situation indicated that SET might overlook the supervision of some stocks.

(4) Some stock news that was reported on the Kaohoon website was quite serious and could obviously affect the stock price. Although a listed company was required to report to SET, it did not do so or it reported only when the irregular trading period had already ceased a long time previously.

In sum, the study showed that there were still some problems related to information disclosure in Thailand's stock market and those problems needed to be investigated urgently. They included the quality of information, unequal access to information, and information asymmetry.

REFERENCES

Arkhom Termpittayapaisith. 2008. The Development of infrastructure for enhancing Thai industries'

competitiveness. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Chaiyuth Punyasavatsut. 2008. Human capital and economic return of education. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Chayun Tantivasadakarn. 2008. Observations on the rights of Thailand to emit greenhouse gas. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Decharut Sukkumnoed. 2008. Alternative energy and Thai agricultural sector. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Deunden Nikomborirak, and Saowaluk Cheevasittiyanon. 2008. Regulatory system for the public utility provision. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Doner, Rick. 2008. The Thai Government and Thailand's uneven economic development. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30.

Kobsak Pootrakul. 2008. The Role of financial and capital market in improving the competitiveness of Thai industries. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Nessara Sukpanich. 2008. Total factor productivity growth and Thai industries' competitiveness. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Piyachart Phiromswad, Taka Fujioka, Sabin Srivanna-boon, and Pongsak Hoontrakul. 2008. The Competitiveness of Thailand: economic analysis from competitiveness reports. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30.

Sarinnee Achavanuntakul. 2008. The Development of financial markets for sustaining long-term growth: the case study of information in the capital market. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Somchai Jitsuchon. 2008. Economic management for competitiveness. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)

Somkiat Tangkitvanich, Taratorn Ratananarumitsorn, and Songphol Sanguanchit. 2008. Thai laws and economic efficiency. Paper prepared for the 2008

- Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Srawooth Paitoonpong. 2008. An Overview of Thailand's quality of labor. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Suwanee Khamman. 2008. Social capital and human capital development. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Thailand Development Research Institute. 2009. "Summary of Conference Papers of TDRI 2008 Year-end Conference on Sustaining Long-term Growth." *TDRI Report*, No. 67, February (Special Issue). (in Thai)
- Viraphol Jirapraditkul. 2008. Alternative energy and policy on reducing global warming. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Viroj NaRanong. 2008. Health and human capital. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Wisarn Pupphavesa, Nattapong Thongpakde, and Santi Chaisrisawatsuk. 2008. Enhancing Thai industries' competitiveness in the world of globalization. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Worawan Chandoevmit. 2008. Decent work. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)
- Yongyuth Chalamwong, and Wirash Usha. 2008. Competency of labor and competitiveness of Thai industries. Paper prepared for the 2008 Year-end Conference on Sustaining Long-term Growth, November 29-30. (in Thai)



Thailand Development Research Institute

565 Ramkhamhaeng Soi 39, Wangthonglang District, Bangkok 10310 Thailand

Tel: 66 2 718 5460, 718 5678-89; Fax: 66 2 718 5461-2

Email: publications@tdri.or.th; Web site: <http://www.tdri.or.th>