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by

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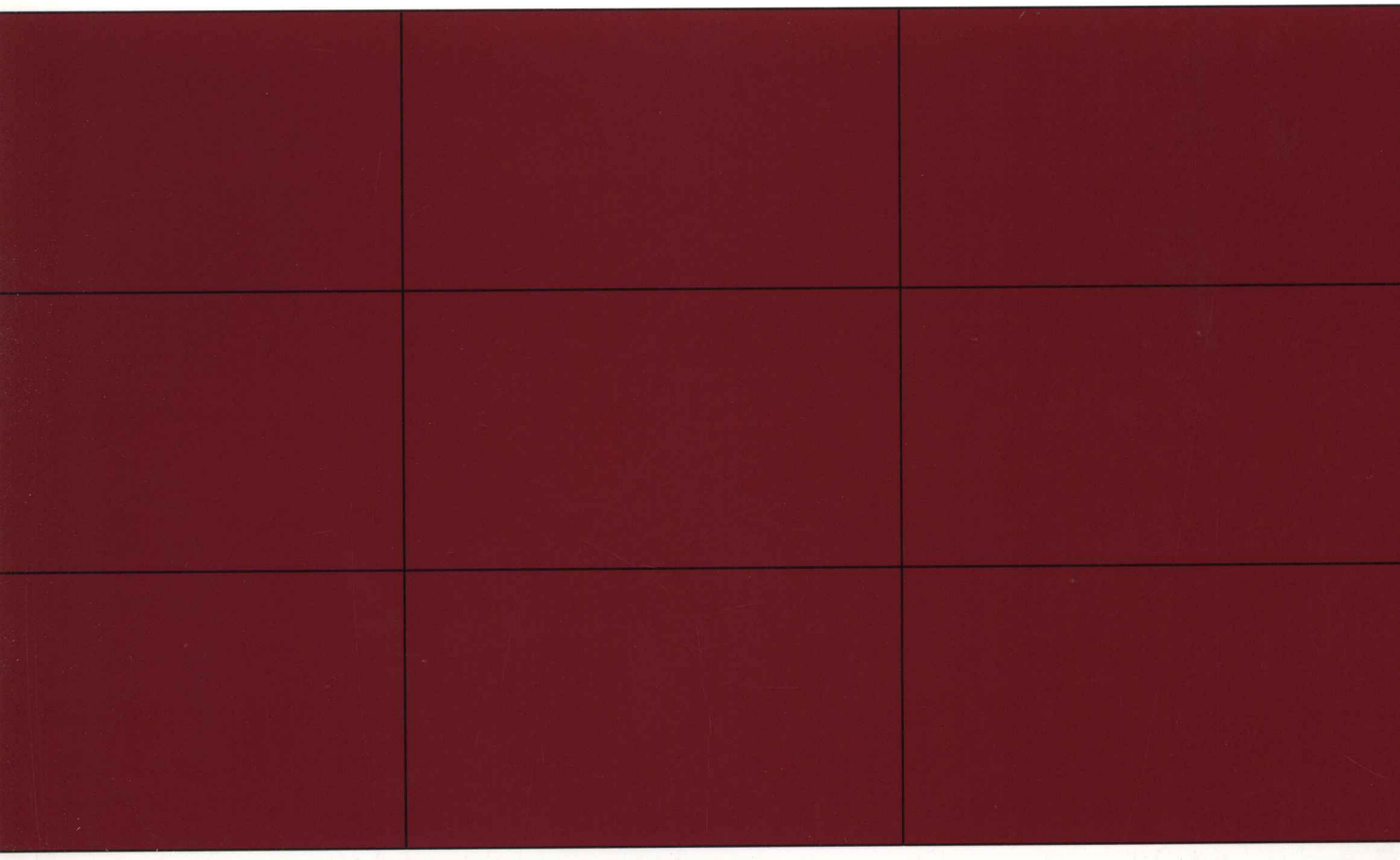

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PROVINCIAL INDUSTRY LABOR MARKET

LIST OF CONTENTS

LIST OF TABLES

EXECUTIVE SUMMARY

The study of labor market in regional industries was concluded with the following recommendations:

1. Labor & labor development

Labor problems in regional industry is more a question of quality than quantity. In other words the unskilled labor is abundant in the regions. These workers lack education, experience and familiarity with production processes and industrial operations. Even more specialized skilled laborers, i.e., supervisors, may only have "Prathom" level education. However, neither employer nor employee pay much attention to skill development while, on the other hand, skill development conducted by educational institutions is still not relevant to the requirements of regional industrial operations. Thus, even those people who have graduated still lack the skills and experience their employers need.

The lack of a skilled labor force can be mostly found mostly in the engineering industries specially in metal casting and vehicle production and repair. Next are electronics and machinery, chemicals, plastics and petroleum, and the paper and wood production industries. Industrial mechanics are especially hard to find. In general there is a shortage of skilled labor in industries of all sizes, especially in the South.

There will be an increasing demand for workers in all levels of employment in regional industries over the next 5 years. Industries which are particularly expected expand are metal casting, chemical products and plastics and the paper industries. Some of these industries will require both supervisors with vocational qualifications as experienced industrial mechanics and commercially trained personnel as administrative officers.

In order to support regional industrial development and employment, the government should introduce a policy of human development in line

with the regional demand. The policies that should be implemented or extended are as follows:

1. Raising the level of workers skills by organizing and expanding short-term vocational courses, especially in industrial mechanics, in regional areas. Support and encouragement must be given to industry to provide training for their employees both by supervisors on-the-job and by visiting professionals. These skill development programs could be carried out by joint-agreements between the educational institutions and the regional entrepreneurs.

2. Recruitment planning is needed to increase the number of skilled laborers in line with demand. This can be done in several ways as follows:

2.1 Expand the present skill development programs into the regions more so that young local laborers are given the opportunity to learn a craft.

2.2 Introduce vocational education into National Service requirements so military recruits are prepared to work in the labor market once they have completed their service.

2.3 Through cooperation between vocational institutions and the industrial enterprises promote the skills and experience of vocational students by providing relevant training equipment and practical experience on the factory shop floor. Educational institutions should set up workshops within their institutions so that students can produce work contracted from outside operations.

2.4 Encourage private sector to establish specialized skill development institutes.

2.5 Set up and develop more courses in those fields which most lack skilled workers.

2.6 Prepare an educated human resource base by expanding the "Mattayom Suksa" level of education to the regions.

The costs of improving skills should be financially supported by the government by allowing those businesses who provide skill development programs either direct financial aid or tax incentives.

3. Develop small and medium size industries by expanding and introducing management training programs which give priority to developing personnel management capabilities as well as production and marketing skills.

Not only is the development of a skilled labor force a way of increasing specialized labor for regional industries but it will also lead to improving the productivity of labor and thereby raise the wages, incomes and living standards of the workers.

2. Employment, wage & income

Low wages and job insecurity are related and most serious problems for regional industries, especially those in the Northeast and North of Thailand. These problems can be sub-divided into two groups: The first concerns the size, characteristics and quality of labor, i.e., the number of unskilled workers who lack knowledge, experience, training and continuity is increasing at a high rate. Secondly, the demand for workers in regional industry varies according to the season, and regional management is not sufficiently developed to cope thus, the long term employment and income of employees is not assured.

Even though the wages and income of unskilled workers in the Northern and Northeastern industries are low, the minimum wage in these two regions is higher than the market average. This minimum wage rate is also increasing at a higher rate than both market average and regional industrial production.

Given the current situation, the government should introduce ways and means of to raise the real wages and income in regional industries in line with production increases. At the same time, it should consider introducing a policy of whereby the minimum wage rates increases in the North and Northeast can be slowed down until such tune as the market rate adjusts to the regional rates and allowing the minimum wage to move closely reflect actual labor market levels.

Methods of increasing production, wages and income includes the development of labor quality, as previously mentioned, in coordination with the development management skills. However, production and marketing management abilities must also be developed to encourage entrepreneurs to increase production by improving products and introducing technology to create market stabile appropriate.

For setting the minimum regional wage rates, the government should make provisions for regional departments to be responsible within their jurisdiction for setting their own the minimum wage rate. There are two ways to determine the optimum minimum wage rate in the regions: 1) The Ministry of the interior could establish a regional wage sub-committee in each region; or 2) Establish a regional wage committee under the authority of "the Joint Public Private Consultative Committee" consisting of three groups i.e., employees, employers and government representatives. The Committee would be responsible for setting the minimum wage rates in their region, the criteria for which would based on the national average. However, in the present circumstances the development of regional wage sub-committee supervised by the Ministry of Interior is more likely to succeed, however in the long run, as the local labor organizations become stronger, the JPPCC should be given direct responsibility.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND AND PROBLEMS

The existence of an adequate skilled labor force plays a vital role in industrial development. However, related problems, which may arise from either demand, supply or the inefficient operation of labor market, also influences industrial activities. During the 5th (1982-1986) and the 6th (1987-1991) National Economic and Social Development Plan, rural industrialization as a policy as well as an objective was adopted to enhance rural job opportunities and increase income. But these attempts to promote rural industries have run into difficulties, resulting in a low growth and success rate.

The labor problems facing small-and medium-scale industries, from studies done by Saeng Sanguanruang, et. al. (1978), Pradit Charsombut and Chucheep Pipatsitee (1985), and Industrial Management Co. Ltd. (1985), all cited seasonal labor shortages, lack of skilled labor, undisciplined workers and high turn-over rates. Although the studies explained and analyzed these industrial labor problems, they reflected of the situation only one-sided. For instance, Saeng Sanguanruang and his colleagues pointed out the labor problems in small-and medium-scale industries, but failed to address their causes and did not study the behavior and problems of industrial workers. The study carried out by Industrial Management Co. Ltd. gave a detailed analysis on the work force of rural industries, and how to develop their skills, but failed to analyze the demand. On the other hand, Pradit Charsombut and Chucheep Pipatsitee analyzed the labor problems of various enterprises but their study covered only small food and engineering industries. Studies by the project of Rural Off-Farm Employment Assessment in Thailand (ROFEAP), jointly carried out by Kasetsart University, Michigan State University, and that by the Ohio State University (1982), and the World Bank Report (IBRD,1983), found that rural households, aside from doing agricultural work, were also involved in industrial activities.

These studies further revealed that labor supply and rural employment are directly related to agricultural labor demand and supply, resulting in seasonal changes in level of industrial employment. However, these studies covered only cottage and small rural industries. So far, therefore, existing studies have analyzed rural labor problems within a confined framework, with none of them examining the overall situation. Moreover, no study has ever been undertaken on labor problems in modern and large regional industries, which although at present are relatively less important they could play an increasingly important role in the future rural industrialization.

The above findings raise the question as to the nature and pattern of employment and wage conditions in regional industries. How does industrial labor demand and supply behave? To what extent is labor a scare commodity? How are employment and wages in provincial industries determined? How can the level of employment and wages be effectively increased and stabilized?

At this stage, it may be hypothesized that industrial labor is scarce, especially in the case of unskilled manpower during rainy season, as regional industries depend on the agricultural labor force whose workers are found to return to the farm during this busy season. Even where the employment and wages in industrial sector may be steady, these regional industrial workers will continue to work in a seasonal pattern. In the same manner, skilled labor is also difficult to maintain because of the high turn-over rate, coupled with a recent increase in demand. The lack of adequate training - much of which does not reflect the skills demanded by the enterprises - to satisfy the demand for skilled worker in the industrial sector poses further obstacles to industrial expansion in the rural areas.

In order to promote rural industrial development it is necessary to understand the rural industrial market system, types of demand, related factors, the characteristics and behavior of labor in the industry as well as market functions before appropriate measures can be applied.

1.2 OBJECTIVE OF STUDY

This study involves 4 objectives:

1. To study characteristics and patterns of rural labor demand and related factors, especially the production structure and management capacity of rural entrepreneurs, as well as provide a guideline as to why such a demand is increasing.

2. To study the outstanding features and behavior of the supply of labor to rural industries and their influences such as on wages, social welfare services, and production as well as provide measures to support the stability of the supply labor in rural industry.

3. To study the means and processes of developing worker's skills in both the works place and in educational institutes as well as measures to upgrade the quality of labor in various fields.

4. To study a means of fixing wages and employment, establishing an income and wage structure and social welfare services as well as to analyze other factors which may influence higher incomes and and greater industrial employment.

1.3 SCOPE OF STUDY

This study emphasizes the rural industrial labor market which involves manufacturing in category 3 under Thailand Standard Classification (TSIC) and must be located outside Bangkok and its five neighboring provinces, namely Nonthaburi, Pathum Thani, Samut Prakan, Nakhon Pathom and Samut Sakhon. The industrial labor market in Bangkok is studied for comparative purposes but is not intended as an objective of the study. The study will cover three main issues.

Firstly, it analyzes the pattern of rural industrial demands and its trends.

Secondly, it analyzes labor supply and its behavior and the development of skills.

Thirdly, it analyzes the performance of the labor market, especially in the determination of wages and measures to increase labor productivity. To analyze the labor supply, the study will concentrate on labor in the industrial work place not on labor at household level.

1.4 METHODOLOGY

1.4.1 Concepts of Labor Market

In order to correspond to the objectives and scope of study, the markets for labor in Thailand may be classified into two main areas,[1] namely, the Greater Bangkok market; and the rural or provincial market which is situated outside of the Greater Bangkok area. The structure of the labor market may be determined from three important factors; those are, labor supply, labor demand, and performance of labor market. These components may be described briefly as follows:

Labor supply, which depends upon the size, age structure, health and educational level of the population, may be divided into labor supply in the Metropolis and those in the rural areas. Although the supply of labor in these two markets may be slightly different, both markets cannot be totally separated. The migration of labor between the Metropolis and the rural areas is an example of the interaction between these two markets. Further, rural market involves a large area and there is also labor migration within and between the regional areas and between different socio-economic sectors.

Labor is required to produce goods and render services, and is dependent on the production and the price of those goods and services. Labor demand can also be divided into two markets; those who are demanded for urban market; and those for the rural markets. The urban

market is composed of two important economic sectors;[1] these are modern or formal sectors engaging in large scale production or the formal employment sectors such as large-or medium-scale industries and commerce, State Enterprise and Agencies. The second sector is the informal sector which involves cottage industries which have informal production and employment such as, household industry, retailing, peddling, transport and services. All such production results in an urban labor demand.

In the rural labor market, labor demand may be classified into three economic sectors:- labor demand for agricultural production; the industrial sector production; and non-agricultural production. The agricultural sector is currently the most important economic sector in rural area and involves plantations, stock-raising, fisheries and forestry work. The industrial sector production covers the processed goods, involves various sizes of enterprises and is located nearby or in the provincial centers. The non-agricultural production in the rural areas includes the manufacturing of goods and services, such as household handicrafts and retailing. The labor market in rural industry included in this study is therefore only a small part of the total rural labor market.

The overall performance of the labor market involves the interaction of demand and supply as seen from levels of employment, unemployment and wage rates. In the competitive labor market, this labor demand and supply determines employment levels and wage rates. It is, however, realized that the labor market is generally less competitive than commodity and financial markets and as such state intervention measures such as by laws and regulations, labor unions, employees' associations have been introduced. These phenomena can be seen in the labor market in Thailand, especially in the urban labor market or in the modern economic sectors.

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1. The production sectors in urban areas can be classified into several features such as F.H.Harbison (1973) who divided the economic sectors into three components; namely the Modern; Intermediate; and the Traditional Sectors.

Even though the labor market is less competitive than other markets, data from several studies indicate that there is certain level of competition, such as shown in the researches by IBRD (1983), the project study of ROFEAP by Kasetsat University (1982) and study by Industrial Management Corp. (1985). These researches found that labor in the industrial sector comes largely from agricultural households where competition, in certain seasons exists. WitHin the industrial sector itself, there is also migration of workers from smaller enterprises to larger ones and a high labor turn-over (Saeng Sanguanruang et al., (1978) and Pradit Charsombut (1985)). These phenomena indicates the competitiveness in the rural labor market.

Under a competitive market situation, labor demand and supply determines the rates of employment and wages. Attempts have been made to solve the problems of employment and wage rates in the rural industrial market by one or all of the following strategies:

1. Development of the labor supply in terms of both quality and quantity to correspond with both long-term and short-term demands of the industrial sector in order to protect or to solve the problems of labor shortage. Manpower development can be undertaken by educational institutes, on-the-job training and by employees themselves. The strategies involved in developing a skilled labor supply must stress the promotion of support factors and lessen the effect of those factors which impede the development of labor in rural industries.

2. Increasing the demand for labor to get higher, and more stable effect, on the levels of employment and wage rates. Such increases can be made by improving productivity, expanding production and marketing, improving and developing the products, instituting suitable management and labor supply development, and, finally the development of production techniques. All these factors will enable the increase of labor productivity and demand.

3. Improvements in the efficiency of the labor market will help in reducing cost of hiring labor by the employers, obtaining jobs by the workers and help offset the costs of adjusting the demand and supply

aspects of the market under various conditions. This improvement in efficiency may be carried out in several ways such as by supplying information, reducing the obstacles and adjustment costs of into industrial labor market and increasing the competitive capacity of both entrepreneurs and workers.

1.4.2 Methodology

Methodology of analysis will take into consideration the locations, categories and sizes of the industry and, through use of basic statistics, to compare characteristics and patterns of labor demand with characteristics and behavior of the workers, the labor development process as well as the performance of labor market.

A further analysis to discover the relationship between working behavior and labor market performance to other related factors will be based on a regression analysis, such as the analysis of factors related to working in rural industries, wage rates, labor productivity and labor problems.

1.4.3 Data Used in the Study and Size of Samples

Data will consist of secondary and primary sources. The secondary sources are derived from official statistics report such as the report on labor surveys for the whole Kingdom and censuses made by National Statistical Office, a report on a survey of wage structures in Thailand by the Department of Labor and Bank of Thailand, labor statistics from the Department of Labor, the Ministry of Interior, educational statistics from the Department of Vocational Education and the report on educational research taken from various sources.

Primary data was gathered at the end of 1988 from survey of the industrial firms managers and employees through questionnaires or interviews. Samples were drawn from 989 establishments, 870 of which are

scattered throughout the rural areas and 119 of which were located in Bangkok and its five neighboring provinces. These samples are based upon multi-stage sampling.

The number of employees questioned during the survey total 756 persons. The selection of establishment for placing the questionnaires was based on two principles: (1) cooperation of the proprietors; and (2) the range of the types of industry. Industries which constitute large sample in the survey will have a low proportion of selected samplings of workers, whereas industries which represent only a small sample in the survey will have high proportion of selected samplings so that the responses by workers are widely spread among different types of industry. However, the types of industry which is widely represented will have several workers selected, whereas limited industries will have only a few workers represented.

The number of employees selected are spread proportionately throughout the regions. There are also three levels of workers skills represented they are:

1. Regular office employees such as management, general staff, marketing and accounting officers.

2. Officers or production supervisors, regarded in this paper as skilled workers, and their assistants, regarded as semi-skilled workers, and

3. Laborers or workers who act upon orders are regarded as unskilled workers, Each type of labor level is sampled proportionately at 20 percent, 30 percent, and 50 percent, respectively. The number of samples as fixed according to regions and types of labor aims at analyzing the features and behavior of labor in each type and area.

Survey of labor as based upon classification was followed by a random sampling of each type of labor for interview. That is, interviews of workers seen in the work place and their availability during survey

week. This part of the Survey was not a probability sampling since there were a shortage of workers' listed in large-and medium-scale enterprises or the proprietors did not enter a list or know all the names. This random sampling was applicable in this case because the objective of this study was to understand types and behavior of each category of workers more than to explain the feature and size of the labor force.

1.5 ORGANIZATION OF THE REPORT

This report is divided into seven chapters: One, the foreword; Chapter 2 deals with the overall structure of Thai labor market and its connection with other markets. The analysis is based on secondary sources; Chapter 3 analyses the characteristics of labor and working behavior compared to the demands in rural industry; Chapter 4 analyses the results of labor market performance in terms of employment, wages, incomes and problems, Chapter 5 considers the comparison of the desired quality and quantity of labor with labor development; Chapter 6 summarizes and studies various guidelines which could be introduced to solve the labor problems of rural employment.

CHAPTER 2

LABOR MARKET STRUCTURE

2.1 URBAN AND RURAL LABOR MARKET

Before the rural labor market is analyzed, we should first understand the structure and types of labor market in Thailand. This labor market may be considered from employment point of view which is experiencing the phenomenon of rising demand and supply. For the purposes of this study the number of workers and their movement at each level of employment in each area, each economic sector or occupation will be used as indicators of the size and condition of labor market.

2.1.1 Urban and Rural Employment

A comparison of the labor market structure between urban and rural levels of employment deals with the division of labor market in terms of areas of different economic structure. According to the labor census of the whole country, conducted by National Statistical Office since 1974, workers are classified in terms of region, municipal and outside-municipal groups. The findings indicate that more than 80% of the workers and employee in the country remain outside the municipal areas. Although the proportion of non-municipal workers has been decreasing from 87.21% in 1977 to 83.98% in 1987, the ratio of these workers remains high. If the municipal area is regarded as urban labor market and an outside-municipal as a rural labor market, such figures show that the rural labor market is much larger than the urban one.

For the definition of this study, the word urban labor market denotes Greater Bangkok and includes its five surrounding provinces. In terms of municipal-employment the Bangkok is the most important, with 61% of the total workers and employees in all municipal areas in 1987. The rest work in municipalities in other regions, each region having a low ratio (see table 2.1). Bangkok and vicinity being regarded as the

urban market, with the rest of the country being regarded as a rural labor market, is not far from reality. According to labor census by the National Statistical Office , number of workers and employees in the five surrounding provinces (Nonthaburi, Pathum Thani, Samut Prakan, Nakhon Pathom and Samut Sakhon)is not included with Bangkok but in the figures for the Central part of the country. Therefore Bangkok between 1977-1987 accounted for about 10% of labor employed throughout the kingdom. If we include the number of employees of the five surrounding provinces together with Bangkok, the census as of 1980 (The National Statistical Office) reports that Greater Bangkok employees account for 12.4% of the whole country's workforce which still is relatively small when compared with the rural areas.

In terms of regions, the majority of workers and employees are found in the North and the Northeast. As of 1987, the total labor force and employees amounted to 29.55 million and 27.64 million, respectively. Of this 35% and 21% reside in the Northeast and the North, respectively. Therefore, these 2 regions account for more than half of the labor force, they cover a larger area and are more densely populated than other regions. The rest, 22%, 12% and 10% are the employee in the Central region, the South and Bangkok, respectively. During the past 10 years, the ratio of employees in these regions changed very little. However, if we take into consideration the number of employees in Greater Bangkok area, the ratio of employees has increased due to expansion of production in various sectors and the migration of labor to the five surrounding provinces of Bangkok is at a high rate.

2.1.2 Employment in Accordance with Economic Sectors

In terms of economic sectors, employment in the agricultural sector constitutes the bulk of labor. Next is commerce, industry and handicrafts. Data in table 2.2 indicates that in 1987, the start of the 6th National Economic and Social Development Plan, the number of employees in the agricultural sector during the rainy season accounted for 64.4% of employees across the nation. The industrial sector at this time accounted for only 8.8%. If the Bangkok market (not including the

five surrounding provinces) is compared with the regional market, the ratio of agricultural employees in rural areas accounts for 71.0% of all the countries employees. During the rainy season only 7% were absorbed by the industrial sector. In the Bangkok market, the service, commercial and industrial sectors are the most economically important accounting for 29.4%, 28.7%, and 25.5%, respectively.

Even though the ratio of agricultural workers all over the country has decreased from 73.5% in 1977 to 64.4% in 1987 and at the same time, ratio of industrial workers has increased from 6.5% to 8.8%, this is still very low especially when compared to that of employment in industrial sectors in the rural areas, totaling only 7.0% of all workers. The number and ratio of rural industrial employees however differs from region to region. Outside the city of Bangkok, the Central region has a relatively high number and ratio of industrial workers, while on the contrary, in the Northeast and North, even with their large labor force, industrial workers are limited to between 3-5% of each regions workers (see table 2.3).

A labor survey conducted by National Statistical Office did not classify the work undertaken into main and secondary activities. The classification of employees in terms of industrial category and occupation can be assessed from working hours or previous occupation (National Statistical Office, 1986:7). In the cases where the employee worked in several activities or occupations, classification of employee in terms of industrial category or occupation was based on the occupation in which he had worked for the longest hours, or the longest time. These employees will be considered as the worker in that industry or occupation but will not determine the minor occupation of that worker. In this way, persons working in agriculture who also work in industry or commerce may be considered as seasonal agricultural workers since they spent most of their time farming. If however a classification of employees in terms of industry or occupation is made in terms of full-time and part-time work, the ratio of full-time workers in agriculture may be lower and may be decreasing at faster rate. Findings of the Rural Off-Farm Employment Assessment in Thailand supported this observation. That is, many rural agricultural household members work not

only in the agricultural sector but also in household industrial sector and in off-farm employment. The ratio of households working in the latter two activities is higher in area with access to towns, such as around Amphor Muang, Chiang Mai province and Khon Kaen (Onchan, 1983). If the classification of employees is conducted in terms of major and minor activities and occupations, such a classification will more accurately reflect employment in terms of economic sector and occupation.

If we consider the trend of employees in the industrial sector, Table 2.3 indicates that the numbers of industrial workers in Bangkok and other regions are steadily increasing. The number of industrial workers in Bangkok increased from 629,000 in 1980 to 688,000 in 1987, an average increased of 1.3% per year.[1] This rate is still considered to be the low compared to that in other regions, partially, due to the relocation of industries in the surrounding provinces during that period. The average rate of the number of industrial workers has increased in the Central regions including the 5 surrounding provinces of Bangkok, from 540,000 in 1980 to 881,000 in 1987. Such an increase accounts for an average rate of 7.7% per year. The data in Table 2.3 is taken from figures issued by the National Statistic Office which does not separate employment data obtained in those 5 provinces around Bangkok from the Central region.

While the numbers involved in industrial employment in every region from 1980 to 1987 has increased, the rates have fluctuated quite considerably. For example, as shown in the year of 1983 when industrial employment actually decreased in every region. In the Northern region, the rate of increase was higher than other regions, from 178,000 in 1980 to 353,000 in 1987, an average arithmetic increase of 12.9% per year. During the same period in the Southern and Northeastern regions, the level of industrial employment increased at a rate of 6.1% and 3.2%, respectively.

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1. The arithmetic average rate of increase is slightly higher than the geometric average. The objective here is to compare the rate of increase in employment between regions. Therefore, it is more convenient to use the arithmetic average rate rather than the geometric average rate.

In the South, the industrial employment rate decreased continuously during the period 1980 to 1983 but increased considerably between 1986 and 1987. Although regional industrial employment has expanded, the proportion of the industrial workers, to all workers in the rural regions, is still low.

Data concerning number of employees in each economic sector indicates that in the rural areas, the industrial labor market is rather small compared to agricultural labor market but is third in importance to agricultural and commerce. On the other hand, the industrial labor market in the rural areas has slowly expanded especially in Northeast where there is a large labor force. Which is contrary to the labor market in Bangkok, where commerce,industry and services are more important in terms of employment.

2.1.3 Employment by Occupation

Occupation denotes the type or kind of work that a person is doing. This classification as conducted by National Statistical Office, shows that the trends in the labor market are almost the same as the those seen in the economic or industrial sector. That is, as of 1987, 64.5% of all employees nationwide during the rainy season were engaged in cropping, livestock-raising, fishery and mining. The next in importance were the commercial occupations and technicians and workers involved in the production process which totaled 10.1% and 11.6% of all employees, respectively. People working in business administration or in their careers or academic establishment accounted for only 4.8% (Table 2.4).

In the regions, those engaged in cropping livestock-raising, fishery, forestry and mining accounted for 71.1% of all workers, which is somewhat higher figure than the average nationwide but those who work as technicians or in production processes involving handicrafts and industry account for only 9.8% of all rural employees. Such data indicates that the labor market is regional industrial rather limited. Those who follow their careers, or do business and academic work, and are regarded as a knowledgeable and experienced labor force, account for

only 3.8% of all rural workers and these are not continued to only one industrial sector but in fact are spread throughout various economic sectors.

A review of the labor market structure from the aspect of level of employment in each sector, indicate that in the economic and academic sectors the rural industrial labor market is very small, whereas agricultural sector is very important in term of numbers demand for agricultural production. As such it would seem that the supply of unskilled workers in the rural industrial sector can be affected by the labor mobility from agriculture.

2.2 EMPLOYMENT AND UNEMPLOYMENT CONDITION IN RURAL LABOR MARKET

The labor market performance, such as unemployment and employment status, will be considered to analyze its effects in rural areas.

2.2.1 Seasonal Employment

The number of workers fluctuates according to the season. That is, the number of workers employed in any given year is highest during rainy season and lowest during dry season. Such as in 1987, the total number of workers during the rainy season amounted to 27.64 million, but in early rainy season and during dry season of the same year, there were 25.69 million and 25.18 million employed, respectively. The number of workers decreases during dry season as a result of decrease in agricultural activities which causes the decrease in the demand agricultural laborers.

Nevertheless, if we review the status of employment in regard to the economic sector, data in Table 2.2 indicates that the mobility of employed persons in the industrial sector is directly opposite to those in agricultural sector, that is , the number and ratio of workers in industry and technical occupations or in production processes increases during dry season and decreases during rainy season. In 1987, the number

of employed people in industrial sector during dry season amounted to 2.94 million but in rainy season this figure dropped to 2.44 million. In 1986, the number of industrial workers during dry season accounted for 2.94 million people, but dropped to 2.07 million in the rainy season, whereas those in agricultural sector increased from 13.60 million in the dry season to 17.82 million in the rainy season. This figure shows that 670,000 people changed their jobs during this period. The number of employees in the industrial sector during dry season increasing by more than 47.3% and those in the the agricultural sector decreasing by 31.52%. This phenomenon has occurs annually and has been doing so for a long period of time.

The fluctuation of the number of workers according to the season and the economic sector, such as above, may be largely due to two factors. Firstly, the change in occupation from the industrial to the agricultural sector. For example, a large number of industrial workers return to farming during rainy season. Secondly, the definition of labor during the survey did not classify workers into main and secondary occupations. In the case where people are working in both the agricultural and the household industrial sector, those employed in household industry may increase or stabilize, when agricultural activities decrease during the dry season. Such a worker will then be counted as employed labor in the industrial sector. In the rainy season, employees may spend more working hours in agricultural activities than in household industry activities. Such a worker may be counted as being employed in the agricultural sector. Therefore the changes in the number of workers classified by economic sector and occupation are affected in accordance with season. A more accurate classification by taking into account the number and ratio of persons working part-time in the industrial sector, which should increase, whereas the number and ratio of persons working full-time in the agricultural sector should similarly decrease.

Such data concerning the seasonally fluctuating levels of employment shows the labor market conditions as follows:

1. Employment levels during dry season, when number of people working in the industrial sector is at its highest, the rural industrial labor market is still only accountd for a small market share as compared to the agricultural labor market.

2. The fluctuation of employment levels between the agricultural and industrial sectors indicates a symbiotic relationship between the markets. During dry season when the labor supply in the agricultural sector decreases, a certain number of agricultural workers will switch to the industrial sectors whereas during rainy season, when agricultural production activities increase, a certain number of industrial workers will return to farming.

3. If however industrial production and labor demand for certain industrial work continues to increase, direct competition, in terms of employment between the agricultural and industrial sectors may result.

4. The seasonal labor fluctuations between industry and agriculture indicates an interpendence of the labor force between the two sectors which may lead to a competitive market.

2.2.2 Working Condition

Working condition denotes the status of the employed persons as classified into employers, government employees and private employees, self-employed and unpaid family workers. By defining the status of workers the structure and status of employment in the labor market will be indicated.

According to a labor survey conducted by National Statistical Office, most employed persons in Thailand are either self-employed or unpaid family workers. During the rainy season in 1987, persons working as employees and as employers accounted for 27.8% and 1.3% of the workforce, respectively. The rest 75.6% were self-employed or unpaid family workers. This shows that self-employment especially in agricultural acitivities, plays a significant role in labor market of

the country. However, if we consider the status of employed persons in terms of the Greater Bangkok and provincial areas a difference can be seen between the two labor markets. In the rainy only 27.2% of employed persons in Bangkok are self-employed or are unpaid family workers. The rest work as employees and employers. (see Table 2.5). Such data indicates that, in the rural labor market, the self-employed and unpaid family workers in both the agricultural and non-agricultural sectors play a vital role. Usually, the self-employed run independant small-scale businesses and the pattern of employment has no clear rules and regulations.

In rural industry, the employed persons who work in private businesses amounted to 60.2% of all workers during the rainy season in 1987, thus indicating that the relationship between employers and employees in the industrial sector plays more significant role than in other economic sectors. However, the number of employed persons in the rural industrial sectors is much lower than in metropolitan industrial sector (see Table 2.5 Tor.). In regional industry, during the dry season the ratio of workers in private companies and unpaid family workers much higher and these workers play important role in the rural industrial sector.

Data derived from labor survey report conducted by National Statistical Office did not provide details on the employees' working conditions, however, data from a wage survey made by Bank of Thailand and Department of Labor indicated that most employees in the rural industrial sector are hired on a daily or contract basis. The ratio of workers on monthly salaries account for no more than 30% of employees, and thus form a lower ratio than those found in the metropolitan areas (see Table 2.6). The data indicated that the rural industrial labor market tends to have a high worker turn over and dismissal rate. Such employment provides little or no stability for both the employers and the employees. For example, according to this report about 23-26% temporary and contractual workers in rural industry work on average of 26-27 days per month but work only 5-6 months per year, thus indicating that this type of worker lacks security both in terms of jobs and wages.

The ratio of workers in each type of rural industry varies according to size of enterprises. In a large-scale industry, the ratio of temporary workers is rather high and tended to increase between 1977-1987. In small-scale industries, the ratio of monthly employees and contractual worker is higher than those in medium and large-scale industries (see Table 2.6). The large-scale industry is able to employ daily and temporary workers since such employment responds to a flexible production schedule and avoids achieving to labor protection laws. whereas small-scale industries tend to favour a high ratio of monthly workers since these industries usually have closer employees employers relationships. Also, as the working hours can vary monthly employment is more economical than daily employment. For the workers, monthly employment can offer more security and in more important positions may reduce the risk of labor shortages. Hiring contractual workers in small-scale industry may help to decrease the costs of equipment and buildings while allowing the enterprise to be more flexible in terms of seasonal production.

During the past decade, the ratio of contractual workers in every size of industry has increased noticeably. The ratio of temporary employees in large-scale industries and contractual employees in small-scale industries tends to show an upward trend when there is a change in the industrial sector's employment structure. These trends may worsen the stability of employment in rural industries.

2.2.3 Rural Unemployment

Unemployment exists in various forms in Thailand. The most obvious being open unemployment, in which workers are jobless although they are looking for and need jobs. Seasonal unemployment accounts for those workers who are jobless during certain seasons. In rural labor market, both these aspects exist and are tending to be on the increase.

Table 2.7 shows unemployment ratesin Thailand. In 1987, nationwide the average open unemployment (OU1) was at 6.25%. If only the unemployment rates of current labor force, not including seasonal labor

force, are taken into account the open unemployment of current labor force (OU2) increased to 6.42% in 1987. Open unemployment is increasing in both Bangkok and rural areas, especially the Northeast, where the open unemployment rate is nearly as high as 10%.

Seasonal unemployment, that usually lasts 3 or 4 months, is also a serious problem in some rural regions of the country. In 1987 seasonal unemployment in Northeast was at 6%. If we add both rates together the overall of unemployment rate in the Northeast rose to 16% of the total labor force, whereas in the North, the overall rate was 9%.

Seasonal unemployment in rural labor market had long been a severe problem. In 1983, the rate was nearly 15% of the workforce in the Northeast and 9% in the North. More recently the seasonal jobless worker has become openly unemployed and thus the seasonal unemployment rate has been seen to decrease while open unemployment rate has increased. This phenomenon is most obvious in rural labor market, especially in the Northeast, where the seasonal unemployment rate dropped from 15% in 1983 to 6% in 1987, and the open unemployment rate rose from 5.9% to 9.3%. The open unemployment rate in Bangkok, which is the most important urban labor market, has also increased from 3.7% to 6.0% during this period. This may possibly be because some of the unemployed labor force are migrating to work in towns or in other regions. The large number of rural labor force looking for a job in the open market have caused a noticeable increase in the open unemployment rate.

Data collected either by National Statistical Office or estimations made by Department of Labour are very similar in that they indicated an increasing rate of open unemployment in 1977-1986 which dropped slightly in 1987. One important reason for the higher unemployment rate was the rapid growth in the labor force, at the rate of 2.5% to 3.0% per year, and this continuous increase had made it more difficult for rural workers to find jobs.

The second reason that the capacity to accommodate agricultural labor is declining as new arable land become more scarce. The available natural resources are decreasing and are not in balance with population

growth. The introduction of new agricultural technology cannot alone raise the production to a sufficiently high level. In 1980-85, 320,000 workers (NESDB, 1988, Table 5) migrated into Bangkok, causing a noticeable increase in the open unemployment rate in the capital city.

The third most important reason is that there had been an economic recession locally and internationally due to oil crisis, which caused a slowing down in labor demand in both agricultural and non-agricultural sectors. This combined with restrictive government policy which resulted in the government employment opportunities expanding at a slow rate, caused in the unemployment rate of educated people at various levels. Educated people also joined the ranks of the jobless.

In summary, whether considered from an unemployed status, a seasonal working status or the working conditions of the employed there is evidence to indicate that a high ratio of the rural labor force are facing some form of unemployment, especially among those unskilled agricultural laborers who look for employment in both the agricultural and non-agricultural sectors. For those who are employed, most of the jobs are unstable due to short-term employment which affects their security wages, and income. This latter point will be furthur elaborated in this paper.

2.3 WAGES AND INCOME

The performance of the labor market can be examined from the point of view of wages and income of the workers. This part of the study will analyze wages and the determination of wages in rural industrial labor market.

2.3.1 Types of Wage

Table 2.6, apart from indicating the status of industrial employees and workers, also points out the wages structure for the three main categories of industry as follows:

The first category deals with monthly wages as earned by regular and temporary workers. This category is prevalent in Bangkok, or about 43% of the industrial workers in the metropolitan area. By contrast, in the provincial areas, this category belongs to small-scale industry.

In the second category are the daily wages earned by temporary workers, accounting for about 65% of all the industrial labor force. Small industry prefers to set daily wages in preference to other types of payment. In the South, nearly 90% of large-scale industries pay a daily wage. These figures indicate that daily wage payments are an important form of wages in rural industry.

The third category covers contractual or piece rate payments as based on individual jobs and earned according results. The Bank of Thailand and the Department of Labor's reports indicate that this type of payment is more popular in rural areas than in Bangkok and in small-scale industries more than large industries. This category of payment has been applied in almost every industrial sector, especially in the industries which can easily separate the production process, such as in food-processing, wood and furniture products, and ready-made garments. This form of payment, however, is less popular than first two categories.

2.3.2 Wage Rates

The income earned as wages by industrial workers is in various forms. In 1986, all types of industrial workers earned an average of 2,632 baht per month (see Table 2.8) and average wage of industrial workers varied according to region and type of employment. Workers in Bangkok and the Central region earned higher wages than in the other regions. Workers in the Northeast earned the least. Data derived from a wage survey undertaken by the Bank of Thailand and Department of Labour, Table 2.9, shows that monthly, regular workers earn higher wages than daily and contractual workers and receive an average of 3,596 baht per month. Daily and contractual workers earned 1,982 baht and 1,709 baht per month, respectively, or about 55.1% and 47.5% of monthly workers'

wages. Monthly workers' jobs and therefore better paid and are more secure than other types of workers. Temporary workers therefore are not only lack stability, but also get paid at lower rate.

Although the average wages as shown in Table 2.8 and 2.9 are based on the income of workers at every skill level (skilled and unskilled), if we compare income from low wage rates expected to be received by unskilled workers of 1,586 baht per month, those daily labors in industrial sector, which are majority group in in the Northeast and the North, receive lower wages than unskilled workers. The daily wages of workers in the Northeast and the North are below the minimum wage rate . If the minimum wage rate of unskilled labor is taken as a measurement, employees in the metropolitan area, Central and Southern regions earn an average income which is above minimum rate.

Survey of household income and expenses was conducted by National Statistics Office and indicated that, in 1986 household expenses in North and Northeast municipalities amounted to 21,531 baht and 18,006 baht per year, respectively (Grandstaff,S. ,1990: Table 12.4). If an employee who works in the North or Northeast industrial sector is daily worker and obtains his wage from one source, such a employee will have insufficient income to support their expenses. By using this measure, it can be said that provincial industrial workers in the Northeast and the North are below subsistance level.

2.3.3 Income

Apart from regular wages, some workers also earn overtime payment, rewards, an annual bonus and obtains social welfare assistance, all of which make the overall income higher than the regular stated wages. In 1986, in the overal income and expenses of industrial workers, monthly-paid workers earned more than their wages 23.7% while daily and contractual workers earned higher wage than overall income by 20.9% and 13.9%, respectively.

The income structure of industrial workers is similar to the wage structure. That is, the average income of industrial employees differs in terms of region, category and types of workers. Bangkok workers earn more than those in other regions. Workers in the North and the Northeast receive the lowest. In terms of type of employment, monthly workers earn the highest, followed by daily and contractual workers. Daily paid workers in the Northeast and the North earn the lease, on average 1,650 baht and 1,690 baht per month, respectively. This average income is about 5% higher than the minimum wage of unskilled labor thus indicating that although they earn below the minimum wage rate set for all types of work, they do have an average income at about the level of minimum wage rate for rural areas. This average income is based on maintaining the same luring standards as those in towns. Therefore, although the industrial daily-paid worker, more than 60% of all employees in the Northeastern and Northern regions, earns low wages, they can support themselves by earning overtime payments and other benefits which are not paid in term of wages. Other kinds of employees, and industrial employees in other regions, have an average income which is higher than the minimum wage rate and cost of living expenses. However this conclusion doesn't separate the average income earned by unskilled workers from other employees. This problem will be addressed later.

2.3.4 Social Welfare and Other Benefits

According to the report of the wage structure survey conducted by Department of Labor together with Bank of Thailand (1983: Table 9.1) apart from their wages, industrial workers receive fringe benefits in terms of providence funds, food, lodging, medical coverage and bonus payments. These benefits also vary from region to region and from enterprise to enterprise.

On average, employees in Bangkok receive providence funds, food and higher bonus payments than those in the rural areas, whereas a larger proportion of employees in the rural areas receive better benefits in terms of accommodation. The provision of medical care is about the same nationwide and is legislated according to the law, which do not

come under the law, other types of welfare are provided according to company policy. This survey indicates that employers in Greater Bangkok prefer to provide welfare services and incentives while employer in rural areas prefer to provide lodging to their workers.

The data in Table 2.10 shows ratio of benefits received by permanent and temporary workers, however, this data is now rather obsolete although it does provide an overall picture of difference in benefits provided by region and size of industry. In small-scale industries 40-50% of the workers receive lodging benefits and about 30-45% receive food. These workers tend to stay with their employers but they lack independence.

A study conducted by Pradit Charsombut and Chucheep Pipatsithee (1985: 84) reported that although rural workers receive lower wages than those in Bangkok, they can save more money. Also, workers in the food processing industries, who earn less than employees in the engineering industries, can manage their money better than those in industrial sector. One reason is that these workers receive a higher ratio of benefits in terms of food and lodging.

In the Northeast, although industrial workers receive low wages, 52% of them are giving lodging benefits and 45% receive food. Unskilled workers tend to prefer this type of benefit.

2.4 DIFFERENCE OF WAGE AND INCOME

As discussed earlier, wages in the rural market vary widely. However, this survey wishes to stress that wages and income in the rural industrial sector are generally low when compared to other sectors, and differ as to region, types of employee and characteristics of labor.

2.4.1 Difference of Wages between Industry and Other Sectors

To compare wages in terms of money earned from industry to other sectors, data was taken from two sources, namely; a wage survey report

issued by the Department of Labor (Table 2.8) and; the National Statistical Office (Table 2.10). Both sources indicate that the average industrial wage is relatively low when compared to the wages in other economic sectors. Only certain agricultural workers and those in the service sector in some areas receive lower wages. In the South, North, and Bangkok Metropolis, the average wage in the industrial sector is lower than that in other economic sectors. But in the Northeast, the Central region and the five provinces surrounding of Bangkok, the average industrial wage is slightly higher than those received in commerce, the service and transport sectors.

In 1987, a labor survey by the National Statistics Office during the rainy season, came to the same conclusions that the average monthly wages of industrial workers are lower than those in other enterprises, other than agriculture (see Table 2.10), whether they be urban or rural industrial workers. Compared to other types of workers with the exception of agricultural workers in the same locality and of the same sex, industrial workers receive less wages.

When comparing industrial wages to agricultural wages, although the average wage for industrial workers is higher the difference also depends on the region and location. In general, in the Northeast and the North, where there is a large agricultural labor force, agricultural wages are lower than industrial wages but in the Central region and the South, where there is a relatively small agricultural labor force, the difference between the wages of the two sectors decreases, especially in the towns. The data shown in Table 2.10 does not support the premise that the overall average agricultural wages are in fact lower than industrial wages.

If we further examine the wages received in certain types of agriculture, such as sugar-cane plantations in the Central region, (Kosit Panpiamrat et al., 1983) and in the livestock-raising, fishery and sugar-cane plantations (Pradit Charsombut et al., 1986) the average wages received hardly differ from those received by unskilled labor in industry.

2.4.2 Difference of Wages in Terms of Occupation

Wages and determination of wages vary according to occupation, and whether they are paid monthly or daily. On the average, the wages of those in administration, general affairs, and specialized work tend to be higher than those in commerce, transportation, production processes and agriculture. Wage rates in the first group tend to be paid monthly rather than daily.

Table 2.11 shows average monthly wages of workers in different occupations. Compared to the average wages throughout the country, we find that average monthly wages of those in production processes, agriculture and service are very nearly the same, but at a very low rate, about 62% and 23%, of those received by workers in professional and management areas respectively. In general, people whose occupation involves business administration, management, and general affairs, professional work , academics and clerical work are better educated than those who work in other occupations. Besides, working in business administration, the management must have experience, unlike those whose occupation involves services and in the transport sector. Workers in production processes and agricultural work are less educated. The wage rates for the first group are higher than those of the second, probably largely due to education and experience.

In the region, although average wages of people in administration, management and clerical services are higher than those in the service, transport and production sectors, the difference between them are less than in Bangkok. It may be that in rural regions the demand for workers in all occupations is less than that in Bangkok, thus, the income gap is not so wide.

2.4.3 Difference of Wages in Industrial Sector

In the industrial sector, the wages and average income of employees may vary by region, type and size of the industry, as well as type and description of labor.

1. Regional wages: Data in Tables 2.8, 2.9. and 2.10 indicated that industrial workers in Bangkok receive wages and income on the average higher than those in other regions. Next, in terms of wages are workers in five provinces surrounding Bangkok and employees in the central region. In the North and the Northeast average wages tend to be lower than in other regions. Urban industrial workers earn higher wages than their rural counterparts (see Table 2.10). By comparing the labor market structure in Bangkok and other urban areas the rural areas, can be seen that in Bangkok and its surrounding provinces or in other municipal areas where non-agricultural activities predominate wages are higher for industrial workers. However in the rural labor market, where there is a large agricultural industry, industrial wages tend to be lower. This indicates that industrial wages differ according to the labor market conditions and structure.

2. Wages and income are different according to types of employees: Data in Table 2.9 indicates that regular monthly-paid workers earn higher incomes than daily-paid and contractual workers. These differences are found throughout the country. The average wages of daily-paid workers are higher than contractual workers but the difference is less. In the Central region, the Northeast and the South, the average wages of daily-paid workers are not noticeably higher than the average wages of contractual workers because of certain skills, such as weaving in Northeast, where highly skilled weavers can earn good wages (Charsombut, 1983).

3. Wage differences of each enterprise: In general, the average wages paid to those working in large industrial concerns are higher than those in the medium and small ones. A wage survey conducted by the Bank of Thailand and the Department of Labor (1983: Table 6.1) indicates those who work in that small industries with fewer than 50 workers, and medium industries with between 50 to 299 workers, earn an average wages at about 86% and 92% of average wages of those in large industries with 300 workers or more. This difference in wages according to size of industry are the same in Bangkok and the rural areas. The data also

indicates that in small industries in the informal sector, the average wages of workers at all levels are lower than those in formal industries.

4. Wages according to sex : In general, the average wages earned by men are higher than those of woman. Data in table 2.10 indicates that males in both urban and rural industries receive higher wages. On average, females receive about 72% of male wages.

2.5 UNSKILLED LABOR WAGES AND MINIMUM WAGES

The wage rates discussed earlier were applied to all levels skills. In general, skilled or experienced workers receive higher average wages than their unskilled counterparts. This section will deal only with the wages of the large majority of industrial unskilled labor. The wages received by unskilled labor and the minimum wage rate will also be compared. The term unskilled labor has been applied to those industrial workers who have few qualifications and experience. Most of them are primary school graduates, have had little or no industrial experience and tend to come from agricultural sector.

2.5.1 Wage Rates of Unskilled Labor

The average wages of industrial unskilled workers varies according to regions and types of work. The wages for unskilled labor in Bangkok are higher than those in the regions and wages in the Central region tend to be higher than those in the North and the Northeast. The difference in the average wages for unskilled labor are the same as the differences in the average labor wages for all levels of skills, as discussed earlier.

Data in Table 2.12 indicates that in 1986 daily wages in terms of money earned by industrial unskilled workers were 73 baht in Central region, 68 baht in the South, and 56 and 57 baht in the North and the Northeast, or 86.9%, 81.0%, 66.7% and 67.9%, respectively of rate

earned for the same type work in Bangkok. If we consider the real wage, which is the wage rate in terms of money adjusted by living cost index, the same regional differences will be found. However, the difference between the real wage rate in the rural industrial sector and in Bangkok is less in terms of money. In this case the real wage rates in Central, Southern, Northern and Northeastern regions accounted for 93.4%,87.1%,72.1% and 71.8%, respectively of those in Bangkok. This figure indicates that in terms of real wages there is very little difference nationwide.

The wage rates for unskilled industrial workers differ according to the the type of work as shown in a wage survey made by the Bank of Thailand and the Department of Labor (1983; Table 2.6). As of 1986 , unskilled workers paid on a monthly basis received higher wages than other types of unskilled labor. Nationwide these workers earned monthly average wages of 1,837 baht, while daily-paid workers earned 1,602 baht per month and temporary workers and contractual workers earned on average 1,460 baht and 1,643 baht per month, respectively. In the Northeast and the North, these unskilled, temporary workers' received the lowest wages of about 1,360 baht per month.

Comparing the average wages of industrial unskilled workers to cost of living expenses per person in towns, as of 1986, the unskilled urban laborers in the North and the Northeast earned on average an income lower than expenses incurred or 81.1% and 98.8% per person, respectively. In the Central region and the South unskilled labor earns more than expenses. However, if we consider this aspect in more detail, a wage survey conducted by the Department of Labor and the Bank of Thailand reported that unskilled employees on monthly wages earned more than the average cost of living. Other types of unskilled employees in rural industries earned less. This implies that, if unskilled laborer working in towns only receive their wages from one source,their standard of living will suffer.

2.5.2 Minimum Wage Rate Determination

The minimum wage rate is set by law. The government authorizes the Ministry of Interior to set up a tripartite committee, of employers, employees and government representatives to determine minimum wages for unskilled labor in the industrial, commercial and service sectors having one employee or more. The law has been in effect since 1973. The rates differ according to locality. In Bangkok minimum wage rates are set higher than in the rural areas. The minimum wage rate is determined by taking many factors into consideration such as economic conditions, living standards, investments, profits and the socioeconomic situation.

Between 1977-1983, the minimum wage has been adjusted annually due to high inflation and generally low wages. Between 1984-1989, there have been four rate adjustments. In some years no adjustments were due to economic recession during that period. Minimum wage rates in Bangkok have risen from 28 baht daily in 1977 to 66 baht per day in 1983, 70 baht in 1986, and 78 baht in 1989. In the regions, wages were set lower than in Bangkok. In 1982, the regional minimum wage was 52 baht per day rising to 59 baht in 1986. In the provinces where there is a high industrial output, such as Ranong, Phangnga, Phuket, Chon Buri, Saraburi, Nakhon Ratchasima and Chiang Mai, the minimum wage rate is higher than other provinces. Whenever a rate adjustment has been made for Bangkok, the nominal wage rates were also changed, in other provinces.

Although the data in Table 2.12 indicates that the nominal minimum wages in Bangkok, is higher than rural regions, however, in real terms there is very little difference between Bangkok and the regions. In 1986 real minimum wages in the provinces, on average, were about 90% of the real minimum wage in Bangkok, whereas the regional nominal minimum wage was about 84% of the rate in Bangkok. In regions where the minimum wage rates are increased by the same value as those Bangkok, the real wage value is either the same or higher.

In the Northeast and the North before 1981, minimum wage rates had been lower than other regions. Since 1981 these two regions (except

certain provinces), minimum wage rates have been the same as in the Central regions and the South. Since the North and the Northeast tend to have surplus labor and their per capita income is relatively lower than the rest of the country, the setting of minimum wage rate at such high rates may be harmful to these regions.

2.5.3 Difference of Market Wages and Minimum Wages

Table 2.13 shows the ratio of the set minimum wage rates compared to the average market rate earned by industrial unskilled workers. Although the data lack continuity, it clearly shows that minimum wages in Bangkok, the Central region and the South are lower than the average market rate which is earned by unskilled industrial workers. The setting of minimum wage in these three regions has little effect since industry pays higher average wages than those stipulated by law. It is therefore not surprising that a survey made by the Department of Labor and the Bank of Thailand reports that in these regions, the number of unskilled workers who earn below the minimum wage are few.

On the other hand, in the Northeast and the North, minimum wage rates fixed by the committee since 1981 have been higher than average market rate. In the Northeast, particularly, the difference between the minimum wage rate and market rate fluctuates during the year, however in 1985 and 1986, it can be clearly seen that minimum wage rate was consistently higher than market rate, since the latter is always determined by labor supply and demand. Therefore, the minimum wage rate policy does not take into account the natural market mechanisms and may create burden for some industrial firms. In these two regions, a high proportion of unskilled workers earn less than minimum rate. (Bank of Thailand and Department of Labor; 1983)

2.5.4 Trend of Wage Rate

The average market wages of unskilled labor has tended to increase in all regions (see Table 2.15). However, if we consider the nominal wages during 1980-1986, industrial unskilled workers' market wage rate

in the Central region increased on the average by 12.8% per year and is the highest increase nationwide. The rest of the country has increased rates at close to that level. From the aspect of actual wages, the Central region also enjoys a higher wage than in every other region of an increase of about 6.3% per year. In the North, the Northeast and the South, actual wages have been close to the wage rate increase. But, in Bangkok, the real wage increase is the lowest at about 2.15%

It should be noted that while the average market wage rate has risen equally throughout the country, minimum wages in the North and the Northeast have increased more in nominal terms in these two regions wages rose by an average of 12.1% per year, while market wage rate rose at an average of 11% per year; which has caused an increase in the ratio between minimum wage and average minimum wages (see Table 2.13). On the contrary, in the Central region and Bangkok, although the average market wage has increased significantly, the set minimum wage is the lowest, so the ratio of minimum wage against average market wage has decreased continuously in these areas. This data indicates that the minimum wage rate in Bangkok and the Central region has not kept up with the cost of living, whereas in the North and the Northeast, it has been over compensated. Details of this bias concerning minimum wage rate policy are included in report by Chesada Loha-unchit (1989).

In the North and the Northeast, minimum wages have also increased faster than the growth of industry. Data in Table 2.15 indicates that while average minimum wage increased every year, the value of regional industrial product per head in these regions has fluctuated. Between 1981 to 1987, in the Northeastern region the industrial product value only increased in 1984, and in the North only in 1983 and 1984, as against the steady growth seen during this period in Bangkok and the Central regions.

An analysis of the interventions in the unskilled labor market by the committee determining minimum wage rates showed that these decisions were not in line with reality and especially in the North and Northeast regions the minimum wages are distorted and higher than they should be.

2.6 INFLUENCE OF LABOR DEMAND AND SUPPLY ON WAGE RATES

An analysis of the industrial wage structure may be summed up in two main issues. First, wages in the regional industries, especially those of unskilled workers in the Northeast and the North are the lowest, but the rates vary as to type of industry, occupation, sex and region. Second, real average wages in Bangkok are slightly higher than in the regions but the increases are at a lower rate than in all regions. In the North and the Northeast, market wage rates and minimum wage rates are lower than other regions but they are increasing at a faster rate than in the rest of the country. These regional variations may be explained in terms of labor supply and demand.

2.6.1 Labor Supply

The term labor supply here applies to the population aged 11 years upwards, who wish to and can work, whether he or she is presently employed or not. According to a survey made by National Statistical Office in 1987, there were 29.55 million workers in Thailand, 53.5% of whom are male and 46.5% female. During the past 10 years, the labor force continuously increased by between 2.5% to 3.0% per year, adding about 800,000 persons to the labor market annually. Squire (1981) explains that such an increase, especially in developing countries, can cause industrial and other business wage rates to rise only slowly. It is expected that Thailand's labor force will increase at high rate over long period time allowing wages to be set at a low rate and only increase slowly. Although the population growth rate has decreased since 5th National Economic and Social Plan (1981-1986) the labor force has continued increase from 27.8 million in 1986 to 38.4 million people in 2001. (NESDB, estimates 1988). It is also forecast that a great number of these workers will transfer from agriculture to industry and other sectors of the economy.

Data shown in Table 2.15 indicates that in the North and the Northeast, has the largest labor force and the increase rate is high. Discussed earlier, manpower in these two regions face severe

unemployment problems. Under these circumstances, there is an excess supply of labor causing wages to be low, whereas in Bangkok, the Central region and the South, number and ratio of labor force to the market demands are lower and the unemployment rate is also low with correspondingly high wages.

2.6.2 Labor Migration

Migration of labor is an adjuster in the labor market which may affect the wage rates. In Thailand, labor migration may be seen as migration between the regions and provinces; migration from rural to urban areas, taking employment abroad, or as seasonal and permanent migration, etc.

According to the population census of 1970, between 1965-1970 430,000 people migrated. Only in Bangkok-Thonburi area, was there net in-migration while the Northeast had a net out-migration of 47,600 persons. The census as of 1980 found that between 1975-1980, 1.57 million people migrated. Only Bangkok had net-incoming of 266,531 persons, however it also had the highest outbound migrants at about 196,522 persons. Between 1980-1985, the Human Resources Planning Division of the National Economic and Social Development Board (Table 6.1) estimated that Bangkok immigrants to totaled 323,000 people of which about 236,000 came from the Northeast, 19,000 from the North and 9,000 from the South. The data also indicates that this population and labor force migrating into Bangkok, has tended to flood the labor market caused wage rates to increase slowly.

Several reports (United Nations, 1988; K. Panpiemras and S. Krunsuansombat, year unknown, Pradit Charsombut, 1975 and Direk Patamasiri, 1989) have indicated that there were many socioeconomic factors influencing labor migration. By far the most important factor is job opportunities and income. A survey conducted by National Statistic Office indicates that about 47% of all migrants into Bangkok as of 1981 and 1982 come because jobless during the dry season and a further 20%

because the wish to change their work or occupation. The remaining one out of three migrated due to other reasons (United Nations, 1988: 34).

The migrants coming into towns are mostly young, able-bodied people. A report on census and households conducted by National Statistics Office indicated that the population of Bangkok increases at an average of 6.3% per year. Such great numbers naturally depressed the real wages of unskilled workers noticeably in 1981-1982 (see Table 2.13). This type of phenomenon has also occurred in several other countries such as Korea, where this influx of rural people distorted wage rates and became an important factor in the country's subsequent industrial growth. (United Nations, 1980:94). In several countries in Africa, Oberai (1988:17) reported that from 1970-1985 a great number of workers migrated into town, thereby decreasing the real wages rates.

More recently, real average wages of unskilled industrial workers in Bangkok and the Central region has tended to rise due partly to an increase in quality and productivity since migrants are often more qualified and work harder than local labor. As seen in Japan, Korea and Taiwan, Harry Oshima (1983: 595) migrants, apart from being young, are, on average better educated and a significant numbers of these joined the industrial sector, thus increasing productivity and wages.

In the Northeast and the North, although more people migrated than to other regions, this migration had very little affect on local wages. Wages, in terms of money and real wages, of unskilled workers in these regions are lower than the average wage as there is an excess supply of labor supply. In the Central region and the South, if the numbers migrating continues to rise, it is expected that local labor will become in short supply and that the wage rates may increase. Such long-term problems may occur in the North before the Northeast since the potential labor force in the North is much smaller and birth rate has been at a very low level for several years now.

2.6.3 Education Level of Industrial Workers

The labor supply may also be examined in terms of quality. Table 2.16 shows the ratio of employed persons in the industrial sector in terms of their educational level. In 1987, 78.6% of the workforce in the industrial sector graduated from primary school or lower, only 13.4% were graduates from middle school. This is a very low percentage compared to other industrial countries in both Asia and the rest of the world.

Rural industrial workers are even less educated than their counterparts in Bangkok. Only 83.6% of rural workers had attended primary schools, whereas 65.3% of workers in Bangkok are primary school graduates. Compared to 16.4% of the rural workers, 34.6% of workers in Bangkok had attended middle school or higher level. This difference between the rural areas educational and industrial workers Bangkok is in line with difference in wages indicating that industrial labor wages partly dependent on educational level.

2.6.4 Labor Demand

Labor demand is one of the most important factors depressing industrial wages and allowing them to increase only slowly. As discussed earlier, rural industry is a relatively small sector of the economy and its demands for labor and employment is low, while there is an abundant supply of unskilled labor. This, uncertainty of labor demand coupled with seasonal production and the employment of labor on a temporary and daily wage basis, may all be contributing factors for low levels of production and wages.

In terms of region, the concentration of various sizes of the industry, is in line with difference in industrial wages offered in each region. According to statistics gathered by Industrial Works Department, Ministry of Industry, in 1987, there were 44,897 industrial plants (except rice-mills) registered with the Department of Industrial Works; 59.8% of which were in Bangkok, 14.9% in the Central region, 8.6% in the

North, 10.1% in the Northeast and 6.6% in the South. If we consider average value added of the industry between 1981-1987, data on income collected by the National Social and Economic Development Board shows that value added figures for the industry in the Central region, the Northeast, the North and South amounted to 13.9%, 5.5%, 4.0%, and 2.6%, respectively. The concentration of factories and the value of the products in Bangkok and the Central region are in keeping with employment levels and average industrial wages in these regions. Production and the demand for labor in industrial sector are higher here when compared to other regions because industrial wages here tend to be higher also. well.

In terms of the regions, we find that the growth rate of industrial value added and the growth rate of industrial employment in the Central region is at the level of 7%-8% per year. This rate is high when compared to the rate in other areas. This high growth rate corresponds to the wage rate growth of unskilled laborers in this region (Table 2.15). Therefore, the expansion of production and employment in the Central region directly affects the wage rate and the growth of wage rate in this region.

2.7 SUMMARY

Industrial labor market in the rural areas is relatively small but it is the third in terms of importance next to agriculture and commerce. The industrial labor market is related to the agricultural labor market concerning demand and supply. Part of industrial labor force is made up of migrants from the agricultural sector, and thereby supplying an abundant unskilled industrial labor force. Because agricultural output is affected by the seasons, regional industrial labor force increases during dry season and decreases during rainy season.

Regional industrial work is mostly concerned with self employment in small-scale industries. Employees often work on a daily rate or as contractual workers, leading to job uncertainty and low instability.

Such features indicate that there is a certain amount of independence exercised in the labor market where workers often migrate between industry and agriculture. The wages and income of industrial employees are still low. Unskilled labor wages in the North and Northeast are at lower level than in other regions partly due to the abundance of unskilled labor, which has continued to increase for several years, while labor demand is slow and limited. However, industrial labor wages differ as to regions and types of employment, occupation, level of education, sex, and size and type of the industry.

Wages, in terms of money, in Bangkok are higher than in the rural areas but the real wage rates of unskilled labor between the two markets differ only slightly. Migration of the labor force to Bangkok does not increase wages in the rural market, it also slows down wage increases in Bangkok. However, the imposition of regional minimum rates, especially in the North and the Northeast, lead to wages which are higher than market wage rates. Minimum wages in these two regions increased at a faster pace than market wages and regional productivity growth. This may lead to the conclusion that minimum wage scale is not appropriate in the Northern regions.

Although the findings indicate that salaries of managers, administrators and professionals are considerably higher than for other workers and occupations, this study could not arrive at any conclusion concerning the relationship between skilled labor and other labor problems. This analysis would require further detailed studies.

Table 2.1
Total Labor Force and Employed Persons Classified by Municipal and Non-Municipal Areas and by Region, 1987

1,000 Persons

Region	Total Labor Force		Employed Persons	
	Municipal Area	Non-Municipal Area	Municipal Area	Non-Municipal Area
Whole Kingdom	4,697 (100.00)	24,855 (100.00)	4,429 (100.00)	23,210 (100.00)
Bangkok Metropolis	2,872 (61.15)	-	2,701 (60.98)	-
Central	619 (13.18)	5,693 (22.90)	591 (13.34)	5,461 (23.53)
North	440 (9.37)	5,801 (23.34)	413 (9.32)	5,403 (23.28)
Northeast	368 (7.83)	10,264 (41.30)	344 (7.77)	9,345 (40.26)
South	398 (8.47)	3,097 (12.46)	380 (8.58)	3,001 (12.93)

Note: Percentage in parentheses

Source: National Statistical Office, Report of the Labor Force Survey: Whole Kingdom (Round 3) August, 1987, Table 1.

Table 2.2
Employed Persons: 1987

1,000 Persons

Economic Sector	Whole Kingdom	Bangkok Metropolis	Rest of Kingdom
Dry Season (Round 1)			
All Sector	25187	2659	22528
	(100.0)	(100.0)	(100.0)
Agriculture	14264	77	14187
	(56.6)	(2.9)	(63.0)
Manufacturing	2945	671	2274
	(11.7)	(25.2)	(10.1)
Commerce	3197	787	2410
	(12.7)	(29.6)	(10.7)
Services	3147	767	2380
	(12.5)	(28.8)	(10.6)
Others	1634	357	1277
	(6.5)	(13.4)	(5.7)
Rainy Season (Round 3)			
All Sector	27638	2700	24938
	(100.0)	(100.0)	(100.0)
Agriculture	17789	80	17709
	(64.4)	(3.0)	(71.0)
Manufacturing	2438	688	1750
	(8.8)	(25.5)	(7.0)
Commerce	2996	795	2201
	(10.8)	(29.4)	(8.8)
Services	2947	775	2172
	(10.7)	(28.7)	(8.7)
Others	1468	363	1106
	(5.3)	(13.4)	(4.4)

Note: Percentage in parentheses

Source: National Statistical Office, Report of the Labor Force Survey: The Whole Kingdom, Round 1 (February) and Round 3 (August), 1987, Table 6.

Table 2.3
Employment in Manufacturing, Its Proportion and Growth Rate
(July - September) by Region: 1980 - 1987

Year	Whole Kingdom	Bangkok Metropolis	Central 1/	North	North east	South
Number (1,000 persons)						
1980	1,788.9	629.3	539.5	178.3	221.6	220.0
1981	1,741.8	619.3	555.7	201.9	181.1	183.3
1982	2,006.7	635.2	643.7	318.5	241.2	167.6
1983	1,842.4	668.6	577.3	248.2	192.7	155.3
1984	1,985.7	644.4	634.3	313.7	208.6	184.4
1985	2,066.7	661.9	695.0	305.2	255.5	148.7
1986	2,068.8	670.7	736.1	280.5	213.4	167.7
1987	2,437.8	687.8	881.4	353.3	241.5	273.1
Proportion of Total (%)						
1980	7.9	27.0	12.2	3.7	2.7	8.3
1981	7.1	25.6	11.3	3.7	2.0	6.7
1982	8.1	26.1	13.0	5.8	2.7	5.8
1983	7.3	26.7	11.6	4.5	2.1	5.4
1984	7.6	25.4	12.5	5.3	2.2	6.0
1985	8.0	26.0	13.2	5.3	2.8	4.9
1986	7.8	25.2	13.7	4.8	2.2	5.3
1987	8.8	25.5	14.6	6.1	2.5	8.1
Growth Rate (%)						
1981	-2.6	-1.6	3.0	13.2	-18.3	-16.7
1982	15.2	2.6	15.8	57.8	33.2	-8.6
1983	-8.2	5.3	-10.3	-22.1	-20.1	-7.3
1984	7.8	-3.6	9.9	26.4	8.3	18.7
1985	4.1	2.7	9.6	-2.7	22.5	-19.4
1986	0.1	1.3	5.9	-8.1	-16.5	12.8
1987	17.8	2.5	19.7	26.0	13.2	62.9
Average	4.9	1.3	7.7	12.9	3.2	6.1

Note: 1/ Including 5 Provinces Surrounding Bangkok Metropolis.

Source: National Statistical Office, Report of the Labor Force Survey: Whole Kingdom (Round 3) August, 1987, Table 1.

Table 2.4
Employed Persons Classified by Occupation
in Rainy Season in 1987

1,000 Persons

Occupation of Worker	Whole Kingdom	Bangkok Metropolis	Rest of Kingdom
Professional and Technical Workers	912 (3.3)	217 (8.0)	695 (2.8)
Admin. and Managerial Workers	419 (1.5)	169 (6.2)	251 (1.0)
Clerical Workers	762 (2.8)	336 (12.4)	426 (1.7)
Salespersons	2,800 (10.1)	605 (22.4)	2,195 (8.8)
Farmers and Miners	17,818 (64.5)	87 (3.2)	17,732 (71.1)
Transportation Workers	737 (2.7)	197 (7.3)	540 (2.2)
Craftsmen and Production Workers	3,194 (11.6)	746 (27.6)	2,448 (9.8)
Workers in Service Sector	989 (3.6)	336 (12.5)	653 (2.6)
Unclassified	8 (0.0)	8 (0.3)	-
Total	27638 (100.0)	2700 (100.0)	24938 (100.0)

Note: Percentage in parentheses

Source: National Statistical Office, Report of the Labor Force Survey: The Whole Kingdom, Round 3 (August), 1987, Table 7.

Table 2.5
Employed Persons Classified by Work Status: 1987

1,000 Persons

Work Status	Bangkok Metropolis		Rest of Kingdom	
	All Sectors	Manufact-uring	All Sectors	Manufact-uring
Dry Season (Round 1)				
Total	2,660	671	22,528	2,274
	(100.0)	(100.0)	(100.0)	(100.0)
Employer	99	47	264	61
	(3.7)	(7.0)	(1.2)	(2.7)
Gov't Employee	421	13	1576	42
	(15.8)	(1.9)	(7.0)	(1.8)
Private Employee	1,380	511	5,004	1,164
	(51.9)	(76.2)	(22.2)	(51.2)
Own Account Worker	494	61	8,314	666
	(18.6)	(9.2)	(36.9)	(29.3)
Unpaid Family Worker	266	39	7,371	341
	(10.0)	(5.8)	(32.7)	(15.0)
Rainy Season (Round 3)				
Total	2,700	687	24,938	1,750
	(100.0)	(100.0)	(100.0)	(100.0)
Employer	117	45	247	36
	(4.3)	(6.6)	(1.0)	(2.1)
Gov't Employee	427	16	1,506	32
	(15.8)	(2.3)	(6.0)	(1.8)
Private Employee	1,423	536	4,324	1,053
	(52.7)	(77.9)	(17.3)	(60.2)
Own Account Worker	475	54	8,183	417
	(17.6)	(7.8)	(32.8)	(23.8)
Unpaid Family Worker	258	37	10,680	213
	(9.6)	(5.4)	(42.8)	(12.2)

Note: Percentage in parentheses

Source: National Statistical Office, Report of the Labor Force Survey: The Whole Kingdom, Round 1 (February) and Round 3 (August), 1987, Table 8.

Table 2.6
Distribution of Workers Under Various Terms of Employment in Manufacturing Sector: 1982

Percent

Region/Size	Terms of Employment			
	Salaried	Regular	Temporary	Contract
Greater Bangkok	43	51	4	2
Small 1/	49	38	6	7
Medium 2/	42	51	3	4
Large 3/	44	51	4	1
Central	27	40	26	7
Small	41	30	14	15
Medium	32	43	15	10
Large	23	41	32	4
North	32	32	32	4
Small	43	32	17	8
Medium	32	33	28	7
Large	28	31	41	0
North-East	26	51	15	8
Small	44	28	15	13
Medium	30	42	20	8
Large	19	61	14	6
South	22	53	19	6
Small	47	31	14	8
Medium	23	63	6	8
Large	10	50	39	1

Notes: 1/ employment with 1 - 49 workers
2/ employment with 50 - 299 workers
3/ employment with 300 + workers

Source: Bank of Thailand and Department of Labor, Wage Structure in Thailand 1982/1983. November 1983, Tables 3.1-2.4.

Table 2.7
Open and Seasonal Unemployment in 1983 and 1987

	Open Unemployment		Seasonal Unemployment	
	OU1	OU2	SU1	SU2
1983				
Whole Kingdom	4.58	4.77	7.95	8.63
Bangkok Metropolis	3.75	3.76	0.37	0.37
Central	4.44	4.55	4.50	4.71
North	4.30	4.49	8.57	9.37
Northeast	5.90	6.34	14.73	17.27
South	2.03	2.04	0.18	0.18
1987				
Whole Kingdom	6.25	6.42	3.65	3.79
Bangkok Metropolis	5.97	5.97	0.20	0.20
Central	4.46	4.54	1.86	1.89
North	5.21	5.41	3.91	4.07
Northeast	9.33	9.71	6.16	6.52
South	2.80	2.83	2.09	2.13

Notes: OU1 = Average Number of Unemployed Persons as Percentage of Average Number of Total Labor Force.
OU2 = Average Number of Unemployed Persons as Percentage of Average Number of Current Labor Force.
SU1 = Number of Seasonally Inactive Labor Force as Percentage of Number of Total Labor Force in the Dry Season.
SU2 = Number of Seasonally Inactive Labor Force as Percentage Labor Force in the Dry Season.

Source: Office of National Statistics, Report of The Labor Force Survey: Whole Kingdom (Round 1, 2 in 1983, and Round 1, 2 and 3 in 1987), Calculated from Table 1.

Table 2.8
Average Monthly Earnings from Wages of Non-Agricultural Workers Classified by Industry and Region in 1986

Baht

Industry	Region						
	Bangkok	Environ of BKK	Central	North	North east	South	Whole Kingdom
Mining	n.a.	2,053	2,411	2,352	1,857	2,556	2,487
Manufacturing	3,141	2,669	2,216	1,687	1,919	2,055	2,632
Electricity & Gas	5,950	6,033	n.a.	n.a.	n.a.	n.a.	5,998
Construction	3,678	2,839	2,647	2,487	2,226	2,740	3,195
Trade & Restaurant	3,817	2,467	2,069	2,253	1,844	2,231	3,168
Transportation	3,528	2,464	1,837	2,258	1,878	2,697	3,140
Banking & Insurance	6,144	3,520	3,995	3,935	3,545	4,750	5,998
Service	3,295	2,435	2,384	2,514	1,955	2,272	2,764

Source: Labor Department and Bank of Thailand, Survey Report on Wages; Income and Working Hours, 1986 (No.20/1988), Table 2.0-2.6.

Table 2.9
Average Monthly Earnings from Wages of Manufacturing Workers Classified by Type and Region in 1986

Baht

Region	Type of Workers		
	Salaried Workers	Daily Workers	Contract Workers
Bangkok	4,035	2,161	1,926
Inner Ring	3,837	2,064	2,073
Central	2,714	1,861	1,852
North	2,614	1,398	1,195
Northeast	2,292	1,378	1,793
South	2,802	1,674	1,773
Whole Kingdom	3,596	1,982	1,709

Note: Assuming 26 working days per month

Source: Labor Department and Bank of Thailand. Survey Report on Wages and Working Hours, 1986 (No.20/1988), Table 2.0.

Table 2.10
Average Wage of Private Employees Classified by Sex, Industry, Municipal and Non-Municipal Areas and Region: 1987

Baht per Month

Industry/Sex		Bangkok	Central	North	North east	South
Municipal Areas						
Agriculture	:M	1,824	2,348	1,060	1,787	5,519
	:F	958	1,165	962	665	873
Mining	:M	8,031	2,656	7,000	1,818	2,480
	:F	7,200	n.a.	2,712	n.a.	n.a.
Manufacturing	:M	3,353	2,107	1,659	1,600	2,093
	:F	2,292	1,691	1,266	1,170	1,350
Construction	:M	3,126	2,183	2,185	1,809	3,065
	:F	2,149	1,811	1,303	1,555	1,560
Electricity	:M	n.a.	n.a.	n.a.	n.a.	n.a.
	:F	8,615	2,200	n.a.	n.a.	n.a.
Commerce	:M	4,138	2,421	3,846	2,747	2,267
	:F	3,311	2,206	1,741	1,904	1,652
Transportation	:M	5,198	2,140	1,819	1,679	1,798
	:F	4,764	2,518	1,140	567	1,363
Services	:M	2,940	1,951	3,014	1,544	2,130
	:F	1,607	1,300	1,348	959	1,741
Non - Municipal Areas						
Agriculture	:M	-	1,301	982	890	2,004
	:F	-	1,118	863	866	1,340
Mining	:M	-	1,774	2,100	2,459	2,003
	:F	-	1,094	1,040	n.a.	2,971
Manufacturing	:M	-	2,173	1,370	1,233	2,476
	:F	-	1,666	801	1,008	1,733
Construction	:M	-	2,201	1,716	1,771	2,124
	:F	-	2,144	1,225	1,029	1,557
Electricity	:M	-	n.a.	n.a.	n.a.	1,820
	:F	-	n.a.	n.a.	n.a.	n.a.
Commerce	:M	-	1,978	1,192	1,586	1,460
	:F	-	1,835	960	1,010	1,334
Transportation	:M	-	1,786	1,528	1,731	1,827
	:F	-	1,435	513	n.a.	n.a.
Services	:M	-	2,076	1,766	958	2,637
	:F	-	1,057	784	597	1,750

Source: National Statistical Office, Report of the Labor Force Survey: Whole Kingdom (Round 3), August 1987, Table 15A.

Table 2.11
Average Salary of Workers Classified by Occupation and Region in 1986

Region	Type of Workers by Occupation						
	Profess-ional	Adminis-trative	Clerical	Trade	Service	Agricul-ture	Produc-tion
Bangkok	4,962	12,888	4,827	4,239	2,748	2,849	3,123
Inner Ring	5,769	12,573	4,483	3,305	2,235	1,938	3,729
Central	2,954	8,055	2,886	2,564	1,727	1,857	2,294
North	3,487	6,165	2,535	2,236	1,572	2,629	2,368
Northeast	3,034	5,161	2,284	1,687	1,140	1,463	1,771
South	2,564	5,936	2,715	2,496	1,525	2,233	2,618
Whole Kingdom	4,294	11,479	4,349	3,638	2,217	2,839	3,006

Source: Labor Department and Bank of Thailand. Survey Report on Wages, Income and Working Hours, 1986 (No.20/1988), Table 3.0-3.6.

Table 2.12
Actual Wage (WR) and Minimum Average Daily Wage (MWR) Rate of Unskilled Workers by Region in 1979-1989

Baht per day

Region	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Greater Bangkok											
Actual WR	41.7	52.5	59.0	61.5	n.a.	n.a.	80.0	84.0	n.a.	n.a.	n.a.
Legal MWR	37.5	47.2	55.8	61.8	64.5	66.0	67.0	70.0	70.8	73.0	77.5
Real WR	32.1	33.7	33.4	33.0	n.a.	n.a.	40.0	41.2	n.a.	n.a.	n.a.
Real MWR	28.8	30.3	31.5	33.2	33.5	34.0	33.5	34.4	33.9	33.7	n.a.
Central											
Actual WR	31.3	45.4	50.5	52.0	n.a.	n.a.	64.8	73.0	n.a.	n.a.	n.a.
Legal MWR	30.5	40.2	48.2	52.0	53.0	56.0	56.8	59.0	59.5	61.0	64.5
Real WR	25.1	30.2	30.2	33.3	n.a.	n.a.	34.8	38.5	n.a.	n.a.	n.a.
Real MWR	24.4	26.8	28.9	29.7	29.2	30.6	30.5	31.1	30.5	29.9	n.a.
South											
Actual WR	33.7	48.3	50.2	57.0	n.a.	n.a.	66.3	68.0	n.a.	n.a.	n.a.
Legal MWR	30.5	40.2	48.2	52.0	53.0	56.0	56.8	59.0	59.5	61.0	64.5
Real WR	26.9	32.5	30.5	33.0	n.a.	n.a.	35.8	35.9	n.a.	n.a.	n.a.
Real MWR	24.4	27.1	29.4	30.1	29.7	30.6	30.6	31.2	30.8	30.4	n.a.
North											
Actual WR	27.3	40.2	45.0	52.0	n.a.	n.a.	55.9	56.0	n.a.	n.a.	n.a.
Legal MWR	27.5	37.2	46.0	52.0	53.0	56.0	56.8	59.0	59.5	61.0	64.5
Real WR	22.0	27.7	27.6	30.3	n.a.	n.a.	30.4	29.7	n.a.	n.a.	n.a.
Real MWR	22.2	25.6	28.3	30.3	29.4	30.8	30.8	31.1	30.8	30.3	n.a.
Northeast											
Actual WR	26.8	37.9	52.4	58.3	n.a.	n.a.	53.6	57.0	n.a.	n.a.	n.a.
Legal MWR	27.5	37.2	46.0	52.0	53.0	56.0	56.8	59.0	59.5	61.0	64.5
Real WR	21.7	25.3	31.0	32.7	n.a.	n.a.	28.2	29.6	n.a.	n.a.	n.a.
Real MWR	22.3	24.8	27.2	29.2	28.2	29.7	29.9	30.6	30.3	29.9	n.a.

Notes: Legal minimum wage of the region excluding Chiang Mai, Nakhon Ratchasima Saraburi, Ranong, Phangnga, and Phuket where the minimum wage rates were higher.
: Average Daily Wage Rates are adjusted to the Mid-year.
: Real Wage Rates are deflated by Consumer Price Indices.

Sources: 1. Nominal Minimum Wage Rate from Department of Labor, Ministry of of Interior.
2. Actual Wage Rate from Wage Structure Surveys jointly conducted by the Department of Labor and The Bank of Thailand.
3. Consumer Price Index from the Bank of Thailand, Monthly Bulletin, Various Issues.

Table 2.13
Average Daily Minimum Wage Rate as Percentage of Actual Wage Rate of Unskilled Workers: 1979-1986

Percent

	Greater Bangkok	Central	South	North	North east
1979	89.97	97.38	90.56	100.66	102.61
1980	89.90	88.58	83.37	92.57	98.23
1981	94.56	95.54	96.21	102.31	87.82
1982	100.47	89.01	91.23	100.15	89.18
1985	83.68	87.54	85.56	101.58	105.84
1986	83.33	80.82	86.76	105.36	103.51

Source: Table 2.12

Table 2.14
Annual Changes and Average Growth Rates of Unskilled Worker's Daily Wage Rates and of Manufacturing value Added (MVA) per Worker in Current Market Price, 1980-1989

Baht per day

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	Average
Greater Bangkok											
Actual WR	25.91	12.35	4.24	n.a.	n.a.	9.22	4.91	n.a.	n.a.	n.a.	10.53
Legal MWR	26.00	17.99	10.76	4.45	2.33	1.52	4.48	1.07	3.18	6.16	9.65
Real WR	4.99	-0.93	-1.08	n.a.	n.a.	6.63	3.11	n.a.	n.a.	n.a.	3.66
Real MWR	5.07	4.04	5.11	1.04	1.59	-1.63	2.68	-1.49	-0.53	n.a.	2.56
MVA per Worker	n.a.	n.a.	-1.95	8.38	17.16	-2.47	17.49	18.42	n.a.	n.a.	9.51
Central											
Actual WR	45.08	11.14	15.68	n.a.	n.a.	3.53	12.60	n.a.	n.a.	n.a.	12.85
Legal MWR	31.97	19.88	7.77	1.92	5.66	1.34	3.96	0.85	2.52	5.74	10.36
Real WR	20.74	-0.16	10.40	n.a.	n.a.	1.45	10.47	n.a.	n.a.	n.a.	6.31
Real MWR	9.83	7.69	2.85	-1.67	4.85	-0.40	1.99	-1.99	-1.75	n.a.	3.59
MVA per Worker	n.a.	n.a.	-12.39	12.58	10.92	-0.95	14.09	-21.63	n.a.	n.a.	0.43
South											
Actual WR	43.35	3.87	13.66	n.a.	n.a.	5.18	2.52	n.a.	n.a.	n.a.	10.56
Legal MWR	31.97	19.88	7.77	1.92	5.66	1.34	3.96	0.85	2.52	5.74	10.36
Real WR	20.69	-6.05	8.01	n.a.	n.a.	2.80	0.30	n.a.	n.a.	n.a.	4.21
Real MWR	11.11	8.43	2.41	-1.16	3.06	0.03	1.71	-1.14	-1.36	n.a.	3.66
MVA per Worker	n.a.	n.a.	-7.31	6.91	-16.03	26.23	-23.49	-32.97	n.a.	n.a.	-7.78
North											
Actual WR	47.29	11.73	15.43	n.a.	n.a.	2.47	0.23	n.a.	n.a.	n.a.	10.80
Legal MWR	35.45	23.49	13.04	1.92	5.66	1.34	3.96	0.85	2.52	5.74	12.13
Real WR	25.63	-0.14	9.62	n.a.	n.a.	0.08	-2.21	n.a.	n.a.	n.a.	4.36
Real MWR	15.53	10.37	7.31	-2.89	4.61	0.07	1.43	-1.35	-1.71	n.a.	5.21
MVA per Worker	n.a.	n.a.	-29.82	6.36	34.47	-2.14	-12.65	-3.37	n.a.	n.a.	-1.19
Northeast											
Actual WR	41.49	38.13	11.32	n.a.	n.a.	-2.75	6.30	n.a.	n.a.	n.a.	11.32
Legal MWR	35.45	23.49	13.04	1.92	5.66	1.34	3.96	0.85	2.52	5.74	12.13
Real WR	16.38	22.45	5.64	n.a.	n.a.	-4.80	4.65	n.a.	n.a.	n.a.	4.48
Real MWR	11.42	9.47	7.27	-3.49	5.55	0.54	2.35	-1.05	-1.34	n.a.	4.73
MVA per Worker	n.a.	n.a.	-11.16	-10.47	32.60	-9.39	-1.33	-17.96	n.a.	n.a.	-2.95

Source: Table 2.12

Table 2.15
Number and Proportion of the Labor Force by Region in the Rainy Season: 1977-1986

1,000 Persons

Year	Bangkok Metropolis	Central	North	Northeast	South
1977	1,980.0	4,318.8	4,435.4	7,416.9	2,325.5
	(9.7)	(21.1)	(21.7)	(36.2)	(11.4)
1978	2,196.9	4,463.1	4,801.2	7,958.5	2,475.1
	(10.0)	(20.4)	(21.9)	(36.3)	(11.3)
1979	2,268.1	4,249.7	4,848.8	7,598.4	2,454.5
	(10.6)	(19.8)	(22.6)	(35.5)	(11.5)
1980	2,414.1	4,483.6	4,899.7	8,255.5	2,675.0
	(10.6)	(19.7)	(21.6)	(36.3)	(11.8)
1981	2,496.1	4,957.2	5,429.6	8,959.9	2,736.4
	(10.2)	(20.2)	(22.1)	(36.5)	(11.1)
1982	2,614.3	5,132.4	5,689.0	9,284.2	3,028.8
	(10.2)	(19.9)	(22.1)	(36.1)	(11.8)
1983	2,611.4	5,173.1	5,622.0	9,499.9	2,942.5
	(10.1)	(20.0)	(21.7)	(36.8)	(11.4)
1984	2,643.6	5,234.5	5,974.2	9,734.2	3,114.0
	(9.9)	(19.6)	(22.4)	(36.5)	(11.7)
1985	2,674.2	5,464.2	5,984.8	9,813.8	3,178.1
	(9.9)	(20.2)	(22.1)	(36.2)	(11.7)
1986	2,795.9	5,633.8	6,042.6	10,100.6	3,262.9
	(10.0)	(20.2)	(21.7)	(36.3)	(11.7)
1987	2,872.5	6,311.9	6,240.9	10,631.9	3,494.9
	(9.7)	(21.4)	(21.1)	(36.0)	(11.8)

Note: Numbers in parentheses are percent of total.

Source: National Statistical Office, Report of the Labor Force Survey, Whole Kingdom Round 2 and Round 3, 1977-1987, Table 1.

Table 2.16
Employed Persons in Manufacturing Classified by Level of Education: 1987

1,000 Persons

Level of Education	Whole Kingdom	Bangkok Metropolis	Rest of Kingdom
Total	2436	687	1749
	(100.0)	(100.0)	(100.0)
No Education	103	15	88
	(4.2)	(2.1)	(5.0)
Less than Prathom 4	82	19	63
	(3.4)	(2.8)	(3.6)
Lower Elementary	1185	275	910
	(48.7)	(40.1)	(52.0)
Upper Elementary	543	140	403
	(22.3)	(20.3)	(23.0)
Lower Secondary	224	94	131
	(9.2)	(13.6)	(7.5)
Upper Secondary	102	33	69
	(4.2)	(4.7)	(4.0)
Vocational	92	41	51
	(3.8)	(6.0)	(2.9)
Degree	34	28	6
	(1.4)	(4.1)	(0.3)
Technical Vocational	38	24	14
	(1.6)	(3.5)	(0.8)
Teacher's College	13	5	8
	(0.5)	(0.8)	(0.4)
Short-Course & Others	21	13	8
	(0.7)	(2.0)	(0.5)

Note: Percentage in parentheses

Source: National Statistical Office, Report of the Labor Force Survey: The Whole Kingdom, Round 3 (August), 1987, Table 6.

CHAPTER 3

CHARACTERISTICS OF LABOR AND LABOR DEMAND IN REGIONAL INDUSTRIES

3.1 CHARACTERISTICS OF LABOR IN INDUSTRIAL SECTOR

3.1.1 Category of Employee

Besides collecting data from the Labor Department and the National Statistics Office, the study also used the data obtained from interviews with 756 industrial employees; 119 of which were located in the Greater Bangkok area and 637 in other regions. Of these employees, 19.5 % were managers, administrators, accountants, salesmen and transportation personnel, 33.2% were foremen and assistant foremen, 41.3% were laborer and 6% were miscellaneous workers.

The ratio of the category of employee was obtained from a stratified sampling of employees. These employees were classified into the categories mentioned above in order to study the types and behavior of each section. Since non-proportional sampling was used, the actual proportion of employees mentioned here probably differs from that classified by different kinds of employee.

In order to compare the data obtained from the interviews of employees with that of the majority employees, the researchers also questioned a further 870 employers in the regions and 119 in Bangkok metropolitan area.

3.1.2 Sex

Sixty-eight percent of the regional and 58.3% of the Metropolitan Bangkok labor force is male. The ratio of male labor to female labor is higher in the manufacturing and repairing of electrical appliances,

machines, vehicles, the metal industry, paper making and printing. Female labor dominates in the textile, garment and accessory industries.

3.1.3 Age

On average industrial employees nationwide are about 28 years old, of which 73% are between 15-35 years of age, which is considered to be the strong and energetic period of life.

Only 8% of the workforce in the regions and 5% in the Metropolitan area are under 18 years old. The industries that employ child labor are the metal industries such as metal distortion, manufacturing and repairing and the majority are apprentices. The ratio of child labor in other types of industry is low.

3.1.4 Education

In the regions, employees have had, on average, seven years of education, which is about one year less than those in the Greater Bangkok area. The data obtained from this survey corresponds with the other sources mentioned in Chapter 2. In regional areas, 38% and 25% of the employees finished primary and elementary school, respectively, 18% finished secondary school, 12% finished vocational school, 5% completed a bachelor's degree, and 2% didn't complete their schooling. Laborers in the Northeastern region have the lowest education; an average of only 6.3 years. On the other hand in the Metropolitan area, 29% and 24% of the industrial workers have primary and elementary education, respectively, 17% finished secondary school, and 21% complete vocational school, 9% obtained a bachelor's degree or higher.

The average of education of the labor force in this survey deviated sufficiently that it was impossible to draw any satisfactory conclusions due to the limited number samples when workers were classified by different types of industry.

However, the data from the survey (see Table 3.1 columns 7 & 8) shows that there is very little difference in the education levels among industrial workers, and that the majority of the employees in every kind of industry had some primary and elementary education. Those who have completed compulsory education can work in a certain level of industry. In chemical and petroleum production, textiles and garments, paper and printing, and miscellaneous industries, workers tend to have secondary education, while vocational education is a requirement in certain areas of manufacturing and maintenance of machines and electrical appliances. A higher ratio of workers with bachelor's degree or more work in the chemical and plastic industries. A greater demand for workers with education beyond elementary school will have to be introduced if these types of industry expand.

The regional industrial entrepreneurs questioned also came to some the conclusion (see Table 3.2). These employers reported that 87.6% of their unskilled workers have only elementary education or less. Even their foremen and assistants on average have only low levels of education. However, the employers also reported that educational qualifications vary according to the different categories of employees as follows:-

1.Office Workers Of these workers 53.7% have received vocational education in commerce which is directly related to their administrative and office work. In the textile and garment industries, plastic industry, chemical industry and petrochemical industry, their office staff tend to have a bachelor's degree or higher. This indicates that these types of industry employ administrators and workers with higher education, despite their size.

2. Production Chiefs: Production Chiefs are regarded as skilled workers but the majority or 56.2% only completed primary school. This indicates that most of these employees develop their skills through experience. Production Chiefs with vocational education account for only 15.8% and those with B.A. or higher qualification account for a very low 3.7%.

However, those industries in which Production Chiefs have some form of higher education are chemicals plastics and petroleum, textiles and food. Such data indicates that a vocational level education or higher is required in large-scale industry. The production chiefs vocational training involves engineering, food science and other related sciences. Should these industries expand further, it is expected that the highly-educated labor will increase.

3. Assistant Production Employees: Assistants may be regarded in the category of semi-skilled workers; 53.1% of whom have graduated from primary school. In the food and beverages industry, however 18.1% and 11.7% had graduated from middle school, and vocational schools respectively. This indicates that these people may be targeted to become production chiefs.

4. Production Labor: This type is unskilled labor of which about 87% have not attended school beyond the primary school level. It should be noted that 14.3% and 11.1% in the plastics and petroleum industry and some other miscellaneous industries are graduates from middle school. In certain rural industries, some of this labor force had graduated from vocational schools, thus indicating that there are some vocational school and middle school graduates working below their educational levels. In regional industry possibly due to the lack of opportunities.

In summary most workers in regional industry have completed their primary school education, but overall educational levels compared to these in Bangkok or other industrial nations are low.

3.1.5 Experience of Workers

The survey results show that, in most cases, before working in their present positions 50% of the employees in industries nationwide have no previous job experience, with the exception of those working in agriculture. About 25% of the workers in regional industries have had at least one years experience in the same type of industry and 16% had

worked other unrelated industries for at least one year. Together, 41% of the sampled in the rural areas workers had previous experience in the industrial sector, whereas 20% of the workers in Bangkok have had previous work experience and only 26% of them had worked in other types of industry. However, 46% of all sampled workers in Bangkok have had experience in the industry. Regional workers, in general, therefore are somewhat less experienced. It should also be noted regional workers who have had working experience in their current type of job are more numerous as the Bangkok area has many a wider variety of industries providing a wider range of job opportunities. In the rural areas, there is much less choice.

3.1.6 Labor from Agricultural Households

In the urban areas, about 42% of all industrial workers come from agricultural households, 40% are from families with a background of general work, including agricultural hiring, 11% come from small trading families and 7% from other backgrounds. In the Northeast as many as 56% are from agricultural households. This indicates that the regional industries have obtained half of their labor force from the agricultural sector. Whereas in Bangkok only 36% of agricultural workers are absorbed by the industrial sector.

The number of employees coming from agricultural households varies as to the type of industry. The metal and wood industries such as saw-mills absorb about 50% of labor (see Table 3.1, 6th and 7th column). On the other hand, iron-casting and other metal industries as well as the paper and printing industry, only absorbs 15% of all the industrial employment from agricultural household is low or not more than These industries tend to demand better educated personnel. Workers in textile and garment industry, as well as petro-chemical and plastic industries are, on average, better educated than those in other industries but ratio of their workers coming from agricultural households is relatively low. On average, workers from agricultural households are less well educated than those from other types of households. thus decreasing their employment opportunities.

3.1.7 Migrant Labor and Local Labor

About 66% of the workers in the regional industry are locally hired. This indicates that regional industry can in fact absorb a large percentage labor local labor. About 3% are migrant workers from Bangkok and 31% come from other provinces and regions. In Greater Bangkok, 74% of its industrial workers are migrants, and this figure corresponds to the findings in Chapter 2.

In regions such as the North and the Northeast, about 72% of all employees are local labor since these regions already have a large supply of unskilled workers. Most local labor is recruited from the surrounding area in other words about 57% of all workers live with their families in their municipality or health zone. 43% commute are from the countryside. If we disregard the contractual workers hired by urban factories, these findings indicate that regional industry absorbs most of its labor from the towns rather than the outlying districts.

As well as in Bangkok, the ratio migrant labor is very high in the south (43%) and in the Central region(35%). These figures indicate that migrant workers play a significant role in supplying industry in these regions. Bangkok's industry mostly depends on migrant labor and in the South, most of the migrant workers come from the Northeast.

Also in Bangkok, all types of industry rely heavily on migrant labor, whereas in the countryside only the iron and other metal-casting industries rely on obtaining 64% of its workforce requirements from migrant labor. Other industries which may rely primarily on migrant labor are the petro-chemical and petroleum industries. The survey indicated that about 9% of these workers are migrants from Bangkok and it may well be that these skilled employees are attracted by employers to the rural areas and as a result, are hard to replace in Bangkok.

Of the sampled interviewees 72% reported that most of their labor force are hired locally. However, in terms of type of employees' (Table 3.3), about 20.0% of employers reported that at supervisory or more skilled levels most of their employees are migrants, whereas about 76.9%

of their unskilled workers are local people who are easy to hire. It should be noted 75.9% of employers reported that most of their administrative staff are also local. An owner has to be confident, especially in small-scale industries, in the administration of the business and this person is usually know by or relative of the owner.

To summarize, regional industry relies heavily on employing local youths who mostly come from agricultural households. Because of their large numbers, as elaborated in chapter 2, it is expected that regional industry will hardly experience any problems in hiring unskilled labor. If there is a problem, it should be in the quality of labor since most of these workers have little education and experience. There is, however, a scarcity of skilled labor in some rural industries who must hire these workers from Bangkok, or other regions. These labor problems are analyzed in detail in Chapter 4.

3.2 WORK STYLE AND BEHAVIOR OF INDUSTRIAL WORKERS

3.2.1 Work Style and Employment Duration

Work duration and job changes are an indicator of the work style and behavior of industrial workers. Table 3.4 indicates that 17.6% of employees in regional industries leave their job at least once, which is a lower figure than was found in a previous study (P. Charsombut and C. Pipatsithee, 1985) since that study involved only the cottage industries. This present study covers all sizes of industry. In this study the ratio of office workers to labor chiefs is also high. In the Northeast 25.3% of workers who have resigned later rejoined the factories they are now working in, whereas in Greater Bangkok the figure is a mere, 10.6% since the city provides many more job opportunities.

Although certain number of workers have left their first job, all of them have worked, on average, for 54 consecutive months. Northern workers have the shortest work duration.

There are further two points which should be noted: (1)- 50.0% of employees who change their jobs work on a daily basis; and (2) 71.4% of workers in this category are domiciled in the province where the factory is located. This allows the workers to assist their families when required and the employers can also promptly contact them should they be needed.

In the food industry, 23% of workers belong in this high turn-over category, more than in any other industry. This may be because this industry involves seasonal employment or production depending on the availability of raw materials.

The turn-over rate of employees is explained by a multiple regression analysis. It is hypothesized that number of turn-over of employees now working in their current jobs (NQU) involves several factors, most-importantly their educational level. Those with higher education are expected to be more stable. Local workers (MIG) may more easily return to help their families whereas migrant workers have rather lower turn-over rate since travel is expensive and there may be no opportunities to resume their jobs. Daily wages (CUY) and other fringe benefits (FRI) encourages the workers to remain in their jobs. The number of working days per week which indicates working conditions, should also be taken into account.

The findings, as their appear in Table 3.5, indicates that the work style and behavior of employees can explain the turn-over rate in only 3.8% of all cases. These variables, in terms of education and other benefits, show a significant co-efficiency at the confidence level of 95%, which can be interpreted that the higher the education the lower turn-over rate since these employees have more secure jobs. Good fringe benefits and the provision social welfare services also attracts workers to carry on their jobs. However, the average income, which may be high, has no significance at the confidence level of 95%.

The high number of working days per week is also not a burden. On the contrary, it reduces the turn-over, but the variables have no statistical significance at the level of 95%.

Locally hired labor accounts for 71.4% of the overall turn-over rates, but in statistical terms, it can not be calculated that, at the confidence level of 95%, thus local labor has a higher turn-over rate than migrant labor. Therefore, a proportion of migrant workers may return to agriculture as local labor.

In summary, work style and employees behavior cannot explain the turn-over rate. Therefore, the work style and the behavior of the employer should be further analyzed.

3.2.2 Leaving Employees and Related Factors

Of the 637 employees in regional industry, only 56% reported that they will continue to work in their original work place, which is slightly lower figure than those in Greater Bangkok. Another 40% of employees in regional industry reported that they will leave at sometime and 4% were uncertain.

Among those regional workers who will resign, 71.4% live near the factories. Of 50% of unskilled laborers, 45% have left their original work places. Such a turn-over tends happens mostly in the food processing industry, the non-metallic and vehicle production and repair industries, in which 23%, 21%, and 20% of workers, respectively have left.

There are several reasons for leaving but the two most important causes are low wages and seasonal agricultural work, accounting for 28.3% and 26.0%, respectively, of regional industrial workers (Table 3.6). Often these two reasons became so inter-twined that respondents could not set a priority. Low wages may indeed be the cause of workers returning to agriculture during rainy season, however the effects of low incomes will be further analyzed in Chapter 4.

Other reasons given by workers for leaving their jobs are:- (1) Uncertainty of work; (2) No future; (3) No work. These reasons are also inextricably inter-twined. Although 3.2% stated that uncertainty

and 15.8% said lack of prospects were their main reason. Another 6.1% claimed that they will soon be laid off as therefore was little work to be done. These three reasons covered 25.1% of all resignations.

It should be noted here that of workers in food industry (14%) and non-metallic industry (17%) left to do agricultural work and 40.2% of these industrial workers earned no more than 1,500 baht per month while 52.0% had never had other jobs.

Of all leaving employees, 19.1% intended to become self-employed whereas 16.7% wished to work in a larger enterprises. Those who intend to do personal work were mostly supervisors of which 31.2% earned an average of 3,000 baht upwards per month. 50% of this type of employee used to work in other industrial job and 41.7% had remained in their current job for more than three years. This previous experience had given them the confidence to become self-employed and they may be most often found in the vehicle production and repair industry (12.2%) and in electrical production and repair industry (11.8%).

Among the workers who leave to work in larger enterprise, two-thirds did not earn more than 2,000 baht per month, and 38.1% not more than 1,500 baht per month. This figure indicates that low wages have caused these workers to seek higher-incomes and more secure jobs.

In Bangkok, the reasons and objectives for leaving their jobs differ from those of rural industrial workers, in that although 14.5% of them return to agricultural work only 18.1% claim that they leave because of low incomes. The majority of Bangkok's industrial workers 48.2% leave because of the widen choice in size and types of industry, and that 42.2% of those leaving wished to work in larger enterprises.

3.3 INDUSTRIAL LABOR DEMAND

Industrial employment and work style depends on the demand for labor on the part of the employer. Theoretically, this demand is derived from the demand for goods and service, therefore, any economic changes can affect the demand for labor and employment in the regional areas.

3.3.1 Seasonal Production and Employment

On average, all sizes and types of factories in the regions work 284 days per year or 85% of the year. But regional industrial production is seasonal, thereby affecting the demand for labor. Of 870 persons sampled persons in the rural areas and the 119 persons in Greater Bangkok, Table 3.7 indicates that as many as 72.4% of entrepreneurs upcountry, as against 56.3% of those in Greater Bangkok, reported that their production is seasonal. The peak season is between the year-end and mid-year, from about November until the following May. Within this long period each type of industry actually increases its production for only 3-4 months. 33% of enterprise, increase their production for by about 26% to 50%, 25% increase normal production by no more than 25% and another 25% were unable to give precise information.

During low season, between May and October (m)- the early rainy season, 35.6% of enterprises reduce their output and their productivity is only between 26% - 50% of normal. 27% of enterprises produce not more than 25% of their normal output, only 13% produce less than 50% and about 24% were unable to give clear information.

Seasonal production varies according to type of industry. For example, 80.3% of regional food industry and 78.6% of food processing industry in Bangkok reported that their production was seasonal, whereas the metal and iron casting industry hardly noted any seasonal change.

Table 3.7 shows the seasonal level of employment in regional industries. However, nationwide, variations in seasonal production are

higher than the variations in the employment levels, thus indicating that in a certain number of enterprises are number of workers does not fluctuate as much as could be expected. This ratio accounts for about 37.6% of all sampled enterprises.

The seasonal production change according to the size of the business, found that production patterns of small-and medium-sized industries are not different (see Table 3.8). Only in large-scale industries with over 500 workers, production during peak season is at about 50% more than normal, period but during low season it falls to about 15% less than normal.

In Greater Bangkok, the seasonal production fluctuations for all sizes of industry are less than in the regions and thereby directly affect labor demand and employment in the rural areas.

3.3.2 Causes of Seasonal Production

Table 3.9 shows the causes of fluctuation in production and that 53% of regional entrepreneurs interviewed claimed that seasonal demand for goods was the major cause. During rainy season, when farmers and farm laborers start planting, they have no income coming from other sources and cannot yet sell their products. Under such circumstances, farmers have little or, no purchasing power. However 61% of industrialists in Bangkok also gave the same reason. The majority of industries which are seasonal are small and medium-scale, and depend on agricultural products. These rural industries mostly rely on local market (Grandstaff, 1990), and therefore, a decrease in the demand for goods seriously affects production and labor demand in regional industry.

The shortage of raw materials is a second factor which affects regional industrial production, since most of these come from agriculture and during the planting season when they are not available in the markets.

Labor scarcity or shortage was claimed by 2.5% of the regional industrialists. Findings have indicated that although some factory workers may return to agricultural work during rainy season this, in itself does not pose a major problems. Nevertheless, in industries where production and therefore labor demand are relatively constant such as in the steel and metal casting industry, chemicals and petro-chemical, and the vehicle production and repair industries (see Table 3.7) are more affected by seasonal labor shortages than other industries. In the food industry in which production is more in tune with the seasons there are no labor shortage problems thus indicating that particular industry can procure its labor requirements easily when production increases.

A point to be noted is that never at anytime during this survey does the Bangkok industrialist claim that labor is seasonally difficult to procure. These findings indicate that the supply of unskilled labor is not major problem for large-scale industries. These seasonal changes in production and unemployment are primarily caused by the availability of local goods and the shortage of raw materials.

3.4 JOB SEARCH AND LABOR RECRUITMENT

Analyzing the methods of recruitment indicates the behavior patterns between workers and employers. A second indicator is the time taken and expenses involved in hiring workers. This section, therefore, deals with recruitment methods as used by employer, in order to explain employees behavior, employers attitudes and how the labor market works.

3.4.1 Information and Recruitment Methods

Table 3.10 indicates that nationwide 50% of workers first hear about job vacancies from friends, relatives and other employees. Prospective employers in Greater Bangkok are more aware of this situation than those in the regions. The search for jobs as based on unofficial information directly corresponds to the employers'

recruitment method since most employers rely on people within their enterprises to advise their contacts. Public, or official sources, such as newspapers, the mass media and employment agencies plays a relatively insignificant role. Soonon Kim (1982:11) found that the search for jobs and similar recruitment method also played a significant role in employment in Korea in early eighties.

This method saves time and money and is efficient. The survey sampling found that regional industrial workers spent about 15 baht per person and 32 days of waiting for job placement, whereas workers in Bangkok spent about 30 baht per person and 12 days of waiting. However, these expenses did not include food, travel costs and lodging since most of the employees stayed with friends or relatives. And usually, the new employee is entrusted to the introducing person. If we compare this method with other methods such employment agencies, where the employee has to pay a service fee equivalent to one month of employment and the actual placement takes longer the savings are quite substantial. The problem, however, is that when one employee, especially if they are a relative of another, leaves or goes back to his/her village, the others from the same area tend to take leave at the same time. So, although this method of recruitment may initially save time and money, it can increase other costs, due to the turn-over rate.

It should be noted here that in Greater Bangkok, the ratio of workers looking for jobs through friends, relatives and established employees is higher than regional market. Such data indicates that most of the openings in industry are either not made known to the public or if known through mass media or employment agencies, are rarely utilized. Thus, it is rather difficult for independent migrant labor to secure a job since he/she does not know anybody. In the regional market, however, about 21.5% of employees can find their own job. This indicates that a rural job applicant has the opportunity to approach the employer on his own. However, recently that there has been more reliance on advertising in daily and weekly papers and in notices posted in the labor department.

3.4.2 Recruitment Method

As a whole, regional industrialists continue to recruit their labor force through fellow-workers or by direct contact with the applicant but the methods used still varies for each type of industry as shown in Table 3.11.

Most entrepreneurs (22.1%) prefer to recruit workers through friends or relatives and leads to trust. Another relatively popular method is to put up advertisement in front of the premises 17.7% and directly accept the applicant. These two methods both save time and money for the employers. However, when recruiting permanent office workers, only 13.8% are introduced by fellow-workers.

Production chiefs and assistants are generally recruited personal introduction or through direct application, rarely through advertisements. Personal introduction by friends, relatives or acquaintances is popular because employers can trust the person since they are known by their fellow-workers. Worker-level recruitment is the same as for production chiefs and assistants for the same reasons.

3.4.3 Testing before Placement

In regional industries 45.1% do not have a selection or testing method for placement of workers (see Table 3.12). Most of the jobs come with personal introductions allowing a high degree of trust. This method is particularly prevalent in the food and beverages industries as well as in the non-metal industries which mostly engage local workers.

Regional employers use one or several selection methods but most (54.9%) prefer interviews. Formal selection such as testing skills or other methods accounts for only 20.8%. However, in the metal product industries and electronics manufacture and repair industry, there is a testing of skill.

In summary, employers still largely neglect paying any attention to the way they select their employers.

3.5 SUMMARY

The findings on types and behavior of labor in regional industry indicate that most employees are local people who come from agricultural households. In the North and the Northeast, local labor constitutes the bulk of those employed in rural industries. On the other hand, workers in Greater Bangkok and the rural Central region are mostly migrants. At present, there is a large supply of unskilled labor in regional areas, although these workers are only educated to primary school level and have little experience besides farming. The major problem now is the quality of workers applying for jobs in regional industries.

Some regional workers leave their factory jobs frequently, often to go back to farming on a seasonal basis. However, as regional industry also relies on the supply of agricultural raw materials which are also seasonal.

Labor recruitment and management by regional employers is based on local hire through introduction by fellow-workers. Most employers pay little attention to other selection methods, and thereby are affected seasonal production and high turn-over rate of workers.

Table 3.1
Characteristics of Sample Workers Classified by Type of Industry

Type of Industry	Percent of Male		Average Age		Av. Yrs. Ed.		% From Farm		% Migrant	
	Provincial	Greater Bangkok	Provincial	Greater Bangkok	Provincial	Greater Bangkok	Provincial	Greater Bangkok	Provincial	Greater Bangkok
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Food, Beverage, Tobacco	59.36	52.63	29.89	23.74	7.38	8.00	40.64	52.63	39.04	84.21
Textile, Apparel and Footwear	28.13	33.33	29.84	27.80	9.09	8.72	25.00	29.63	37.50	77.78
Wood & Furniture	70.79	81.25	28.73	30.19	6.67	6.00	50.56	62.50	34.83	75.00
Paper & Printing	92.31	62.50	32.76	29.88	10.38	5.12	15.38	25.00	30.77	100.00
Chemical, Petroleum & Rubber Products	70.83	42.31	26.25	27.65	8.54	9.92	29.17	23.08	25.00	73.07
Pottery, Glass & Other Non-Metal	69.74	88.89	31.01	30.78	6.32	10.33	38.16	44.44	34.21	77.78
Iron & Metal Basic Industries	72.73	100.00	34.70	29.50	7.54	10.00	9.09	0.00	63.64	50.00
Fabricated Metal	77.78	78.57	24.00	25.61	6.78	8.46	55.56	28.57	22.22	67.85
Machinery & Electrical Supplies	91.76	74.07	25.31	26.46	7.08	8.37	47.06	44.44	25.98	62.96
Transport Equipment	85.71	100.00	26.35	26.33	5.80	6.67	44.90	33.33	30.61	66.67
Others	43.18	57.14	25.64	29.43	8.95	10.86	47.73	28.57	27.27	85.71
All Industry	67.97	58.29	28.41	27.55	7.27	8.47	41.76	35.68	33.59	74.37

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.2
Number and Percent of Employees by Level of Education

Level of Education	Admin. Worker	Skilled Worker	Semi-Skilled Worker	Laborers
No Formal Education	-	6	3	11
(%)		1.17	0.88	1.70
Primary	17	287	181	556
(%)	6.30	56.16	53.08	85.94
Secondary	48	73	41	20
(%)	17.78	14.29	12.02	3.09
Vocational & Technical	145	81	33	10
(%)	53.70	15.85	9.68	1.55
Bechelor Degree and Above	41	19	1	-
(%)	15.19	3.72	0.29	
Others	-	2	2	7
(%)		0.40	0.59	1.08
Unknown	19	43	80	43
(%)	7.04	8.41	23.46	6.63
Total	270	511	341	647
(%)	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.3
Number and Percent of Worker by Original Place of Residence

Origin	Admin. Workers	Skilled Workers	Semi-skilled Workers	Laborers
Same District as Firm	30	52	33	95
(%)	10.95	10.18	9.48	14.82
Other District in Same Province	178	310	180	398
(%)	64.96	60.67	51.72	62.09
Foreign Country	-	2	-	-
(%)		0.39		
Greater Bangkok	14	17	1	2
(%)	5.11	3.33	0.29	0.31
Other Provinces in Rural Central	9	13	7	15
(%)	3.28	2.54	2.01	2.34
Northern Region	4	12	14	7
(%)	1.46	2.35	4.02	1.09
Southern Region	9	29	17	15
(%)	3.28	5.68	4.89	2.34
Northeastern Region	10	29	23	77
(%)	3.65	5.68	6.61	12.01
Unknown	20	47	73	32
(%)	7.03	9.20	20.98	4.99
Total	274	511	348	641
(%)	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.4
Patterns of Employment in Manufacturing, by Region: 1988

	North	North east	South	Rural Central	Provin- cial	Great Bangk
Percent of Workers Used to Leave the Present Firm Temporarily	16.9	25.3	12.2	16.3	17.6	10
Average Month of Employment:						
-Of those Who Never Temporarily Quit the Present Firm	47.8	59.1	51.8	57.3	54.3	55
-Of those Who Used to Temporarily Quit the Present Firm	43.9	55.3	50.3	55.5	51.7	55
-Expected Duration at the Current Job	108.4	170.2	97.5	66.8	107.0	66
Percent of Workers Expecting to Keep the Same Job for Next 5 Years	50.7	62.3	46.0	62.2	55.9	58
Expected Employment After Quitting the Current Job						
-Self-Employed	18.9	17.7	10.3	30.0	19.1	18
-With a Larger Firm	7.6	13.7	15.4	27.1	16.7	42
-Back to Farm	37.7	37.3	30.8	20.0	30.6	12

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.5
A Regression Analysis of Job Quitting Rate from the Same Firm

546 Observations
Dependent Variable is NQU

VARIABLE	COEFFICIENT	t-statistic
C	1.2799	5.2390
EDU	-0.0548	-3.1577
MIG	0.0428	0.3097
CUY	-0.0003	-0.3836
FRI	-0.0689	-2.2096
WCO	-0.0219	-0.8375

R-squared	0.0269	Mean of dependent var	0.4579
Adjusted R-squared	0.0188	S.D. of dependent var	1.5044
S.E. of regression	1.2706	Sum of squared residual	1186.6400
		F-statistic	4.2670

Notes: NQU = Number of times the respondent had quit the same sample firm
EDU = Level of education; years of schooling
MIG = Local worker = 1, migrant workers = 0
CUY = Average Daily earnings from wages, unit baht
FRI = Sum of index of available fringe-benefits
WCO = Working day per week

Source: Calculated from Rural Industries and Employment Project Survey Data, TDRI, 1989.

Table 3.6
Reasons for Wanting to Quit the Present Job

Reasons	Greater Bangkok		Provincial Areas	
	Frequency	%	Frequency	%
Low Wage and Income	15	18.1	70	28.3
Poor Fringe-Benefits & Welfare	1	1.2	1	0.4
No Future	40	48.2	39	15.8
Uncertainty in Work and Income	2	2.4	8	3.2
Hard or Risky Work	3	3.6	10	4.1
Poor Working System	1	1.2	2	0.8
Labor Disputes	1	1.2	6	2.4
Go Back to Farm	12	14.5	64	26.0
Being Laid-Off	0	0.0	15	6.1
Leaving the Labor Force	6	7.2	25	10.1
Other	2	2.4	7	2.8
Total	83	100.0	247	100.0

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.7
Number of Sample Firms Facing Seasonality in Production and Employment

Type of Industry	Greater Bangkok		Provincial Areas	
	Seasonality in		Seasonality in	
	Production	Employment	Production	Employme
Food, Beverage, Tobacco	11	5	208	1
(%)	78.57	35.71	80.31	39.
Textile, Apparel and Footwear	10	2	16	
(%)	45.45	9.09	55.17	27.
Wood & Furniture	4	3	88	
(%)	36.36	27.27	74.58	37.
Paper & Printing	4	0	13	
(%)	80.00	0.00	65.00	20.
Chemical, Petroleum & Rubber Products	7	3	36	
(%)	46.67	20.00	67.92	36.
Pottery, Glass & Other Non-Metal	2	0	68	
(%)	33.33	0.00	74.73	55.
Iron & Metal Basic Industries	1	0	3	
(%)	33.33	0.00	50.00	33.
Fabricated Metal	7	3	33	
(%)	46.67	20.00	70.21	36.
Machinery & Electrical Supplies	13	3	101	
(%)	76.47	17.65	70.14	15.
Transport Equipment	4	3	44	
(%)	66.67	50.00	60.27	32.
Others	4	1	17	
(%)	80.00	20.00	65.38	34.
All Industries	67	23	627	3(
(%)	56.30	19.33	72.40	34.
Total Samples	119	119	866	8
(%)	100.00	100.00	100.00	100.

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.8
Percentage Change in Production from Normality
during Peak and Trough Period

Firm Size (Number of Workers)	Greater Bangkok		Provincial Area	
	Increase	Decrease	Increase	Decrease
0 - 5	36.9	45.0	43.0	46.4
6 - 9	35.0	40.0	42.9	38.8
10 - 19	38.2	45.0	42.9	38.4
20 - 49	68.3	35.7	47.2	35.3
50 - 99	52.9	23.1	50.9	43.9
100 - 119	105.0	20.0	50.8	37.2
200 - 499	20.0	18.3	43.2	37.5
500 - 999	35.0	30.0	62.5	15.0
1000 +	0.0	0.0	50.3	0.0
Average	46.0	35.0	44.3	40.8

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.9
Causes of Production Seasonality in Provincial Industries

Number and Percent

Industry	Cause of Production Seasonality						
	Material Shortage	Demand	Labor Shortage	Weather	Other	Un-specified	Total
Food, Beverage, Tobacco	84	95	1	18	8	3	209
(%)	40.19	45.45	0.48	8.61	3.83	1.44	100.00
Textile, Apparel and Footwear	6	8	0	0	3	0	17
(%)	35.29	47.06	0.00	0.00	17.65	0.00	100.00
Wood & Furniture	33	43	4	1	5	3	89
(%)	37.08	48.31	4.49	1.12	5.62	3.37	100.00
Paper & Printing	1	9	0	0	3	0	13
(%)	7.69	69.23	0.00	0.00	23.08	0.00	100.00
Chemical, Petroleum & Rubber Products	11	17	2	5	2	0	37
(%)	29.73	45.95	5.41	13.51	5.41	0.00	100.00
Pottery, Glass & Other Non-Metal	9	37	3	15	3	2	69
(%)	13.04	53.62	4.35	21.74	4.35	2.90	100.00
Iron & Metal Basic Industries	0	1	1	0	1	0	3
(%)	0.00	33.33	33.33	0.00	33.33	0.00	100.00
Fabricated Metal	0	21	0	3	5	5	34
(%)	0.00	61.76	0.00	8.82	14.71	14.71	100.00
Machinery & Electrical Supplies	4	68	2	12	10	8	104
(%)	3.85	65.38	1.92	11.54	9.62	7.69	100.00
Transport Equipment	2	28	2	5	5	4	46
(%)	4.35	60.87	4.35	10.87	10.87	8.70	100.00
Others	2	12	1	1	0	1	17
(%)	11.76	70.59	5.88	5.88	0.00	5.88	100.00
All Industries	152	339	16	60	45	26	638
(%)	23.82	53.13	2.51	9.40	7.05	4.08	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.10
Modes of Job Searching Used by Workers and Mode of Labor Recruitment

Percent

Mode	Job Searching by Workers		Labor Recruitment by Employers	
	Provincial	Greater Bangkok	Provincial	Greater Bangkok
Job Announcement at Factory	4.40	8.54	11.57	27.47
Public Media	1.26	5.53	2.68	13.55
Employment Agencies	0.94	0.50	2.68	0.73
Through Relatives or Friends	42.07	50.25	18.00	9.52
Through Present Employees	18.68	25.13	27.19	20.51
Personal Contacts	21.51	7.04	22.92	14.29
Through Private Brokers	0.31	0.00	0.65	0.00
School Placement Services	1.73	2.01	0.72	5.49
Others	9.11	1.01	13.50	8.44
Total	100.00	100.00	100.00	100.00
Number of Observations	637	199	870	119

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.11
Means Used in Job Search by Sample Workers
Classified by Types of Workers

Number and Percent

	Admin. Worker	Skilled Worker	Semi-skilled Worker	Laborers	Total
Job Announcement at a Factory	45	56	35	69	160
(%)	17.72	11.36	12.37	11.37	11.57
Public Media	30	20	10	7	37
(%)	11.81	4.06	3.53	1.15	2.68
Employment Agencies	8	13	10	14	37
(%)	3.15	2.64	3.53	2.31	2.68
Through Relatives or Friends	56	89	46	114	249
(%)	22.05	18.05	16.25	18.78	18.00
Through Present Employees	35	113	72	191	376
(%)	13.78	22.92	25.44	31.47	27.19
Personal Contacts	28	97	56	164	317
(%)	11.02	19.68	19.79	27.02	22.92
Through Private Brokers	1	3	1	5	9
(%)	0.39	0.61	0.35	0.82	0.65
School Placement Services	7	37	21	5	63
(%)	2.76	7.51	7.42	0.82	4.56
Others	21	31	9	20	60
(%)	8.27	6.29	3.18	3.29	4.34
Unspecified	23	34	23	18	75
(%)	9.06	6.90	8.13	2.97	5.42
Total	254	493	283	607	1383
(%)	100.00	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 3.12
Method of Work Placement Practiced by Rural Manufacturing Firms

Number and Perce

Type of Industry	Most Used Method				
	Just Hire	Interview only	Skill Testing	Others	Un-specified
Food, Beverage, Tobacco	133	80	29	2	2
(%)	54.07	32.52	11.79	0.81	0.81
Textile, Apparel and Footwear	5	15	7	1	1
(%)	17.24	51.72	24.14	3.45	3.45
Wood & Furniture	44	42	23	3	4
(%)	37.93	36.21	19.83	2.59	3.45
Paper & Printing	6	8	5	0	0
(%)	31.58	42.11	26.32	0.00	0.00
Chemical, Petroleum & Rubber Products	18	26	6	0	0
(%)	36.00	52.00	12.00	0.00	0.00
Pottery, Glass & Other Non-Metal	56	23	7	1	1
(%)	63.64	26.14	7.95	1.14	1.14
Iron & Metal Basic Industries	1	4	1	0	0
(%)	16.67	66.67	16.67	0.00	0.00
Fabricated Metal	9	10	23	0	3
(%)	20.00	22.22	51.11	0.00	6.67
Machinery & Electrical Supplies	57	28	40	3	0
(%)	44.53	21.88	31.25	2.34	0.00
Transport Equipment	29	20	18	0	3
(%)	41.43	28.57	25.71	0.00	4.29
Others	13	10	1	1	1
(%)	50.00	38.46	3.85	3.85	3.85
All Industries	371	266	160	11	15
(%)	45.08	32.32	19.44	1.34	1.82

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

CHAPTER 4

EMPLOYMENT, WAGES, INCOME AND LABOR PROBLEMS

This chapter, aims at analyzing the working of regional industrial labor market as based upon employment levels, wages, income and problems in the labor market.

4.1 EMPLOYMENT

4.1.1 Number of Workers and Establishments

According to statistics issued by the of Department of Industrial Works, Ministry of Industry, the number of factories registered with the Ministry, as of 1987, totaled 44,897 (not including rice-mills)[1], with altogether 1.05 million persons registered workers. The number surveyed by National Statistical Office during the 1987 rainy season, accounted for 43.08% of employed persons in the industrial field. From a field survey, it was found that the number of workers listed on the survey data were higher than the number who registered on the registration date. This discrepancy could be accounted for by the fact that the number recorded by Department of Industrial Works is the figure on one day only and not taken over a period of tune.

Regional industries, on average, have 17 workers per establishment compared to 27 in Bangkok. However, from the survey of 870 regional industrial establishments and 119 in Bangkok, registered with Department of Industrial Works, found that on average there were 42 workers per establishment during the week of survey and in Bangkok the an average was 118 persons, which is a very different figure.

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1. Under the law, factory with more than 7 persons or more than 2 H.P. engine must be registered with the Department of Industrial Works.

Of the total 1.05 million industrial workers, the number in regional industrial establishments are about 300,169 or about 30.17% of the number of workers in registered work places. About 36.87% of these work in large-scale industries, hiring more than 200 people upwards whereas 42.95% work in factories with no more than 49 hired persons. The rest, or 20.18%, work in medium-scale industries (see Table 4.1).

The ratio of workers registering on registration day is rather different from the ratio of those according to the survey of industries. In the survey 59.05% of the workers work in large-scale factories, whereas those in small-scale factories account for only 19.63% of employed persons. If we consider number of factories in terms of size, we come to a similar conclusion (Table 4.2), that is the surveyed large-scale and medium-scale factories have a rather higher ratio of workers compared to the numbers registered with Department of Industrial Works, Ministry of Industry. This survey covered 4.82% and 8.16% of large-scale and medium-scale industries respectively as compared to 7.22% and 4.04% of the same size of industry, respectively on registration date. Small-scale industry covers only 83.0% of the firms surveyed. The difference between data collected under the survey and data gathered by the Department of Factories is due to two important factors. First, the number of workers recorded by the Department of Industrial Works on the date of registration, was lower than the figures gathered on the day the survey was made, since many large scale industries have expanded. Secondly, the sampling covered all sizes and types of industry and the majority of those were large-scale industries. Whereas, on the whole, the general image of regional industry, whether based on the survey or data by the Department of Industry, is one of small-scale enterprises.

4.1.2 Size of Employment by Types of Industry

The actual number of workers hired varies as to type of industry (see Table 4.3). This difference in employment level indicates the size of each type of industry. The Textile and garment industries have employ on average 146 workers per factory, which is regarded as a large enterprise, whereas industries with an average less than 20 employees are spare parts, electrical and engineering repair workshops and, metal

production and metal-casting industries. These industries are said to be small-scale. Medium-scale industries, with an average of 50-60 workers, are chemicals and plastics, food and beverages factories.

However, when the size of employment is considered in detail in each type of industry, it may be said that most of regional industries are small-scale, with at most 20 workers per factory with one out of three having, at most, 5 workers. These industries tend to be household industries such as machinery, engine and electrical repair workshops, and the metal product industries. Large-scale industries with at least 200 workers per factory account for 38.0% of regional textiles and garments factories and 5.6% of food processing factories.

4.1.3 Size of Employment Varied from Season

Table 4.3 indicates employment fluctuation according to the season. The number of workers varies according to production, as previously discussed in Chapter 3. During the period of highest employment, there are about 54 workers per industry, or higher, accounting for 25.6% more than during a normal period. During the low season there are on average of 31 workers per industry, which accounts for about 28.0% less than normal. The difference between the highest and lowest season of employment account for 53% fluctuation. However, these fluctuation differ according to the type of industries. The food and beverage industries, which use raw-materials from agriculture, fluctuate more than any other type of industry, where the increase amounts to 40.3% of the normal period during the peak season and the decrease to 32.2% of normal in the low season. The employment level in textile and garment have less fluctuation.

This study took place at the end of 1988. Therefore the employment level at that time was rather higher than normal, with the exception certain industries such as wood and furniture production, non-metal industries, and the vehicle repair and production industries which had employment levels lower than normal.

Table 4.4 indicates that number of industrial work places as classified by employment level will fluctuate according to seasonal production. For example household industries, with at most 5 workers, account for 21.0% of total regional industries. In the increased production period, the number of industries with such employment levels will decrease to 10.8%, and increase to 36.3% when employment levels decline. Therefore, data regarding the number of employees in regional industries should be used in any case with an awareness of the situation of employment.

4.1.4 Components of the Workforce

Workers in regional industries are composed of various types of labor; family, management and office staff, and production supervisors as well as both temporary and permanent employees and contractual and apprentice labor. The average number of each type of labor is shown in Table 4.6. In small-scale industries, with at most 5 workers, family members constitute on average about 1.6 persons. In large-scale concerns, with more than 1,000 workers, family members account for only 4.5 persons. Therefore, proportionately family labor is an important factor in household industries, accounting for 46% of the labors force. In large-scale industries family members account for only 0.2%.

The ratio of management and office staff hired varies according to the size of industry. On average, regional industries hire about 6 persons at these levels. Small-scale industries, with at most 9 workers, only have an average of 0.2 persons in management since in such industries administration and general affairs tend to be controlled at household level. The number of supervisors similarly varies. Small-scale industries, on average, will have about 7 persons in supervisory and assistant levels and although this number varies there is at least 1 person in this position per enterprise.

The permanent and temporary unskilled laborer account for about 34 and 21 persons, respectively per industry. However the actual number of

these types of employees varies quite considerably. The number of sub-contracted employees accounted for 39 persons per firm. This average is higher than that of any other type of employee and they are found in both very large-and small-scale industries. There are very few apprentices. This small number indicates that there is little variation between industries. However, in actual fact the number of apprentices declines as the size of industry increases up to the level of 500-900 workers. There are no apprentices in large-scale industry with more than 1,000 employees and up. In general, large-scale industries are not interested in employing this type of labor since they are not encouraged by law to do so and therefore provide very few training opportunities.

The survey found that very few household industries hire subcontractors largely because for the purpose of this study the sampling was taken only from those industries which are registered by the Department of Industrial Works. In the rural areas industries which employ sub-contractors are the small scale businesses who produce goods piece rate, such as garments and, textiles. Such industries tend only to sell their products in the immediate area and will not be included in the sampling for this survey as they have not registered with the Department of Industrial Works.

4.2 EMPLOYMENT CONDITION

Table 4.6 shows the ratio of each type of labor in each enterprise sampled during the week of survey. The employment levels in regional industries of the following types of labor are set out in terms of the average ratio for all types of industry:

1. Family labor (Family members)	1.94%
2. Office employee including managers,clerks, accountants and sales staff	5.23%
3. Permanent production workers:	
-skilled labor or supervisors	6.03%
-semi-skilled labor or assistants	6.26%
-unskilled labor	26.89%

4. Temporary production worker:
   including employees engaged
   on a seasonal or piecemeal basis 18.41%
5. Apprentices or persons being trained who receive
   no pay or only a normal sum 1.22%
6. Contractual workers who receive
   piece meal pay (not including other outside
   contractors or households doing sample work) 34.02%

These survey findings show that employment conditions in regional industries are very different to those of the study conducted by Department of Labor and the Bank of Thailand (1983 Table 3.1 - 3.4). The ratio of contractual workers is very high, especially in food and beverage industries, chemicals and plastics and vehicle parts manufacture and repair, where these workers total between 49.7% to 71.7% of the workforce. Other industries also employ contractual labor but at a much lower ratio. A study by the Department of Labor together with the Bank of Thailand has shown that number of contractual workers has tended to increase over the past 5-6 years and for the past 2-3 years, there has been talk on investigating the working conditions of contractual labor but to date there no official study has been carried out. Temporary employment accounts for 18.4% of total employment in all types of industry. This type of employment is particularly high in wood products, and the food and beverage industries, and accounts for 52.4% of all regional industrial workers.

The reasons for the increase in the number of contractual workers to one or several of the following factors:

1. Contractual employment is seen as being more efficient than other types since are made on results. Workers tend only to take on projects they are already experienced in.

2. The job is very attractive. The more you work the more you earn.

3. Employers can avoid labor laws, such as minimum wages or the labor protection law.

This increase in contractual and temporary employment could be interpreted as showing a lack of confidence in regional industries. However, these workers can work at home and small or cottage industries by preferring to work on assignment helps to distribute employment to rural households.

Monthly salaried and daily-paid workers account for 44.4% of the workforce. Office staff account for only 5.2% and production workers 39.2%. The industries with the highest proportion of production workers are the textile and garment industries and paper and print.

Skilled and semi-skilled workers who are hired on a permanent basis are mostly found in the steel-casting industries where they account for 44.3% of all employees, the engine and electrical appliance production and repair industries (28.1%), metalware (37.1%) and non-metal industries (32.9%) vehicle production and repair industries (31.9%). Which not only indicates that these particular industries require a large skilled and semi-skilled labor force but also that they prefer a guaranteed workforce.

Apprenticeships account for only 1.2% of all types of employees, but in vehicle and electric manufacture and repair industries, their numbers rise to 8.4%, followed by the metalware and wood product industries, thus indicating that these industries require more skilled and experienced workers than in the non-metal, food and beverages, chemical and plastic production industries, some of which are large-scale, yet rarely take on apprentices. Thus indicating that unskilled labor require little training and experience.

Besides those employed in the factories, there are some industries such as garment manufacturers, wood products and furniture who sub-contract to household and small local industries to produce the goods. Such employment does not provide stability.

4.3 WORKING CONDITION OF EMPLOYEES

4.3.1 Working Hours per Day

An analysis of working conditions must include working hours and number of working days per employee. On average regional industrial workers work about 8.28 hours or 8 hours and 15 minutes per day generally between 07.30 to 16.45 Hr. (see Table 4.6) with an one hour break. However, the number of daily working hours and starting times vary quite considerably. About 80.4% of the employees interviewed worked about 8 to 9 1/2 hours daily. About 11.5% worked less than 8 hours and 8.1% worked for between 10 to 14 hours. These figures resulted in a standard deviation of working hours of about 1 hour 13 minutes per day.

These hours differ according to industry. Industries with the highest average working hours are chemicals, plastics and petroleum, food and beverages, non-metallic industries, motor and electrical parts manufactures and repair industries and textiles and garments. The shortest working hours were found in paper and printshop which averaged 7 hours and 45 minutes.

In general in Greater Bangkok average working hours are less than those in regional industries - about 8 hours per day. 82% of workers average between 8 to 9 1/2 hours per day, and only about 3% work for 10 to 11 hours, most of whom work in the garment and textiles industries. The survey did not find any employee working more than 11 hours per day.

4.3.2 Working Days per Week

Regional industrial employees work, on average, a 6 day week, which is slightly longer than their counterparts in Greater Bangkok. 60.9% of these work between 6 to 6 1/2 days and 34.3% work everyday. The rest work less than 6 days per week. In Bangkok, 81.2% of industrial workers work 6 to 6 1/2 days per week and only 13.7% work everyday. Therefore, both in working hours per day and number of days worked it

may seen that regional industrial workers work harder than their counterparts in Greater Bangkok.

4.3.3 Holidays and Pay

Nationwide workers have about the same holidays per month, on average about 3 1/2 days. However, the holidays of regional industrial workers range more widely; that is 69.0% have 4 holidays per month, 8.8% have 1-3 holidays, 14.9% have no holiday and 7.3% have taken between 5-15 days off per month. In Bangkok, the holidays are more equally distributed for all types of industry. About 77.2% take 4 holidays per month, 12.2% have no holiday; 5.0% have 1-3 days off and 5.6% have between 5-8 holidays per month, indicating that the Bangkok labor market is more systematic than that in the regions.

It should be noted that 47.4% of regional industrial workers and 33.7% of Bangkok industrial workers do not receive holidays pay since they are paid on daily rates.

4.3.4 Overtime and Pay

Nationwide about 50% of employees work overtime for 1 hour per day. However, 82.6% of regional industrial workers receive less overtime pay than their counterparts in Bangkok.

In the food and beverages industries in particular, the survey found that 26% the workers did not receive overtime pay, although the figure is slightly lower for Bangkok.

4.4 WAGES

4.4.1 Wages According to Types Of Industry

Table 4.8 shows the daily and monthly wage rate and as noted in Chapter 2, the survey found that, in general, wages in terms of money received by rural industrial workers are lower than those in Bangkok.

In regional industry, the average daily wages paid to employees in the steel-casting, metalware and vehicle manufacture and repair industries were markedly higher than those in other types of industry. In paper and printshops, chemicals, plastic and petroleum industries, the average wages of daily workers were lower than in other industries. Of the wages for monthly-paid workers, only those in steel-casting industry received higher salaries 4,967 baht per month, whereas in other industries the average between 2,000-3,000 baht per month. In vehicle manufacture and repair industries although, daily wages were high, monthly wages are only about 1,614 baht per month.

4.4.2 Wages Differ by Types Of Employees

Table 4.9 shows the average daily and monthly wages rates according to the type of employment. Skilled workers at supervisory levels receive higher wages than semi-skilled and unskilled workers. However, the actual difference in wage level may indicate labor market conditions in each industry, and either that it is difficult to find skilled workers or difficult for skill development.

On the average, the wages of daily-paid employees are slightly less than those of monthly-paid workers. Skilled workers are usually paid 2 to 3 times more per month and are usually permanent employees. In Table 4.9 in terms of type of industry it is found that difference between the wage of skilled and unskilled workers is vast in vehicle manufacture and repair, electric and chemical, plastic and petroleum industries, thereby indicating that in these industries skilled labor is difficult to find.

4.4.3 Wages Differ as to Size of Industry

If the number of employees is used as a criterion by which to measure the size of the industry, Table 4.10 shows that in general, the workers in larger enterprises receive higher wages than those in smaller ones.

However, for each individual type of employee, the size of enterprise affects wages to a much larger degree. For instance, administrative employees in large industries receive, on average, 15,650 baht per month or 5.6 times more than their counterparts in small-scale industry. This indicates that large-scale industry require and attract well-qualified and capable administrators.

At supervisory level, the monthly wages also differ according to the size of the industry but for daily workers, the wages of skilled or supervisor level employees in small industries is, on the average about the same as those in the medium and large-scale industries. This indicates that small-scale enterprises have to compete in the open market for skilled labor.

In general the wages of semi-skilled and unskilled laborers are low. Although their wages may differ according to the size of industry, the difference is minimal. It can thus be interpreted that there is a large supply of this type of labor on the market. Therefore, it is unnecessary for anyone particular industry to pay higher wages than other industry.

4.4.4 Wage Differences Across Regions

Table 4.11 show the daily and month wages for different types of workers in each region. Wages for administrative and office workers are about the same since these wages levels are determined by educational level. An exception was found in the North where the discrepancies may be explained by some unusual samplings.

More noticeable is the difference found in skilled and semi-skilled labor's wages in different regions, whether it be in daily or monthly wages. In general, skilled and semi-skilled labor in the South earns higher wages than in other regions. This indicates that it is more difficult to hire skilled and semi-skilled labor in this area.

The average wages of unskilled laborers in the South are also higher which indicates that the South may suffer an overall labor shortage. In the North and the Northeast, unskilled workers earn 47.4 baht and 45.9 baht, respectively, which is, on average, lower than local minimum wage.

4.4.5 Criteria for Determining Wages of New Employees

The differences in wages are partly due to the different starting wages. This study examined the criteria used by regional industrialists to determine wages of new employees. Table 4.12 shows that employers apply different criteria and can vary according to the type of employees.

For administrative and office workers' the education level (35.9%) and experience (13.9%) are taken into account. For skilled and semi-skilled workers' previous references ability are most important, and for unskilled labor's 23.0% of employers preferred to reward their performance overtime. Other criteria applied to unskilled workers were minimum wages, ability and diligence. However, only 13.4% of employers based their salary levels on these of local minimum wages.

4.4.6 Factors Affecting Wages

The study tried to explain industrial wage rates, based on regression analysis of factors hypothesized to be related to the wages of daily-and month-paid workers; such as for examples, the expectation that the older the worker the more experienced and therefore wages should also be higher. Other factors involve educational levels, length

of time served, previous experience and occupational training. The presence of any or all of these factors is expected to positively affect the employment level of the worker. However, it is also possible that fringe benefits have a negative effect on nominal wages since the employer may reduce wages in order to procure other benefits.

The findings, based upon a simple relationship between average wages in terms of money, and variables hypothesized, can be summarized in such a way that no matter what the base wage of regional or metropolitan industrial employees may be, such variables can explain the average wage of employees (Table 4.13). However, the education level of the employee affects average daily wages more than any other factor (see Table 4.14). Then age length of service, on-the-job training, fringe benefits, short-term occupational training and experience are all positive influences on the wage rates of regional industrial employees, and are statistically significant. This may therefore imply that an increase in these factors will increase the average wage. The reason why the co-efficient values of other benefits are positive towards wage may be explained by the fact that employers do not provide welfare and compensation.

Statistical analysis based upon all the hypothesized factors mentioned in Table 4.14 shows that, in regional industry, these factors can explain 37.4% of the average wages. The rest comes from other factors not taken into account such as type and size of enterprise, sex of employees, etc. In Bangkok industry, however, these factors explain wage rates by 44.4%. Multiple regression analysis further confirms that these factors can explain regional industrial wage rates, in terms of statistical significance, at the confidence level of 95%.

The findings show that the higher the educational level of the employee, the higher the wage. Therefore, the upgrading of workers' education will increase his ability, productivity and, his wages. At the same time, the opportunity take part in official training also helps to increase skills and productivity, whereas length of time served helps promotion and raises wage levels, when based upon previous experience. Short-term occupational training cannot be clearly interpreted since

there are too few examples and as a for statistical analysis. This also applies to in-house training.

4.5 OTHER FRINGE BENEFITS

Some employers also provide welfare services and and offer other fringe benefits. Table 4.15 shows that 60.0% of sampled enterprises reported that they provide benefits in terms of medical care and a further 23.4% provide this care occasionally. About 15.8% did not provide any care and 1.0% did not specify. In fact welfare protection is stipulated by law, and enterprises which do not provide such a service are small-scale industries. They tend to provide only accommodation and annual bonus. The industry most likely to provide accommodation is the food and beverage industry (54.3%) since employees start the work early in the morning, and may have to work long hours. Industries which mostly only provides food are engine parts manufacture and repair (55.3%), vehicle manufacture and repair (53.7%), and others small-scale enterprises (56.0%) since in these cases the owner and workers often live and eat together on the premises.

4.6 INCOME

Income of workers denote earnings from monthly salary and overtime payments, as shown in Table 4.8 columns 6 and 7. The average monthly income of workers may be explained in the same way as average wages, and they also differ according to the type of industry. A higher daily wage level does not necessarily mean that employees receive higher income. For instance, in the metalware industry, electronics manufacture and repair, and the vehicle assembly and repair industry, the average daily wages are higher but the average monthly wages are lower than in other industries as there is little overtime. In food industry, although the daily wages are low, average monthly incomes are higher than other industries when overtime in taken into account.

4.7 LABOR PROBLEM OF ENTREPRENEURS

The survey questioned entrepreneurs as to "whether they ever faced any labor issue". The answers are set out in Table 4.16. 34.1% of employers in the South and 28.4% in Bangkok reported that they have problems hiring sufficient highly skilled labor. In the Central, the North and Northeast, most entrepreneurs reported that they find it difficult to maintain a permanent unskilled labor force since, in the rainy season, many workers return to their farms. Only 15% of employers in Greater Bangkok cited to this problem.

Very few entrepreneurs in Bangkok referred to high wages as being a problem. This However, in the North about 12.5% of employers referred to high wages, which corresponds to the explanation given in Chapter 2.

The high turn-over rate of employees is a problem faced in all regions but only 10% to 16% of employers mentioned it, most often those in the North and the Northeast where the turn-over rate is higher than in Bangkok. Among skilled workers upcountry for instance, their monthly percentage of work entry is 4.9% and leaving is 4.5% whereas in Bangkok the figure is 1.8% and 1.6%, respectively.

In steel and metal-casting and vehicle assembly and repair industries 50% and 45% employers, respectively, referred to problem of procuring skilled workers. In the wood and furniture, paper products, motor and electronics manufacture and repair industries, 25-30% of employers refer to this problem.

The difficulty of procuring unskilled labor during agricultural season is referred to in all types of industry, especially in food and beverage industries (46.7%), wood products and furniture (31%), and the non-metal industry (31%).

Though labor problems were mentioned, only 67 enterprises or 20.6% said that labor was their main problem, with. 7.7% stating that this problem is severe. In this group about 28.4% report that obtaining skilled workers especially engineers was a severe problem, about 16.4%

mentioned the difficulty of procuring lower-level workers particularly during agricultural season, and 17.9% cited high worker turn-over rates. problems.

From the group which mentioned severe labor problems, 85.2% reported that these problems affected production. Most of them (56.6%) referred to decreased production, another 24.5% said that they could not expand production, and the rest mentioned other problems.

Regional labor problems can be solved by various means. Most employers (20.8%) solve the problem by engaging temporary labor. Increase of wage and incentives and hiring family members is generally practiced more than other methods (see Table 4.19). Permanent employment is hardly practiced through contract. Most (52.0%) say than this method does not work effectively. Although regional industry prefers to solve labor problem by engaging temporary workers, higher wage and incentives tend to be offered less by regional industries. Other methods include upgrading skills or the employers doing the job incentives. instead of the workers.

4.8 SUMMARY

Regional industries are mostly small-and medium-scale, with generally lower levels of employment than in Greater Bangkok. On average, there are 42 persons per enterprise in the regions as against 118 in Bangkok. Employment levels in regional industry fluctuates according to the season. The difference in employment level between the peak season and low season is 53% of normal season. The industry with the highest fluctuation is the food industry.

Contractual and temporary workers are important in regional industry, constituting 52.4% of the workforce, and indicating a general insecurity of employment in the regions. Only office staff and skilled workers have secure jobs. Most regional workers work long hours without holidays or welfare systems.

The average daily average wage in regional industry is nearly the same as the minimum wage, or 68 baht per day. Unskilled labor, however, only receives 55 baht per day. Monthly-paid workers receive an average of 1,171 baht per month. In general, workers in the Northeast and the North receive lower wages than those in other provinces. Wages rates are also dependent upon other factors such as types and size of industry and the employees education, age, on-the-job training, industrial experience and time served. Education levels and the length tune in the job are the most important factors leading to higher wages.

Apart from daily or monthly wages, some employees receive overtime payments. On average all types of employees receive 2,482 baht per month but the average income differs in the same way as the wage rates. More than 50% of workers interviewed receive one or several fringe benefits.

In general, labor recruitment is not the main problem for industrialists. Only 20.6% of enterprises reported that obtaining workers labor is a major problem or 7.7% reporting the problem was sufficiently severe to affect productivity of the company or expansion. Southern enterprises have more labor problems than in other regions. The most important issue there is in procuring skilled workers, mostly engineers, especially in the steel-casting and vehicle manufacture and repair industries. Other industries which mentioned this problem to a lessen extent included textiles, wood products and furniture, electronics, engine manufacturing and repair, non-metal, chemicals, plastics and petroleum industries.

Table 4.1
Distribution of Employed Persons in Registered Firms
by Size of Employment in 1987

Firm Size (Number of Workers)	Greater Bangkok		Provincial Areas	
	DIW 1/	Survey 2/	DIW 1/	Survey 2/
0-5	34,845 (4.75)	56 (0.40)	28,717 (9.06)	824 (2.27)
6-9	43,472 (5.93)	74 (0.53)	28,287 (8.93)	1,075 (2.96)
10-19	66,177 (9.02)	302 (2.16)	36,813 (11.62)	2,018 (5.56)
20-49	101,890 (13.89)	762 (5.44)	42,262 (13.34)	3,204 (8.83)
50-99	73,696 (10.05)	832 (5.94)	32,438 (10.24)	2,861 (7.88)
100-199	78,485 (10.70)	2,052 (14.65)	31,447 (9.93)	4,841 (13.34)
200-499	112,484 (15.34)	3,351 (23.93)	50,012 (15.78)	6,202 (17.09)
500-999	84,733 (11.55)	3,376 (24.11)	21,787 (6.88)	3,321 (9.15)
>=1000	137,729 (18.78)	3,200 (22.85)	45,036 (14.21)	11,945 (32.91)
Total	733,511 (100.00)	14,005 (100.00)	316,799 (100.00)	36,291 (100.00)

Note: Percentage in Parentheses

Sources: 1 Department of Industrial Work (DIW)
2 Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.2
Distribution of Registered Firms by Size of Employment in 1987

Firm Size (Number of Workers)	Greater Bangkok		Provincial Areas	
	DIW 1/	Survey 2/	DIW 1/	Survey 2/
0-5	10,068 (37.53)	16 (13.45)	8,793 (48.66)	268 (30.80)
6-9	6,038 (22.51)	10 (8.40)	3,976 (22.00)	166 (19.08)
10-19	5,035 (18.77)	23 (19.33)	2,889 (15.99)	164 (18.85)
20-49	3,435 (12.80)	25 (21.01)	1,461 (8.09)	124 (14.25)
50-99	1,106 (4.12)	12 (10.08)	493 (2.73)	55 (6.32)
100-199	581 (2.17)	15 (12.61)	236 (1.31)	44 (5.06)
200-499	375 (1.40)	11 5.00	165 (0.91)	26 (2.99)
500-999	122 (0.45)	5 (2.00)	31 (0.17)	9 (1.03)
>=1000	68 (0.25)	2 (1.68)	25 (0.14)	7 (0.80)
Unspecified	0 0.00	0 0.00	0 0.00	7 (0.80)
Total	26,828 (100.00)	119 (100.00)	18,069 (100.00)	870 (100.00)

Note: Percentage in Parentheses

Sources: 1.Department of Industrial Work (DIW)
2.Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.3
Average Number of Persons Employed Per Month by
Rural Manufacturing Firms

Persons

Type of Industry	During the Survey Week	Normal Employment	Employment during Peak Period	Employment during Trough Period
Food, Beverage, Tobacco	65.54	53.97	75.72	36.58
Textile, Apparel and Footwear	146.46	143.38	157.00	102.25
Wood & Furniture	26.42	43.69	49.97	28.69
Paper & Printing	11.70	9.75	15.50	8.00
Chemical, Petroleum & Rubber Products	56.16	49.75	56.93	42.41
Pottery, Glass & Other Non-Metal	20.46	28.53	33.64	19.96
Iron & Metal Basic Industries	29.67	27.50	39.00	25.00
Fabricated Metal	14.37	11.00	16.44	8.07
Machinery & Electrical Supplies	9.41	7.41	10.43	5.09
Transport Equipment	13.07	23.38	25.94	11.95
Others	58.69	108.11	114.78	143.33
All Industries	46.70	43.28	54.35	31.16

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.4
Size Distribution of Rural Manufacturing Firms
in Various Seasonality

Percent

Firm Size (Number of Workers)	Greater Bangkok			Rest of the Country		
	Normal	Peak	Trough	Normal	Peak	Trough
0-5	13.04	4.76	14.29	21.02	10.84	36.27
6-9	8.70	0.00	9.52	14.97	16.43	14.08
10-19	21.74	23.81	23.81	23.89	21.33	17.61
20-49	17.39	28.57	9.52	15.29	24.83	11.97
50-99	8.70	14.29	19.05	8.60	8.74	5.28
100-199	8.70	9.52	9.52	5.73	4.20	3.87
200-499	13.04	4.76	4.76	3.18	3.85	1.76
500-999	4.35	4.76	0.00	0.64	1.75	0.35
1000 & Over	0.00	0.00	0.00	0.32	0.35	0.35
Unspecified	4.35	9.52	9.52	6.37	7.69	8.45
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.5
Average Number of Persons Employed Per Manufacturing Firm in Provincial Areas

Firm Size (Number of Workers)	Family Labor	Admin Worker	Permanent Operation Workers			Temporary Workers	Appentices	Subcontract Workers
			Skilled	Semi-skilled	Unskilled			
<= 5	1.6	0.1	0.9	0.8	1.4	0.1	0.4	1.1
6-9	2.1	0.2	2.0	1.3	3.4	0.8	1.0	3.7
10-19	2.4	1.3	3.2	3.0	6.6	1.8	1.6	9.6
20-49	3.1	3.0	4.9	4.8	17.0	5.3	2.0	14.5
50-99	2.9	6.8	8.6	10.9	40.2	15.2	1.1	31.9
100-199	3.5	5.9	21.2	9.2	60.3	14.1	11.0	0.0
200-499	2.5	32.9	23.2	55.2	160.8	116.0	7.0	185.0
500-999	3.5	46.4	48.9	72.7	364.9	170.0	5.0	0.0
> 1000	4.5	47.8	84.7	60.5	2117.0	939.3	0.0	1850.0
All Size	2.2	6.0	6.9	7.1	33.7	20.9	1.4	38.7

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.6
Percent of Persons Employed by Rural Manufacturing Firm During the Survey Week
Classified by Type of Employment and by Industry

Type of Industry	Family Member	Admin-istrative Workers	Skilled Workers	Semi-skilled Workers	Unskilled Workers	Temporary Workers	Apprentice	Subcon-tract Workers	Total
Food, Beverage,Tobacco	1.25	4.87	3.13	3.14	12.10	25.56	0.27	49.68	100.00
Textile, Apparel and Footwear	0.58	1.73	6.69	7.15	68.56	4.07	1.05	10.17	100.00
Wood & Furniture	3.86	6.78	11.28	9.84	16.09	34.54	5.94	11.67	100.00
Paper & Printing	2.90	6.56	21.12	7.93	51.48	8.06	1.96	0.00	100.00
Chemical, Petroleum & Rubber Products	0.98	2.33	1.88	1.27	18.97	2.53	0.35	71.69	100.00
Pottery, Glass & Other Non-Metal	2.55	9.92	12.93	19.98	34.62	7.87	0.00	12.13	100.00
Iron & Metal Basic Industries	4.64	11.06	13.34	30.92	23.71	11.59	4.74	0.00	100.00
Fabricated Metal	7.38	3.36	12.99	24.13	40.74	0.00	6.98	4.42	100.00
Machinery & Electrical Supplies	11.14	7.92	20.85	17.26	23.39	1.36	8.35	9.72	100.00
Transportation Equipment	5.72	3.10	8.71	23.17	16.33	1.51	3.19	38.26	100.00
Others	3.19	6.17	8.86	5.08	51.61	24.55	0.55	0.00	100.00
All Industries	1.94	5.23	6.03	6.26	26.89	18.41	1.22	34.02	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.7
Working Conditions in Manufacturing Firms in Rural Area and Greater Bangkok

Working Condition	Greater Bangkok		Rest of the Country	
	Average	S.D.	Average	S.D.
Working Hours Per Day	8.04	0.75	8.28	1.22
Working Days Per Week	6.11	0.45	6.29	0.59
Holidays Per Month	3.48	1.73	3.54	2.17
Percent of Workers Being Paid for Working on Holidays	66.33	-	52.60	-
Percent of Workers Working Overtime throughout the Year	50.76	-	49.06	-
Number of Hours of Overtime Work per Month	29.60	21.54	27.03	21.40
Percent of Workers Working Overtime and Getting Paid	90.00	-	82.64	-

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.8
Average Daily Wage and Salary of Workers in Manufacturing Firms by Type of Industry and Region: 1988

Baht

Type of Industry	Average Daily Wage		Average Salary		Avg. Earning from Wage per Month	
	Provincial	Greater Bangkok	Provincial	Greater Bangkok	Provincial	Greater Bangkok
Food, Beverage, Tobacco	55.65	67.67	2,781	2,378	2,653	2,339
Textile, Apparel and Footwear	79.30	94.08	2,903	3,295	2,758	3,454
Wood & Furniture	65.75	69.67	2,282	4,170	2,292	3,078
Paper & Printing	30.00	65.00	2,944	3,680	3,312	3,669
Chemical, Petroleum & Rubber Products	54.33	66.00	2,947	3,204	2,633	3,247
Pottery, Glass & Other Non-Metal Products	60.00	78.92	2,888	4,577	2,404	3,729
Iron & Metal Basic Industries	91.57	80.00	4,967	7,000	3,345	5,040
Fabricated Metal	90.22	84.42	1,617	3,000	2,421	5,187
Machinery & Electrical Supplies	74.77	84.00	1,915	3,524	2,108	3,438
Transport Equipment	82.06	n.a.	1,614	2,633	2,048	2,633
Others	66.75	n.a.	3,500	5,057	2,858	5,716
All Industries	67.88	79.08	2,565	3,383	2,482	3,642

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.9
Average Wages of Semi-Skilled and Laborer as Percentage of that of Skilled Labor

Type of Industry	Average Daily Wage			Average Salary		
	Skilled	Semi-Skilled	Laborer	Skilled	Semi-Skilled	Laborer
Food, Beverage, Tobacco	100.00 (67)	93.73 (63)	77.31 (52)	100.00 (4,158)	55.92 (2,325)	33.93 (1,411
Textile, Apparel and Footware	100.00 (101)	62.38 (63)	70.30 (71)	100.00 (2,720)	64.04 (1,742)	62.43 (1,698
Wood & Furniture	100.00 (114)	70.25 (80)	41.47 (47)	100.00 (3,256)	51.20 (1,667)	37.16 (1,210
Paper & Printing	n.a. n.a.	n.a. n.a.	n.a. n.a.	100.00 (3,250)	90.25 (2,933)	46.17 (1,500
Chemical, Petroleum & Rubber Products	n.a. n.a.	n.a. (60)	n.a. (53)	100.00 (3,575)	57.34 (2,050)	30.29 (1,083
Pottery, Glass & Other Non-Metal	100.00 (89)	74.16 (66)	56.18 (50)	100.00 (3,320)	36.14 (1,200)	40.42 (1,342
Iron & Metal Basic Industries	100.00 (100)	89.73 (90)	69.79 (70)	n.a. n.a.	n.a. n.a.	n.a. n.a.
Fabricated Metal	100.00 (99)	n.a. n.a.	82.67 (82)	n.a. n.a.	n.a. (2,000)	n.a. (870
Machinery & Electrical Supplies	100.00 (95)	79.89 (76)	54.63 (52)	100.00 (3,308)	56.83 (1,880)	21.46 (710
Transport Equipment	100.00 (153)	39.29 (60)	46.30 (71)	100.00 (2,150)	93.02 (2,000)	43.26 (930
Others	n.a. n.a.	n.a. (80)	n.a. (59)	100.00 (4,020)	39.80 (1,600)	51.62 (2,075
All Industries	100.00 (101)	71.20 (72)	55.01 (55)	100.00 (3,495)	58.63 (2,049)	33.51 (1,171

Notes: Number in parentheses are average wages in baht.
Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.10
Average Daily Wage and Salary of Workers in Provincial Firms
Classified by Size of Firm

Baht

Firm Size (Number of Workers)	Type of Workers				
	Administrative	Clerk	Skilled	Semi-Skilled	Laborer
Daily Wage					
<= 5	-	n.a.	142	69	60
6-9	-	38	99	68	54
10-19	-	77	120	128	58
20-49	-	75	100	75	59
50-99	-	65	101	78	64
100-199	-	100	97	80	72
200-499	-	n.a.	110	80	66
500-999	-	n.a.	n.a.	73	62
>= 1000	-	80	79	66	71
All	-	77	114	90	60
Salary					
<= 5	2,782	1,800	2,337	1,725	922
6-9	n.a.	1,700	2,188	1,485	1,100
10-19	5,906	2,390	2,674	1,781	1,292
20-49	7,425	2,668	3,341	2,921	1,547
50-99	10,054	3,345	3,322	2,636	1,449
100-199	6,642	3,200	2,963	2,012	1,476
200-499	16,073	3,442	6,416	2,683	2,600
500-999	14,000	4,002	5,700	3,700	2,940
>= 1000	15,650	4,000	7,167	2,833	n.a.
All	9,230	3,000	3,090	2,199	1,256

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.11
Average Daily Wage and Salary of Workers
in Various Regions

Baht

Region	Type of Workers						
	Admin.	Clerk	Skilled	Semi-Skilled	Laborer	Other	Average
Daily Wage							
North	n.a.	65.8	78.3	63.0	47.4	37.0	55.9
Northeast	n.a.	74.7	113.2	72.4	45.9	n.a.	67.4
South	n.a.	61.0	126.9	88.6	68.1	84.8	83.4
Rural Central	110.0	78.7	76.0	72.4	58.7	54.2	66.8
Provincial	110.0	70.1	100.8	71.7	55.4	55.4	67.9
Greater Bangkok	n.a.	82.0	98.6	78.3	77.2	56.7	79.1
Salary							
North	6,257	2,040	2,486	1,930	940	1,536	2,160
Northeast	3,071	2,882	2,339	1,760	1,055	1,550	1,932
South	4,075	2,368	4,070	2,460	1,689	2,000	2,727
Rural Central	4,612	3,536	5,350	2,040	1,012	2,100	3,160
Provincial	4,569	2,976	3,495	2,050	1,171	1,850	2,565
Greater Bangkok	5,400	4,367	4,765	2,830	2,230	2,498	3,383

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.12
Wage Setting Criteria Used by Provincial Firms

Number and Percent

Criteria of Wage Determination	Admin. Worker	Skilled Worker	Semi-Skilled Worker	Laborers
Minimum Wage Rate	12	19	15	85
(%)	4.63	3.78	5.36	13.36
Government Salary	1	2	1	1
(%)	0.39	0.40	0.36	0.16
Education Level	93	32	16	15
(%)	35.91	6.37	5.71	2.36
Past Work Experience	10	53	28	37
(%)	3.86	10.56	10.00	5.82
Sex	0	0	0	0
(%)	0.00	0.00	0.00	0.00
Work Performance	36	191	82	146
(%)	13.90	38.05	29.28	22.95
Wage Requested by Workers	0	1	0	1
(%)	0.00	0.20	0.00	0.16
Relative Wages to Others	1	5	0	14
(%)	0.39	1.00	0.00	2.20
Firm's Need of Labor	1	0	0	0
(%)	0.39	0.00	0.00	0.00
Costs of Living	2	2	1	5
(%)	0.77	0.40	0.36	0.79
Worker's Ability	27	77	53	81
(%)	10.42	15.34	18.93	12.74
Work hard	16	31	22	82
(%)	6.18	6.17	7.86	12.89
Position & Responsibility	13	34	17	59
(%)	5.02	6.77	6.07	9.28
Others	9	16	10	39
(%)	3.47	3.19	3.57	6.13
No Specific Criterion	38	39	35	71
(%)	14.67	7.77	12.50	11.16
Total	259	502	280	636
(%)	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.13
Simple Regression Coefficient of Factors Affecting Manufacturing Wages

Dependent Variable is Average Wage Per Day

Explanatory Variables	Constant	Co-efficient	T-STAT	r^2 (%)	Obser-vations
Provincial Areas					
Education 1/	35.08	6.52	9.62	14.40	552
Age 2/	3.18	2.84	9.45	13.97	552
Length of Work 3/	65.44	0.35	7.72	9.77	552
Training in the firm 4/	75.79	40.78	5.87	5.96	546
Fringe-benefit 5/	66.58	4.62	3.38	2.03	552
Short-term training 6/	81.65	25.59	2.34	0.98	552
Experience 7/	80.39	13.61	1.99	0.71	552
Greater Bangkok					
Education 1/	28.39	10.08	8.43	26.93	195
Age 2/	17.14	3.49	4.88	10.99	195
Length of Work 3/	87.79	0.42	4.25	8.55	195
Training in the firm 4/	95.00	43.86	3.90	7.29	195
Fringe-benefit 5/	66.95	11.30	3.32	5.40	195
Short-term training 6/	110.56	47.08	1.90	1.84	195
Experience 7/	110.73	12.42	0.86	0.38	195

Notes: 1/ Years of education;
2/ Years of age;
3/ Months of work in the current firm;
4/ 1=if a worker had formal on-the-job training;
0=if no training;
5/ Sum of number of fringe-benefit;
6/ 1=if a worker had short-term training;
0=if no training;
7/ 1=if a worker used to work in manufacturing for at least 1 Year;
0=if a worker never worked in manufacturing before;

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.14
Multiple Regression Coefficients of Factors Affecting Manufacturing Wages

Dependent Variable is Average Wage Per Day

Explanatory Variables	Provincial Areas		Greater Bangkok	
	Coefficient	Coefficient	Coefficient	Coefficient
Constant	-67.90	-63.59	-82.79	-82.62
Education 1/	7.48	7.12	10.85	10.80
	(12.36)	(11.47)	(9.81)	(8.81)
Age 2/	2.53	2.46	3.07	3.07
	(8.38)	(8.06)	(4.07)	(4.06)
Length of work 3/	0.21	0.20	0.19	0.19
	(4.83)	(4.54)	(1.92)	(1.92)
Training in the firm 4/	-	15.45	-	0.84
		(2.55)		(0.08)
Fringe-benefit 5/	2.38	1.93	1.37	1.35
	(2.12)	(1.67)	(0.49)	(0.48)
Short-term training 6/	11.68	11.00	17.72	17.65
	(1.32)	(1.25)	(0.92)	(0.92)
Experience 7/	14.40	14.43	13.24	13.19
	(2.55)	(2.56)	(1.16)	(1.15)
R^2	37.18	3736	44.37	44.38
F-Value	53.77	45.84	24.99	21.31
Observations	552	546	195	195

Notes: T-statistics in parenthesis
1/ Years of education;
2/ Years of age;
3/ Months of work in the current firm;
4/ 1=if a worker had formal on-the-job training;
0=if no training;
5/ Sum of number of fringe-benefit;
6/ 1=if a worker had short-term training;
0=if no training;
7/ 1=if a worker used to work in manufacturing for at least 1 Year;
0=if a worker never worked in manufacturing before;

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.15
Availability of Various Fringe-Benefit Given to Employees by Sample Firms

Type of Fringe-benefit	Not Available	Available Occasionally	Available Regularly	No Answer
Food allowance	342	144	322	12
	41.71	17.56	39.27	1.46
Transportation provision	611	88	93	22
	75.06	10.81	11.43	2.70
Housing	277	170	364	11
	33.70	20.68	44.28	1.34
Annual bonus	197	266	344	13
	24.00	32.4	41.9	1.58
Reward	352	304	146	20
	42.82	36.98	17.76	2.43
Health services	130	193	492	8
	15.8	23.45	59.78	0.97
Holiday with paid	356	185	255	14
	43.95	22.84	31.48	1.73
Others	6	4	13	2
	24.00	16.00	52.00	8.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.16
Labor Problems Faced by Manufacturing Firms

Number of Firms

Type of Labor Problems	Greater Bangkok	Rural Central	Northeast	North	South
Shortage of Skilled Workers and Engineers	21 (28.4)	19 (18.6)	24 (18.5)	21 (14.6)	46 (34.1)
Shortage of Semi-Skilled Workers	14 (18.9)	8 (7.8)	13 (10.0)	19 (13.2)	13 (9.6)
Shortage of Unskilled Workers Regularly	6 (8.1)	16 (15.7)	15 (11.5)	14 (9.7)	16 (11.9)
Shortage of Unskilled Workers in the Rainy Season	11 (14.9)	33 (32.4)	37 (28.6)	46 (31.9)	27 (20.0)
High Labor Turn-over	8 (10.8)	12 (11.8)	22 (16.9)	24 (16.7)	18 (13.3)
High Wage Rates	5 (6.8)	8 (7.8)	9 (6.9)	18 (12.5)	10 (7.4)
Shortage of Administrative Workers	4 (5.4)	2 (2.0)	5 (3.8)	2 (1.4)	3 (2.2)
Others	5 (6.8)	4 (3.9)	5 (3.8)	0 0.0	2 (1.5)
Total	74 (100.0)	102 (100.0)	130 (100.0)	144 (100.0)	135 (100.0)

Note: Parentheses Show Percentage of Regional Total

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 4.17
Labor Problems Faced by Provincial Firms Classified by Industry

Number and Percent

Type of Industry	Type of Labor Problems									
	1	2	3	4	5	6	7	8 Unspec.		Total
Food, Beverage, Tobacco	16	1	15	43	8	5	2	2	0	92
(%)	17.39	1.09	16.30	46.74	8.70	5.43	2.17	2.17	0.00	100.00
Textile, Apparel and Footwear	8	3	2	1	1	0	0	0	0	15
(%)	53.33	20.00	13.33	6.67	6.67	0.00	0.00	0.00	0.00	100.00
Wood & Furniture	17	0	3	8	1	3	0	1	2	35
(%)	48.57	0.00	8.57	22.86	2.86	8.57	0.00	2.86	5.71	100.00
Paper & Printing	3	2	1	1	0	0	0	1	0	8
(%)	37.50	25.00	12.50	12.50	0.00	0.00	0.00	12.50	0.00	100.00
Chemical, Petroleum & Rubber Products	10	2	0	6	5	1	1	1	1	27
(%)	37.04	7.41	0.00	22.22	18.52	3.70	3.70	3.70	3.70	100.00
Pottery, Glass & Other Non-Metal	8	2	10	13	3	1	0	1	1	39
(%)	20.51	5.13	25.64	33.33	7.69	2.56	0.00	2.56	2.56	100.00
Iron & Metal Basic Industries	3	0	0	0	0	0	0	0	0	3
(%)	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Fabricated Metal	8	4	2	5	0	0	0	1	1	21
(%)	38.10	19.05	9.52	23.81	0.00	0.00	0.00	4.76	4.76	100.00
Machinery & Electrical Suplies	24	8	5	9	3	2	0	1	0	52
(%)	46.15	15.38	9.62	17.31	5.77	3.85	0.00	1.92	0.00	100.00
Transport Equipment	14	3	2	3	1	0	0	1	0	24
(%)	58.33	12.50	8.33	12.50	4.17	0.00	0.00	4.17	0.00	100.00
Others	0	2	1	2	2	1	0	0	1	9
(%)	0.00	22.22	11.11	22.22	22.22	11.11	0.00	0.00	11.11	100.00
All Industries	111	27	41	91	24	13	3	9	6	325
(%)	34.15	8.31	12.62	28.00	7.38	4.00	0.92	2.77	1.85	100.00

Notes: Type of Labor Problems
1 = Shortage of skilled workers & engineers
2 = Shortage of semi-skilled workers
3 = Shortages of unskilled workers regulaly
4 = Shortages of unskilles workers in the rainy season
5 = High labor turn-over
6 = High wage rates
7 = Shortages of administrative workers
8 = Others

Table 4.18
Solution to Shortage of Required Personnel, Used by Manufacturing Firms

Number and Percent

Solution	Greater Bangkok	Rest of the Country
Increase Wage or Rewards	3	7
(%)	27.27	13.21
Mechanization	0	5
(%)	0.00	9.43
Hire Temporary Workers	1	11
(%)	9.09	20.75
Employ Family Members	2	7
(%)	18.18	13.21
Up-Grade Unskilled Workers	2	3
(%)	18.18	5.66
Issue Work Contracts	0	2
(%)	0.00	3.77
Decrease Production or Quality	1	5
(%)	9.09	9.43
Others	2	7
(%)	18.18	13.21
No Solution	0	6
(%)	0.00	11.32
Total	11	53
(%)	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

CHAPTER 5

LABOR REQUIRED AND LABOR DEVELOPMENT

The purpose of this chapter is to discover the type of labor required by regional industrialists, to consider skill development and training opportunities relation to the labor market, and the process of labor development and whether or not it corresponds to demand, and, from this to suggest possible labor development measures to satisfy requirements.

5.1 FORECAST OF LABOR SITUATION IN 5 YEARS

A survey of 865 industrialists who were asked to forecast their employment levels for the next 5 years, found that 35.4 % could not give an answer (Table 5.1). About 31.2% forecast said that their employment will not change and only 22.3% reported that as production was expected to expand so their labor requirements would increase. However, 9.0% forecast that employment levels may in fact decrease due to decreased production. Only 0.35% referred to difficulties in hiring workers or high wages. As was seen in the previous chapter labor supply and wages are not important issues of great concern to industrialists.

The industries which reported an expected increase of employment over the next 5 years were steel and metal casting (40%), textiles and dress-making, paper products, chemicals and petroleum. Only 20% of the many food and beverages industries reported an increase in employment.

As for size of industry (Table 5.2), most of the small-scale industries could not forecast employment levels in their enterprises. But nearly 50% of the medium-scale industries, between 50 to 199 employees, and large-scale industries, with more than 200 employees, reported that their employment level would increase, but however 57% of large scale industries with over 1,000 employees reported that the

employment levels will increase with increased production. Therefore, between 1990-1994, regional industrial employment levels are expected to increase overall but the entrepreneurs cannot forecast at what rate.

5.2 TYPE OF LABOR REQUIRED

From the regional industrial groups which expected to increase employment levels, each industrialist mentioned the type of worker who may be required as follows:

5.2.1 Administrative and Office Workers

1. Educational levels: For administration and general business affairs, the educational level required is basic vocational education (28.6%) and advanced vocational education (20.4%). Only 17.6% required university graduates (Table 5.3). Thus indicating that regional industries will absorb mostly vocational school graduates for their administration and marketing officers.

All sizes of regional enterprises require vocational school graduates as administrative and office workers but large enterprises have a higher ratio of these than smaller ones. Only the large-scale enterprises required Bachelor Degree graduates or higher. In smaller enterprises, about half reported that they preferred vocational school graduates and the other half did not specify educational level clearly.

The most popular field of study required in commerce (40.5%), which is directly related to administration and management, but also another 40.5% of employers could not specify clearly as to what occupational training was desired, especially in small industries.

Of commercial graduates, only 3.0% of entrepreneurs say that labor is difficult to procure and a further 6.0% claimed that vocational graduates in other fields were difficult to recruit, however, even when

taking these into account 80.1% of regional employers reported administrative offices were not difficult to find.

2. Experience: The level of experience and the work performance expected in regional industrial enterprises showed diverse opinions (Table 5.4) but, most (58.7%) said that experience was not necessary. About 18.2% of employers took academic records and other experience into account. Another 14.9% put emphasis on working or industrial experience, indicating that to be hired for management and general business previous experience affairs is not an important criteria.

5.2.2 Skilled Workers

1. Educational level: The educational requirements for supervisors or skilled workers ranges from Bachelor Degree level to no education at all (Table 5.3, column 3). Most employers 34.2% not respond and as being the most important criteria. 16.1% did not mention any specific educational level seeing ability to work well. Only 12.1% prefer Bachelor Degrees or higher, and about 29.5% require vocational level training.

The educational level of supervisors and skilled workers also varied according to size of the enterprise (Table 5.6). Most small-scale industries with less than 50 workers, did not specify any particular qualifications, what they want is the ability to carry out the assignment, and therefore experience is required. Medium and large-scale industry tends to prefer workers with vocational and Bachelor Degree level education.

The fields of study preferred by employers are diverse, but most require in mechanical engineers such as factory mechanics (8.6%), motor mechanics (5.8%), electricians and electronics engineers (5.8%). Handicraft technicians (2.9%) nutritionists (3.9%), textile and garments technicians (2.9%) and also required. About 73.6% of the entrepreneurs could not state whether workers with the required qualifications were difficult to procure.

2. Experience: Previous experience is what most employers are looking for when hiring skilled workers (Table 5.4). 40.5% of regional industrialists reported that their supervisors must have previous experience in the same field or type of industry, but 2.4% stated that the experience may be drawn from another type of industry. About 36.9% could not clearly specify the required experience, especially in small- and medium-scale industries (see Table 5.6). It is possible that a supervisor in a small-scale industry has to take care of several duties ranging from general business affairs to therefore making it difficult to specify the experience required. The education system doesn't prepare a worker for diverse type of employment, so the employer should, be prepared to upgrade and promote his own supervisors.

5.2.3 Assistant Production Employees

1. Educational level: Educational levels for assistants ranges from vocational levels to no education at all (Table 5.4). Most employers (29.4%) do not worry about educational qualifications and another 23.5% did not even mention them. However, 30.1% specified that they did prefer to hire vocational level graduates.

The fields of study are as diverse as those at supervisor levels, of the employers who responded but most preferred workers trained in factory mechanics (8.9%), electricians and electronic mechanics (7.2%), motor mechanic (3.6%). The majority, however, did not specify or could not state which field they preferred. Most employers (91.7%) could not indicate whether it was difficult to find suitable employees at assistant production levels. Only 4.2% reported that supervisory assistants in the field of arts and handicrafts were difficult to recruit and 4.2% claimed that they had difficulty finding factory and electronic mechanics.

2. Experience: Most employers (57.6%) report that no previous experience is necessary for semi-skilled workers and another 9.8% did not specify. About 26.8% of industrialists said that their semi-skilled workers or assistant supervisors should have experience in the same type

of work. Thus at these levels employers prefer vocational graduates and previous experience.

5.2.4 Unskilled Workers

1. Educational level: For lower level or unskilled workers, 44.9% of industrialists did not specify particular additional levels and 18.8% were undecided. Therefore, 63.8% of employers do not have any specific educational requirements for production workers, 18.1% need primary school graduates, 13.0% preferred advanced primary school graduates, and only 5.1% looked for middle school or vocational school graduates, of these most were, medium-scale enterprises. In terms of category of industry, non-metal (9%), vehicle manufacture and repair (25%) and electrical engineering (8%) preferred their workers to have graduated from middle school or basic vocational school.

Nearly all entrepreneurs (93.5%) who were hiring labourers could not indicate what type of skill they required. Only 4.9% reported that they required construction workers and factory mechanics. No employers reported that unskilled labor was in short supply.

2. Experience: 69.9% entrepreneurs reported that their unskilled workers did not need any previous experience, but 18.9% required experience in the same field of work (Table 5.4, last column).

5.3 SKILL DEVELOPMENT IN NON-FORMAL EDUCATION SYSTEM

There are several forms of industry-related labor development ranging from basic skills to advanced training in particular types of industry. The training takes place both within and outside the formal educational system.

Skills development in the non-formal education system refers to that knowledge and experience which gained from working and on-the-job training provided to upgrade the skills of industrial workers.

5.3.1 Experience Procurement of Employee

As described in chapter 3, 41% of regional industrial employees have had previous experience before working in the current job, about 25% have worked in the same type of industry for more than 1 year and about 16% used to work in other types of industry. In terms of types of industry, 54% of the employees in vehicle production and repair industries and 43% in steel and metal casting have had at least 1 year of experience. Generally, in engineering works such as engine repair, mechanical and electrical repair, the workers must have had previous experience. However, certain jobs do not require advanced technical skills and can be carried out without any previous training. Job experience can be obtained in several ways and a certain number of industrial employees leave their current job in order to work in larger concerns and gain more experiences. Others gain experience by working in home industries such as weaving and furniture making. Obtaining related working experience helps to increase the workers' ability and this is a positive factor towards commanding better wages, as explained in chapter 4. However, such experience is based upon the opportunity to work in the industry. If the regional industries do not expand, the opportunities to gain experience will be limited

5.3.2 On-the-Job Training

When working in industry, employees are able to practice, train and develop their skills. During the first three months 46% of regional industrial employees reported that they were provided on-the-job training (Table 5.7), 33% have been orientation lectures, 14% receive occasional training by a professional trainer, 7.4% received training elsewhere and about 21% received vocational training by attending an educational institute supported by entrepreneur. In terms of regions, only 13% of workers in the Northeast and in the South receive some form of on-the-job training.

After having worked for 3 months, about 49% of the regional industrial workers reported that they had received training or developed their skills in various ways. However, most of the training involved job orientation or introduction by supervisor.

In Bangkok, the development of workers' skills is more common than in the rural areas. On average, a worker will receive more than one type of training during the first three months of work. 51% reported that they received on-the-job training by their supervisors 30% of workers received official training or trained outside the job. In Bangkok, after 3 months of employment workers still continued to receive some form of training and skill development.

The data shows that very few regional industrial workers have received formal training. Although the majority of employees have received some form of orientation or on-the-job training, this is a basic necessity. If no training is offered industry will suffer. Development of skills through additional practical training in an educational institute and internal official training sessions are be better than on-the-job training in developing skills, but are hardly ever introduced by industrial entrepreneurs. Sookon Kim (1982) explained that if a high turn-over rate in employment continues, skill development receives very low priority among entrepreneurs. Even the workers themselves pay little attention to such training since the rewards are small and not guaranteed (Juthathip Rakkhanam, 1986).

This study also questioned proprietors or managers about training. The findings were the same as in Table 5.8. About 50.7% of the sampled regional industries reported that their enterprises gave initial orientation or training to workers during the first three months, and 43.3% provided on-the-job training. As for official training 1.68%, provided in-house instruction by trainer or instructor, only 1.86% of their employees were enrolled in educational institutes.

After the first three months, the amount of formal training provided increased proportionately. About 4.77% of the enterprises gave

in-house training 8.23% or supported their workers training elsewhere or in an educational institute.

The forms of skill development provided varied according to the size of the enterprise. In both small and large-scale industries, development of skill usually takes the form of orientation and on-the-job training. Formal training hardly exists. A larger proportion of formal training exists in medium-scale industries. After three months of work, official skill development increases in proportion, especially in medium-and small-scale industry, with between 20-499 employees. Although the proportion of industries which provide formal skill development opportunities will increase after three months of employment, such a proportion is still very low when compared to orientation and on the job training.

5.4 SKILL DEVELOPMENT THROUGH FORMAL EDUCATIONAL SYSTEM

Skill development denotes both short-term and long-term training and instruction offered by educational institutes. Such development as it relates to manpower in rural industry may be classified as follows:

5.4.1 Short-term Training

Short-term training is organized both by the state and private sectors to develop skills and upgrade the quality of manpower. The survey found that only a very few industrial workers actually receive any short-term training. Of 637 regional employees interviewed, only 50 persons, or 7.8%, received short-term occupational training before starting their job, of these 24.0% received training from a Labor Skill Development Institute of the Department of Labor and 22.0% from the Mobile Training Center Unit. Another 12% were trained in other private or government vocational schools, and the rest by other organizations.

In Bangkok, only 11 out of 199 employees, about 5%, have received any short-term training. Of these, three persons, 27.3%, attended

private vocational school.

In fact, short-term training has been available in Thailand for many years and at present, a diverse range of training opportunities are provided by government agencies and private organizations, however the major vocational fields are: management and service, dress-making, engineering, construction, art, handicraft and music. The courses range from 7 days to 1 year, depending on the type of training and vocational category, and involves preparation for job-entry, upgrading skills and providing supplementary occupations and income.

Job-entry preparation is provided both by the state and private agencies. State organizations include the Ministry of Education, Department of Non-Formal Education and Vocational Education, Ministry of Interior, Skill Development Institutes, Department of Labor, Department of Public Welfare and Department of Corrections, Ministry of Defense and the Bangkok Municipality. Occupational training for a supplementary career is organized by the above institutes, as well as the Community Development Department and the Department of Industrial Promotion, Training for upgrading skills and on-the-job training are provided by the Skill Development Institute, Department of Labor and Department of Industrial Promotion. Details of these training opportunities can be found in the Policy and Program for the Promotion of Small Scale and Regional Industries, volume V,in Industrial Restructuring for the National Economic and Social Development Board. (IMC, 1985: 253-270).

Although many agencies are involved in short-term training with 100,000 students per year (Ministry of Education 1987:42), most of the courses promote supplementary careers and job entry training and upgrading of skills is still limited. In 1982, only 11 of all the 168 short-term trainees received their training from Skill Development Institute of Labor, Department of Labor. This figure increased to 19,802 in 1988. 74% graduated, 64% of whom were trained in rural areas. Since the number of trainees and graduates are limited, the number of short-term trained employees found working in industry are very small.

During the last phase of the 6th National Economic and Social Development plan in rural regions, nearly 100,000 trainees had graduated from short-term training courses provided by the Department of Vocational Education, Department of Non-Formal Education and Department of Labor. Of these, 10% graduated from Skill Development Institute of Labor, Department of Labor. Although there were also many graduates from Department of Vocational Education and Department of Informal Education, most of these had undertaken supplementary courses and did not have sufficient qualifications. The survey found that most employees working in industry received their occupational training from Department of Labor. The emphasis placed by the Skill Development Institutes on offering suitable occupational courses plays significant role in providing the graduates skills required by employers.

5.4.2 Manpower Training at Vocational Level

Vocational and high school level education prepares manpower at intermediate and advanced level and work in either production departments, as assistants or supervisors in administrative or office work. The survey found that only 12% of regional industrial workers were educated to the basic senior vocational level, and only 5% at a higher level. In Bangkok, vocational graduates accounted for only 18.4% of all employees. Employees with higher higher education than vocational level are very limited.

A study made by Department of Vocational Education (Table 5.10) reports that between 1983-1988, there were 63,000 graduates from vocational certification courses, advanced vocational courses and technical professional courses. However, between 1985 and 1988, the number of graduates decreased, thereby indicating a slow-down in training. Of these graduates, 30,000 were trained in industrial engineering.

From the early part of the 5th National Economic and Social Development Plan to the early, part of the 6th National Economic and Social Development Plan, unemployment was the main problem faced by the

newly graduated. Some graduates did not join the labor market and continued their studies. This is only postponed unemployment. One of the causes of unemployment was economic recession, as described in chapter 2. Some employers claimed that new graduates do not have the qualifications and experience that they require (National Education Commission Office, 1983). By 1986, when industry had expanded at the rate of 9.63%, and in 1987 by 13.56% in 1987 (ONEC), demand for labor and employment increased and unemployment, in certain fields, decreased from 29.6% in 1986 to 17.8% in 1988. More recently, it has been reported that middle and high level manpower are difficult to recruit, and if this trend continues the shortage of middle level workers may become critical. may be intensifying.

One reason why the quality and experience of vocational course graduates does not correspond to employers' requirements is due to lack of apprenticeship schemes both inside and outside the institutes. Most schools lack equipment and budgetd (NESDB, 1983). These problems could be solved through encouraging closer cooperation between educational institutes and local industry.

Tables 5.11 and 5.12 show that 68.6% of industrial entrepreneurs have never enrolled their employees for training, and 60% of small-and medium-level enterprises have never accepted any student for on-the-job training. However, the survey findings indicated that nearly 56% of these enterprises were willing to accept these students. Even 50% of small industries with less than 20 employees, are more than willing to do so. The industries that previously accepted students would be willing to accept them again are mainly the steel and metal casting enterprises (83.3%) and textiles and dress-making (79.3%). Others include electrical and engine assembly and repair, metalware and the vehicle manufacture and repair industries. This is the case, it is possible that educational institutes could initiate cooperation with industries to upgrade skills.

5.4.3 Basic Education level

Most semi-and unskilled workers are primary school graduates, and are the bulk of the workforce. Even some assistants and supervisors are only educated to primary school-level. Data in chapter 2 indicates that supply of this type of labor is sufficient to fill most industrial need.

Middle school graduates account for only 18% of all rural employees. Experience shown by NICs and the more advanced industrial nations indicates that middle school-educated labor provides the central force of national production and development.

In Thailand, educational statistics by the Ministry of Education in 1987 (Office of the Permanent Secretary, Ministry of Education, 1988:44) indicates that 94.7% of children at primary school age (7-12 years) attend school. This is not very different from percentage of children in primary schools in industrial nations. However, when we reach middle school age group (13-18 years) only 28.6% are in school. This is very low, compared to other industrial nations, for instance Japan in 1984 (95%), Korea in 1986 (95%), Singapore in 1983 (69%), Malaysia in 1985 (52%) and the Phillipines in 1985 (64%) (UN/ESCAP; 1989: 125). This figure indicates that education level of the Nation's manpower which constitute its industrial workforce is very low. It should be noted that the basic qualifications of workers do not correspond to the conditions and experience required in many industrial countries. But, what is of utmost concern is that this proportion of middle school students per school-age population is decreasing, from 30.6% in 1984 to 29.6% in 1986, and 28.6% in 1987. Such decreases prevail in every region, but most especially in the poor regions. If we consider the importance of long term industrial development, such problems should be actively tackled both in terms of quantity and quality of labor now. Courses should be adjusted to suit the national economic structure since manpower development and adjustment at certain levels are time-consuming and in certain fields will be unable to keep pace with technology developments.

5.5 SUMMARY

Labor demand and employment in regional industries is tending to increase. About 22.3% of regional industries expect to increase their employment levels due to more production, especially in the steel and metal casting industries, chemical and plastic products, paper products and textiles. Many large-scale industries were able to forecast increased employment trends but smaller cottage industries were uncertain.

Those industries which expected to expand production and employment over the next five years, required all types of labor in all fields. Of the office and administrative workers 40.5% are required to have graduated from vocational schools graduate in commerce. Most entrepreneurs prefer experience above education when hiring workers assistant levels. In enterprises which preferred their workers to be educated level, most of them required vocational engineering graduates, especially factory mechanics, motor mechanics, electricians and electronics engineers. Most of the entrepreneurs who were hiring more staff (73.6%) did not find that the workers educated in their required field were difficult to recruit. In general, employers do not care about the education or experience of their unskilled labor force.

Industry-related skill development has many levels and takes many forms, such working experience. In the regions, further training opportunities are limited because there are a few regional industries. On-the-job training has received very little attention as yet because the employee turn-over rate is very high.

Developing workers skills through short training courses and vocational studies is important for supervisors and assistants, but the number who receive this training in regional industries is still small. Although a large number of these workers have graduated at vocational level, their qualifications and experience did not correspond to the need of employers. However, methods to develop skills to correspond with the requirements of industry through cooperation between educational institutes and entrepreneurs could be established since most

entrepreneurs are willing to accept trainees and apprentices in the factory and educational institutes require training facilities for students.

Table 5.1
Frequency of Sample Firms Expecting Changes in the Labor Employment in the Next 5 Years
Classified by Industry

Number and Percent

Industry	Expected Employment Situation						
	Undecided	Cease Operation	No change	Decrease	Increase	No answer	Total
Food, Beverage, Tobacco	90	2	87	27	51	3	260
(%)	34.62	0.77	33.46	10.38	19.61	1.15	100.00
Textile, Apparel and Footwear	9	-	6	2	12	0	29
(%)	31.03		20.69	6.90	41.38	0.00	100.00
Wood & Furniture	41	-	43	10	22	3	119
(%)	34.45		36.13	8.40	18.49	2.52	100.00
Paper & Printing	6	-	7	1	6	0	20
(%)	30.00		35.00	5.00	30.00	0.00	100.00
Chemical, Petroleum & Rubber Products	13	1	19	4	17	1	55
(%)	23.64	1.82	34.55	7.28	30.91	1.82	100.00
Pottery, Glass & Other Non-Metal	23	-	30	13	24	0	90
(%)	25.56		33.33	14.44	26.66	0.00	100.00
Iron & Metal Basic Industries	1	-	1	1	3	0	6
(%)	16.67		16.67	16.67	50.00	0.00	100.00
Fabricated Metal	20	-	13	4	9	1	47
(%)	42.55		27.66	8.52	19.15	2.13	100.00
Machinery & Electrical Supplies	66	2	35	10	26	3	142
(%)	46.48	1.41	24.65	7.04	18.31	2.11	100.00
Transport Equipment	27	1	22	5	15	1	71
(%)	38.03	1.41	30.99	7.04	21.13	1.41	100.00
Others	10	0	7	1	8	0	26
(%)	38.46	0	26.93	3.85	30.77	0.00	100.00
Total	306	6	270	78	193	12	865
(%)	35.38	0.69	31.21	9.02	22.3	1.39	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.2
Frequency of Sample Firms Expecting Changes in the Labor Employment in the Next 5 Years Classified by Firm Size

Number and Percent

Firm Size (Number of Workers)	Expected Employment Situation						
	Unde-cided	Cease Operation	No Change	De-crease	In-crease	No Answer	Total
0 - 5	109	4	91	31	27	7	264
(%)	41.29	1.52	34.48	9.85	10.23	2.65	100.00
6 - 9	59	2	58	15	31	0	165
(%)	35.76	1.21	35.15	9.09	18.79	0.00	100.00
10 - 19	66	0	42	16	40	0	164
(%)	40.24	0.00	25.61	9.76	24.39	0.00	100.00
20 - 49	39	0	42	4	34	1	124
(%)	31.45	0.00	36.80	3.23	27.42	0.81	100.00
50 - 99	17	0	10	5	21	2	55
(%)	30.91	0.00	18.19	9.10	38.18	3.64	100.00
100 - 199	8	0	10	8	18	0	44
(%)	18.18	0.00	22.73	18.18	40.91	0.00	100.00
200 - 499	6	0	4	1	14	1	26
(%)	23.08	0.00	15.38	3.84	53.00	3.84	100.00
500 - 999	0	0	6	0	3	0	9
(%)	0.00	0.00	66.67	0.00	33.33	0.00	100.00
> 1,000	1	0	1	1	4	0	7
(%)	14.29	0.00	14.29	14.29	57.14	0.00	100.00
Unknown	1	0	2	2	1	1	7
(%)	14.29	0.00	28.57	28.57	14.29	14.29	100.00
Total	306	6	270	78	193	12	865
(%)	35.38	0.69	31.21	9.02	22.31	1.39	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.3
Frequency of Sample Provincial Firms Indicating Level of Education Needed in the Employment of Various Workers

Number and Percent

Level of Education	Admin. Workers	Skilled Workers	Semi-Skilled Workers	Laborers
No Formal Education	8	51	25	62
(%)	8.79	34.23	29.41	44.93
Lower Primary School	-	5	4	25
(%)		3.36	4.71	18.12
Upper Primary School	-	3	8	18
(%)		2.01	9.41	13.04
Lower Secondary School	1	2	1	1
(%)	1.10	1.34	1.18	0.72
Upper Secondary School	2	2	1	1
(%)	2.20	1.34	1.18	0.72
Lower Vocational School	26	24	14	4
(%)	28.57	16.11	16.47	2.90
Upper Vocational School	19	20	12	1
(%)	20.88	13.42	14.12	0.72
Bachelor Degree and Above	16	18	-	-
(%)	17.58	12.08		
Unknown or Unspecified	19	24	20	26
(%)	20.88	16.11	23.53	18.84
Total	91	149	85	138
(%)	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.4
Frequency of Sample Firms Indicating Level of Experience Needed in the Employment of Various Types of Workers

Number and Perce

Required Experience	Admin. Workers	Skilled Workers	Semi- Skilled Workers	Labore
Have Worked in this Line of Production < 1 Year	8	34	19	2
(%)	6.61	20.24	16.96	12.0
Have Worked in this Line of Production for 1 to 3 Years	3	20	8	1
(%)	2.48	11.90	7.14	6.0
Have Worked in this Line of Production for 3 to 5 Years	1	14	3	
(%)	0.83	8.33	2.68	1.8
Have Worked in Other Types of Manufacturing < 1 Year	5	3	3	
(%)	4.13	1.79	2.68	0.0
Have Worked in Other Types of Manufacturing for 1 to 3 Years	1	1	0	
(%)	0.83	0.60	0.00	0.0
Have Worked in Other Types of Manufacturing for 3 to 5 Years	0	0	0	
(%)	0.00	0.00	0.00	0.6
Unspecified/ No Experience Required	71	62	60	11
(%)	58.68	36.9	53.57	69.8
Good Performance in School	15	7	4	
(%)	12.40	4.17	3.57	2.4
Good Experience and Good Performance in School	7	13	4	
(%)	5.79	7.74	3.58	1.2
Others	10	14	11	1
(%)	8.26	8.33	9.82	6.0
Total	121	108	112	16
(%)	100.0	100.0	100.0	100.

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.5
Frequency of Sample Firms Indicating Level of Education Needed
in the Employment of Skilled Workers

Number and Percent

Desirable Level of Education	Number of Employment										
	0-5	6-9	10-19	20-49	50-99	100-199	200-499	500-999	>=1000	Unspec.	Total
No Formal Education	7	10	19	7	5	1	2	0	0	0	51
(%)	35.00	43.48	61.29	31.82	29.41	6.25	16.67	0.00	0.00	0.00	34.23
Lower Primary School	1	1	2	1	0	0	0	0	0	0	5
(%)	5.00	4.35	6.45	4.55	0.00	0.00	0.00	0.00	0.00	0.00	3.36
Upper Primary School	0	1	2	0	0	0	0	0	0	0	3
(%)	0.00	4.35	6.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
Lower Secondary School	1	0	1	0	0	0	0	0	0	0	2
(%)	5.00	0.00	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34
Upper Secondary School	0	1	0	0	0	1	0	0	0	0	2
(%)	0.00	4.35	0.00	0.00	0.00	6.25	0.00	0.00	0.00	0.00	1.34
Lower Vocation School	3	1	3	4	5	5	2	0	1	0	24
(%)	15.00	4.35	9.68	18.18	29.41	31.25	16.67	0.00	50.00	0.00	16.11
Upper Vocation School	2	1	2	3	3	4	1	3	1	0	20
(%)	10.00	4.35	6.45	13.64	17.65	25.00	8.33	75.00	50.00	0.00	13.42
Bechelor Degree and Above	3	0	0	3	3	3	5	0	0	1	
(%)	15.00	0.00	0.00	13.64	17.65	18.75	41.67	0.00	0.00	50.00	0.00
Unknown	3	8	2	4	1	2	2	1	0	1	
(%)	15.00	34.78	6.45	18.18	5.88	12.50	16.67	25.00	0.00	50.00	0.00
Total	20	23	31	22	17	16	12	4	2	2	149
(%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.6
Frequency of Sample Firms Indicating Level of Experience Needed in the Employment of Skilled Workers

Number and Percent

Type of Desirable Experience	Size of Employment										
	0-5	6-9	10-19	20-49	50-99	100-199	200-499	500-999	>=1000	Unspec.	Total
Have Worked in this Line of Production < 1 Year	7	4	9	3	4	4	1	1	1	0	34
(%)	30.43	13.33	28.13	12.50	22.22	22.22	8.33	20.00	25.00	0.00	20.24
Have Worked in this Line of Productio for 1-3 Years	3	3	3	5	1	0	4	1	0	0	20
(%)	13.04	10.00	9.38	20.83	5.56	0.00	33.33	20.00	0.00	0.00	11.90
Have Worked in this Line of Production for 3-5 Years	2	3	2	3	3	0	1	0	0	0	14
(%)	8.70	10.00	6.25	12.50	16.67	0.00	8.33	0.00	0.00	0.00	8.33
Have Worked in Other Types of Manufacturing < 1 Year	1	0	1	1	0	0	0	0	0	0	3
(%)	4.35	0.00	3.13	4.17	0.00	0.00	0.00	0.00	0.00	0.00	1.79
Have Worked in Other Types of Manufacturing for 1-3 Years	1	0	0	0	0	0	0	0	0	0	1
(%)	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
Unspecified/ No Experience Required	6	15	13	10	3	8	3	1	2	1	62
(%)	26.09	50.00	40.63	41.67	16.67	44.44	25.00	20.00	50.00	50.00	36.90
Have Good Performance in School	0	0	0	0	4	2	0	1	0	0	7
(%)	0.00	0.00	0.00	0.00	22.22	11.11	0.00	20.00	0.00	0.00	4.17
Have Good Experience and Good Performance in School	0	0	1	1	1	0	1	0	0	0	4
(%)	0.00	0.00	3.13	4.17	5.56	0.00	8.33	0.00	0.00	0.00	2.38
Have Good Experience in Manufacturing and Good Performance in School	0	0	1	0	0	0	0	1	0	0	2
(%)	0.00	0.00	3.13	0.00	0.00	0.00	0.00	20.00	0.00	0.00	1.19
Have Good Experience in Several Types of Manufacturing	2	0	0	0	1	3	0	0	1	0	7
(%)	8.70	0.00	0.00	0.00	5.56	16.67	0.00	0.00	25.00	0.00	4.17
No Answer	1	5	2	1	1	1	2	0	0	1	14
(%)	4.35	16.67	6.25	4.17	5.56	5.56	16.67	0.00	0.00	50.00	8.33
Total	23	30	32	24	18	18	12	5	4	2	168
(%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.7
Training Received by Sample Workers

Number and Percent

Means of Training	Within First-3 month		After First-3 month	
	Provincial area	Greater Bangkok	Provincial area	Greater Bangkok
Orientation	211	47	87	15
(%)	33.1	18.4	27.9	10.1
On-the-Job Training Within Firm	292	131	117	79
(%)	45.8	51.2	37.5	53.0
Occasional Training by Firm Supervisors	87	62	57	29
(%)	13.7	24.2	18.2	19.4
Observation of Work Carried Out Outside Department or Firm	39	13	38	18
(%)	6.1	5.1	12.2	12.1
Trained in Schools	8	3	13	8
(%)	1.3	1.2	4.2	5.4
Total	637	256	312	149
(%)	100.0	100.0	100.0	100.0

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.8
Frequency of Various Methods of Labor Training Used by Sample Firms

Number and Percent

Training Period in the First 3 Months of Employment	Employment Size										
	0-5	6-9	10-19	20-49	50-99	100-199	200-499	500-999	>=1000	Unspec.	Total
Orientation	69	50	58	51	26	19	16	7	4	1	301
(%)	45.39	43.48	48.74	54.84	63.41	57.58	66.67	87.50	66.67	33.33	50.67
On-the-Job Training Within Firm	73	62	56	34	15	11	4	1	0	1	257
(%)	48.03	53.91	47.06	36.56	36.59	33.33	16.67	12.50	0.00	33.33	43.27
Occasional Training by Firm Supervisor	4	2	1	2	0	0	0	0	1	0	10
(%)	2.63	1.74	0.84	2.15	0.00	0.00	0.00	0.00	16.67	0.00	1.68
Observation of Work Carried Out Outside Department or Firm	1	0	1	2	0	1	3	0	0	0	8
(%)	0.66	0.00	0.84	2.15	0.00	3.03	12.50	0.00	0.00	0.00	1.35
Training in School	0	0	0	0	0	0	1	0	0	0	1
(%)	0.00	0.00	0.00	0.00	0.00	0.00	4.17	0.00	0.00	0.00	0.17
Others	0	0	0	1	0	0	0	0	1	0	2
(%)	0.00	0.00	0.00	1.08	0.00	0.00	0.00	0.00	16.67	0.00	0.34
No Answer	5	1	3	3	0	2	0	0	0	1	15
(%)	3.29	0.87	2.52	3.23	0.00	6.06	0.00	0.00	0.00	33.33	2.53
Total	152	115	119	93	41	33	24	8	6	3	594
(%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.9
Rates of Labor Turnovers Per Month in Manufacturing Firms

Percent/Month

Type of Worker	New Access	Lay-off	Job quits
Provincial Areas			
Administrative Workers	4.8	0.0	3.2
Permanent Operation Workers:			
- Skilled Workers	4.9	0.6	3.9
- Semi-skilled Workers	7.1	1.0	3.3
- Unskilled Workers	3.6	2.0	2.5
Greater Bangkok			
Administrative Workers	3.04	n.a.	2.2
Permanent Operation Workers:			
- Skilled Workers	1.8	0.6	n.a.
- Semi-skilled Workers	2.0	0.0	1.2
- Unskilled Workers	1.5	0.2	1.6

Note: Rates of labor turnovers are calculated from a number of labor turnovers as percentage of total workers by category in the survey week.

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.10
Number of Vocational and Technical Graduates and their Distribution by Employment Status, 1983-1988

Year	Total Graduates (Persons)	Percentage of Total Graduates			
		Unemployed	Employed	Further Study	Other
1983	48,306	22.8	28.4	48.8	0.0
1984	68,640	24.0	22.0	54.0	0.0
1985	57,840	26.9	19.7	51.7	1.7
1986	68,872	29.6	23.7	45.2	1.5
1987	70,083	25.8	27.8	44.4	2.0
1988	64,604	17.8	37.6	42.9	1.7

Source: Ministry of Education, Department of Vocational Education, Employment Status of the Vocational Graduates, 1988. Bangkok, 1989, Page 13.

Table 5.11
Distribution of Sample Firms Providing Labor Training
or Willing to Do So Classified by Size of Employment

Number and Percent

Firm Size (Number Of Workers)	Training Provision			Willing to Train		
	Yes	No	No Answer	Yes	No	No Answer
0 - 5	62	203	3	132	132	4
(%)	23.13	75.75	1.12	49.25	49.25	1.49
6 - 9	38	125	2	85	78	3
(%)	23.03	75.76	1.21	51.20	46.99	1.80
10 - 19	42	121	0	84	77	3
(%)	25.77	74.23	0.00	51.22	46.95	1.83
20 - 49	44	80	0	77	44	3
(%)	35.48	64.52	0.00	62.10	35.48	2.42
50 - 99	20	34	1	35	19	1
(%)	36.36	61.82	1.82	63.64	34.55	1.82
100 - 199	23	21	0	30	13	1
(%)	52.27	47.73	0.00	68.18	29.55	2.27
200 - 499	20	6	0	26	1	0
(%)	76.92	23.08	0.00	96.15	3.85	0.00
500 - 999	9	0	0	8	1	0
(%)	100.00	0.00	0.00	88.89	11.11	0.00
> 1,000	6	1	0	6	1	0
(%)	85.71	14.29	0.00	85.71	14.29	0.00
Unknown	2	4	1	3	3	1
(%)	28.57	52.14	14.29	42.86	42.86	14.29
Total	266	585	7	485	369	16
(%)	30.65	68.55	0.81	55.75	42.41	1.84

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

Table 5.12
Distribution of Sample Firms Providing Labor Training
or Willing to Do So Classified by Industry

Number and Percent

Industry	Training Provision			Willing to Train		
	Yes	No	No Answer	Yes	No	No Answer
Food, Beverage, Tobacco	51	203	5	124	132	4
(%)	19.69	78.38	1.93	47.69	50.77	1.54
Textile, Apparel and Footwear	15	14	0	23	6	0
(%)	51.72	48.28	0.00	79.31	20.69	0.00
Wood & Furniture	24	94	0	65	51	3
(%)	20.34	79.66	0.00	54.62	42.86	2.52
Paper & Printing	7	13	0	13	7	0
(%)	35.00	65.00	0.00	65.00	35.00	0.00
Chemical Petroleum & Rubber Products	15	40	0	31	23	1
(%)	27.27	72.73	0.00	56.36	41.82	1.82
Pottery, Glass & other Non-metal	25	64	1	48	36	6
(%)	27.78	71.11	1.11	53.33	40.00	6.67
Iron & Metal Basic Industries	5	1	0	5	1	0
(%)	83.33	16.67	0.00	83.33	16.67	0.00
Fabricates Metal	17	29	1	29	16	2
(%)	36.17	61.70	2.13	61.70	34.04	4.26
Machinery & Electrical Supplies	78	67	0	91	54	0
(%)	53.79	46.21	0.00	62.76	37.24	0.00
Transport Equipment	24	49	0	45	28	0
(%)	32.88	67.12	0.00	61.64	38.36	0.00
Others	5	21	0	11	15	0
(%)	19.23	80.77	0.00	42.31	57.69	0.00
Total	266	595	7	485	369	16
(%)	30.65	68.55	0.81	55.75	42.41	1.84

Source: Rural Industries and Employment Project Survey, TDRI, 1989.

CHAPTER 6

SUMMARY AND SUGGESTIONS

6.1 SUMMARY OF ISSUES

The main objective of this study is to analyze labor market conditions in regional industry and find ways to solve regional labor and employment problems. The analysis has taken into account wages, employment conditions, income and other problems of both employers and the employees as well as consider the present demand for labor in the regions and in the next 5 years. The conclusions of the findings are:

6.1.1 Labor Problems

Most regional unskilled workers are from agricultural backgrounds and are educated only to primary school levels. The problem stem from the quality of the workforce rather than the quantity. Most regional workers are poorly educated, inexperienced and lack familiarity, with the disciplines of a large industrial production system. However, regional industries have very few problems obtaining sufficient staff as most of the workers come from the agricultural sector which has an excess of manpower. The unemployment problems in this sector have forced farmers from agriculture into industry, and other jobs. However, regional industrial production is still small accounting for about 7% of regional labor market. Although demand and employment in regional industries has been expanding continuously, this expansion has not been sufficient to absorb all the excess labor.

Some regional industries may face a scarcity of labor during the rainy season when workers return to the farms, this problem is not only the result of labor's behavior, but also is caused by seasonal fluctuations within industry itself and lack of effective personnel management, thereby creating a high employee turn-over rate. Most

entrepreneurs are well aware of these problem and are taking steps to resolve them.

In areas where skilled labor is hard to find, problems related to lack of skills and experience occur in all industrial fields, but especially in steel and metal casting, vehicle manufacture and repair closely followed electrical assembly and repair, chemicals and plastics and paper and wood products. These problems are more apparent in the South than in other regions and occur more often in cottage rather than large-scale industries. In the past, this problem has little impact on production but during the past three years, when industrial production has expanded rapidly, problems of migration of skilled labor from small enterprises and competition through higher wages, have become apparent.

Between 1983-1988, vocational school graduates in industrial engineering, about 30,000 persons, have become important factor in the labor force as supervisors or assistants, but they lack the experience and skill required because their education lacks practice and training. Therefore this level of manpower does not meet the market demand. Not only vocational level workers, but some semi-skilled workers have taken short-courses in training are also inexperienced. Lack experience and skills are the main problems for rural industries.

Other problems faced by certain regional industries are (1) that the educational institutions' courses are geared towards large-scale industries or formal market sector and provide specialist education while cottage industries also requires that this level of employee should be capable of supervising and have a broader experience; (2) industrial entrepreneurs give low priority to skills development; (3) recently, certain industries such as chemicals have rapidly expanded and the educational programmes have not been able to meet the requirements.

6.1.2 Wage, Income And Employment

Low income and wages, and job insecurity are inter-related problems, and are the most important issue for labor. These problems

are much more obvious in the Northeast, where the population is poor and jobs insecure though seasonal supply and demand. Contractual and temporary workers total 52% of all Northeastern industrial employees.

On average, all types of regional industrial workers receive 68 baht per day. The unskilled laborer's daily wage is 55 baht and the average monthly wage is 1,171 baht. Regional unskilled workers in general receive higher wages than their agricultural counterparts but lower than other fields apart from the service industry. The average income of an unskilled worker is nearly the same as cost of living per person upcountry but is lower than the average wage. If the laborer has to support a family, he faces financial hardship.

At present these minimum wages for regional industrial can be explained by the plentiful supply of labor resulting form rapid population growth for several years running. Although the demand for labor and employment has increased in the regions has not kept up with the population increase. The survey showed that workers wages and income depend on two major factors: the supply and type of labor and the types of industry. In other words, wages and income of unskilled workers vary as to type of industry and size of the enterprise. Wages in larger industries are generally higher than medium-size and smaller ones. In terms type of labor, the quality of education, age, length of work and experience all directly affects the wage rates.

In the North and the Northeast, the industrial wage rate is lower than in other regions, but this has not encouraged new investment. These two provinces still have an inadequate infrastructure which discourages the establishment of new enterprises. The minimum wages, as set forth by wage control commission, are higher here than the local wages, whereas in Bangkok, the central plains and the south, the minimum wages are lower than local rates. The minimum wage in the Northeast and the North has also increased at higher rate than the increase of industrial products' added value per capita per region and has risen higher than in Bangkok and the Central plains. This situation does not attract new investments and may even cause prospective investors to worry about the low rate.

6.1.3 Trend of Labor Demand and Development

During next five years, the demand for regional industrial labor is expected to rise and 22% of the employers interviewed reported that they will increase production, and therefore employment. Only 10% reported a decrease in staff and the rest were uncertain. A wide range of industries reported an increase in employment, but most especially in steel and metal-casting, chemical products, plastics and petroleum and paper and paper product enterprises.

The labor force requirements range from the unskilled workers to supervisor level and office staff. Two-thirds of employers could not specify any particular qualifications or experience they would expect in their unskilled staff but one-third said they preferred lower primary school level of education (18%), upper primary school (13%) and middle school (5%).

Workers at chief and assistant chief levels were expected experience rather than educational qualifications, however, some employers did require educational qualifications as well. About 30% of those preferred vocational level graduates and 12% wanted Bachelor Degrees or higher but were unable to specify in which particular field.

Administrative or office workers should have vocational education or higher, and the required field is commerce. About 5.9% of the employers did not feel that experience is necessary.

Employers that said they will increase employment levels whether it be office or skilled workers, believe that they can find suitable candidates. However, in certain areas where industry is expanding at a rapid rate, employers in several modern technological industries are aware that the quality and number of semi-skilled and skilled workers are in short supply. Therefore, certain industries are beginning to place an emphasis on manpower development tailored to suit their needs.

Although industrial skill development varies according to levels and types, on-the-job training and formal upgrading of skills still receives little attention from industrial proprietor, largely due to the high turn-over rate of workers. Skill development through occupational short-course training and vocational education is important at the level supervisors and production assistants. Unfortunately, such workers often lack the required experience since the educational institutes fail to provide suitable training.

6.2 POLICY AND MEASURES

The above findings show that policies and measures to support the development of industry and regional employment should be instituted. The suggestions take into account factors: wage policy, and labor development policy.

6.2.1 Wage Policy and Measures

6.2.1.1 Policy and Measures on Upgrading Wage and Income

The government should set out a clear policy on increased wages and income of workers in the industrial sector and making sure that they can support themselves and their family. This policy is necessary for all types of industry, in every region.

Measures to upgrade the income level and wages of regional industrial worker should take into account the following points:

1. Development of Quality and Skill Development in the quality and skills of workers depends on upgrading the educational level and providing experience. This will encourage increased productivity which in turn will effect the wage levels and income of industrial workers. The details of policy will be outlined later in this paper.

2. Development of Entrepreneurs' Ability, especially the managers of medium-sized and cottage industries in order that they will gain a better understanding personnel administration, wage rates and wage increase policies, welfare of funds and labor relations. These measures will be elaborated on later in this paper.

3. Production and Marketing System Improvement aims at promoting the output of regional industries to make the production and marketing system more secure and efficient. These measures are related to other policies and measures, such as products improvement, promotion of technology and production techniques and production expansion, etc.

6.2.1.2 Minimum Wage Policy

The minimum wage increases in certain regions should slow down especially in provinces where the minimum wage is set higher than the market rate or where the rate of increase is greater than expansion of the value added rate in the industrial sector, for example as is happening in the North and the Northeast. The slow-down should be to the level where the minimum wage rate is nearly the same as market rate to enable employers to keep with the law.

The measures taken to establish wage rates and slow-down the increase of the minimum wage may be undertaken by the following methods:

1. Ministry of Interior can, by virtue of Decree no. 103, appoint a sub-committee on regional wage rates to set minimum wages in each region. The regional sub-committee should be structured on the Central Minimum Wage Committee and be composed of entrepreneurs, employees and the government representatives. Most of the sub-committee members should live in the region and should be empowered to set forth a minimum wage level and its rate of increase in that region.

At present, the Central Wage Rate Committee establishes regional minimum wage rates, without representation by regional directors who are familiar with the local conditions. Setting up a central committee

with representatives from all regions would only succeed in making it too large to be effective.

In 1988 the Ministry of the Interior appointed a regional minimum wage sub-committee to consider and submit regional wage rates to the central committee, but this sub-committee's role is very limited in terms of authority and its role. For a regional minimum wage sub-committee to work it must have wider authority.

2. A local organization could consider and determine the minimum wage rate and its increase. This organization could be set up by the Ministry of Interior under Decree no. 103, as a regional minimum wage committee or set up as a "Joint Public and Private Consultative Committee (JPPCC), composed of local entrepreneurs, workers and government representatives.

Since in practice, local organizations still has their weakness and limitation their development will take time. Therefore this method is a long-term prospect, whereas the first method could be undertaken as a short-term measure until the local organization is strengthened.

6.2.2 Policy and Measures of Labor Development

The government should establish a clear policy in the development of labor to support regional industries. Labor development should involve upgrading of skills, job entry preparation and management training.

6.2.2.1 Upgrading Skill of Workers

Workers in industrial enterprises, especially those in cottage and medium-sized industries, should be upgraded in terms of their skill to increase productivity and wages. This can be carried out by:

1. Upgrading of Skills Through Short-term Courses: This training can be undertaken in several ways through trade training and workshops

organized by the Labor Skill Development Institute, Ministry of the Interior and extended into the regional areas through branches of the institute which would be set up in the provinces. The government should give incentives so that small-and medium-scale industries will send their workers to be trained; and evening training programs should also be offered so that workers can have an access to the training.

The areas which require most upgrading are in industrial engineering such as engine assembly, electronics and metalware, in all regions, and ceramics in the North and shipbuilding in the South.

2. On-the-Job Training: The government should support and encourage industrial enterprises to set up training programs, apart from orientation sessions, such as on-the-job training and night classes to upgrade the workers skills. This program should be tax deductible by the Ministry of Finance.

6.2.2.2 Job-Entry Training for Industry

Since manpower development is a long term project, and the adjustment of labor supply is slower than demand, the government should prepare manpower planning both in long and short-term to suit the development and needs of workers at various levels. Measures which could be taken are as follows:

1. Short-term occupational training as preparation for entering the industrial sector: This aims at introducing short courses of instruction provided by the Labor Skill Development Institute, Ministry of Interior, to train workers. The training should cover the required courses and should be for the purpose of upgrading skills rather than introducing workers to new jobs.

2. Occupational training for military recruits: When military recruits leave the army, they enter labor market. The Ministry of Defense is aware of this fact and has tried to upgrade vocational skills, particularly in agriculture, to suit the recruits' basic lifestyle. Now that the labor market has diversified into the non-

agricultural sector, other courses, such as mechanics should be offered to the recruits. The introduction of such training should be relatively easy because they already live and work together, such as military recruits, they will satisfy their prospective employers' requirements because they are disciplined.

3. Increase of skill and experience for vocational students: The problems of basic level and senior vocational graduate's is lack of skills and experience. To solve this will require a large budget as the employers' demand a wide range of skills. The measures needed to solve this problem are:

(1) To procure and update equipment and tools in regional educational institutes to be in line with industry. The state should provide budgets or funding could be granted by international organizations.

(2) Cooperation between educational institutes and industry in setting up project and outline a curriculum should be encouraged. This project is especially feasible for modern industries which require specialist training and should be established in those areas where technical industry is densely located, such as on the eastern seaboard of Thailand or in industrial projects.

(3) Factory in schools project. The government must support the setting up of workshops in regional schools to both provide a service to the regional industrial enterprises and, at the same time, give students the opportunity to gain technical training and earn some income. This proposal has been already approved by the Ministry of Education and the proposal now rests with the Ministry of Finance to set forth financial rules and regulations. (Department of vocational study, 1987: 57-62). This problem can be settled by reconsidering the agreement established between the Bureau of Universities and Ministry of Finance.

The policies and regulations should clearly stated as to the type of service and whether it is to be given officially or non-officially. Remuneration of teaching personnel should be sufficient so as to give

further incentives and prevent the brain-drain from the government sector to the private sector.

Such measures will help educational institutes to take initiative to render appropriate services to the local community. Many cottage industries could benefit from the institute which could repair their machines and give advice on products development. At the same time, the institute would train their students so that they are familiar with local industries and products.

4. Support the private agencies to set up specific manpower development institute: Some industries need specially trained manpower. This can be done by establishing specialist courses to enhance expertise in that particular field. Skill development should be provided to certain industries such as ceramics in the North, chemicals and petroleum, textiles and garments, gem-cutting and design, and should be supported by the government. Ministry of Finance, should finance certain activities or provide tax incentives.

5. Educational and course development for skills in short supply: As new industry expands into the regional areas, certain enterprises, such as chemicals and petroleum, electric and electronic appliances find it difficult to obtain the required skilled labor. Educational institutes should be set up cooperation with public agencies, such as the Ministry of Education, Bureau of University Affairs, Ministry of Sciences and Technology and the Ministry of Industry to provide these skills. Since most modern large-scale industries are located on the eastern seaboard, such schools should be first situated in this area.

6. Preparation of basic manpower level: The skills of unskilled workers should be upgraded through education and development of work ethics to conform with industrial standards. Middle school education should be extended to more rural children to upgrade their basic qualifications. This would be particularly beneficial to modern technological industries since they generally require a higher educational level among their workers.

For better understanding of occupational opportunities and working in industry, the Ministry of Education should introduce into the syllabus, both for primary and middle school students, specialized courses, such as life experience or occupational work, to prepare these students for their future careers.

Upgrading the education of manpower at this basic level may not have an immediate effect on regional industrial development but it will be important for the nation in the longer term. Planning should be initiated in every region, depending upon the budget.

6.2.2.3 Policies and Measures Concerning Management Training

Management Training should also be supported by the government, in all regions of the country, through expansion and improvement of the skills of small entrepreneurs.

Some of these measures have already been undertaken by the Department of Industrial Promotion and several private agencies but these should be expanded to regional areas through government's cooperation with the educational institutes concerned or through large-scale industry, in designing a syllabus and training methods applicable at regional levels. The government should also allocate a budget or seek funding from international organizations to support training activities.

The training should be revised to develop personal abilities as well as management and administrative skills for small-and medium-scale industrial entrepreneurs so that they can better understand the importance of manpower development and personnel management as well as wage increases and social welfare benefits for their workers.

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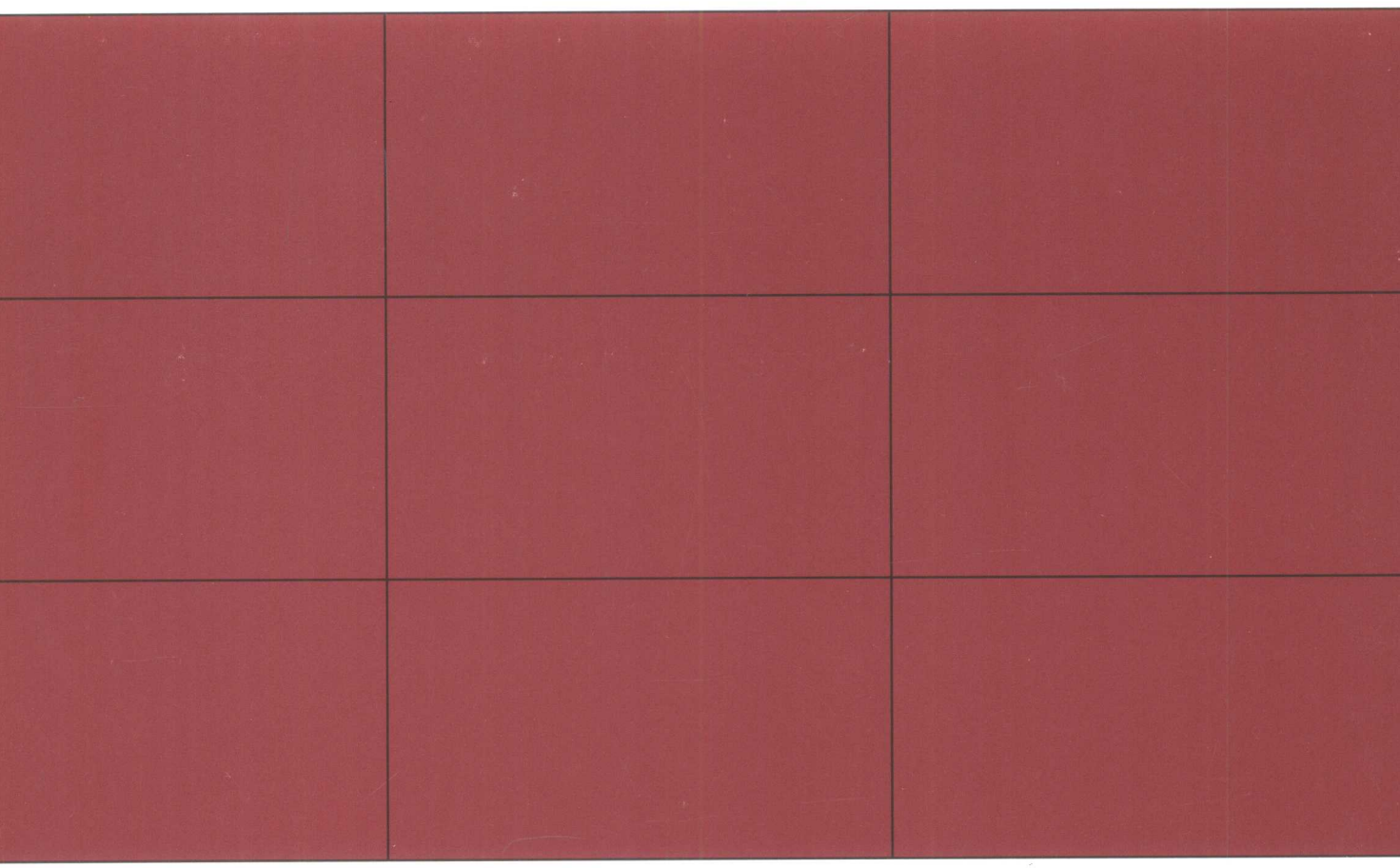

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