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# **THAILAND: FOSTERING PRIVATE PARTICIPATION IN THE DEVELOPMENT OF LABOR FORCE SKILLS**

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**Final Report**

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U.S. Agency for International Development*

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## EXECUTIVE SUMMARY

### I. Introduction

Over the past decade, Thailand has earned the reputation as one of the fastest growing economies in the world. With economic growth averaging almost 7.5% since 1981 and reaching double digits during the past two years, the country is well on its way toward NIC status. Most experts predict that Thailand's strong performance will continue; estimates of real annual GDP growth rates for the next five years range from 7% to 9%. With the influx of foreign investment, manufactured exports have taken on an increasingly important role in the economy.

Strong overall expansion, combined with dramatic shifts in the economy, have resulted in substantial strains on the country's human resource base. An abundant supply of cheap and easily trained labor was an important component of Thailand's comparative advantage in the past. However, as the industrial structure shifts into more technology-intensive sectors, the need for a well-trained stock of technical and managerial personnel becomes more evident.

### II. Statement of the Problem

The key problem is that Thailand's educational and training structure has been unable to keep pace with the changing demands of the economy. As a result, serious gaps have evolved between the needs of the private sector and the output of Thai educational and training institutions.

The status of human resource development in Thailand is summarized in the following data:

- ◆ The share of the employed population with elementary or less education is 86%; with secondary or vocational, 9%; teacher training, 2%; and university education, less than 3%.
- ◆ Thailand has almost universal enrollment in primary schools; its adult literacy rate is one of the best in the region.
- ◆ Only 1/3 of the children that finish primary school proceed to secondary school. Thailand lags far behind other countries in the region; the gross secondary enrollment ratio in Thailand is 30% vs. 95% in South Korea, 91% in Taiwan, 71% in Singapore, 69% in Hong Kong, 68% in the Philippines, 53% in Malaysia, and 39% in Indonesia.
- ◆ Enrollment ratios have increased dramatically at the tertiary level, due primarily to the establishment of two open universities; some of the growth can also be attributed to the expansion of the private universities and colleges.

### III. Analysis of the Problem: Gaps in Labor Force Skills Development

Rapid growth in the Thai economy has resulted in widespread shortages across a range of labor skills. Labor shortages are of mounting concern to the business community. As their needs for skilled personnel continue to grow, companies are finding it increasingly difficult to fill key technical and managerial positions. The Board of Investment notes that Thailand is losing investors to other countries due to infrastructure constraints, one of which is lack of skilled manpower. The most significant gaps are found in the following areas:

- ◆ Engineering: The shortage of engineers is the most critical human resource constraint facing the private sector. Shortages of science and technology personnel are expected to continue at the post-graduate level throughout the Seventh Plan period. Shortages at the bachelor degree level are expected to improve significantly in electronics technology, metallurgy, civil engineering and other related fields. However, the education sector will be unable to meet the demand for graduates in the key areas of mechanical, chemical and industrial engineering.
- ◆ Management: Businesspersons consider shortages in management quite important; many companies experience annual turnover rates in excess of 25% at the managerial/supervisor level. Major shortages are found in finance, marketing, materials management and human resource personnel.
- ◆ Technical/Skilled Labor: Many companies report significant shortages of technicians and other skilled workers. While the shortages in engineering and management are primarily quantity related, companies view the shortage of skilled labor as quality related. Vocational graduates often lack the know-how and training to operate in a productive environment.
- ◆ English-Language Skills: English language deficiencies are the most important quality-related factor affecting human resource utilization in the private sector. Firms view English communication skills as critical since the Thai economy is heavily dependent on international markets for inputs and exports. It is also a barrier to training and technology transfer.

The Thai educational and training system has been slow to respond to the changing needs of the labor market; hence, a widening gap has emerged between the needs of the private sector and the outputs of the educational system. Traditionally geared toward preparation for civil service, the Thai educational system continues to produce a surplus of graduates in the humanities, social and political sciences, while there remains a shortage of graduates in engineering and other technical and scientific disciplines.

Private higher education has been expanding rapidly in Thailand and will play a larger role in the future in meeting the needs of the private sector. For example, private higher education is being called upon to take the lead in addressing the critical shortages of engineers. Nonetheless, private and public education face several key constraints in addressing private sector needs:

- ◆ Quantity and quality of faculty: Given the critical shortages of engineers and managers, faculty are being increasingly recruited by the private sector which can offer more attractive compensation; hence, higher education has been unable to recruit and retain its engineering and management faculty. The issue with respect to engineering faculty is one of quantity; lack of faculty is a serious constraint to resolving the shortage of engineers. In contrast, the most critical issue facing programs in management is the quality of faculty; a disproportionate number of teaching staff hold only bachelor's degree and lack experience in business.
- ◆ Relevance of the curriculum: The curriculum of most degree and vocational education programs is geared toward theory, as opposed to practice. To meet private sector needs, a greater emphasis must be placed on applied learning and professional development.
- ◆ Pedagogical skills: There is a general lack of pedagogical skills in the Thai educational system. Lecture, as opposed to more interactive methods, is the most common approach. More innovative pedagogical tools would improve the effectiveness of education and training efforts.

The most important avenues for addressing labor skills constraints involve: (i) increasing the level of collaboration between the private sector and educational and training institutions, and (ii) increasing the level of collaboration between U.S. education and Thai educational programs.

There are already several model approaches to such collaboration in Thailand. Most notably, the electronics industry and King Mongkut Institute of Technology, Ladkrabang, have worked together to design tailored educational programs. The Sasin Program at Chulalongkorn University is widely recognized as a model of collaboration with U.S. universities (the Kellogg School at Northwestern University and the Wharton School at University of Pennsylvania). These are the types of initiatives upon which the USAID/Thailand strategy should build.

#### IV. A USAID Strategy for Labor Force Skills Development

The central goal of the proposed strategy for labor force skills development is:

**To serve as a catalyst and facilitator to bridge the gap between the needs of the private sector and the output of Thai educational and training institutions.**

The overriding labor skills problem in Thailand is the inability of the educational and training system to keep up with changes in private sector demand. The unmet demands of the private sector are deep, and clearly, USAID cannot and should not tackle the problem alone. Its most effective role will be to serve as a catalyst and a facilitator for the adoption of solutions to bridge the gap -- solutions which are in the long-run interest of business and educational and training institutions to sustain. To focus the Mission's resources on activities which meet this goal, we propose the following criteria:

##### Criteria:

1. Programs must have the active support and involvement of the private sector; the willingness of the private sector to be involved should serve as a "filter" to determine whether an activity is commercially viable and sustainable.
2. Programs should involve existing institutions and facilities with a view toward improving the quality and/or quantity of their output.
3. Programs should be based on models (both local and foreign) which have a proven track record of success.
4. Programs should focus on, but not be limited to, addressing gaps in engineering/technology, management, and human resource development.
5. Programs should impose minimal management burden on USAID.

This strategy proposes a number of interventions to support three objectives. However, it is important to recognize that these objectives are not mutually exclusive, and the proposed interventions can and should be combined to meet multiple objectives. USAID's overall program objectives, as outlined in its AMP, are illustrated by three over-lapping circles, with each circle representing one of the central themes of the Mission's strategy: mutual interests, open markets, and open societies. Similarly, the objectives of the human resource strategy should be viewed as over-lapping circles, with each circle representing an objective of the strategy. Priorities for funding should ultimately be driven by private sector demand.

**Objective 1: Foster the development of mutually-beneficial partnerships between business and educational institutions to address labor force needs.**

Interventions:

1. Support Thai industry collaboration with educational and training institutions to design and implement sector-specific programs. A successful example is the collaboration between the King Mongkut Institute of Technology, Ladkrabang, and a group of electronics sector in the design of a sector-specific educational program.
2. Encourage exchange of information and human resources between Thai industry and educational training institutions.
  - Faculty sabbaticals in industry to increase "real world" business experience.
  - Use of Thai and U.S. business-people as university lecturers or adjunct faculty.
3. Encourage the active involvement of business in policy-making boards of educational/training institutions. The Milwaukee School of Engineering may serve as a model; its "pro-business" approach is founded on the participation of business leaders in board meetings and special committees. Academic programs are strengthened through Industrial Advisory Committees.
4. Support private sector collaboration with educational/training institutions to develop continuing education programs. The aim would be to up-grade management and technical skills.
5. Examine feasibility of the use of "distance education" using high-technology educational techniques to up-grade skills within firms and within educational and training institutions.

**Objective 2: Foster linkages to apply U.S. expertise in education and training to the resolution of Thai labor force gaps.**

Interventions:

1. Support the creation/facilitation of "joint-ventures" between U.S. higher education and Thai higher education. The Sasin Model, in which Chulalongkorn University, the Kellogg School of Northwestern University and the Wharton School of the University of Pennsylvania have collaborated in the development of business management programs, could be applied to the development of engineering, technology, and human resource development programs.

2. Provide start-up funding for the creation of placement and career development services for Thai students in the United States. This might be accomplished in collaboration with U.S. businesses with interests in Thailand.
3. Promote the use of U.S. private sector/training expertise in human resource development and training methodologies to strengthen in-company training programs:
  - Train HDR managers in firms to design and implement training programs;
  - Develop training of trainers programs.
4. Support creation/facilitation of U.S.-Thai faculty exchange programs.
  - U.S. professors in Thai universities would address the immediate need for faculty in key areas.
  - Placement or scholarships for Thai faculty in U.S. universities would address the medium and long-term need to strengthen faculty.
5. Encourage integration and use of English language in business and technical-oriented educational and training programs. Support curriculum development through U.S. technical expertise and the creation of language laboratories.
6. Develop training programs to foster U.S.-Thai trade and investment.
  - Train potential investors in how to do business in Thailand.
  - Develop workshops to expose U.S. and Thai business persons to similarities and difference in their respective management and negotiating styles.
7. Provide U.S. expertise from professional accrediting bodies to the Association of Private Colleges and Universities and the Rectors' Council; assist in establishing accrediting mechanisms and standards for university and college programs.
8. Fund the Thailand-US Educational Foundation to facilitate professional exchanges between Thai academics and Americans who visit Thailand and the region.

9. Provide U.S. expertise in educational administration to assist Thai institutions to: establish appropriate fees and financial planning mechanisms; conduct assessments of market needs; design and execute marketing plans; and other factors related to managing educational institutions as commercially-viable entities.

**Objective 3: Support private sector efforts to influence policies affecting labor skills development.**

Interventions:

1. Assist business/professional associations to identify, analyze and advocate changes affecting labor skills development.
2. Support the participation of professionals in a particular discipline on the accrediting bodies of private university and college programs.
3. Support collaboration between the private sector and Thai research institutes to examine labor skills issues and alternative approaches and models to address these issues.

V. Funding the HRD Program

The proposed program would be funded from several projects. The most important projects would include the following. In rough order of priority:

- ◆ Thai Growth and Investment Fund (TGIF)
- ◆ Emerging Problems in Development II (EPD)
- ◆ Management of Natural Resources and Environment Support (MANRES)
- ◆ Science and Technology Development
- ◆ PVO Co-Financing
- ◆ Trade and Investment Support (TIS)

## I. INTRODUCTION

Until recently, the A.I.D. program in Thailand focused mainly on addressing security issues of mutual interest to the U.S. and Thai governments and assisting Thailand to achieve sustainable economic growth and social progress. Thailand's strong economic performance and stable social progress over the past decade attest to the appropriateness of past assistance strategies. Recognizing that Thailand has graduated to the rank of an Advanced Developing Country (ADC) and that the focus of the relationship between the U.S. and Thailand has shifted from security concerns towards commercial interests, USAID is now developing assistance strategies reflecting the new environment. USAID/Thailand has determined its new role will focus primarily on trade and investment issues of interest to both Thailand and the U.S. In the future USAID will work to identify and reduce continuing barriers to greater Thai integration with the world economy and global community, particularly in areas of mutual interest to the U.S. and Thailand.

It is widely recognized that the recent success of the Thai economy has also led to significant problems that pose a threat to long-term sustainable economic growth and continuing integration into the world economy. Presently, Thailand faces key constraints relating to infrastructure, environmental degradation, financial markets, and human capital. The development of human capital is especially critical since indigenous human resource capabilities not only impact the ability of Thai business to compete in global markets, but substantially affect Thailand's ability to deal effectively with all other factors constraining economic and social development.

The purpose of this report is to outline target areas where USAID can assist in the development of labor force skills in Thailand. The key problem underlying the development of Thailand's labor force is that the country's educational and training structure has been unable to keep pace with the changing demands of the economy. As a result, serious gaps have evolved between the needs of the private sector and the output of Thai educational and training institutions. The report examines:

- ◆ Critical manpower constraints as perceived by the private sector, with a particular focus on the U.S. business community in Thailand
- ◆ Responses to shortages by both the public and private sectors
- ◆ Constraints affecting the ability of educational institutions to adequately address human resource gaps

Finally, the report presents recommendations regarding how USAID can best utilize its limited resources to serve as a catalyst and/or facilitator to bridge the gap between the needs of the private sector and the output of the Thai education and training institutions, keeping in mind that solutions should serve both US and Thai interests.

### The Consultancy

This labor force skills analysis and strategy was conducted at the request of USAID/Thailand. It was fully-funded by the Mission through the Private Enterprise Development Support (PEDS) Project of A.I.D.'s Bureau for Private Enterprise (PRE).

Field work for the consultancy was conducted in February and March of 1990. The team consisted of four Ernst & Young consultants. The team leader was Sydney Lewis, Manager at Ernst & Young. The other team members included Dr. Mary Thormann, Education and Training Specialist, Dr. Matt Seymour, Education and Training Specialist, and Richard J. Smith of Siamerica Business Group Co. Ltd., a Thailand-based consulting firm.

Research comprised three elements: (i) a review of the literature on private sector development and labor force skills in Thailand; (ii) interviews with business, government, and education leaders; and (iii) formal surveys of local businesses and educational institutions. All of the findings, conclusions, and recommendations presented in this report are solely those of the authors, and not necessarily those of USAID, other U.S. or Thai government agencies, or private sector organizations.

## II. CHANGES IN THE THAI ECONOMY AND HUMAN RESOURCES

The dramatic changes in the Thai economy during the 1980s have led to a considerable shift in manpower requirements. Before examining private sector demand for labor skills, it is important to present a brief background on Thailand's business climate and historical patterns relating to education and employment.

### A. The Thai Economy

Over the past decade, Thailand has earned the reputation as one of the fastest growing economies and one of the most successful developing countries in the world. With economic growth averaging almost 7.5 percent since 1981 and reaching double digits during the past two years, the country is well on its way toward NIC status. Most experts expect the strong performance to continue with estimates for real annual GDP growth rates for the next five years ranging from 7 to 9 percent. Growth has been characterized as export led and driven by foreign direct investment. Exports have grown at an average rate of 30 percent over the past three years and net foreign direct investment inflows are estimated to have grown at 90 percent annually from 1985 through 1988. Key factors affecting Thailand's spectacular progress include:

#### ♦ Favorable Monetary and Fiscal Policy

The Thai Baht is pegged to a basket of currencies with an estimated 80 percent comprising the US dollar. The close relationship to the dollar combined with two major devaluations during the past decade have given Thai products a competitive advantage in international markets. Generally conservative and consistent fiscal and monetary policies have provided confidence to foreign investors looking to establish a low-cost manufacturing base.

#### ♦ Pro-business Government Policies

From the standpoint of fundamental philosophy, attitudes, approaches and policies, Thailand's government has long been committed to an economy driven by the market and private enterprise. Compared to many other developing countries, the direct role the government plays in the economy is relatively limited. In addition, The Board of Investment, which is charged with promoting indigenous and foreign investment, offers an attractive package of investment incentives including corporate tax holidays, business tax exemptions, and the right to import raw materials and machinery duty-free for export-oriented projects.

♦ Low Cost Labor

A main factor contributing to Thailand's international competitiveness is the large pool of low-cost, productive and easily trained labor. Workers are literate and tend to be reliable and hardworking. Female participation in the workforce is high, particularly in labor intensive semi-skilled industries, a key source of export earnings for the country. Labor unions represent a very low proportion of workers. The labor force is not militant and relations with management have been generally good.

♦ Political Stability

Although military coups were relatively common in the past, the country has been moving toward a more democratic society. Thailand installed its first elected civilian prime minister in 1988. Furthermore, there are no ideological differences between competing factions of the ruling elite. Changes in government have had little or no impact on the private sector.

With the influx of foreign investment during the 1980s, manufacturing has taken on an increasingly important role in Thailand's economy. While agriculture accounted for almost 27 percent of GDP in 1970 and manufacturing for 16 percent, today manufacturing and agriculture account for 24 and 17 percent of GDP, respectively. Manufacturing plays an even more important role in the export sector, the backbone of recent growth. Last year manufactured exports accounted for approximately two-thirds of Thailand's exports, up from 33 percent in 1980.

B. Historical Role of Education in the Thai Economy

Without question, human resource capabilities play a key role for any developing economy. In Thailand, one can point to important contributions at all skill levels, ranging from farm laborers to doctoral graduates.

Historically, the government has been the most important source of employment for better-educated Thais. Government employment of the educated elite can be traced back to the previous century when the bureaucracy comprised royal family members, the only people with access to education. Under the reign of King Rama V, emphasis was placed on developing the country's bureaucratic infrastructure and educational institutions. The association of education and government employment with royally decreed goals afforded high status to Thais entering the bureaucracy. Even through the mid 1980s, the government attracted the top Thai graduates from both local and foreign institutions. Educational attainment was clearly one of the most important means of paving the way for a promising career. Since most graduates sought government employment and the

public sector employed a significant portion of the educated elite, local universities concentrated on developing strong political science, law, and related faculties.

On the other hand, education has, until recently, played a relatively minor role in the Thai business sector, which has been traditionally dominated by ethnic Chinese family groups. These are some of the key characteristics of the traditional private sector.

- ◆ Control of much of the business and financial sectors has been exercised largely through business associations, informal groupings of firms, an elaborate system of interlocking directorates, kinship ties and intermarriage.
- ◆ Most of the founders of the industrial groups in Thailand formerly belonged to the merchant class who were usually importing or wholesaling the same products they later started to manufacture locally. Most commercial conglomerates only moved into industry with the encouragement of the government.
- ◆ Industrial firms focus on the commercial activities related to the manufactured goods that they handle, not their production processes themselves. Common behavior which can be widely observed includes market-orientation and inclination towards quick-returns. Goal attainment is usually to improve commercial activity, not production activities. Consequently, Thai industry, for the most part, has relied on foreign partners for technology.

Given the nature of the private sector, success in business did not typically depend on one's educational attainments. Instead, success depended on business savvy, linkages with other business elite, distribution capabilities, and access to capital (meaning the people or groups who controlled scarce capital).

Education and training have also been quite important in the labor sector with almost all Thais completing primary school with a basic degree of literacy. This educational base contributes to the "trainability" of Thai labor; indeed, the Thai labor force is recognized for its ability to acquire skills through on-the-job training programs.

Thus, by the early 1980s, the bureaucracy comprised highly educated individuals, many of whom had studied overseas. The strong educational background of bureaucrats has provided them analytical skills which they have used to, many would argue, successfully guide the country's fiscal and monetary policies. On the other hand, the private sector was unable to absorb educated persons who failed to secure government positions. Even as late as the mid 1980s, Thailand faced a problem of educated open unemployment in technology and management fields. The business sector focused, to

a large extent, on the trading of agricultural products or the production of goods for domestic consumption. In addition, local business operated (and still does to a large extent) in an economy protected by high tariff barriers and where collusion via business organizations served to restrict competition. In the absence of government incentives or external competitive pressure, the perceived rewards for education, particularly in technical fields, were relatively low on the part in the business community. Finally, since the economy has, until recently, depended upon agricultural commodities and low value-added manufactured goods as its primary export goods, the training needs for labor were minimal.

### C. The New Environment

Since 1987, the situation has changed dramatically. Strong overall expansion combined with structural shifts in the economy have resulted in substantial strains on the country's human resource base. Although an abundant supply of cheap and easily trained labor was an important component of Thailand's comparative advantage in the past, the situation is changing rapidly. Other economies with larger supplies of cheap labor such as India, China, and Indonesia are intensifying their export efforts and present stiff competition to Thailand's traditional labor-intensive industries. Thailand risks losing out to these low-wage producers if the country fails to improve productivity. Productivity gains will only be made by upgrading the technology component of manufacturing inputs. As the industrial structure becomes increasingly complex and the economy shifts into more technology-intensive sectors, the importance of a well-trained stock of technical, managerial and labor personnel becomes more apparent.

Manpower shortages are not isolated to the private sector. The government, for the first time, faces significant "brain drain" problems as it has been unable to compete with business in terms of compensation packages offered. The issue is particularly acute with regard to some of the brightest and best educated prospects for future leadership positions. Shortages in the public sector are causing concern in the private sector, however, for two reasons. First, the scarcity of qualified bureaucrats capable of analyzing and implementing sound economic policies poses a threat to private enterprises which, of course, are affected by government activity. Secondly, the government requires capable engineers and managers to run the state-owned infrastructure enterprises as well as to interface with business. Naturally, when manpower constraints weaken the country's already strained infrastructure, businesses are adversely affected.

### III. PRIVATE SECTOR HUMAN RESOURCE REQUIREMENTS

As noted in the previous chapter, sustained, rapid growth in the Thai economy has resulted in widespread shortages across a broad range of skilled manpower classifications. The issue of manpower shortages, particularly in the engineering and management fields, is of mounting concern to the local business community. Rising salaries and high employee turnover threaten to undermine Thailand's position as a low-cost, relatively productive manufacturer for international markets. The problem is so severe that major business publications such as the Asian Wall Street Journal, Far Eastern Economic Review, and Asian Business have all featured articles on Thailand's manpower shortages during the last few months and the Royal Thai Government has come under increasing pressure to address the problem in the Seventh National Economic and Social Development Plan (1991-1995).

Manpower shortages in Thailand have been well documented with little disagreement that shortfalls exist for engineering and management professionals. In a September 1988 survey sponsored by the American Chamber of Commerce in Thailand, 64 percent of the respondents from foreign chambers of commerce reported difficulties in filling openings for middle managers and technical/professional personnel. Evidence suggests that the situation has deteriorated over the ensuing year and a half. Problems exist regarding both quantity of personnel and the skill qualities of available employees. While not as well documented, the research team also found that skill shortages in the area of technical/skilled workers (i.e. technicians, vocational workers, etc.) is becoming an increasingly important factor constraining business development, although problems in this area are generally related to a mismatch of skills and quality issues.

In addition to unstructured discussions with local business leaders, the research team carried out formal interviews with general management and human resource staff at 15 local companies. Since USAID would like to develop areas of mutual Thai/US interest, the sample group was predominantly American-owned (11 companies) with the industry distribution listed below. The survey was exploratory in nature and makes no claims as being definitive or fully representative of the American or the general business population in Thailand. Its purpose was to provide primary qualitative and quantitative data to supplement the wide body of literature on human resource needs in Thailand. The results of the survey complement rather than conflict with the literature.

**Table 1****Industry Profile of Formal Sample Group**

| Industry                   | Number | Structure                               |
|----------------------------|--------|---|
| Computer and Related       | 6      | 100 % US Subsidiary (6)                 |
| Trading/Distribution       | 2      | 100 % Swiss Subsidiary (2)              |
| Service                    | 2      | Joint Venture - US/Thai (2)             |
| Metal Parts Manufacture    | 1      | Joint Venture - US/Japan (1)            |
| Consumer Products          | 2      | 100 % US Subsidiary (2)                 |
| Manufacturing Conglomerate | 1      | 100 % Thai with several foreign JVs (1) |
| Petroleum                  | 1      | 100 % US Subsidiary (1)                 |
| Total                      | 15     |   |

All companies surveyed (formally and informally) have been experiencing critical manpower shortages. Each survey respondent was asked to rate the severity of manpower shortages. Priority was clearly given to engineering fields, followed by management positions and then technician/skilled labor positions. While the technology intensive nature of much of the sample group biased responses towards engineering functions, job placement agencies and even bankers rate engineering shortfalls as the most critical facing business. The following table presents skill shortages as perceived by the business sector.

**Table 2**

**Assessment of Manpower Shortages**  
(by number of farms citing problems)

| Field                     | Critical | Important | Desirable | No Problem | Not Applicable | Average Rating |
|---------------------------|----------|-----------|-----------|------------|----------------|----------------|
| Electrical Engineering    | 8        | 4         | 2         | 0          | 0              | 2.43           |
| Mechanical Engineering    | 9        | 2         | 1         | 2          | 0              | 2.29           |
| Industrial Engineering    | 5        | 7         | 1         | 1          | 0              | 2.14           |
| Computer Systems          | 3        | 10        | 0         | 1          | 0              | 2.07           |
| Finance                   | 5        | 4         | 1         | 2          | 2              | 2.00           |
| Chemical Engineering      | 6        | 3         | 1         | 4          | 0              | 1.79           |
| Marketing                 | 4        | 3         | 1         | 3          | 3              | 1.73           |
| Human Resources           | 3        | 6         | 3         | 2          | 0              | 1.71           |
| Accounting                | 3        | 6         | 3         | 2          | 0              | 1.71           |
| Materials Management      | 1        | 8         | 4         | 1          | 0              | 1.64           |
| Technicians               | 2        | 6         | 3         | 2          | 1              | 1.62           |
| Operations Management     | 2        | 5         | 3         | 3          | 1              | 1.46           |
| Secretarial               | 2        | 1         | 4         | 6          | 1              | 0.92           |
| Machine Operators/Repair  | 0        | 3         | 3         | 5          | 3              | 0.82           |
| Environmental Engineering | 0        | 2         | 3         | 8          | 1              | 0.54           |

Each rating was assigned a value: critical = 3, important = 2, desirable = 1, no problem = 0. The average reflects the mean value of all respondents excluding those who felt the job classification was not applicable to their business. (For example, several subsidiaries of multinationals are strictly production centers, and as such, have no marketing function.)

A. Key Manpower Shortages

1. Engineers

The research team's interviews with business leaders indicate that the shortage of engineers is the most critical issue relating to human resource constraints. The severity of the shortfalls is confirmed by a 1989 survey by the Japan International Cooperation Agency, as well as a recent study on science and technology (S&T) manpower carried out by TDRI in conjunction with the NESDB. According to the JICA survey, "...the most serious problem both for any company and for Thailand as a whole was the shortage of engineers. This problem exists for both old and new companies." The TDRI study which is primarily a quantitative undertaking, shows current surplus demand for graduates in all S&T fields with the exception of agriculture related fields. According to the study, shortages of S&T manpower are expected to continue at the post-graduate level throughout the Seventh Plan period. While businesspersons interviewed by the USAID research team did not indicate a substantial need for post-graduate S&T personnel, they acknowledged that shortages at this level are of concern because manpower at the post-graduate level is needed to train lower-level technicians.

The shortages at the bachelor degree level are expected to improve significantly in electronics technology, metallurgy (including material science and mining engineering), and fields such as civil engineering, and other related fields. The education sector will be unable, however, to meet the demand for graduates in the key areas of mechanical engineering, chemical engineering, and industrial engineering.

**Table 3****S & T Manpower Shortages (Surplus) as Predicted by TDRI**

|                        | 1989   | 1990   | 1991   | 1996   |
|------------------------|--------|--------|--------|--------|
| <b>Post Graduate</b>   |        |        |        |        |
| Agricultural Fields    | -67    | -74    | -80    | -188   |
| Food Science           | 14     | 15     | 17     | 12     |
| Bioscience             | 42     | 44     | 46     | 48     |
| Computer Science       | 16     | 13     | 14     | 18     |
| Electrical Engineering | 49     | 47     | 47     | 46     |
| Mechanical Engineering | 136    | 132    | 139    | 184    |
| Metallurgy Engineering | 6      | 6      | 6      | 7      |
| Other Engineering      | 174    | 143    | 145    | 262    |
| Chemical Engineering   | 16     | 16     | 18     | 19     |
| Industrial Engineering | 135    | 124    | 131    | 171    |
| <b>Bachelor Degree</b> |        |        |        |        |
| Agricultural Fields    | -1,142 | -1,214 | -1,271 | -1,699 |
| Food Science           | -13    | -5     | 3      | 4      |
| Bioscience             | -20    | -38    | -31    | -30    |
| Computer Science       | 80     | 61     | 39     | -91    |
| Electrical Engineering | 541    | 428    | 326    | -391   |
| Mechanical Engineering | 1,400  | 1,277  | 1,279  | 1,277  |
| Metallurgy Engineering | -36    | -59    | -84    | -245   |
| Other Engineering      | 156    | -131   | -365   | -1,386 |
| Chemical Engineering   | 245    | 227    | 218    | 185    |
| Industrial Engineering | 430    | 411    | 429    | 526    |

The table above summarizes the S&T manpower shortfalls as presented in the TDRI study. It should be noted that the shortfalls are annual, representing new graduates minus new demand and do not take into account demand arising from past shortages. Of course, it is quite difficult to estimate demand arising from past shortages as labor substitution takes place. The analysis also assumes that the ambitious targets for supply growth can actually be implemented and maintains a fixed coefficient between the output of each sector and S&T manpower requirements.

Considering the assumptions used in the TDRI model, one could justifiably argue that the S&T manpower problem is actually understated. Another way to look at the problem is to compare Thailand with other countries during similar stages of development. In 1987, only 70 of one million people were engineers in Thailand. By comparison, in 1982 that figure was 425 per million in Taiwan; and in 1978 it was 679 in South Korea. If, because of labor skill constraints, Thailand is unable to increase the technology component of production, the country will find it extremely

difficult to make further strides in productivity and compete effectively with producers from low wage countries.

## 2. Management

While the USAID research team did not find any quantitative studies concerning management/supervisor shortages, shortfalls in this area are certainly posing problems for business. Table 2 shows that on average, businesspersons consider shortages in management functional areas quite important, although less critical than most engineering fields. Survey respondents reported significant shortages in finance, marketing, human resources, accounting, and materials management.

Rising salaries and increased job-hopping provide evidence of the scarcity of management skills. Many companies are experiencing annual turnover rates in excess of 25 percent at the managerial/supervisor level. According to an executive recruitment firm, managers increase their salaries by 30 percent on average when switching jobs. Approximately 60 percent of the firms interviewed by the research team reported hiring non-technical managers and supervisors from other firms, effectively promoting them to higher positions in the process. These findings are consistent with those in an earlier survey of American firms in Thailand (Siamerica Business Group, 1989). Estimates regarding the increase in salaries offered to new management/supervisory hires range from 25 to 100 percent over the past two years. According to the September 1988 AmCham survey, 72 percent of the respondents reported unusual escalation of salaries in competing for middle managers and technical/professional personnel.

The age/experience profile of managers also indicates shortages in management functional areas. Half of the formal survey respondents estimate the average managerial experience for the firms' executive managers at 5 years or less, considerably less than one would expect to find under conditions of skilled labor availability.

## 3. Technical/Skilled Labor

Many companies reported significant shortages of technicians and other skilled workers. Generally, employees in this category comprise vocational and associate degree graduates. Many managers point out that technical/skilled employees have become increasingly important since they must, due to engineering shortages, assume responsibility for many tasks previously carried out by engineers.

Companies also report high employee turnover and rising wages in this labor category. Furthermore, while many companies prefer to hire new graduates and train them for technical/skilled positions (or train existing employees), shortages of engineers (who would

undertake training) and high turnover of technical/skilled positions, have forced companies to pirate experienced workers from other firms. Sixty percent of responding firms cited cases in which they have recruited technical/skilled employees from outside the firm.

#### 4. Cross Cutting Issues: Quality versus Quantity

Manpower shortages concern both quantity and quality related issues. When asked whether critical manpower shortages were quantity related (in that there is an inadequate supply of educated/trained personnel) or quality related (in that there is a sufficient supply of educated/trained personnel but they are inadequately prepared to effectively to contribute to the firm) 79 percent of the respondents cited quality issues and 71 percent quantity issues (the issues were not mutually exclusive). Generally, those citing quantity issues considered shortages of engineers and experienced managers as the most important constraint. (It should be noted that while experience may be a quality issue, the research team chose to classify it as a quantity issue since interviewees felt that no amount of education or training could replace or compensate for experience.) The most important quality issues related to English language skills and applied learning at the educational level.

At the university level, most businesspersons agree that Thais are well educated and graduate with strong theoretical backgrounds. Many feel, however, that domestic universities do not provide enough "applied" learning experiences. The JICA study confirms this view stating that, "Education in Thailand, especially at the university level is equivalent to Japan...However, there are very few places for Thais to gain practical experience applying the theories they learned in [the] university."

English language deficiencies are probably the biggest quality related factor affecting human resource utilization and development in Thailand. All firms interviewed by the research team cited lack of English skills as the biggest constraint in hiring and developing engineers and managers. Firms reported that they often interviewed people who were technically competent but the lack of strong English communications skills prevented the hire of such personnel. The research team found this to be true in both foreign-owned and Thai companies. Firms view English communication skills as critical since the Thai economy is heavily dependant on international markets for both inputs and exports.

Lack of English capabilities also forms a significant barrier to training and hence, technology transfer. American firms often cite lack of English skills as a major constraint to overseas training. The Japanese concur. According to the JICA study,

The Japanese, although weak in English themselves, are very aware of the importance of English fluency. There are many Japanese managers who say that language is the critical element of technology transfer ... Language communication and training is a major problem. English is the mother language for neither side, [yet] it remains a barrier for training in most companies.

At the technical/skilled labor level, companies view skill shortages as mostly quality related. The TDRI study team reached the same conclusion citing present and projected excess supply of S&T vocational school graduates who are unable to find S&T related jobs. According to the study "This may be a reflection of the quality of output at the vocation level and is consistent with the very high unemployment rate for workers with vocational education." The companies in the USAID survey group complain that vocational graduates often lack the know-how and training to operate in a production environment. Specifically, they have been trained on obsolete equipment, lack general problem solving skills, and are unable to move into leadership roles (such as line foreman).

**B. Private Sector Response to Labor Skill Constraints**

Firms have reacted in a variety of ways to increasing manpower skill shortages. Table 4 summarizes responses to skilled manpower shortages on the part of firms in the formal survey sample group. A more detailed discussion of specific activities follows.

**Table 4**

**Private Sector Response to Labor Skill Shortages**

| Response   | Percentage |
|--|------------|
| Intensify in-house training efforts                            | 100%       |
| Increase salaries, wages, and perks                            | 92%        |
| Recruit employees from other firms                             | 83%        |
| Utilize less qualified personnel than described                | 58%        |
| Contract out work which the firm would rather undertake itself | 58%        |
| Utilize expatriates more than the firm would like              | 42%        |
| Delay product introductions, projects, etc.                    | 33%        |
| Intensify Campus Recruiting                                    | 33%        |
| Collaboration through associations                             | 33%        |
| Slow the pace of technology transfer                           | 17%        |
| Improve Work Environment                                       | 17%        |
| Recruit Overseas Thais   | 8%         |
| Intensify PR Efforts   | 8%         |

## 1. Training

All firms interviewed stated that they have intensified training efforts due to recent manpower shortages. While the quality and amount of training varies from firm to firm, some trends are clear.

- ◆ Professional training is provided in the form of overseas placement, overseas management and technical training, and local management and technical training (off-site and in-house). Senior managers are usually sent overseas annually, while middle level managers and technical staff are sent abroad for introductory training. Introductory training is usually in the range of two weeks to four months; however, introductory training of one to two years is also provided by some firms.
- ◆ Management and technical staff are more likely to receive general training while training for skilled and unskilled workers is usually firm and task specific.
- ◆ Blue collar training is usually conducted in-house and is introductory in nature, particularly at American and Thai firms. The Japanese and a few other firms, however, often send line workers overseas for new product/process training.
- ◆ Many companies are focusing training efforts on upgrading the skills of technical workers to compensate for the shortage of engineers.

Companies utilize trainers from a variety of sources including corporate personnel (local and overseas), university professors, and private training companies. Most companies subsidize continuing education programs for their employees but are concerned that the benefits of their human resource investments are accrued to other firms due to high employee turnover. While not verified by the research team, one might expect high turnover to act as a disincentive to general training.

## 2. Recruiting, Promotion, and Personnel Practices

The scarcity of skill personnel has also forced firms to alter recruiting, promotion and other personnel practices. Key reactions on the part of firms are described below.

### ◆ Recruiting Employees from Other Firms

While many firms would, under ideal circumstances, hire directly from educational institutions and develop their own employees up the career ladder, recent turnover problems have made this practice extremely difficult. Furthermore, newly established firms have no choice but to hire experienced workers.

Generally, only large, established firms with strong human resource capabilities are able to fill vacancies internally with 83 percent of the firms in the sample group resorting to recruiting experienced employees from other firms.

◆ Use of Less Qualified Personnel than Desirable

A majority of the firms in the sample group (58 percent) also fill vacancies with personnel who are not fully qualified for the positions. As mentioned earlier, the relatively low level of management experience of managers in many of the firms indicates that firms are moving Thai personnel into positions of responsibility relatively early in their careers.

◆ Use of Expatriates

More than 40 percent of the firms surveyed feel they are using expatriates more than they would like. Many expatriates are here on short-term (1 to 2 years) employee development assignments in technical and management functional areas. Since the cost of utilizing expatriates is quite high, firms prefer to fill vacancies with Thais. The shortage of experienced managers and engineers, however, has left firms little choice but to import skilled employees from abroad.

◆ New Approaches to Recruiting

Many firms have taken new approaches to recruiting. Besides using recruitment agencies, several firms are intensifying campus recruiting efforts and/or attempting to recruit Thais from overseas. One firm mentioned that it now offers positions to undergraduates during the third year of school, one year earlier than previously done.

◆ Compensation of Employees

Firms are placing greater emphasis on employee compensation packages. All but one of the firms in the sample reported that they have had to increase salary and benefit packages to new and existing employees. Perks are also increasingly important, especially at the upper management levels.

### 3. Business Strategies

Manpower shortages have forced firms to alter business strategies. A third of the survey respondents reported delaying new projects or product introductions due to lack of skilled manpower. A few firms claimed that technical manpower shortages have slowed the planned pace of technology transfer. Finally, 58 percent of the survey firms contract out work they would rather do internally such as package design, engineering, and in some cases, manufacturing.

While none of the firms have responded to manpower shortages by slowing the pace of investment or reinvestment, the sample group does not capture companies looking to establish new ventures in the region. BOI officials admit that manpower is one of several critical infrastructure problems in the Thai economy. While it is difficult to evaluate the relative importance of manpower with regard to investment decisions, the BOI reports that Thailand is losing many investors to other countries due to infrastructure constraints, one of which is lack of skilled manpower.

#### 4. Collaborative Efforts through Associations

Although not fully captured in the survey sample, collaborative efforts among private firms through business and industry associations are quite significant in the area of education and training. In the area of human resources, industry associations have been instrumental in disseminating information to members, interfacing with (and sometimes establishing) education and training institutions, and engaging in dialogue with the government. Below are some areas in which businesses have collaborated to address human resource issues.

##### ♦ Dissemination of Information

Several business associations (formal and informal) conduct employee compensation studies annually, sharing information with members. Members use this information to ensure they are offering competitive compensation packages. AmCham has a Human Resources Committee which disseminates information regarding specific HR issues to the AmCham membership via publications, breakfast meetings and luncheons, and workshops and seminars.

##### ♦ Interface with Education Institutions

Business associations have been a key vehicle for business-education interface. Probably the most salient example is the Thai Chamber of Commerce which was instrumental in establishing the University of the Thai Chamber of Commerce, the country's largest private higher education institution. Members of the Electronics and Computer Employers Association have formed a partnership with King Mongkut Institute of Technology (KMIT) whereby Association members help establish curriculum, fund, and supply students to a program at KMIT designed to upgrade technicians to full engineers. Industry has demonstrated a strong interest in participating in the upgrading of education and skills through collaborative efforts with educational institutions. In the September 1988 AmCham survey, 57 percent of all respondents and 61 percent of AmCham respondents said that their company would be willing to participate in cooperative student training programs with local universities. The Board of Trade which comprises members from the foreign and

local chambers of commerce as well as the Federation of Thai industries and the Thai Bankers Association has sought Japanese assistance in establishing a local technical university. As proposed, the university will eventually produce 1500 degrees and associate graduates annually.

♦ Interface with the Government

Finally, business associations provide effective channels for business-government dialogue. The Board of Trade offers a formal channel of dialogue with the government. A key organization focusing on government-business dialogue is the Joint Public-Private Consultative Committee (JPPCC) which is chaired by the Prime Minister and whose members comprise economic ministers and the heads of the Thai Chamber of Commerce, the Federation of Thai Industries, and the Thai Bankers' Association. It is through these organizations that the Thai private sector has been discussing education and training needs with the Royal Thai Government.

#### IV. HUMAN RESOURCE DEVELOPMENT IN THAILAND

The Thai business community is facing critical shortages in labor skills. As outlined in the previous chapter, the most significant gaps are found in engineering, science and technology, management, and English language skills. The key problem is that Thailand's educational/training structure has been unable to keep pace with the changing demands of the economy. As a result, serious gaps have evolved between the needs of the private sector and the output of Thai educational/training institutions. Traditionally geared toward preparing students for civil service, the Thai educational system continues to produce too many graduates in the humanities, social and political sciences and too few graduates in engineering and other technical and scientific disciplines. The result: severe shortages in the labor force.

A snapshot of the status of human resource development in Thailand is provided in the following data:

- ◆ Educational attainment has been increasing in recent years, but overall levels of education remain low.
- ◆ The share of employed population having elementary or less education is 86%; with secondary or vocational education, 9%; with teacher training, 2%; and university education, less than 3%.
- ◆ Thailand has almost universal enrollment in primary education; its adult literacy rate is one of the best in the region, ranking just behind South Korea and Hong Kong.
- ◆ Only 1/3 of the children that finish primary school proceed to secondary school. Thailand lags far behind other countries in the region; the gross secondary enrollment ratio in Thailand is 30% vs. 95% in South Korea, 91% in Taiwan, 71% in Singapore, 69% in Hong Kong, 68% in the Philippines, 53% in Malaysia, and 39% in Indonesia.
- ◆ Enrollment ratios have increased dramatically at the tertiary level due primarily to the establishment of two open universities; some of the growth can also be attributed to the expansion of private universities and colleges.

This chapter will focus on the issues in higher education and vocational education. The team has chosen to focus on these two areas for two reasons: (i) they are the areas of greatest concern to the private sector and the development of labor force skills and (ii) they are the areas where the private sector believes it can be a major player. Within higher and vocational education, the team has focused on the role of **private sector alternatives** to education and training at the request of USAID.

This is not to deny the importance of the issues underlying primary and secondary school education. The low rate of enrollment in secondary schools is particularly worrisome, and some believe that this could become an important constraint to economic growth in the future. As Thai industries diversify into more skill-intensive products, the demand for a better-educated labor force will increase. In the long run, low secondary enrollments may limit growth and deepening of the economy.

While the private sector is fully aware of the secondary school problem (and is concerned), it contends that the solutions lie primarily in the hands of the Thai government. Without major changes in government policy, the role of the private sector in providing basic education will continue to decline. A more thorough discussion of the issues underlying primary and secondary education is included in Annex 3 to the report.

#### A. Higher Education

From the perspective of the private sector, higher education is a key sector because it generates both engineers and managers. These are the two areas in which the business community has the greatest unmet demand.

The Ministry of University Affairs oversees all public and private universities and colleges in Thailand. On the public side, there are 16 institutions. Two of these institutions, Ramkhamhaeng and Sukhothai Thammathirat, are "open admission" universities. They comprise a large percentage of the total number of graduates from higher education; in 1986, approximately 53% of the total number of bachelor level graduates were from the two open universities, mainly in the humanities, law and social sciences (MUA, 1988).

Compared to public universities and colleges, private institutions account for a relatively small percentage of all students in tertiary education. Nonetheless, their growth has been dramatic during the past decade. Of the 25 private institutions of higher education in Thailand, six are universities. All six institutions attained university status in the 1980s. As demonstrated in Table 5 on the following page, B.A. graduates from private institutions comprised 10% of all graduates in 1986. It is interesting to note, however, that if graduates from open universities are excluded, private institutions represent approximately 22% of all B.A. graduates. (MUA, 1988). Based on current trends, private higher education in Thailand is projected to grow rapidly.

Rangsit College is an example of a private institution undergoing rapid growth. Established in 1985, the College enrolled 2,300 students within 2 years. Today its enrollment totals nearly 5,000 students. This growth is particularly interesting in that Rangsit College is one of the most expensive schools in Thailand.

**Table 5**  
**Number of B.A. Graduates**  
**Classified by Public vs. Private Higher Education**  
**(1986)**

|                                 | <u>Number of Graduates</u> | <u>Percentage</u> |
|---------------------------------|----------------------------|-------------------|
| <b>Public Institutions</b>      |                            |                   |
| -- Conventional<br>institutions | 21,425                     | 37%               |
| -- Open Universities            | 30,344                     | 53%               |
| -- Sub-Total                    | (51,769)                   | (90%)             |
| <b>Private Institutions</b>     | <u>6,068</u>               | <u>10%</u>        |
| <b>TOTAL</b>                    | <b>57,837</b>              | <b>100%</b>       |

Source: Ministry of University Affairs, General Information, pp. 135 and 144.

1. Key Constraints and Issues in Higher Education

While private institutions face good prospects for growth, they also face a number of constraints in addressing private sector needs. Some of the most important constraints and issues are described below:

◆ Quantity and Quality of Faculty

The lack of qualified faculty was identified as a major problem at all of the private institutions visited by the study team. Given the critical shortage of engineers and managers, faculty are being recruited by the private sector, which can offer more attractive compensation. Consequently, higher education has been unable to recruit and retain its engineering and management faculty. Strategies to address this phenomenon, including improving incentive packages, need to be developed. Research opportunities for faculty, perhaps in cooperation with the private sector or with U.S. academics, could be part of an incentive package. Recruitment of Thais with advanced degrees in the U.S. is one avenue the RTG is pursuing to meet faculty shortages.

The issue with respect to engineering faculty is one of quantity. There simply are not enough professors in the universities and colleges, and "brain drain" to the private sector has exacerbated the problem. Lack of faculty will continue to be a serious constraint to resolving the shortage of new engineers. In contrast, the most critical issue facing programs in management is the quality of faculty. A disproportionate number of teaching staff hold only bachelor's degrees. Moreover, they lack experience in business.

♦ Relevance of the Curriculum

The curriculum of most degree and vocational education programs is geared toward theory, as opposed to practice. Little emphasis is placed on applied learning and professional development. Moreover, there are inadequate linkages between educational institutions and the workplace. Relatively few students get practical experience through internships with firms; similarly, relatively few business people participate in the educational system as adjunct faculty or guest lecturers.

♦ Pedagogical Skills

There is a general lack of pedagogical skills in the Thai education systems. Professors rely almost exclusively on lectures and rarely use interactive teaching methods. The lack of innovative pedagogical tools prevents institutions from offering effective training for professional development.

♦ Governance and Accreditation

Private colleges and universities in Thailand are under the jurisdiction and administration of the Ministry of University Affairs. "Bureaucratic controls are exercised by the MUA over private institutions -- review of proposed curricula, new course additions, grading procedures, and indeed review of actual grades assigned in individual classes, and hiring and promotion of faculty" (Suwannarat Memorandum, September 18, 1989).

The MUA is also the accrediting mechanism for all universities and colleges in Thailand. Public institutions have the distinct advantage of being accredited on an institutional basis. In contrast, private institutions are accredited on a faculty by faculty basis; hence, a private institution may have some but not all of its programs accredited. In preparation for the MUA review, the Association of Private Colleges and Universities assists institutions by reviewing their curriculum, exam standards, physical plant, faculty backgrounds, etc. Accreditation may take up to four years.

The problem is that there is no independent accrediting mechanism in Thailand. The MUA accrediting board is composed of civil servants who may or may not have an understanding of the requirements within a particular discipline. Clearly, experienced professionals would be a valuable resource in setting the standards by which programs and institutions are measured.

Both private and public institutions of higher education are interested in institutionalizing an independent mechanism for accreditation. The accreditation issue was the key topic at a recent meeting of the Association of Private Colleges and Universities. It will also be an issue for discussion at Rectors' Council meeting in June 1990.

#### ◆ Finance

The viability and quality of educational institutions are dependent on maintaining an adequate financial base. Private colleges and universities in Thailand do not receive financial support from the RTG, and tuition fees are the major source of funding. Some schools, such as Rangsit College, were founded by prosperous Thai businessmen who provided start-up capital. Nonetheless, operating expenses are supported primarily by tuition. Given that private institutions are a relatively new phenomenon, endowments and alumni fund-raising are not a major source of support at this point.

Until recently, there was a tuition cap in higher education; this constrained private institutions' ability to respond to market demands. However, in December 1988, the Ministry of University Affairs established a "fee float" policy whereby each private institution is free to set its own tuition base. While there is no tuition ceiling, each private institution must request the MUA's permission to increase tuition fees.

#### ◆ Access and Equity

In the context of this study, the issue of access to higher education has three dimensions: (i) limited development of the full human resource potential in Thailand, (ii) regional disparities, and (iii) attitudinal considerations.

Development of Thailand's human resource potential is seriously constrained by the low percentage of Thai students who go on to secondary school following completion of primary school. To a large extent, accessing higher education in Thailand depends on the quality of the secondary school attended. The quality of schools in the urban and rural areas differ considerably. Secondary schools outside the large urban areas, especially Bangkok, have less resources and the quality of their programs suffers. As a result, students from the rural regions, by and large poorer

students, do not have equal access to higher education opportunities.

An educated workforce which is drawn almost entirely from the "elite" has implications beyond access and equity; this problem relates more to attitude and loyalty toward the job. For some companies, "second tier" students may prove to be better employees. The argument is that these employees are more loyal to companies and less likely to leave firms which provide job training and long-term career opportunities.

## 2. Successful Models

Despite these constraints, a number of successful models have emerged in the provision of higher education. The team has chosen to present these models because of their recognized ability to respond to the needs of the private sector. The team believes they are the types of models upon which the U.S. and Thailand should build future education and training activities.

### ♦ The Sasin Program

The Sasin Program is a joint academic endeavor between Chulalongkorn University, Thailand's most prestigious university, and the J.L. Kellogg Graduate School of Management of Northwestern University and the Wharton School of the University of Pennsylvania, two of the leading business schools in the U.S. This program is a model because it linked three leading academic institutions to address a specific private sector need.

The program offers two degrees: the Master of Business Administration (MBA) and the Master of Management (MM). These programs are taught by faculty members who are well-recognized for their teaching and research at Kellogg and Wharton; they are complemented by staff from Chulalongkorn University.

The foundation for the Sasin program goes back to 1980 when Chulalongkorn University met with firms to discuss their need for executives who were not only professionally qualified but also effective in communicating on an international level. Since English was acknowledged as the business language, the firms had sent their promising personnel for graduate management education abroad, especially to the United States and Great Britain. However, because of the escalating costs of graduate business education in the West, there was undue financial strain on the firms. During 1981 Chulalongkorn University visited the U.S. several times to discuss the project. Eventually, with the cooperation of the Wharton School and the Kellogg School, the final program took shape. The Sasin Program, as outlined in a May 1982 meeting between the Kellogg and Wharton Schools and Chulalongkorn University, included:

- On-going executive development programs conducted in English in order to effectively build-up middle-management's ability to serve investors and entrepreneurs.
- Establishment of professional consultancy services for the benefit of the local business community.
- Research, using Asia-related case studies to provide students with relevant indirect experience for their future jobs.
- Maintenance of about 14 faculty (10 from the U.S. and 4 from Thailand) in the first phase of the project to ensure effective performance.

More information on the Sasin Program is included in Annex 4.

♦ King Mongkut Institute of Technology

The King Mongkut Institute of Technology, Ladkrabang, is one of the most respected science and technology institutions in Thailand and the first to develop a doctoral degree in electrical engineering. The team considers it a model program because of its close links with the private sector. As an example, over 100 companies -- including Siam Cement and Thai Oil -- cooperate with KMIT, Ladkrabang to provide internships and apprenticeships for students. Satisfactory completion of applied learning components is required to earn a diploma from the Institute.

The Institute is currently diversifying its programs; six new Master's and three new Bachelor's degree programs have been proposed. It has also established strong collaborative relationships with private higher education to meet manpower shortages in engineering. For example, KMIT's Ladkrabang faculty are helping establish a new private engineering school to be located near the present KMIT campus. Some of KMIT's faculty will help administer the new facility. [A more detailed description of the Institute is included in Annex 4 to the report].

♦ Adaptation of the Teacher Training Institutions

Teacher training institutions are a model because of their ability to adapt to changes in Thailand's economy. During the last few years, teacher training institutions have undergone a major change in their orientation. Due to an over-supply of teachers and declining enrollment in schools, they have diversified and expanded their programs. Their programs have been broadened to include science and technology and management sciences. Priorities for the future include computer and electronics programs, industrial technology, food sciences, hospitality studies, and management sciences eventually leading to an MBA degree.

A number of donors have assisted the teacher training institutions make the transition to its more professional orientation. The Canadian government has provided assistance to develop a program in food technology; they are also exploring ways to link their community colleges to the teacher training colleges in Thailand. The Japanese have sent experts to study the problems of the teacher training colleges and how they might best assist in program development; they are providing 3,000 million baht over a 5 year period to set up 9 regional centers. The Australians will provide 6 million baht over the next 5 years to support the development of science and technology programs.

## B. Vocational Training

Parallel to the lower and upper general secondary levels are the vocational and technical schools. For every 10 students at the secondary level, there is one in the vocational-technical stream. About 215,000 students, or half of the 400,000 students in vocational/technical education, are enrolled in the formal school system under the auspices of the Department of Vocational Education (DOVE) in the Ministry of Education; the majority of these students are enrolled at the certificate level. Informal vocational and technical training provides a variety of short term courses in agriculture, mechanics, trades, and other areas.

Enrollment in formal vocational/technical schools by trade area is as follows:

|                       |              |              |
|-----------------------|--------------|--------------|
| Trade and Industry    | 115,000      | (54%)        |
| Commerce and Business | 65,000       | (30%)        |
| Agriculture           | 15,000       | ( 7%)        |
| Home Economics        | 15,000       | ( 7%)        |
| Arts and Crafts       | <u>5,000</u> | <u>( 2%)</u> |
| Total                 | 215,000      | (100%)       |

### 1. Key Constraints and Issues

Unlike the gaps at the level of higher education, the primary issue in vocational education is one of quality as opposed to quantity. The vocational education system is extensive and produces many graduates, but in the eyes of the private sector, their training is very poor. The result is a serious mismatch between the needs of private sector employers and the output of vocational and technical schools. There is an abundance of poorly qualified individuals coming out of vocational education, resulting in relatively high levels of unemployment for this group of graduates: 27% in 1985; 30% in 1986; 26% in 1987; and 18% in 1988. A 1989

study indicates that an increasing number of vocational school graduates are either unemployed or are doing jobs that are unrelated to their training.

Some of the reasons vocational education is unable to meet private sector needs are as follows:

♦ Weak Linkages with the Private Sector

Vocational schools are isolated from the world of work. The schools are essentially supply-driven. The curriculum is static with little input or feedback sought from private companies. The focus is on theory with little practical application. Business people note that machine operators who are trained to operate equipment in a school setting have a difficult time shifting to a production mode. In addition, there is little transfer of cognitive skills in the vocational schools which would make employees more "trainable." Lastly, most schools have obsolete and irrelevant machinery and facilities. As a result, skills training is not in tune with modern production and computerized settings.

♦ Quality and Quantity of Teachers

The most important constraint to improving the quality of vocational education is the lack of qualified teachers and trainers. Teachers tend to have limited education and training. Some have completed only two year post-secondary certificates. More importantly, teachers in the vocational schools lack any real experience in industry. The few well-qualified teachers in the system are drawn into the private sector by increased salaries and more attractive positions. "Brain drain" is a serious problem at the vocational/technical level, and some technical colleges report losing a teacher a month to the private sector.

♦ Quality of the Students

Vocational education is usually the "second choice" or "no other choice" track for students; it is an alternative track to the general secondary school and higher education track. In the Thai culture, however, a university education is held in much higher esteem than a vocational education.

## 2. Successful Models

### ◆ Ratchamongkol Institute of Technology (RIT)

Despite the generally bleak picture in vocational and technical education, a bright light is the Ratchamongkol Institute of Technology (RIT). RIT consists of 29 specialized campuses throughout the country and two main campuses in Bangkok. It takes in 20,000 students per year with an overall enrollment of 55,000. Most students pursue the diploma (65%), some the certificate (25%), and a few a degree (10%). While Ratchamongkol Institute operates under the auspices of the Ministry of Education, it maintains a semi-autonomous status; hence, its curriculum and operations are somewhat different. Forty percent of the students follow an engineering curriculum, and another 40% business administration and commercial skills.

RIT has a few other distinctive characteristics. First, the courses are market-driven. For example, business administration courses include accounting, marketing, money and banking, secretarial and clerical, management, computer science and applications, advertising, business language, and tourism and hotel management. Second, foreign contacts are maintained through consultation with overseas trainers and the teaching of English, Japanese and Chinese as part of the curriculum. Third, and perhaps most important, RIT maintains linkages with private sector firms. This is coordinated through an advisory council which consists of RIT faculty and representatives from 26 groups such as Toyota and Nissan. This council advises on instructional matters and coordinates on-the-job training with client firms. Some firms collaborate with RIT by providing in-plant training that complements or follows up the RIT training.

### ◆ The National Institute of Skill Development (NISD)

The National Institute of Skill Development (NISD) is noted for its solid and innovative leadership. It was started in the 1960s with support from the UNDP and the ILO, and operates outside the formal vocational and technical education system under the Ministry of Labor. The Institute offers pre-employment and in-service training to over 30,000 students each year. In addition, it provides innovative training for the unemployed, 75% of whom are women, to start their own businesses. Training of trainers courses and curriculum development workshops are an integral part of the development of the 780 instructors at the Institute and its regional centers. The Institute is supported by Japan, as well as Israel.

### C. The Role of U.S. Education vis-a-vis Thailand's Needs

The education and training industry is an area where the U.S. holds a strong comparative advantage and one which offers significant potential for export. The value of a U.S. education is widely recognized and appreciated in Thailand. For example, about 80% of the lecturers at the prestigious Chulalongkorn University in Bangkok obtained their degrees in the United States. While many Asians have studied in the U.S. -- and this clearly should be encouraged -- exporting U.S. education to Asia is a relatively untapped market. To date, linkages between Thai universities and colleges and the U.S. have developed, almost exclusively, out of personal relationships. Exporting the "best" of U.S. education and training will serve both U.S. and Thai interests. The goal is to create partnerships that are flexible but, at the same time, reciprocal and dynamic. From the U.S. side, this is not a donor-to-recipient posture, but one characterized by mutual commercial and economic interests.

#### 1. The Thai Invitation

In April 1989, the Ministry of University Affairs announced a new initiative to encourage foreign colleges and universities to operate in Thailand. This initiative builds on provisions in the Sixth Five-Year Plan which called for greater private participation in education and is an effort to expand quality higher education in Thailand. The objectives of the policy are three-fold:

- ◆ To take advantage of the best programs available in foreign countries, especially in fields not yet fully developed in Thailand;
- ◆ To allow students to benefit from a foreign education without the expense of living overseas;
- ◆ To offer an impetus to the private institutions in Thailand to compete in educational and technical standards.

There are two mechanisms whereby this program can be implemented: (i) by establishing branch campuses under a licensing system similar to Thai private universities, or (ii) by entering into a cooperative agreement with one or more Thai institutions to offer joint programs. Specific guidelines are in place for the implementation of the two mechanisms. In both cases, the Thai part of the agreement would be under the supervision of the MUA.

## 2. The U.S. Response

Thailand's welcome to foreign universities has attracted considerable attention in the international community. At least ten Australian institutions have initiated inquiries, resulting in two agreements to establish up joint academic programs. Cambridge University in the U.K. is cooperating with two Thai universities to forge university and industry links (Sun, September, 1989).

U.S. educational institutions are attempting to position themselves in Thailand as well. Some selected examples include the following:

- ◆ The University of Maryland, in collaboration with Thai investors, is attempting to establish a program that would confer degrees from the U.S. university. It has posted a person in Thailand for a year to facilitate the process.
- ◆ Pittsburgh State University of Pittsburgh, Kansas has established a foundation to implement an "International University Project" in collaboration with Thai business interests.
- ◆ Executives from the Midwest Universities Consortium for International Activities, Inc. (MUCIA) recently visited Thailand to develop potential links with Thai universities, including Chiang Mai University and Chulalongkorn University.

## 3. Creating Joint-Ventures Between Business and Education

U.S. universities are providing many services to the private sector in other countries. For instance, companies in Japan and Germany have developed proposals to work with Carnegie Mellon University. One proposal involves an association with a newly-formed research/think tank operation in Japan.

Another important type of "joint venture" is between private firms and Thai educational institutions. A model for this type of partnership is the recent technical-cooperation and technology-transfer agreement signed by Toyota Motor and the prestigious Chulalongkorn University in January 1990. The agreement will be the springboard for developing automotive-engineering studies at the university. Toyota Motor will provide the Faculty of Engineering with financial assistance and equipment. Toyota will also assist in the establishment of an automotive laboratory at Chulalongkorn University, and allow the university's instructors and students to use its automotive laboratory and training center facilities in Thailand and Japan.

Training programs within U.S. private firms, such as IBM, Control Data, and Xerox are resources that could be used for short-term

training in Thailand. U.S. training associations, such as the American Management Association (AMA) and the American Society for Training and Development (ASTD), could collaborate with local organizations, such as the Thailand Management Association (TMA). The aim would be to upgrade the training capacity of local private universities, many of which are developing short-term training programs to meet the needs of the private sector. Professional associations, for example, the American Chemical Society, would also be an excellent vehicle for offering short-term high level professional training to faculty in Thai universities.

## **V. A USAID STRATEGY FOR LABOR FORCE SKILLS DEVELOPMENT**

The central goal of the proposed strategy for labor force skills development is:

**To serve as a catalyst and facilitator to bridge the gap between the needs of the private sector and the output of Thai educational and training institutions.**

The labor skills problem in Thailand is primarily due to the inability of the educational and training system to keep up with the rapid changes in the skill composition and quantity of private sector demand. The unmet demands of the private sector are deep, and clearly USAID cannot and should not tackle the problem alone. Its most effective role will be to serve as a catalyst and a facilitator for the adoption of solutions to bridge the gap -- solutions which are in the long-run interest of business and educational and training institutions to sustain. To this end, we propose three areas for USAID involvement to meet the following objectives:

- 
- Objective 1: Foster the development of mutually-beneficial partnerships between business and educational institutions to address labor force needs.**
  - Objective 2: Foster linkages to apply U.S. expertise in education and training to the resolution of Thai labor force gaps.**
  - Objective 3: Support private sector efforts to influence policies affecting labor skills development.**
- 

The strategy outlined below proposes a number of interventions to support these three objectives. However, it is important to recognize that these objectives are not mutually exclusive; they do overlap and many of the proposed interventions serve more than one objective. The proposed interventions can and should be combined to meet multiple objectives. USAID's overall program goals, as outlined in its Assistance Management Plan, are illustrated by three over-lapping circles, with each circle representing one of the central themes of the Mission's strategy: mutual interests, open markets, and open societies. Similarly, the objectives of the human resource development strategy should be viewed as over-lapping circles, with each circle representing one of the three objectives of the strategy.

To focus the Mission's limited resources on activities which meet these three objectives, we propose the following criteria:

1. Programs must have the active support and involvement of the private sector; the willingness of the private sector to be involved should serve as a "filter" to determine whether activities are commercially viable and sustainable.
2. Programs should involve existing institutions and facilities with a view toward improving the quality and/or quantity of their output.
3. Programs should be based on models (both local and foreign) which have a proven track record of success.
4. Programs should focus on, but not be limited to, addressing gaps in engineering/technology, management, and human resource development.
5. Programs should impose minimal management burden on USAID.

Based on these criteria, the following sets of activities are recommended as areas for USAID funding to support labor skills development. Ultimately, the priorities for funding should be driven by private sector demand.

Objective 1:

**Foster the development of mutually-beneficial partnerships between business and educational institutions to address labor force needs.**

Interventions:

1. **Support Thai industry collaboration with educational and training institutions to design and implement sector-specific programs.**

This recommendation is central to bridging the gap between the needs of the private sector and the outputs of the educational system. Collaborative programs are in the interest of both industry and education. Industry benefits because training programs are tailor-made to its needs; current and future employees obtain the kind of training and skills most needed and valued by business. Educational institutions benefit through access to business as a site for training, increased sources of funding and access to industrial expertise. Students benefit through the addition of a practical and career-oriented dimension to their education. In the U.S., the collaborative relationship often

involves private sector funding of industry-related programs, research facilities or high-technology centers.

Several collaborative training programs have already been established by local companies and educational institutions. As noted in the previous chapter, a successful example of this type of program is between the King Mongkut Institute of Technology, Ladkrabang, and a group of firms in the electronics sector. The plastics industry is working in tandem with the King Mongkut Institute in Thonburi. The key to the success of these programs is that they are demand-driven; the programs are flexible and change in accordance with the needs of industry.

These are pioneer initiatives upon which USAID can build. There are many more opportunities for increasing the involvement of the private sector in the design of sector-specific training programs. The private sector is eager to explore opportunities for increased collaboration, and USAID could be an important catalyst.

**2. Encourage exchange of information and human resources between Thai industry and educational/training institutions.**

One of the weaknesses of the Thai educational system in preparing students for the labor market is its focus on theory, as opposed to practice. University faculty often have little to no experience in industry or business, hence the educational system lacks a practical dimension. To address this problem, we propose that USAID encourage greater exchange of expertise between business and educational institutions. For example, faculty from universities could be encouraged to work in industry during their sabbaticals to improve their knowledge of how Thai industry functions. Conversely, Thai and U.S. business-people could serve as university lecturers or adjunct faculty; in fact, businesses have expressed an interest in doing so. USAID might assist by providing training to business people in basic pedagogical skills.

**3. Encourage the active involvement of business in policy-making boards of educational/training institutions.**

Representatives from business are found on the boards of some educational institutions in Thailand; however, the degree to which they actively participate in developing and implementing educational policy appears to vary. The Milwaukee School of Engineering (MSOE) in the U.S. may serve as a model for integrating business leaders in the policy-making decisions of an educational institute. This is the foundation for a "pro-business" approach to education.

MSOE is directed by a non-profit, non-stock corporation of more than 200 business and professional leaders, who in turn select 45 of their members to serve as Regents. Regents participate in the affairs of the college through involvement in board meetings and

special committees. Eighteen Industrial Advisory Committees, composed of business representatives, work with MSOE faculty to adapt the curriculum to the changing needs of U.S. industry; the purpose of the Advisory Committees is to design, monitor and update degree programs in collaboration with MSOE's faculty. The MSOE approach would appear to have the potential for application in Thailand. As a first step, USAID might encourage informal contacts between MSOE and the engineering faculty of Thai institutes.

4. **Support private sector collaboration with educational and training institutions to develop continuing education programs.**

Rapid growth and change in Thailand's economy has resulted in critical shortages of technical and managerial manpower. A short-term step toward resolving this problem would be to improve the skills of current employees through continuing education. This might involve short-term courses targeted toward a specific industry or skill, or adult education programs offered during the evenings and weekends. In addition to meeting this immediate need, continuing education programs will be important in meeting the demand for up-to-date technological know-how. This need will grow increasingly acute as Thailand's economy shifts into more technology-intensive sectors. The Thai Management Association (TMA) and Technological Promotion Association (TPA) are two widely-recognized institutions providing continuing education programs. TPA is particularly interested in obtaining U.S. expertise in product safety and environmental management.

5. **Examine the feasibility of the use of "distance education" using high-technology educational techniques to up-grade skills within firms and within educational and training institutions.**

Thailand's open universities have used "distance education" methods very effectively to widen the benefits of higher education. Such techniques might also be effective to up-grade skills within firms and within educational and training institutions. Interactive audio-visual programs could be used as part of in-company training programs to up-grade technical skills, to improve English language skills or to keep employees up-to-date on technological innovations. They might also be used to strengthen the technical or pedagogical skills of faculty within educational institutions.

Objective 2:

**Foster linkages to apply U.S. expertise in education and training to the resolution of Thai labor force gaps.**

Interventions:

- 1. Support the creation/facilitation of joint-ventures between U.S. higher education and Thai higher education.**

The Sasin Program represents a collaborative effort between Chulalongkorn University, the Kellogg School of Northwestern University and the Wharton School of the University of Pennsylvania. Students are awarded the equivalent of a U.S. degree in business management. Similar types of programs, involving successful U.S. and Thai universities, could be applied to the development of engineering, technology, and human resource development programs.

The U.S. is recognized as having a comparative advantage in higher education programs, particularly, in fields where Thailand has important needs: engineering, business, and science and technology-related fields. Higher education offers a very clear opportunity for adapting U.S. expertise to the solution of Thai growth problems. The U.S. expertise in higher education is recognized and valued by both Thai businesspeople and academic institutions. Indeed, according to several businesspersons, the Thai business community would be more willing to participate in collaborative efforts with educational institutions if a U.S. institution were part of a three-way linkage. USAID can play an important role in facilitating a "match" which is in the interest of both American and Thai institutions to sustain.

- 2. Provide start-up funding for the creation of placement and career development services for Thai students in the United States.**

Many of the key leaders in the Thai government and business community have studied in the United States. Thais value a U.S. education, and many are willing and able to pay for it. The team sees no justification for USAID to finance long-term scholarships for Thais, except for qualified students who are truly unable to pay. A more appropriate role for USAID might be to provide start-up funds for the establishment of placement and career development services for Thai students. This "unit" might be attached to the Thai Embassy in Washington, D.C., with a corresponding unit in Bangkok. The units could serve a number of functions:

- Provide information on U.S. university and college programs to Thai students;
- Assist in the placement of students in U.S. programs;

- Assist in organizing summer internships and work-study programs with U.S. firms that have commercial interests in Thailand. The internships could be either in the U.S. or Thailand);
  - Disseminate career planning information to encourage students to return to Thailand following their studies in the U.S.; and
  - Publish and distribute a "job opportunities bulletin" for Thais living in the U.S. The aim would be to keep them informed of job opportunities in Thailand in an effort to reverse "brain drain." The cost of producing the bulletin could be absorbed through advertisements.
3. **Promote the use of U.S. private sector expertise in human resource development and training methodologies to strengthen in-company training programs in Thailand.**

A growing number of Thai firms have begun to intensify training efforts due to manpower shortages; this includes overseas training, as well as off-site and in-house training in Thailand. Despite heavy demand for training programs, effective training methodologies are generally not well-known or practiced in Thailand. The most common approach to education and training is the lecture approach, as opposed to more interactive and innovative methods.

The U.S. private sector could be a valuable source of expertise in the development of training methodologies. This is clearly another area where the U.S. has a strong comparative advantage. A potential application of this expertise is in the planning and implementation of in-company training programs. Assistance should not be geared toward a single firm, but rather toward a group of individuals responsible for human resource development in their respective firms. A more general application of the U.S. expertise would be in the design of training of trainers programs.

4. **Support creation/facilitation of U.S.-Thai faculty exchange programs.**

The critical shortage of professors in higher education, especially in engineering, has been a theme throughout this assessment. Clearly, expanding the faculty of engineering programs will be a long-term endeavor; likewise, up-grading the quality of business professors will only take place over the medium to long-term. One possible solution to resolve the gap in short-term would be to bring U.S. professors to Thailand via a faculty exchange program. This would serve to address three problems: the immediate need for faculty, the need to up-grade existing faculty in Thai universities and the need to integrate English language training in technical fields. Thai faculty could attend American universities to obtain

Master and Ph.D. level training. As noted previously, many Thai professors of business hold only a bachelor's level degree. USAID's role might be to assist in creating the faculty exchange program, either through placement of faculty in appropriate institutions.

**5. Encourage integration and use of English language in business- and technical-oriented educational and training programs.**

English is a compulsory subject in the Thai educational system from grade 5 onward. Nonetheless, the amount of time devoted to English language training is minimal; the curriculum is devoted primarily to grammar and literature, as opposed to applied English; and Thais have few opportunities to use English outside of the classroom. The Thai business community believes that English language deficiencies are the most important constraint in hiring and developing engineers and managers.

While there are many English language classes in Thailand, English is rarely integrated into students' learning; it is considered a separate subject, with few links to students' main line of study and future career needs. This is yet another area in which U.S. expertise could be of significant benefit to Thailand. Specific areas where assistance is needed include: curriculum development, the establishment of language laboratories, and technical and commercial English language training.

**6. Develop training programs to foster U.S.-Thai trade and investment.**

Thai businesspersons note that Americans lack familiarity, and often, sensitivity to important cultural aspects of doing business in this country; in some cases, lack of sensitivity to the Thai culture has prevented American firms from conducting business. The importance of cultural sensitivity in concluding trade and investment deals should not be underestimated; it is of great importance to the Thais. As a result, we recommend that USAID sponsor the development of workshops to expose U.S. and Thai businesspersons to similarities and difference in their management and negotiating styles. Chulalongkorn University has already developed a month-long program to introduce Thai culture to foreigners; perhaps in collaboration with faculty at Sasin, this program could be adapted for U.S. firms that have an interest in developing commercial ties with Thailand.

**7. Provide U.S. expertise from professional accrediting bodies to relevant Thai organizations, such as the Association of Private Colleges and Universities and the Rectors' Council.**

The purpose of this intervention would be to assist Thailand in establishing independent accrediting mechanisms and standards for

university and college programs. As noted in the previous chapter, there is considerable interest in developing accrediting mechanisms among Thai educational institutions. It was the subject of a recent meeting of the Association of Private Colleges and Universities; it will also be the topic of a Rectors' Council meeting in a few months.

- 8. Fund the Thailand-U.S. Educational Foundation to facilitate professional exchanges between Thai academics and Americans who visit Thailand and the region.**

CIDA has successfully fostered faculty exchange through its network of informal contacts with Canadian universities. When professors plan to visit Asia, CIDA assists in making a link with Thai universities and their faculty; professors may lecture or discuss certain research issues with Thai faculty. A similar type of exchange between U.S. and Thai universities could be developed at minimal cost; the management of this activity could be handled by the Thailand-U.S. Educational Foundation.

Another recommendation would be to reinstate USAID representation on the board of the Foundation. Until late 1988, USAID had had representation on the board for at least 10 years. Given the Agency's current and future activities in human resource development, it makes sense to reinstate USAID's seat on the board of the Foundation.

- 9. Provide U.S. expertise in educational administration to assist Thai institutions.**

U.S. expertise in educational administration could be valuable in the following areas: establishing appropriate fees and financial planning mechanisms; conducting assessments of market needs; designing and executing marketing plans; and other areas related to managing educational institutions as commercially viable entities.

Objective 3:

**Support private sector efforts to influence government policies affecting labor skills development.**

Interventions:

- 1. Assist business/professional associations to identify, analyze and advocate changes affecting labor skills development.**

Through the Rural Industries and Employment Project, USAID has provided support to the Thai Chamber of Commerce (TCC) and associated Provincial Chambers of Commerce, as well as to the Federation of Thai Industries (FTI) and its regional branches. It has also supported the institutionalization of the Joint Public Private Sector Consultative Committee as a vehicle for channelling the concerns of the Thai business community to the government.

These institutions and other associations are concerned about the shortages of manpower which affect their member firms. The team recommends that USAID assist business associations to articulate and support demands for changes in the Thai educational system. One avenue for support might be the policy analysis and research units of the TCC and the FTI.

- 2. Support the participation of professionals in a particular discipline on the accrediting bodies of private university and college programs.**

Currently, the Ministry of University Affairs serves as the accrediting mechanism for private university and college programs. Accrediting bodies are composed primarily of civil servants who may not be familiar with the professional requirements of the graduates of the programs they are evaluating. Accrediting bodies should be independent entities with professional representation. Professionals within both the public and private sector will have greater confidence in the accrediting mechanisms if they too have a role in determining what constitutes quality education.

- 3. Support collaboration between the private sector and Thai research institutes to examine labor skills issues and alternative approaches and models to address these issues.**

USAID should support collaboration between the Thai private sector and research institutes, such as TDRI, to analyze the issues underlying labor skills problems. This might also involve developing pilot projects to test alternative approaches and models.

## VI. PROGRAM FUNDING AND MANAGEMENT

### A. Sources of Funding

The proposed program would be funded from several projects. The most important projects include the following. In approximate order of priority:

- ◆ Thai Growth and Investment Fund
- ◆ Emerging Problems in Development II
- ◆ Management of Natural Resources and Environment Support
- ◆ Science and Technology Development
- ◆ PVO Co-Financing
- ◆ Trade and Investment Support

#### 1. Thai Growth and Investment Fund (TGIF)

TGIF will be launched in FY 1991. Its purpose is to provide a flexible mechanism for funding brief and well-focused activities. It will be the first USAID program explicitly designed to assist U.S. institutions to play a role in solving Thai problems. Given its flexibility and its focus on the use of U.S. expertise, TGIF is the best candidate for funding the types of human resource development activities proposed in the strategy. The total amount of funding for this project is yet to be determined.

#### 2. Emerging Problems in Development II (EPD II)

Thus far, EPD II has been the Mission's primary mechanism for funding training activities. The current level of funding in the project is \$19 million. Of this amount, about \$1.6 million has been devoted to training (if one uses a narrow definition of training to include, for example, long-term participant training and short-term training seminars). Approximately, \$4 million has been spent on human resource development more broadly defined (that is, including technical assistance and research activities which contribute to the development of new skills).

Most training activities have focused on improving analytical skills in the public sector, specifically in the Department of Technical and Economic Cooperation (DTEC) and the National Economic and Social Development Board (NESDB). In addition, the project has supported research and analysis related to education and training. For example, through a buy-in to the BRIDGES project, the project

funded research on local community contributions and control of basic education. It also funded a series of consultative meetings on the long-range planning of higher education in Thailand. Thus far, the project has funded only a few private sector-oriented training activities, not exceeding \$25,000 in value.

USAID intends to add an additional \$11.2 million to the project and extend the project's PACD from 1992 to 1994. Of the additional funds, USAID plans to target \$4 million to human resource development activities. However, training activities will have a very different orientation in the amended project. USAID plans to devote \$2 million to support training activities which directly involve the private sector; the remaining half will be devoted to training for public sector entities that have an impact on private sector development.

### 3. Management of Natural Resources and Environment for Sustainable Development (MANRES)

Approximately \$9 million of the \$44 million MANRES project is targeted for human resource development. Approximately 430 participants are to receive training under the project, including 50 Master's Degrees, 30 Ph.D.s and 350 participants in short-term and on-the-job training. [These numbers may change if the Mission chooses to decrease total funding for the project].

Less than \$500,000 has been spent for training activities to date. The project is currently sponsoring an in-depth assessment of professional training needs of RTG agencies, universities, and private organizations involved in natural resources and environmental management; this will result in a detailed plan for future training activities.

### 4. Science and Technology Development (STD)

The project has financed nearly 100 Master's and Ph.D. degrees at Thai universities in life sciences, material sciences, and applied electronics. In addition, the project funds research and scientific exchange activities which also have an important impact on human resource development in Thailand.

### 5. PVO Co-Financing

This project awards small grants on a competitive basis to PVOs for development activities in Thailand. Approximately \$100,000 to \$200,000 has been allocated to training the staff of Thai NGOs in project design and implementation.

In the future, USAID plans to extend the PACD of the project from 1992 to 1994 and add approximately \$4-5 million. Support to the Thai Chamber of Commerce, the Federation of Thai Industries, and IMET will be transferred from the Rural Industries and Employment Project to the PVO Co-Financing Project. If any training is to be funded under the project in the future, it is likely to be short-term, in-country management training for NGO staff or training related to fostering democratic pluralism.

#### 6. Trade and Investment Support (TIS)

This project does not include an explicit training component; however, it is possible that training might be associated with some of the project activities.

#### B. Program Management

The Mission intends to decrease significantly its staff of direct hires and foreign service nationals over the next few years. This will imply a need to reorient the portfolio to activities which impose minimal burden on the remaining staff. A number of the activities outlined in the strategy above have been selected because they meet this criterion. They encourage USAID to be a catalyst and facilitator, as opposed to a "manager."

Training is a major component of at least two existing projects (EPD II and MANRES) and is likely to be a major component in the upcoming TGIF project. Currently, USAID's project officers are responsible for all activities under a given project. However, in light of the future reductions in staff, a more efficient way to manage the portfolio might be to consolidate all training activities in one individual. This individual could be either American or Thai, but most importantly, must have an in-depth knowledge of both countries' educational systems in order to facilitate linkages. A knowledge of the business community is also critical to ensure that future training efforts address private sector needs.

# ANNEXES

**ANNEX 1**  
**INTERVIEW LIST**

**ANNEX 1**

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**ANNEX 2**  
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## ANNEX 2

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## **ANNEX 3**

### **SUMMARY OF THAILAND'S PRIMARY AND SECONDARY EDUCATIONAL SYSTEM**

### ANNEX 3

#### SUMMARY OF THAILAND'S PRIMARY AND SECONDARY EDUCATIONAL SYSTEM

##### A. An Overview of the Thai Educational System

There are four levels of formal education in Thailand: pre-school, primary, secondary and tertiary. Primary education provides six years of basic education and is free and compulsory. General secondary education consists of two distinct lower and upper levels. Parallel to the lower and upper general secondary levels are the vocational and technical schools. For every 10 students at the secondary level, there is approximately one in the vocational-technical stream. Students who successfully pass the upper secondary level qualify for entrance to tertiary education. Approximately 15,000 out of 100,000 applicants per year pass the entrance exam to public university, most of whom major in the arts, social sciences and education.

##### B. Private vs. Public Roles in the Provision of Basic Education

The following chart compares the role of the public sector and the private sector in the provision of basic education.

|                 | <u>PUBLIC SECTOR SCHOOLS</u> |                          | <u>PRIVATE SECTOR SCHOOLS</u> |                           |
|-----------------|------------------------------|--------------------------|-------------------------------|---------------------------|
|                 | <u>Number of Students</u>    | <u>Public % of Total</u> | <u>Number of Students</u>     | <u>Private % of Total</u> |
| Pre- School     | 733,147                      | 73%                      | 275,984                       | 27%                       |
| Primary         | 6,515,140                    | 91%                      | 645,354                       | 9%                        |
| Lower Secondary | 1,124,873                    | 88%                      | 152,746                       | 12%                       |
| Upper Secondary | 1,835,932                    | 84%                      | 346,918                       | 16%                       |

The private sector plays a small role at the primary and secondary level. Private initiatives have been encouraged, but the key constraint is finance. Private schools are regulated through fee controls and allocations of subsidies from the government; these controls provide little financial incentive for the private sector to be involved in the provision of basic education.

In fact, the role of the private sector in basic education is declining. Private schools enrolled 13% of lower secondary students and 9% of upper secondary students in 1986; the private sector accounted for 15% of lower secondary students and 12% in 1982. More recently, an article on the front page of The Nation (March 19, 1990) noted that 95 private schools in Bangkok are closing down; many plan to sell their campuses due to rising operating costs and dwindling numbers of students. With rapidly escalating prices of land, the school proprietors would rather sell their campuses to land developers. The Deputy Secretary General of the Private Education Commission, Pongsiri Chaovanaprich, noted that even more private schools are expected to fold.

### C. Primary Education

Thailand's primary education system is relatively successful in comparison to other low-middle income countries. For example:

- ◆ Access is high, with gross enrollment rates of 99% and net enrollment rates of about 85%.
- ◆ Boys and girls attend at roughly the same ratio.
- ◆ Completion rates for grades 1-4 are high at 84%.
- ◆ Repeater rates are low at only 8% and the pupil-teacher ratio is 1:20.
- ◆ Quality is good. Thai students outscore their Filipino counterparts in math and science on international tests; however, they score considerably lower than their Hong Kong counterparts on the same tests.

As access to primary school has expanded in the past 20 years, so has the level of literacy and numeracy of younger aged students. The trend is accelerating. In terms of labor skills development Thai primary education appears effective in making primary school graduates "trainable" (that is, capable and willing to adapt to new work situations and to learn new skills as part of their job).

Equity issues arise when rural and urban students are compared in terms of access and achievement; more urban students attend school, complete the cycle and perform better. The core curriculum is rooted in Thai language and Buddhist culture with a practical

component of numeracy. It is questionable, however, to what extent students at the primary level receive a solid science background appropriate to that level. With AID support through the BRIDGES project, Thailand is attempting to study how to better organize and support primary schools so as to maximize the use of limited supervisory and input delivery resources.

#### D. Secondary Education

The difference in transition rates from grades 1-6 and from grades 6-7 is startling. For the past 10 years, the transition rates **within** primary school have been 95% or more, attesting to their very high internal efficiency. However, the transition rates **between** grades 6 and 7 in (primary to lower secondary school) have been falling steadily from 45% in 1975 to 38% in 1985. Not only do many primary students not go to secondary school, but those who do have been declining in number steadily in the past 10 years. Projections for the year 2000 indicate that secondary enrollments will continue to decline so that fewer will be attending (in absolute numbers) than do currently.

The low transition rate of .38 from primary to secondary levels does not bode well for Thailand's need to increase its supply of educated labor. Given that students drop out of secondary school even after entering, the overall enrollment rate in secondary school (number of students compared to the age cohort of 13-18 years) is 30%. This is well below the average rate for lower-middle income countries of 51%.

What is the source of the problem? Some of the major factors are the following:

##### ◆ Low Returns

The expected returns to additional schooling depend on the expectations about the student's eventual occupation. In traditional agriculture, there is no evidence of any return to education above the primary level. Likewise, in the informal sector, the returns to education above the primary level are low or nil. Hence, if the prospect of gaining employment in the formal sector is believed to be low, as is the case in poor rural areas, families opt for no schooling beyond the primary level for their children. Relatively few people choose to continue in secondary school education for its own sake because the costs far exceed the expected returns. Secondary school is the path for entering tertiary education, but is perceived to have little value in and of itself.

◆ Financial Constraints

Household income and wealth are important determinants of whether children continue on to secondary school. Low-income families have difficulty paying for their children's schooling.

◆ High Opportunity Costs

Secondary school implies high opportunity costs in terms of foregone contributions to family production and income. Parents need their children's labor to supplement the household income. As wages increase with economic growth, the opportunity cost of sending children to school also increases.

◆ Access to Quality Education

Urban children have greater access to schools than children in rural areas. A disproportionate number of schools are located in Bangkok. The distance of schools from rural homes has important cost implications, both in terms of time and money, as well as foregone contributions to family production and income. Furthermore, there are large variations in quality between urban and rural schools.

◆ Impact of Migration

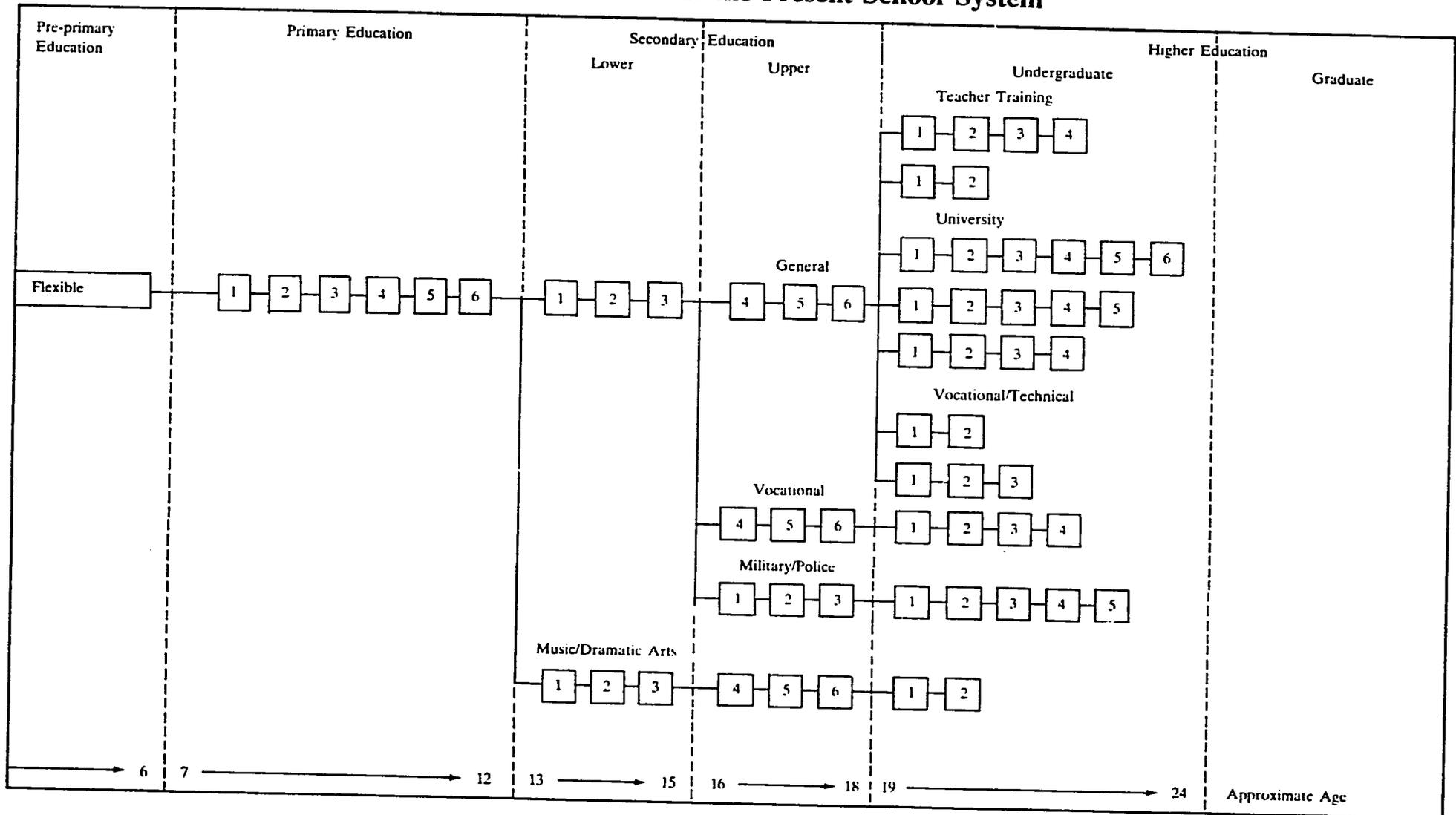
Parents' migration to urban centers in search of employment without transferring their domicile registration makes children unable to enroll in new schools (Study on Some Critical Aspects of Secondary Education, 1987: 41-42).

◆ Lack of Local Participation

Primary and secondary curricula have mostly been developed by national-level agencies with little participation from the local level. As a result, the curricula fail to respond effectively to local needs (Ibid, p. 46).

Urban parents send their children to secondary school at much higher rates than rural parents; 48% of persons aged 15-19 complete lower secondary school in Bangkok, 53% in other urban areas, and 17% in rural areas, with a country-wide average of 23% (World Bank, op cit, p. 125). Rural parents, even though they are poor, would probably send their children to secondary school if they saw it was economically rewarding for them to do so. This point was repeated several times in interviews with knowledgeable Thai educators.

## Structure of the Present School System



Source: EDUCATION IN THAILAND of The Office of the National Education Commission, Office of the Prime Minister

## **ANNEX 4**

### **SUPPLEMENTARY INFORMATION ON SELECTED EDUCATIONAL AND TRAINING INSTITUTIONS**

## ANNEX 4

### SUPPLEMENTARY INFORMATION ON SELECTED EDUCATIONAL AND TRAINING INSTITUTIONS

#### 1. The King Mongkut Institute of Technology, Ladkrabang

The King Mongkut Institute of Technology, Ladkrabang, is one of the most respected science and technology institutions in Thailand and the first to develop a doctoral degree in electrical engineering. It is known for its close links with the private sector. As an example, over 100 companies -- including Siam Cement and Thai Oil -- cooperate with KMIT, Ladkrabang to provide internships and apprenticeships for students. Satisfactory completion of applied learning components is required to earn a diploma from the Institute.

The Institute is currently diversifying its programs; six new Master's and three new Bachelor's degree programs have been proposed. It has also established strong collaborative relationships with private higher education to meet manpower shortages in engineering. For example, KMIT's Ladkrabang faculty are helping establish a new private engineering school to be located near the present KMIT campus. Some of KMIT's faculty will help administer the new facility.

The Institute was founded in 1960 with the technical cooperation of the Government of Japan; Japan has continued to provide enormous support over the years. Initially, it was known as the Nondhaburi Telecommunications Training Centre, and later it became the Nondhaburi Institute of Telecommunications. In 1971, the Nondhaburi campus merged with two other technical colleges, Thonburi Technical College and North Bangkok Technical College, to form the King Mongkut Institute of Technology. The following year, the Nondhaburi Campus was relocated to a 160 hectare site in an industrial suburb about 30 kilometers from Bangkok and renamed the Ladkrabang Campus.

Although sharing common goals, each of the three campuses of the King Mongkut Institute of Technology (Ladkrabang, Thonburi, and the North Bangkok) are totally independent from the other. Each has its own administration and programs of study.

Today, KMIT Ladkrabang enrolls over 5,000 students in its 5 schools: engineering, architecture, agricultural technology, industrial education, and science. The graduate school, started in 1986, comprises about 10% of total enrollment, including 15 students in the doctoral electrical engineering program. The Institute has an excellent student-teacher ratio (about 12:1).

The Institute serves as a training center for the region in telecommunications through its three-month long seminars, each enrolling about 20 participants from neighboring countries. The Institute plans to expand its presence in the region through its degree programs as well; to do so, the Institute plans to offer some courses in English.

Faculty upgrading is seen as a priority because less than 13% of the faculty hold Doctorates. About 59% hold degrees at the Master's degree level. It is interesting to note that women comprise a respectable 32 percentage of the teaching staff. This contrasts sharply with the Asian Institute of Technology (AIT), a highly respected regional graduate institute, where only 2 of its 110 faculty are women.

## 2. Siam University

In June 1989, Siam Technics changed its name to the Siam University, a reflection of its goal to become a comprehensive institution other than just a technical school. The Siam Educational Promotion Company legally owns the university.

Siam University is the first private university to offer an engineering program in Thailand. Its enrollment has been expanding every year (from 3000 in 1986 to 9000 in 1989). A new ten-story building has been completed and a 50-acre site ten kilometers away has been targeted for engineering field laboratories. The growing enrollment in engineering has probably enabled the university to finance its expansion, physically and academically.

Plans for development include: further expansion of its engineering program at both the diploma level and the degree level; the establishment of a faculty of science and technology, to include food science and rural development studies; a Master's degree program in engineering management; and an English Language Center, for which assistance is already sought from California State University at Long Beach.

It is encouraging to see a private institution obviously fulfilling a national need in engineering education. Siam University claims to have smooth working relations with the MUA, and feels that the ministry is definitely encouraging the development of private universities (Sun, September, 1989).

### 3. Suranaree University of Technology

On July 13, 1989, the Thai Parliament passed a bill establishing the Suranaree University of Technology (SUT). The event marked a major Thai government initiative to set up a university considerably different, administratively and academically, from other institutions of higher education in the country.

#### a. Location

Suranaree University is to be located in Nakhon Ratchasima which is at the center of the communications and transportation network linking central and southern Thailand to the north-east. It is also an industrial and agricultural center, with abundant raw materials and natural resources to be commercially exploited. The region has a population of 5.3 million.

#### b. Mandate

- ◆ It will be both a regional university and a national university located in the north-east.
- ◆ It will emphasize technological and vocational studies in science and technology in areas which are insufficiently covered by existing institutions. It will avoid duplication with other universities.
- ◆ It will emphasize the adaptation and transference of technology and the utilization of R&D results to promote the further development of the region and the country as a whole.
- ◆ It will promote increased contacts between higher education and the private sector, especially with the establishment of the "Technopolis" - a permanent center on campus which will directly link R&D activities with the industrial sector in cooperative ventures. The Technopolis will inherit the site of an international exposition planned for March 1992, where some 80 countries are expected to participate and to which 500,000 visitors will come. The Expo will also launch the new university, expected to enroll its first students in June 1992.

#### c. Administrative Structure

The University will attempt to avoid the weaknesses and inefficiencies in the existing public university system, by creating a structure hitherto untried in Thailand:

- ◆ SUT will be set up as an independent non-profit institution, administered like a commercial establishment, but still under the supervision of the MUA, with financial subsidies from the government.

- ◆ Personnel will not belong to the Civil Service Commission and therefore will not be subject to its rules and regulations, including salary scales.
- ◆ SUT will set up "cooperative services" for maintaining maximum links with the community, industry and business through the Academic Services Center, or the Research and Development Institute.
- ◆ A University Council will be responsible for the general administration of the university; an Academic Council will be responsible for all academic and educational affairs.
- ◆ The President will coordinate and implement policies laid down by the University Council.
- ◆ It is anticipated that 40% of SUT's budget will be funded by the Government, 20% by student fees and 40% by private sources. A campaign will be launched to seek assistance from the private sector, including foreign and local businesses, and to develop contacts for future services such as research, technological services, and other products.

d. Academic Structure

- ◆ The curriculum emphasizes the multidisciplinary approach.
- ◆ The curriculum should have sufficient flexibility to respond quickly to the changing human resource needs of the country.
- ◆ Degree programs as well as vocational non-degree programs will be offered.
- ◆ Faculty development will be key to the academic quality of SUT. To this end, and at the initial stages, it reserves the right to borrow qualified personnel from existing institutions or government while its own staff are undergoing training, at home or overseas. It also aims to keep the loyalty of its staff by improved conditions of service, reduced bureaucratic constraints and a salary scale intended to narrow the gap between government and private sector personnel.
- ◆ SUT will have four faculties: Science and Technology, Agricultural Technology, Industrial Technology and Resource Technology. It will admit approximately 400 students in 1992, and increase that figure to 1,500 annually in 10 years.
- ◆ It is intended that the new university will plan a number of academic programs to integrate practical work experience with theoretical studies.

e. Expected Impact

The new university is expected to play a leading role in the economic development both in the region and nationally; by promoting private sector investment in the area, it will encourage the development of job opportunities and income distribution. SUT will be at the forefront of agricultural development in the region by introducing new methods leading to production efficiency and improved marketing. The full use of regional resources is an important factor in the economic development of the area.

Socially SUT is expected to play a role in responding to the special needs of the region, or in solving problems. It will introduce modern technology, for example, communications, telecommunications, and other facilities into the region. It also will increase opportunities for higher education for the people of the north-east.

However, an ambitious and costly venture such as SUT is bound to be viewed negatively in some quarters. To attract qualified S&T teaching staff, it will be seen as another drain on the already stretched resources at existing universities. There are doubts about whether sufficient numbers of students are prepared to pay the higher fees to attend SUT to make the institution financially viable. More seriously, private financing (40% of budget) is still not yet assured, given the lack of tax and other incentives to encourage investment in education (Sun, September, 1989).

4. The Sasin Graduate Institute of Business Administration at Chulalongkorn University

a. History of its Development

Sasin is a joint academic endeavor between Chulalongkorn University, Thailand's most prestigious institution, and the J.L. Kellogg Graduate School of Management of Northwestern University and the Wharton School of the University of Pennsylvania, two of the leading business schools in the U.S.

The program offers two degrees: the Master of Business Administration (MBA) and the Master of Management (MM). These programs are taught by faculty members who are well-recognized for their teaching and research at Kellogg and Wharton; they are complemented by staff from Chulalongkorn University.

The foundation for creating the Sasin program dates back to 1980 when Chulalongkorn University had discussions with firms regarding their need for executives who are not only professionally qualified but also effective in communicating on an international level. Since English was acknowledged as the business language, the firms chose to send their promising personnel for graduate management

education abroad, especially to the United States and Great Britain.

However, because of the escalating costs of graduate business education in the West, there was undue financial strain on indigenous firms. The Sasin Program, offering affordable education, yet maintaining high professional standards, developed out of those concerns.

During 1981, administrators from Chulalongkorn University visited the U.S. several times to discuss the project. Eventually, with the cooperation of the Wharton School and the Kellogg School, the final program took shape. In late 1981, during the Prime Minister's trip to the U.S., cooperation between the two countries was discussed. Both the Prime Minister of Thailand and the President of the United States expressed special interest in pursuing the concept of mutual cooperation through private enterprise in the area of business.

The Secretary General of NESDB recognized the significant role of the project in helping to provide additional sources of manpower for the country's (then) Fifth Plan, particularly with respect to industrial development and foreign investment. The plans for foreign investment would require a considerable number of middle-managers proficient in English in the near future.

The Sasin Program, as developed in a meeting in May 1982, between the Kellogg and Wharton Schools and Chulalongkorn University, included:

- ◆ On-going executive development programs conducted in English in order to effectively build-up middle-management's ability to serve investors and entrepreneurs.
- ◆ Establishment of professional consultancy services for the benefit of the local business community.
- ◆ Research, using Asia-related case studies to provide students with relevant indirect experience for their future professional jobs.
- ◆ Maintenance of about 14 faculty (10 from the U.S. and 4 from Thailand) in the first phase of the project to ensure effective performance.

To these ends, it was decided that a national graduate institute of business administration should be established to represent the national, and not only Chulalongkorn's, interests. The institute was to be the center of the joint effort of professional human resources on a national scale in an attempt to respond to the short and long-term needs of the Thailand's economic development.

An operational plan was laid out including the expected number of students in each of the emphasis areas of the MBA (finance, accounting, operations); the proportion of Thai to American professors during each of the phases of the program's growth, was planned as follows:

|           |             |                   |
|-----------|-------------|-------------------|
| Phase I   | 1983 - 1985 | approximately 1:3 |
| Phase II  | 1986 - 1987 | approximately 1:1 |
| Phase III | 1988 onward | approximately 3:1 |

Curriculum content was outlined, as well as the objectives of the Executive Development Program and Consulting Services, and a plan to develop Thai human resources. Long-term doctoral level degree training was proposed for promising Thai candidates, as well as familiarization tours and refresher courses in the U.S. for Thai instructors.

The program started with approximately 40 students in its first full year of operation (1983-84) and a budget of US \$750,000. By 1987, there were 120 students with a program budget of US 1.6 million. In 1987, about 55% of expenditures were met from fees and about 10% from interest from the program's endowment funds (primarily pledged by the Thai business community).

5. Institute for Management Education for Thailand Foundation (IMET)

IMET is a non-profit tax exempt foundation established in 1982 with USAID support. Its purpose is to expand management training for the Thai private sector and to increase the relevance of academic business training. Its primary target group is the rural private sector. From 1983 to 1985, IMET's programs provided training to more than 3,000 people in the private sector. According to an A.I.D.-funded evaluation, IMET's training programs have been successful and have made a significant contribution to the expansion of the private sector in Thailand.

IMET is governed by a Board of Directors consisting primarily of key figures in the Thai private sector. Its training programs are coordinated and managed by participating universities and local business organizations. Faculty are drawn from at least seven public universities in Thailand, as well as the Sasin program.

Funding for IMET has been provided by grants from A.I.D.'s Bureau of Private Enterprise (\$1.4 million) and the private sector (approximately \$141,000). A.I.D. has also provided funding for the design, development, and delivery of short-term workshops in international business through IMET. The overall purpose of the workshops is to prepare business leaders from Thailand and the United States to establish joint ventures. The first of these

workshops will be held in May 1990, and will focus on Thailand's role in the global economy. The workshop will draw upon faculty from the Wharton School at the University of Pennsylvania, as well as local resources.

6. Asian Institute of Technology (AIT)

The Asian Institute of Technology is a regional graduate institution. The Institute is highly respected, and in 1989, it received the prestigious Ramon Magsaysay award in recognition of its role in shaping a new generation of engineers and managers committed to Asia.

One part of the institute is the Continuing Education Center (CEC). The CEC organizes training and development programs aimed at career development for managers, planners, engineers, technocrats, and other professionals in the private sector and government. The CEC organizes and manages approximately 30 training courses a year. Each course is about two to three weeks. Some of the topics include crisis and risk management, project management, quality control, computerized integrated manufacturing systems, and management of information systems. Over 700 professionals from Asian and Pacific countries have been trained since CEC was established over 10 years ago. The CEC has used the University California/Berkeley to design and deliver some of the management courses over the past few years. Other staff are recruited as needed.

AIT/CEC is in an excellent position to provide training for the private sector, especially if teamed with support from the U.S. education and training industry. The design, development, and delivery of courses to meet private sector needs, perhaps at the sector level, could be facilitated using AIT/CEC as a base and drawing on training resources in the U.S. It might be feasible to use distance education approaches (including state-of-the-art communication technologies) to deliver continuing education and training programs.

7. International Business and Management Institute (IBMI)  
University of Maryland

The International Business and Management Institute is the international training arm of the University of Maryland University College. The University College, the largest campus of the University of Maryland system, extends the resources of the University to adult students at sites around the country and the world. It is known for its nontraditional and continuing education programs which are offered to more than 86,000 students annually at over 250 locations in 22 countries.

The IBMI provides a wide range of training and education programs to corporations around the globe; its overseas offices are in Kyoto, Japan, and Heidelberg, Germany. The IBMI provides practical training in business, as well as specialized language and cross-cultural training. Individual programs are tailored to the needs of the corporation. The University of Maryland is currently trying to establish a campus in Bangkok. If it obtains the necessary government approvals, the private sector could benefit from the training services of IBMI.

#### 8. Thailand Management Association (TMA)

The Thailand Management Association was established in 1964 to promote the principles and practices of good management. It is a not-for-profit organization whose membership consists of managers and executives interested in increasing the knowledge and skills of Thai managers. In the last 26 years, over 60,000 individuals have participated in TMA's programs; in 1989 alone, about 7,500 people participated in TMA's programs.

The TMA has been a major player in preparing managers in Thailand. It has also provided support to other training organizations, such as the Institute for Management Education for Thailand Foundation (IMET) and Kepner-Tregoe, which was associated with the TMA for over 10 years. Recently, a joint venture was established between the Thailand Management Association and the Japan Management Association. The "TMA-JMA Center" will train managers, primarily middle managers, using a correspondence system; materials and examinations are exchanged by mail.

#### 9. Private University-Based Consulting Services

Many private universities have centers that offer consulting services to the private sector. These centers are potentially a valuable resource for training. However, they need to be strengthened, especially due to faculty shortages in critical areas such as engineering and management.

The U.S. education and training industry could assist in upgrading the centers. Professional associations, as well as training organizations could help centers in the design, development, and delivery of courses and workshops tailored to individual private sector clients. [The American Society for Training and Development and the American Management Association are examples of possible professional associations].

**Chart No.3 Ministry of University Affairs Organizational Structure**

**MINISTRY OF UNIVERSITY AFFAIRS**

