

**Thai Economic Growth, Emerging Labour Market
Problems and Policy Responses**

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**THAI ECONOMIC GROWTH, EMERGING LABOUR MARKET PROBLEMS
AND POLICY RESPONSES**

By

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July 1991



**Paper presented at the ILO/ARTEP Regional Technical Workshop on Labour
Market Analysis as a Tool for HRD Planning, Beijing 29-31 July, 1991.**

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THAI ECONOMIC GROWTH, EMERGING LABOUR MARKET PROBLEMS AND POLICY RESPONSES

1. INTRODUCTION

This paper addresses emerging labour market issues in Thailand, and the policies needed to deal with them. With the current economic boom, the major labour market issues relate to better matching between the demand in the labour market and the supply from the education and training system, and better locational development balance. Shortages of skilled manpower is now severe, and in the medium-term, shortages are expected generally for workers with middle levels of education and above. Disparities in incomes between areas around Bangkok, the capital city, and the rest of the country are also large and likely to be widening. Congestion and pollution in Bangkok are already severe, and expected labour movement into Bangkok and the surrounding areas will make things much worse. Appropriate strategies are needed to deal with these issues, as they are becoming key constraints for maintaining economic growth and achieving a better distribution of income.

The next section indicates recent macroeconomic success, and the importance of human resources in supporting this success. Section 3 discusses the labour market problems in two broad areas; employment and education, and employment and income distribution. Finally, section 4 outlines some of the main policy responses, as being formulated in the Seventh Five Year Development Plan (1991-96).

2. MACROECONOMIC PERFORMANCE AND ROLE OF HUMAN RESOURCES

Before discussing the labour market situations and problems in Thailand, this section briefly reviews the Thai macroeconomic performance. As can be seen from Table 1, the Thai economy has performed rather well over the past 30 years or so. Between 1960

and 1980, the average rate of real GDP growth was above 7%, which must be regarded as very satisfactory. The growth rates achieved in the immediate aftermaths of the two oil shocks were lowest; 1970-75 and 1980-85. However, the 5.6% average growth achieved during these periods is very high when compared to the experiences of other countries. After 1986, the economy began a period of unprecedented rapid growth. Driven on by fast growth of manufactured exports (currently averaging about 30% per annum), as well as tourism, two digit growth rates were achieved over the last three years.

As with most LDC's, Thailand has usually experienced trade and current account deficits during the course of its development. In 1975, the ratio of the stock of debt to GDP was insignificant, at 2.3%. Since 1975, however, this ratio rose rapidly. The ratio jumped to 16.1% of GDP in 1980, and to 39.0% of GDP in 1985, and this was an issue of major concern to the government at the time.

Since 1986, however, Thai economic growth accelerated significantly. In 1987, growth reached 9.5%, and since then the rate of growth has been above 10% per annum. The growth was mainly driven by sharp increases in manufactured exports. These exports are very diverse, covering such products as processed food, textiles, shoes, gems and jewellery, artificial flowers, integrated circuits, toys, and steel pipes. Basically, these products are of the low to semi-skilled types, and are the items through which the current NIC's had previously achieved their successes. At the same time, however, Thailand still remains a major player in agricultural exports. She is the largest exporter of rice and cassava in the world, and ranks among the top five to ten in exports of rubber, sugarcane, maize and fisheries.

The boom in exports led to a downturn in the ratio of debt to GDP, which declined from 39% in 1985 to only about 32% in 1988. While currently, the external resource gap is starting to widen again in absolute terms, it remains manageable thanks partly to the large inflow of foreign direct investment into the country.

A number of important factors lie behind the current boom in the Thai economy. Among some of the important ones are:-

1. *Change in the external environment.* In 1986 there was a sharp decline in oil prices and interest rates. Also there was a major exchange rate realignment with the US dollar declining sharply against the yen and major European currencies.
2. *The transition of the Asian NIC's (South Korea, Taiwan, Hong Kong and Singapore) towards commodities other than the traditional labour intensive manufactured export, such as textiles and garments.* These Asian NIC's have probably reached a point where they are no longer competitive in most of these items. South Korea is turning towards more capital and technology intensive export such as motor cars, and Taiwan is currently dominating the world with "compatible" desk-top computers.
3. *Prudent fiscal management during the period after the 2nd Oil Shock, which kept the external balance issue from getting out of hand.* While the ratio of external debt to GDP increased rapidly between 1980 and 1985 as was already indicated, the external debt problem did not become as severe as that faced by many other countries during this time. A reflection of this prudence was that the level of real public sector expenditure (consumption and investment) only grew on average by 3.6 percent per annum between 1981 and 1986. The government also imposed a gross public foreign borrowing ceiling of 1 billion US dollar in 1985.
4. *Appropriate exchange rate policy.* Two devaluations were carried out; the one in 1981 changed the baht from 20.5/dollar to 23/dollar, and the other in 1984 further devalued the baht to about 27/dollar. Another major change occurred as a result of the currency realignment in 1986, when the baht was kept mostly tied to the dollar, so that in effect the baht depreciated sharply with respect to the average currency of Thailand's trading partners.
5. *Relatively good political and social stability during this period.* Between 1980 and 1988, Thailand had only one Prime Minister with a fairly democratic political system.

While the above changes gave the opportunity which Thailand could take advantage of, it is unlikely that Thailand can show the current dynamism unless the human resource base was also favorable. The major human resource contributions to the current dynamism of the Thai economy can be separated into four broad areas as follows.

Plentiful Supply of Low Wage Labour. In Thailand, over 60 percent of the labour force still have agriculture as their main occupation. While the share of employment in agriculture has been declining, the decline has not been that rapid. This contrasts with the decline in the share of in GDP, which has almost halved between 1975 and 1986. The result is that average earnings in agriculture is much lower than that in industries or services.¹ Thus, if the conditions for rapid expansion of industries and services are present, there are plenty of low wage workers who could be drawn into these sectors.

Further, even within industries and services, there are still many people engaged in the so-called "informal" sectors.² Data from 1986 (table 2) shows that for private employees in industries and services only about 28 percent are in the formal labour market. Further, there are substantial wage differentials between the formal and informal sectors.³ Thus, again, there is a pool of low wage workers who could be drawn upon to work in the exporting sectors, should conditions be ripe for the growth of these sectors.

Good Basic Education of the Labour Force. Apart from having available workers who could be drawn upon for industrial expansion at low wages, the general basic quality of these workers are also good. With a substantial progress over the last two decades in the provision of basic education to the population, the primary enrollment in Thailand is now almost universal (97 percent in 1985). Another indicator of the good quality of the labour force is that the adult literacy rate in Thailand is one of the best in the region (91% in 1985).

Plenty of Skill Acquisition Through On-the-job Training. Another factor which contributes to the quality of the Thai labour force is the extensive nature of on-the-job training in the economy. Based on a recent study,⁴ it was found that most of the workers in occupations related to science and technology (including technicians) only had basic

1. This obviously also imply large disparities between agricultural households and non-agricultural households. See Sussangkarn (1988).

2. For definitions of "formal" and "informal" sectors used in this context, see Sussangkarn (1987).

3. See Sussangkarn (1987).

4. TDRI/NESDB (1989).

primary education. Their skills were mostly learnt on the job. It was found that S&T related workers made up about 10 percent of the labour force. However, fully 75 percent of these workers only had primary education or less. The skills needed for the occupations in which they were employed (mostly as technicians) are learnt on the job.

The above points to the importance of on-the-job training as a mode of human resource formation or addition in Thailand. It is one reason why the economic and industrial structure of Thailand is so diverse, and the economy has performed well over the last 3 decades, in spite of past findings that Thai has a lower stock of science and technology manpower (through the formal education system) per capita compared to many other countries in the region. The experiences of countries such as Japan, Korea and Taiwan also showed that on-the-job training makes substantial contributions to the rapid growth that these countries were able to achieve.

Capability of Thai Female Labour Force. Finally, another key human resource contribution to the current economic dynamism is the quality of the female labour force in Thailand. Thailand has very high female labour force participation rate. In 1987, of female aged 11 and above who were not attending school, 80 percent participated in the labour force. The active participation of women in the labour market is very important as one finds that most of the labour intensive semi-skilled industries which are the dynamic exporting industries are big demanders of female labour. Such industries as canned food, textile and apparel, foot wear, and electronics employ more women than men. Thus, female labour make a crucial contribution to the export earnings of the country. In addition, female also predominate in the service sector, and this sector is also of key importance for foreign exchange earnings, mainly through tourism.

3. LABOUR MARKET ISSUES AND EMERGING PROBLEMS

While past development performance of the economy and the basic human resource base are good. Nevertheless, there are important problems concerning the

current labour market structure and emerging trends in the labour market as well. These problems are grouped under two broad headings:

1. Employment and Education; and
2. Employment and Income Distribution.

3.1 Employment and Education

Problems under this heading relate to the fit between demands in the labour market for workers at various levels of education and skills, and the supply forthcoming from the human resource development system. Currently, there are shortages of highly skilled manpower, and over the next 5-10 years, shortages are expected for workers at the middle level of education and skill as well.

Shortages of Skilled Manpower

The rapid growth of the economy over the past few years, particularly the expansion of modern industries and services has led to a shortage of skilled manpower, especially in the area of science and technology. This problem reflects the failure of the education system to adjust to changing composition of demand in the labour market. In general, the labour market had up until recently experienced an excess supply of the educated groups, yet some key skills in the areas of sciences and technology are in short supply. The problem has become particularly acute now that the Thai economy is industrializing very rapidly.

In the mid 1980's, the key problem was one of educated open unemployment. This can be seen from table 3, which shows that in 1984 and 1986 the open unemployment rate of those with vocational education was over 10%, and that for university graduates was over 4%, compared to the overall open unemployment rate of around 1%.

That the overall open unemployment rates are generally low in Thailand should not be too surprising. Most people in Thailand work as either own-account or unpaid

family workers, and mainly in agriculture. Thus, it is easy for most people to work in the family enterprise. Also, as with many other developing countries, there are also many informal sector employment opportunities available, where barriers to entry are low, so that most who really want to work can find something to do.

For the better educated groups, traditionally, the government had always been the most important source of employment. More than half of the university graduates were employed by the public sector in 1984. In the early to mid 1980's, due to fiscal discipline as a result of the rising foreign debt problem, the government had to cut back on the growth of government employment to 2 percent per annum from a growth rate of around 10 percent per annum previously. This obviously meant a tremendous change in the composition of demand for the types of education required in the labour market. Whereas the government employs a lot of graduates in the humanities and social and political sciences disciplines, modern industries and services require more engineers, scientists and business related disciplines. The first visible problem of the change in government employment policy was increasing unemployment of graduates with humanities and social sciences degrees. In the mid 1980's, the economy was still in a recession, and so shortages in the science and technology (S&T) disciplines did not become important until recently. However, with the current boom, spurred on by increased direct foreign investment, shortages of engineers and scientists are very real. Wages of these types of graduates have increased rapidly. The typical pattern is that large firms can usually get the people they want as they can pay more. There is a flow of people from the small to medium firm to the large firms. There is also a rapid flow of qualified people from the public sector to the private sector. This is particularly worrying because as the economy becomes bigger and more complex, the damage that can be done by low quality civil servants becomes that much greater.

In a recent study carried out by the Thailand Development Research Institute and the National Economic and Social Development Board (TDRI/NESDB, 1989), the shortages of engineers are expected to continue on well into the 7th Plan (1991-96), even though the supply targets for S&T graduates have been revised upwards significantly (see

table 4). The situation in *electronics technology* is expected to be much better by the end of the 7th Plan. While the figure for 1996 shows an excess supply, if the previous short-falls are taken into account, then one can just about say that the production will be approximately in line with the demand. The same situation is also true for *related technology* in aggregate, however, shortages are still expected for *chemical and industrial engineering*. For *mechanical engineering* (M1), shortages are expected well beyond the end of the 7th Plan. This is particularly worrying as this group is required extensively in all industries.

Shortages are also expected at the post-graduate level. This is important, because such manpower will be the key for an increase in the quantity and quality of S&T manpower production in the future to meet the changing composition of demand in the modern industries and services.

At levels below the bachelor degree (vocational), on the other hand, the cited study found that while there are shortages of specific skill types, there are generally an excess supply for technical vocational school leavers. This probably reflects quality problems at this level.

Projected Labour Market Tightening at the Middle Level

While shortages of S&T manpower at the higher level is already a current problem, another very serious problem looms around the corner. During the period of the 7th Plan, it is expected that the labour market at the middle level, particularly for those with secondary education will become very tight. This will be the result of two factors. First, the demand for workers with more than primary education is expanding very rapidly in modern industries and services. Second, the supply, particularly of workers with secondary education, is expected to increase more slowly in the future.

That the demand for workers with more than primary education will increase rapidly can be seen by looking at table 5. This gives the shares of municipal private

employees by education in industries for 1984 and 1988. It can be seen clearly that the share of those with primary education and below has gone down tremendously. The decline is much greater than the decline in the share of workers with primary education and below in the general labour force. On the other hand the share of the other groups have all gone up. Large increases are found for those with secondary and vocational education. Thus, as industrial development proceeds at a fast pace, the demand for workers at the middle level will increase even more rapidly than the growth rate of industries. Basically, industries (and services) are demanding better and better educated workers in line with a general upgrading of the technological base in production.

While the demand for middle level workers is expected to increase rapidly, the supply of these workers are expected to actually slow down during the period of the 7th Plan. First, Thailand has a very low gross enrollment ratio at the secondary level. Currently, the gross secondary enrollment ratio in Thailand is only about 30 percent, and is a big drop from the almost universal enrollment at the primary level. The ratio in Thailand is much lower than those of other countries in the region; South Korea (94 percent), Taiwan (91 percent), Singapore (71 percent), Philippines (68 percent), Malaysia (53 percent) and Indonesia (39 percent).⁵ After the compulsory primary level, about half of primary school graduates drop out of the education system.

Sussangkarn (1988) showed that the low enrollment ratio in Thailand can be understood in relation to the structure of production and of the labour market, where in the past, for most of the population there are very little rewards for getting educated beyond the primary level. More recent analyses have also pointed to the generally low income levels of the households (particularly in the rural areas), and the poor curriculum which is not really useful for the majority of the population (Sussangkarn et.al., 1989).

In addition to the low transition rate to secondary education, another crucial factor which will lead to a slower growth in the increase of worker with middle levels of education is that the primary school age population is going to start declining in absolute terms very

5. The data are from the World Development Report, and are for 1984.

soon. This is the outcome of the demographic transition due to the past rapid decline in the fertility rate and the population growth rate.⁶ Thus, the potential group to go on to secondary education is going to decline in absolute terms, so that even with an increase in the transition rate the numbers will not increase very fast.

The current target for the transition rate from primary to lower secondary level is to increase the rate to 73% by the year 1996, and 80% by the year 2000. With these targets, and assuming no major changes in the transition rates across other levels of education, table 6 shows the expected workforce growth and shares by different levels of education. The growth rates of the workforce at all levels of education will slow down over the next 5 years.

With high demand for workers with middle and higher levels of education, the outcome is likely to be that in the next few years, the labour market at these levels will start to get tight. When this happens the wages of these workers will rise rapidly. The problem is that, as these workers are more and more the basic type of workers required for modern industries and services, the international competitiveness of Thai industries and services is determined more and more by the wages at the middle level and less and less by the wages of those with just primary education. Thus, while Thailand will still have plenty of workers with basic primary education and relatively low wages, she may nonetheless lose the competitive advantage in the international export market. This will certainly affect the ability of Thailand to maintain a good growth momentum.

For those workers with primary education and below, while their growth rate will also decline as more children who finish primary schools go on to the secondary level, their share in the labour force will still be very large. In the year 2000, over 75% of the workforce is still expected to be made up with workers with primary education and below. As demand in modern industries and services is for workers with better education,⁷ workers with just primary education will end up mostly in traditional agriculture and in the

6. The rate of population growth had declined from over 3 percent in the mid 1960's to about 1.5 percent currently.

7. This is also true of modern agriculture.

informal sector of the private labor market. These are the less prosperous sectors of the economy, so it is likely that the income gap between those with primary education and those with more education will increase further. This will make it more difficult to improve income distribution.

3.2 Employment and Income Distribution

While, as indicated above, Thailand does not have serious general open unemployment problems, imbalances in the labour market manifest themselves in wage and income differentials. In Thailand, there is a lack of balance between the sectorial and locational distribution of production and of employment. This has led to growing income disparities between agriculture and non-agriculture and between regions in the country.

Sectoral Imbalance

Since 1960 the importance of agriculture in GDP has declined substantially. In 1960, the share of agriculture in GDP was about 40%. By 1986, this has declined to about 16.7%. The share of employment in agriculture has also declined (see table 7). However, the decline in the share of employment in agriculture has been at a much slower pace than that for the share of agriculture in value added. The result was that the income disparity between households engaged primarily in agriculture and the non-agricultural households widened substantially. In 1975, the ratio of the per capita income of non-agricultural households to that of agricultural households was 2.08. This ratio increased to 2.29 in 1981 and 2.73 in 1986 (table 8).

There appears to be two main reasons why there is such a difference between the ratio of employment in agriculture and the share of agriculture in GDP in Thailand. The first is the past ready availability of forest areas which could be converted to arable land. This was the main destination for migrants from the rural areas in response to the population pressure up until about 1980. The main migration pattern in the 1960's and 1970's was rural-rural. Up until the late 1970's, the rate of expansion of cultivated area in

Thailand was between 3-4% per annum, and was in fact greater than the rate of population growth in the rural areas.

A second reason is the very high proportion of farm households who are owner cultivators in Thailand; 83% in 1981. This is likely to be a factor working against large-scale migration into the urban areas. It is likely that the market for the sales and purchases of land in the rural areas is thin, and thus owner cultivators who wish to sell their land and migrate to the urban areas may only get rather low prices for their land. This would increase the opportunity cost of migration.

A factor which would reinforce the above reason is that many of the so called "owner cultivator" in fact do not have full land titles. The migrants who went into the forest areas to open up new land were actually taking possession of the land illegally. In Thailand, about 30% of private land have no formal legal documents. This will make it even more costly for a farmer to abandon the land and migrate out of the rural areas.

Up until about the end of the 1970's, it was logical that many farmers migrated to open up new agricultural land. Plenty of land was still available in the forest areas. Further, crop prices were high and rising. The problem is that once crop prices started to decline in the first half of the 1980's, it was difficult for the farmers to move out of agriculture.

The high opportunity cost faced by farmers were they to migrate into the urban areas leads to long lags in the adjustment of the employment structure to the production structure. However, some adjustments have been occurring, and the pace of adjustment is likely to be accelerating given the rapid industrialization that is taking place in Thailand at the present time. The benefits to be had in migrating to the urban areas where there are rapidly growing demand for semi-skilled workers are getting larger and larger. Data on the rate of growth of the urban population show clearly that rural-urban migration has been increasing since 1980. Between 1960 and 1980, the growth of the urban population has been remarkably steady at about 3.5% per annum. Between 1980 and 1985 however, the rate jumped to 6.6% per annum. This was the time when crop prices were falling, and also

when the availability of new land for agricultural expansion became very limited. Thus, there are clear labour market responses to changes on the production side. However, the responses could not keep pace with changes that were occurring in the production structure. This led to problems of imbalances and income disparities discussed earlier.

The current industrial boom will likely lead to even more rapid urban growth. While reason migration data are not very complete, it is likely that migration rates into areas in and around Bangkok have accelerated. If Thailand can maintain the pace of growth anywhere resembling the past pattern of growth experienced by the Asian NIC's, population movement out of agriculture and into the urban areas are likely to be the key demographic transition which needs careful management over the medium to long term in Thailand.

Locational Imbalance

The disparity between agriculture and non-agriculture is obviously reflected in the disparity between the urban and rural areas, which as indicated above will likely lead to accelerated rural-urban migration in the future. However, in the case of Thailand, the extreme primacy of the capital city, Bangkok, leads to big differences between the economic conditions surrounding Bangkok and the rest of the country. Whereas the Bangkok Metropolitan Region (BMR)⁸ contains 15.6% of the total population in 1985, it accounted for 45.5% of total GDP. Per capita GDP in Bangkok was more than 7 times higher than that for the Northeast (the poorest region), and was about 2.8 times higher than that for the Central region (the second richest region).

Also, the difference between greater Bangkok and the rest had been widening between 1975 and 1985. Between 1975 and 1985, the growth rate of real per capita GDP was highest for the BMR. The current boom in manufactured exports has a tendency to widen the disparities between Bangkok and the rest even more, as 75% of manufacturing

8. Bangkok and the 5 surrounding provinces.

originates from the BMR, and for the main manufactured exports around 90% originates from around the capital region.

With increased rural-urban migration, it is clear that the BMR will be the preferred destination. Yet, Bangkok is now strained to the limit both in terms of congestion and environmental problems. In a sense, the current rapid industrial growth has left the country unprepared. When the current Sixth Plan (1986-1991) was formulated, Thailand was still in an economic recession, and the expected average growth at that time was only 5 percent per annum. In actual fact, the average rate of growth for the whole Sixth Plan period will be more than doubled the expected rate. Infrastructures to support the current growth pattern are now strained to the limit. Congestion and pollution in Bangkok are getting worse and worse. Hundreds of billions of baht need to be invested in urban infrastructures over the next few years to prevent Bangkok from grinding to a halt. This will also be necessary to support sustained growth of the economy, as congestion and infrastructure shortages will likely lead to higher costs of production and a less attractive investment climate.

4. POLICY RESPONSES

Policy responses are needed to deal with mis-matches between the labour market and the education and training systems, and the locational labour market imbalance. These are among the key issues that the Seventh Five Year Plan (1991-96), which is now being finalized, will attempt to tackle. Some of the major points are outlined below.

4.1 Policies for better labour market and educational balance

The main policy measures cover 7 different areas.

1) Increase the Transition Rate from Primary to Secondary Education

This is an area where Thailand lags behind other countries in the region, and is a major constraint to sustainable growth over the longer term. Measures to increase the transition rate include:

- Free education at the lower secondary level (to grade 9);
- Monetary incentives to poor parents to cover the opportunity cost of time of the children at school, possibly through the introduction of a voucher system;
- More flexible school calendar so that schooling has less conflict with the peak agricultural season when parents need the children to help on the farm;
- Improve teacher quality, and teaching methods;
- More flexible curriculum to better fit with varying needs of local communities;

One key consideration in the design of policies to increase the transition rate is that it should not impose undue burden on the poor. Thus, making lower secondary education compulsory is not a recommended course of action, as the poor will be adversely affected. Education choices are made by households based on its perceived best interest at the time the choices are made. One of the reason that secondary enrollment is low is that poor households cannot afford the monetary and opportunity costs of sending their children to school. The better off households, on the other hand, normally see education for their children as starting in kindergarten and ending up in universities. The imposition of a 9 year compulsory education would therefore not affect the rich households very much, but would severely harm the poorer households.

2) Significant Increase in Non-formal Education and Training

Policies to increase the transition rate to secondary schools have impact on the educational composition in the labour market only after long lags. To illustrate the point, Sussangkarn (1991) simulated the impact on the labour force if the transition rate from primary to secondary education could be made 100% starting in 1992 (see table 9). The result show that, even in this extreme case, the proportion of workers with primary education and below in the labour force will still be at 72.3% in the year 2000. Thus, policies to improve the human resource base cannot be limited to policies concerning the formal education system. Substantial increases in non-formal education and training programs are needed for workers who are already in the labour force. They need to be given more skills and knowledge in line with increasing technological requirements in agriculture, industry, and services.

3) More Effective School-Factory Linkages

The schooling system, particularly at the vocational level, need closer linkages with the final users. This will help to improve quality at the vocational level. Currently, the equipment and teaching methods in vocational schools are out-dated, given the rapid technological changes. Some of the larger companies prefer to hire secondary graduates from the academic stream and train them in the companies rather than hire vocational school graduates. By establishing closer links with the final users, the skills imparted to vocational school graduates should be more relevant to the need of modern industries and services.

4) Promotion of On-the-job Training

The importance of on-the-job training in Thailand was earlier indicated. There are, however, emerging problems with on-the-job training. Unlike Japan, where life-time employment is the usual pattern, Thai workers are very mobile. As the labor market gets tight, labor turnover increases. Currently, many employers complain that workers leave after the firm has put in a lot of investment in training. The natural response is that firms

give less training than they would otherwise. Thus, investment in this important source of human resource formation may become socially sub-optimal. At a time when there are supply shortages from the formal education system, this would be the last thing that the country needs. Policies to promote on-the-job training will, however, have to take account of the diverse natures of on-the-job training that exist in various industries and services, and differences between large and small firms in providing on-the-job training. Policies could include tax incentives, and setting industry-wide training institutes.

5) Improve Flexibility of the Education System Particularly at the University Level

The public education system is highly bureaucratic and rigid. This makes it difficult to increase the size of faculty whose graduates are in short supply, and particularly difficult to reduce the size of faculty whose graduates are in excess supply. Policies to achieving more flexibility could include:

- Privatization of one or two of the public universities; Some existing "self-financed programs" with high standards, high faculty compensation and high fees are examples of what privatization of the MUA universities might bring;
- Privatization of the private universities by removing most MUA regulations which constrain innovation and expansion into fields important for future Thai development. This would increase flexibility as private universities need to be more responsive to labour market demand patterns out of necessity.
- Facilitate the establishment of international universities or branch campuses of first-rate international universities (as has happened in Japan) with high standards, international faculty and graduate programs to add capacity and to induce reform in Thai universities;
- Support a highly targeted and sustained program of Ph.D. fellowships for faculty training in critical fields -- where possible for graduate training in Thailand -- thus the strengthening graduate training in Thailand and where this is not yet possible, then for training abroad.
- Support a program of competitive awards to stimulate research and increase compensation of faculty.

6) Better Labour Market Information System

One difficulty in effective manpower planning is the availability of appropriate labour market signals. The private companies have access to signals about labour market conditions through the wages that they have to pay for workers at various levels and fields, and the ease or difficulty in recruitment. These information are, however, by nature decentralized and scattered about in various firms and are also mostly secret.

There is a need to develop an information system that will signal to the planning and educational authorities the demand patterns. Factories and firms could be required to indicate their future manpower requirement on permit renewal, or on receipt of Board of Investment promotional privileges. Expanded data on employees of all establishment employing 20 or more workers could also be obtained through the recently implemented Social Security Program.

In the public agencies, human resource data are also scattered about in many sources and in many agencies. There is a real need to integrate these data, and in the process to iron out inconsistencies both in terms of data series, and in terms of differences in definitions. The use of vastly different unemployment figures by different agencies, even though the figures all come from the same source, is one example. This represents a lack of consensus on definition. Another is the use of data from different sources by different agencies, and the difficulty in matching data from different sources, eg. education data from the Ministry of Education and the employment data from the Labour Force Surveys.

7) More Private Sector Involvement in Manpower and Educational Planning

Generally, there is a need for more active co-ordination between the public and private sector in manpower and educational planning. In the past, the public sector, which is the main producer of educated manpower, also employed most of the educated workers at the higher level. Currently, with rapid growth of the private sector, it is important that private sectors views be adequately reflected in drawing up manpower and educational plans.

4.2 Spatial Development Strategies

Policies to achieve better spatial balance in development should focus on a three prong approach.

1) Agricultural Diversification and Promotion of Agro-Industries

There is no doubt that agriculture is still of prime importance to the majority of the workforce in Thailand, even though many are talking about Thailand as quickly moving to NIC status. About 60% of the workforce still have their main livelihood in agriculture. However, Thailand needs to diversify its agricultural base. The past pattern of agricultural growth, which relied mainly on expansion of the cultivated area can no longer be sustained. It has led to deforestation, forest encroachment, cultivation of marginal and fragile lands, soil erosion, flooding and water shortages and other natural resource related problems. Forests which covered over 50% of Thailand's total land area only 30 years ago are down to 25% (1988), and even less if forest degradation is also taken into account. Water resources have also been under increasing pressure because of the destruction of critical watersheds, the loss of water control, the sedimentation of reservoirs, and the wasteful use of water by various sectors.

At the same time, it is unclear how long Thailand can remain competitive in some of the traditional agricultural crops, particularly paddy. Some of Thailand's neighbouring countries have equally fertile soil, and when their political conditions become more stable, it is likely that one will then begin to see large quantity of export of paddy and other traditional agricultural products from these countries at prices which will make Thailand less competitive. Thus, there is a need to diversify Thai agriculture into products with higher value-added, such as fruits, vegetable, and aquaculture. At the same time, agro-processing industries should be encouraged, as these can help to increase industries in rural areas, and ultimately wages and incomes.

2) More Decentralized Planning for Effective Regional Development strategies

To promote more regional development outside of the capital region, more effective account need to be taken of the diversity of the various areas of the country and their development potentials. Some parts of the country have potential in agriculture and agro-related industries; some as tourist centers; some may be more suited for handicraft industries. The key to fully exploit the potential of the various areas is to increase the participation of the local communities in development planning and management. This will ensure that local knowledge of comparative advantages and needs will be fully integrated into regional development packages.

The greater participation of local communities in both political and economic arenas has been a major goal of the Thai government since, at least, the beginning of the Sixth Plan. Increased fiscal authority and resources will allow the central government to target central government revenues more appropriately than is currently the case. Increased input from local communities regarding projects and priorities, on the other hand, will ensure that both local and central government funds are used more efficiently than in the past and that investments more closely reflect local needs and concerns.

3) Alternative Growth Pole to the BMR

While attempts should still continue to encourage industries to move to regional cities and rural areas, it has to be recognized that the success may be rather limited. The overwhelming advantage of the capital region both in terms of physical and social infrastructures is so great. If industries are to be diverted from the BMR in enough number so as to have significant impact in diverting migrants away from the BMR, then the alternative area has to have sufficient physical and social infrastructure to be an attractive locational site. The only area of the country which could conceivably play this role is the East Seaboard Region (ESB).

While the ESB is not that far away from Bangkok (about 150-200 km.), it is still far enough away so that substantial growth of the area will ease some of the congestion from

the BMR. It already is a well developed tourist area, and many of the major infrastructures required for its development into a major industrial area are already in place. In addition, new deep seaports in the ESB can divert the congestion that is very much apparent now at the Bangkok Port, particularly since manufacturing exports have boomed. More infrastructural development are needed over the next 5-10 years, particularly the social infrastructures such as schools, hospitals and other amenities and utilities to serve the ever growing population in the area.

There is also a need to develop the transportation and communication linkages between Bangkok and the ESB. In fact, at the moment, the whole stretch linking Bangkok and the ESB is like an urban conurbation, and for effective management of the area's development, the BMR and the ESB should be viewed as an integrated whole.

In the Seventh Plan, a new concept of the Extended Bangkok Metropolitan Region (EBMR) has been introduced to capture the integrated development needs of the BMR, the ESB and part of the upper central region. This is in recognition of need to plan development of the areas around the capital region in an integrated fashion, and to direct development within this area by appropriate infrastructural development.

While successful development of the EBMR will not lead to an even spread of industries to all regions of the country, it should ease some of the congestion around Bangkok, and provide new dynamic areas for industrial development and employment growth.

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TABLE 1
GROWTH OF REAL GDP AND REAL PER CAPITA GNP
(1950-1988)

YEAR	REAL GDP	AGRIC	INDUSTRY	SERVICE	REAL PER CAPITA GNP
60-65	7.2%	4.8%	11.5%	7.2%	---
65-70	8.6%	6.0%	10.4%	9.5%	---
70-75	5.6%	3.8%	7.3%	5.6%	2.9%
75-80	7.9%	4.0%	10.6%	8.2%	5.3%
80-85	5.6%	4.9%	5.0%	6.3%	3.5%
86	4.5%	0.2%	7.1%	4.6%	2.6%
87	9.5%	-0.2%	12.8%	11.1%	7.7%
88	13.2%	10.2%	17.4%	11.6%	11.4%
89	12.0	6.6%	16.2%	11.1%	10.5%
90	10.0	-1.8%	15.8%	10.0%	8.5%

Source: NESDB, National Income of Thailand, various issues.

Note: Figures from 1970 are based on
the New Series of National Accounts.

TABLE 2
PRIVATE EMPLOYEES IN INDUSTRY AND SERVICES
1986, JULY-SEPTEMBER

PRIVATE EMPLOYEES						
FORMAL LABOUR MARKET						
	ELEMENT	SECOND	VOCAT	TEACHER	UNIVER	TOTAL
INDUSTRY	187890	83100	35840	1010	46440	354280
SERVICES	172580	138540	106750	24250	165710	607830
TOTAL FORMAL	360470	221640	142590	25260	212150	962110
INFORMAL LABOUR MARKET						
	ELEMENT	SECOND	VOCAT	TEACHER	UNIVER	TOTAL
INDUSTRY	1283230	208780	51100	7870	3730	1554710
SERVICES	738240	117590	65270	11240	14430	946770
TOTAL INFORMAL	2021470	326370	116370	19110	18160	2501480

Source: NSO, Labour Force Surveys 1986, July-September.

TABLE 3
OPEN UNEMPLOYMENT RATES BY EDUCATION: 1984-1988

	1984	1986	1988
PRIMARY AND BELOW	0.42%	0.56%	0.38%
SECONDARY	3.19%	3.55%	2.47%
VOCATIONAL	10.22%	10.86%	5.31%
UNIVERSITY	4.19%	4.58%	2.87%
TEACHER TRAINING	3.19%	3.96%	1.62%
TOTAL	0.97%	1.26%	0.83%

Source: NSO, Labour Force Surveys, July-September.

TABLE 4
PROJECTED EXCESS SUPPLY OF ENGINEERS BY FIELDS
(PERSON)

	1988	1989	1990	1991	1996
BACHELOR DEGREE					
E1	(78)	(80)	(61)	(39)	91
E2	(515)	(541)	(428)	(326)	391
TOTAL E	(593)	(622)	(489)	(366)	482
M1	(1,285)	(1,400)	(1,277)	(1,279)	(1,277)
M2	23	36	59	84	245
TOTAL M	(1,262)	(1,364)	(1,217)	(1,195)	(1,032)
T1	(88)	(156)	131	365	1,386
T2	(225)	(245)	(227)	(218)	(185)
T3	(346)	(430)	(411)	(429)	(526)
TOTAL T	(659)	(831)	(507)	(282)	674

Source: TDRI/NESDB (1989).

Note: Meanings of the Codes

- E. Electronics Technology
- E1 - Computer science, including computer engineering.
 - E2 - Electrical engineering, including electrical, electronic and communications engineering.
- M. Material Technology
- M1 - Mechanical engineering.
 - M2 - Metallurgy, including material science and mining engineering.
- T. Related Technology
- T1 - Other engineering, including civil engineering, sanitary engineering, survey engineering, agriculture and irrigation engineering, and other engineering disciplines not covered under E, M, T2 or T3.
 - T2 - Chemical engineering.
 - T3 - Industrial engineering.

TABLE 5
 SHARES OF PRIVATE EMPLOYEES BY EDUCATION
 INDUSTRY, MUNICIPAL
 (PERCENT)

	1984	1988
PRIMARY AND BELOW	77.6	63.1
SECONDARY	13.4	18.7
VOCATIONAL	6.1	13.2
UNIVERSITY	2.9	5.0

Source: NSO, Labour Force Survey, 1984 and 1988, July-September.

TABLE 6
WORKFORCE GROWTH AND SHARES BY EDUCATION

WORKFORCE GROWTH (PERCENT)			
	1987-91	1991-96	1996-2000
PRIM. BELOW	1.69	0.58	-0.23
L. SECOND	6.56	5.30	5.15
U. SECOND	12.41	6.79	5.87
VOCAT	3.77	3.95	5.08
TECH. VOC	9.37	6.72	7.18
UNIVER	3.52	3.22	3.53
ALL LEVELS	2.42	1.40	0.95
SHARE OF WORKFORCE BY EDUCATION (PERCENT)			
	1991	1996	2000
PRIMARY AND BELOW	82.7	79.4	75.7
LOWER SECONDARY	6.6	8.0	9.4
UPPER SECONDARY	2.7	3.5	4.2
VOCATIONAL	2.8	3.2	3.7
TECH. VOCATIONAL	1.3	1.7	2.2
UNIVERSITY	3.9	4.3	4.7

Source: Sussangkarn (1991).

TABLE 7
SHARE OF GDP AND EMPLOYMENT BY SECTOR

YEAR	1975	1980	1986
SHARE OF GDP			
AGRICULTURE	31.48%	25.38%	16.66%
NON-AGRICULTURE	68.52%	74.62%	83.34%
EMPLOYMENT SHARE			
AGRICULTURE	72.99%	70.95%	66.75%
NON-AGRICULTURE	27.01%	29.05%	33.25%

Source: NESDB, National Income of Thailand, and
NSO, Labour Force Surveys, various issues.

TABLE 8
MEAN PER CAPITA INCOME
AGRICULTURAL AND NON-AGRICULTURAL HOUSEHOLDS
(BAHT PER MONTH)

YEAR	AGRIC	NON-AGRIC	RATIO NON-AG/AG
1975/6	247	513	2.08
1981	503	1,154	2.29
1986	481	1,312	2.73

Source: NSO, Socioeconomic Surveys, 1975/6, 1981 and 1986.

TABLE 9
 SHARE OF WORKFORCE BY EDUCATION
 (100% TRANSITION TO SECONDARY EDUCATION BY 1992)

SHARE OF WORKFORCE BY EDUCATION (PERCENT)

	1991	1996	2000
PRIMARY AND BELOW	82.7	78.0	72.3
LOWER SECONDARY	6.6	8.9	11.3
UPPER SECONDARY	2.7	3.6	4.7
VOCATIONAL	2.8	3.3	4.3
TECH.VOCATIONAL	1.3	1.8	2.4
UNIVERSITY	3.9	4.4	5.0

Source: Sussangkarn (1991).



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