UNIVERSITY EDUCATION AND GRADUATE EMPLOYMENT IN THAILAND

อุดมศึกษากับการมีงานทำของบัณฑิตในประเทศไทย

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ABSTRACT

This study is concerned with the links between the university education and the labour markets of the graduates by observing them in connection with the changing environments. The aggregated labour market was subdivided into three submarkets: the public sector, the private sector, and the self-employment. The employer and employee surveys were conducted to investigate in more details about the structures and behavior of the samples of the employed graduates in all three labour markets.

The surveys from 974 sampling employed graduates yielded more information about the skill requirements and other factors pertinent to future employment prospects of the university graduates. In addition, it helped facilitate an understanding on how the university graduates fitted into the job markets, and how closely the university curricula met the requirements of employers and also of the graduates who wanted to become self-employed.

These informations then were utilized in the formulation of policy concerning various adjustments in the university education in response to the changing situation in the labour markets for the university graduates and the changing environments in the economy. Thus, human resource development through university education and labour market linkages considered in this study would be the most significant mechanism to achieve the desired development goals.

บทคัดย่อ

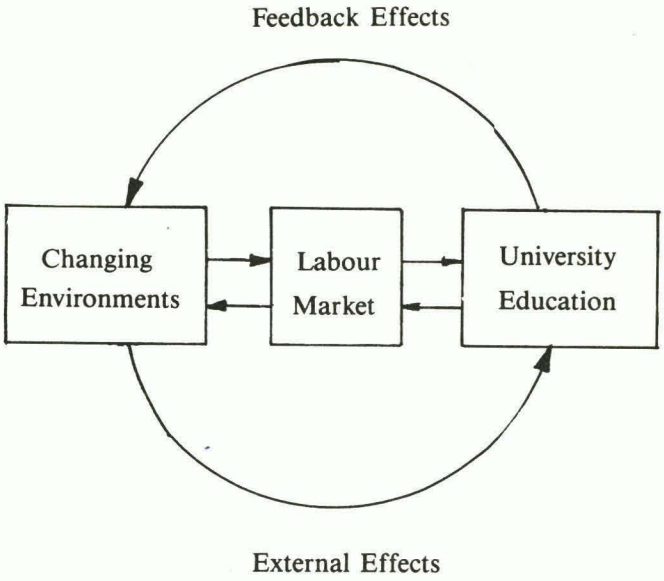
รายงานวิจัยนี้เน้นให้เห็นว่างานด้านอุดมศึกษาไม่ควรจะมุ่งผลิตบัณฑิตเพียงอย่างเดียว แต่ควรคำนึงถึงการใช้ประโยชน์บัณฑิตเหล่านั้นในการประกอบกิจการงานด้านต่าง ๆ อันเป็นประโยชน์แก่สังคมด้วย หรือกล่าวอีกนัยหนึ่งก็คือ อุดมศึกษาควรจะผลิตบัณฑิตให้สอดคล้องกับความต้องการของตลาดแรงงาน ซึ่งเปลี่ยนแปลงไปตามสภาพการณ์และสภาพแวดล้อมต่าง ๆ อยู่ตลอดเวลา ระบบอุดมศึกษาจึงต้องมีการปรับปรุงอยู่เสมอเช่นกัน เพื่อเพิ่มประสิทธิภาพการมีงานทำของบัณฑิต โดยอาศัยพื้นฐานจากการศึกษาตลาดแรงงานของบัณฑิต ทั้งในภาครัฐ เอกชน และการประกอบอาชีพส่วนตัว ทั้งในด้านการเปลี่ยนแปลงทางโครงสร้างและในเชิงพฤติกรรมของตลาดแรงงาน โดยใช้แบบสอบถามและการสัมภาษณ์ สำรวจบัณฑิตกลุ่มตัวอย่างจำนวน 974 ราย นายจ้างทั้งภาครัฐและภาคเอกชนที่ตอบแบบสอบถามประมาณ 81 ราย และสัมภาษณ์เพิ่มเติมอีกประมาณ 10 ราย

ผลการศึกษาทำให้ทราบข้อมูลเกี่ยวกับโครงสร้างของตลาดแรงงานประเภทต่าง ๆ สำหรับบัณฑิต ตลอดจนสภาพและลักษณะการมีงานทำของบัณฑิต รวมทั้งพฤติกรรมต่าง ๆ ในตลาดแรงงานของนายจ้างและตัวบัณฑิตเอง ทั้งในด้านพฤติกรรมเกี่ยวกับการจ้างบัณฑิตเข้าทำงาน การปรับตัวเข้าสู่ตลาดแรงงานของบัณฑิต การเลือกอาชีพ การเปลี่ยนอาชีพ การใช้ความรู้และทักษะที่ได้รับจากอุดมศึกษา การพัฒนาความรู้และทักษะ ตลอดจนพฤติกรรมต่าง ๆ ที่เกี่ยวกับการประกอบอาชีพส่วนตัวของบัณฑิต เป็นต้น นอกจากนั้น ยังสามารถคาดการณ์แนวโน้มของตลาดแรงงานสำหรับบัณฑิตในระยะต่อไปได้อีกด้วย ผลที่ได้รับจากการศึกษาจะนำไปสู่ข้อเสนอแนะในเชิงนโยบายเพื่อปรับการจัดการในด้านต่าง ๆ ของอุดมศึกษาที่เกี่ยวกับการมีงานทำของบัณฑิต ให้สอดคล้องกับสถานการณ์ที่เปลี่ยนแปลงไปในตลาดแรงงาน โดยที่อุดมศึกษาอาจจะต้องปรับปรุงทั้งในด้านทิศทางของการผลิตบัณฑิต หลักสูตรการเรียนการสอน การแนะแนวการศึกษา การจัดหลักสูตรฝึกอบรมต่าง ๆ รวมทั้งในด้านการติดตามและประเมินผลความเคลื่อนไหวของตลาดแรงงาน ตลอดจนความร่วมมือกันในหลาย ๆ ด้านที่เกี่ยวกับการผลิตบัณฑิตและการมีงานทำของบัณฑิต ระหว่างทบวงมหาวิทยาลัย สถาบันอุดมศึกษา รวมทั้งหน่วยงานและองค์กรของภาครัฐและภาคเอกชนต่าง ๆ อีกด้วย ทั้งนี้ เพื่อช่วยให้การผลิตบัณฑิตของระบบอุดมศึกษา สนองตอบต่อตลาดแรงงานและความต้องการของสังคมได้มากขึ้นและมีประสิทธิภาพยิ่งขึ้นด้วย

INTRODUCTION

Education planners and policy-makers in Thailand now quite agree that planning for higher education must take into account of the link between education and labour market.

University education should not be pushed forward mainly for academic excellence or just to serve increasing social demand for higher education without much regard to job opportunities for the graduates. Nevertheless, in considering the link between education and labour market, planners must observe them in connection with the changing conditions in the economy together with all of their feedbacks into the education system. (Diagram 1)



Diag. 1 The links among university education, labour market and changing environments

The changing environments in the economy will have some impacts into the labour market of the graduates and therefore to the university education. As a consequence, the university education has to adjust itself in response to these changes and feedbacks; the adjustment to the labour market and the existing environments as well as linkages effects should be considered altogether simultaneously.

Emphasizing on this viewpoint, the role of the university education is not only to produce the graduates but also to consider how to utilize them most efficiently and effectively in line with the changing situations both in the labour market and in the economy.

This study is an attempt to investigate in details of the changing behavior and structures of the labour markets : the public sector, the private sector, and the self-employment.

METHODS

The method used in this study was, first, to collect data and information from existing materials and to analyze them in order to get a rough picture of the structures and the behavior of the three labor markets. Second, the field surveys were conducted to investigate in more details in the structures and behavior of these markets. Questionnaires were sent out to a number of employers, employees, and the self-employed in all markets. Individual interviews were also supplemented to these questionnaires in order to obtain more in-depth information. Various issues were addressed in the questionnaires and the interviews for instance, the employers' opinions on future graduate employment trends, the skill and other characteristics requirement of workers, the factors affecting future graduate employment trends, the factors influencing the university graduates' choices of occupation, the barriers to the job entry, the problems involved the graduates when performing their job duties, the needs of the graduates for on-the-job and off-the-job trainings, etc. The characteristics of the surveyed samples and the sample sizes are shown in Table 1.

RESULTS AND DISCUSSION

The results are useful in facilitating an understanding on how the university graduates fit into the job markets, and how to provide the university curriculum in accordance with the requirements of employers or prepare the graduates as the self-employed. The findings then can be utilized in the formulation of policy concerning various adjustments in the university education in response to changing labour market conditions as well as in providing human resource development to achieve the desired development goals. In addition, a system to monitor labour market fluctuations is recommended in this study so that the university education policies will always be in line with the changing situations in the labour markets and the needs of the society.

Graduates' behavior in searching and changing job

The university graduates use a wide range of methods in their attempts to find employment. The most dominant of these (46.5%) is by looking at the classified advertisement on personnel wanted in the newspapers, magazines, and other mass-media. This is followed by the use of university placement services on job vacancy announcement (40.6%) and the use of job information channelling through personal contacts as from those of friends (40.5%), and their family members and relatives (25.8%).

In reference to the duration of job search, 43.7% of the sampling employed graduates spent less than 1 month after their graduation in getting their first jobs. Most of

them were the graduates in the fields of science and technology. Moreover, it is interesting to note that some of the samples, 27.7%, already had their jobs while studying at the university, particularly those who graduated from the open admission university. Thirteen point zero per cent continued for further study after their graduation. The rest of them, 18.0%, had to spent time more than one month in seeking their jobs. In particular, some of the social science graduates might have to spend time 2-3 years before getting their first jobs.

Of all sampling employed graduates, about half of them have changed jobs. Most of their previous jobs (81.0%) were in the private sector, largely in service and trading activities. There were many reasons why the graduates changed jobs, but the most important of these were lack of career prospects, inadequate remuneration, temporary working while waiting for the other jobs, and other personal reasons including mismatching with their fields of study and their job preferences (Table 2).

In fact, most of the sampling employed graduates (91.0%) did not like to change jobs, but they had no other choice when facing with the above situations. The group of graduates who like to change jobs (19.0%) said that it gave them more work experiences and also helped them not feeling bored with the same old jobs all the time.

Current situation on graduate employment and unemployment

During the past five years, Thailand produced, on average, around 60,000-70,000 bachelor degree graduates annually. Of these, approximately 10,000 re-enrolled for further study and 50,000-60,000 entered the labour market. Currently, the total stock of the bachelor degree graduates in the labour force is around 708, 500, more than double from that of 1980. The majority of them, around 80%, graduated in the fields of social science, while only 20% were in the fields of science and technology.

The overwhelming number of the graduates in the fields of social science caused a large portion of unemployed. According to the National Statistical Office (NSO) survey, about 18,000 or 32% of the university students who graduated in 1987 were still hunting for jobs two years later. Besides, it found that, among the highest rate of jobless university graduates were those in the fields of education, 43%; law graduates, 35% ; followed by other social science graduates, 29%.

The above unemployment rates, however, are lower than those rates in the preceding years. In 1983, the unemployed bachelor degree graduates was 23%, increased to 28% in 1984, 36% in 1985, and 40% in 1986. Apart from the high unemployment rates, many of the university graduates had to take up various kinds of menial jobs which required lower qualification.

The high rates of unemployment and underemployment among the university graduates during the past few years were due to various factors : the first, involved its supply

side, was a rapid increase in the number of the university graduates over time, particularly those in the liberal art and the social science fields. Most of the increase came from the open universities, which produced around 60-70% of all the social science graduates. Besides the high growth of population that caused the increase in the demand for higher education and therefore the supply of graduates, the heavy subsidization on the costs of education by the government also helped intensify this problem. The private direct cost of education per each university student in all fields is always lower than the social direct costs. The highest social direct costs are for the field of medical sciences, agriculture and engineering, respectively (Table 3).

Regarding the job opportunities for the graduates, the demand side of the labour market had not been increased sufficiently to absorb the increasing number of the graduates. Moreover, the government policy of freezing its employment growth from an average of 9.5% per year to around 2-4% per year since 1982 further aggravated the graduate unemployment and underemployment problems. A large proportion of the graduates faced with severe unemployment and had to seek jobs in the private sector or become the self-employed. Unfortunately, the economic climate at that time (during 1983-1986) was not good, forcing private firms to also cut back job opportunities for the university graduates.

However, the situation began to improve once the country's economic boom got underway, with the rate of jobless university graduates dropping from 40% in 1986 to 32% in 1987. Nevertheless, the booming economy seemed not help the plight of social science graduates since the increasing demand was for graduates in the fields of science and technology. A large portion of the social science graduates still remained unemployed and underemployed.

According to Table 4, the main reasons why graduates, particularly in the fields of social science, failed to get jobs were as follows:

- Most job vacancies did not suit to the graduates' occupational preferences and/or did not match their fields of study;
- They failed the job tests or the job interviews;
- They lacked inside connections with influential people in the organization they applied for jobs;
- They were unqualified due to lack of previous work experiences, lack of some special knowledge and ability, and/or lack of cash or personal guarantees;
- They lacked of information concerning the job sources; or
- The graduates who wanted to become the self-employed did not know how to start their businesses.

It is expected that the pressure on these problems will be lessened in the 1990s as compared to the 1980s. One factor attributed to this is the decline in population growth,

especially among those in the relevant age group (18-24 years old). Other factor included is the slow process of raising students' continuing study rates from primary to secondary and up to higher educational levels. This problem exists due to the low income level of most families in Thailand, they can not afford for their children to obtain higher education.

In the 1990s the factors on the demand side of the labour market will play more significant role in determining the extent of graduate unemployment and underemployment. The most prominent factor seems to be the growth of the Thai economy, which depends on both the local and international circumstances.

Of the total of 708, 500 employed graduates in 1987 approximately 83% of them, work in the service industry, 11% in manufacturing industry and 6% in agriculture. (Table 5)

When consider the pattern of employment by type of labour market, it was found that 56% of the university graduates worked in the public sector, 31.5% in the private sector, and 12.3% worked as the self-employed. These figures clearly revealed the predominant influence of the public sector on the employment prospects of the university graduates in the 1980s. It seems clear that the past record of high supply growth of graduates have been met mostly by an expansion in government employment. Public sector employment at that time expanded, on average, at a rate of 9.5% per year compared with total employment growth of 4% per year.

In recent years, however, there exists the new trend of graduate employment. There has been an increasing proportion of the newcoming graduates who enter the private sector labour market and the self-employment activities. This results in the decline in the proportion of those who work in the public sector jobs (Table 6) due to the restriction on government employment growth and partly of changes in the graduates' attitudes in favor of private sector employment.

Table 7 shows that more than half of the sampling employed graduates (around 55%) had their occupations that matched their fields of study. Thirty-nine point four per cent of them had the kinds of job outside their fields of study, some jobs might be fitted in with their preferences but some might not. Most of the graduates in the fields of science and technology normally took the jobs which matched their fields of study. Job mismatching was often found among the graduates in social science fields. This fact, thus, indicates that the degree of labour substitution is higher for the kinds of job that require the skills of social science graduates as compared to those jobs that require scientific and technological skills. The smaller extent of labour substitution among the types of jobs that need the skills of science and technology graduates compared to those jobs for the social science graduates is due to their in-depth sophisticated and more specialized knowledge and skill requirement.

When asked the sampled employed graduates regarding their job preferences, 35.4% revealed on the self-employment activities, 24.0% on the private sector jobs, 17.7% on the public enterprises, and only 15.7% on the government jobs (Table 8). Those who preferred to be the self-employed gave the reasons of having more freedom in conducting their businesses and also being capable of utilizing their skills and their own abilities at full capacity. Moreover, some types of self-employment activities could give them high amount of net earning.

The sampling employed graduates who preferred to work in the private enterprise found the system of work quite active and productive compared with that of the government job. As a result, they are capable of utilizing fully their skills and experiences and also can make good prospectd in their careers. The wage rates in the private sector jobs are also higher compared to those in the government jobs. For instance, the starting salary for the university graduates in the private sector jobs was, on average, around 4,500-5,000 baht per month (8,000-10,000 baht for the engineer graduates) as compared with 3,550 baht in the government sector jobs. However, the sampled employed graduates who preferred job in the government sector gave the main reasons of having good social welfare benefits and allowances as well as high job security.

From the survey results, most of the samples acquired knowledges and skills necessary for performing their job duties from various sources. Nevertheless, the most significant sources were from the university education, self-learning and self-experience, and on-the-job trainings. Other sources next to these were, for instance, off-the-job trainings, consultation with the experts, or joining various group activities while studying at the university and having been working in the family's or others' businesses (Table 9). Hence, not only knowledge and skills acquired from the university education, but also those acquired from other sources are important for the graduates' job performances.

This qualification is the most desirable one in this rapidly changing world, since the graduates must be able to adjust themselves in response to the changing circumstances.

The survey results also showed that the graduates had done relatively well in adjusting themselves in the labour market. They used various methods of job search in their attempts to find employment, improved and upgraded their skills to get easy-access to jobs, developed themselves and acquired new skills while working. Besides the adjustment on the part of the graduates, university education and the concerned agencies must also play significant roles of active delivery mechanism in providing them all the needed services.

Due to rapid changes in technology and other environments, the skills of many employed graduates may be too obsolete to perform their job duties efficiently and effectively. Hence, many of them need some retraining to be equipped with new skills necessary

for their job performances. The roles that the university education must play, therefore, in the 1990s, will be not only to provide higher education to the students in the relevant age group but also to provide various kinds of training and other services to those who are already employed in the labour force. In addition, the university education should be aware of and be ready to produce the kinds of human resources needed by the society to achieve the desired development goals.

Graduate employment in the public sector

In the early 1980s, more than half of the university graduates in Thailand were employed in the public sector jobs, the rest were in the private sector jobs and the self-employment activities. However, during the Fifth Five-Year National Economic and Social Development Plan (1982-1986), the government faced with the fiscal constraints, they had to limit the growth rate of public employees to around 2% per annum. Compared to the average growth rate of 9.5% in the earlier period, this limited growth rate of 2% was quite a blow to the job prospects of the university graduates. This policy of limiting growth rate of public employees is expected to be continued being effective for a long time, or, perhaps, becomes a permanent one. However, the degree and extent of restriction may be varied depending upon the current situations.

Not only the number of the graduates employed in the public sector has been reduced, but also there has been a change in its structure of employment. In the past, the high demand for the university graduates in the public sector employment were for those in the fields of social science. Recently, the labour demand in the public sector has been changed in favor of the graduates in the fields of science and technology, particularly those in medical science and health-related fields.

The reduction in the number and change in the employment structure of the graduates in the public sector have quite significant impacts on the university education. In this decade and also the next decade, the university education must turn out to produce an increasing proportion of science and technology graduates to serve the private sector jobs and the self-employment activities relatively more than in the past.

This result indicates that future manpower needs in the public sector will change substantially from those past trends. The public sector will compete more with the private sector for higher educated human resources due to the fact that both sectors turn out to demand for similar types of human resources.

Highly manpower needs in the public sector will be for those graduates in such disciplines as medical science and health-relates fields; engineerings; natural science (especially biotechnology and food technology); statistics and computer science; agriculture, forestry, and fishery; commercial and business administration; ecomomics; political science (personnel management and international relation); law (international law); foreign languages; mass

communication and documentation.

The most significant factors that determine the future manpower requirement trends in the public sector are those of the government development policies and the changing environments in the economy. Moreover, the government has to play crucial roles in promoting and supporting the development of the private sector. Thus, the new recruits of their employees must correspond to the direction of development in the private sector, which go more toward the fast expansion of international trade, service, manufacturing, agro-industrial, and information professing activities.

On the part of the government themselves, they will have quite heavy responsibilities in carrying out various development projects . These include, for instance, rural development projects (with greater emphasis on providing health services to the rural population), infrastructural development projects, export promotion, and industrial development projects. Hence, human resource needs in the public sector will be in those fields that fit well with their future development tasks.

The skill and other characteristic requirements of the new recruited public employees have also been changed and become correspondent to those required in the private sector jobs. Enthusiastic individuals with highly motivated, analytical minded and creative thinking, working discipline, as well as having previous work experiences, and some special knowledges (e.g.foreign languages, computers, etc) are in great demand in public sector employment. However, academic excellence is still required if the graduates apply to the public sector jobs, since they have to pass the tests and the job interviews in the recruitment process.

In the 1990s, due to its relatively low wage rate and the change in the graduates' attitudes in favor of private sector jobs, the public sector will face serious 'brain drain' problem. A portion of their graduate employees, particularly those in the fields which are in high demand, will transfer to work in the private sector jobs. The government therefore must try to set up various measures in counterbalance this situation.

Graduate employment in the private sector

In the past few years, when the world economy as well as the Thai economy were so sluggish, there were not enough jobs available in the private sector for the university graduates. A large portion of them (30-40%) faced with the unemployment problems; and many of them had to take jobs that required lower level of education.

The economy has been expanding bullishly, on average, at an annual rate of 10%, which is the highest rate of growth during the past twenty years. With these high growth rate, a large number of jobs have been created for all group of people as well as for the group of the university graduates. Most of these employment generation were in the non-agricultural sector, e.g., manufacturing, trading, banking, and service activities. The recent high rate of

economic growth of the Thai economy, therefore, lessen the unemployment problem among the university graduates than what has been expected.

Most of the university graduates who work in the private sector normally are found in the medium and large-scale enterprises. Among these enterprises include banking, financing and insurance, manufactured export, hotel works, wholesaling and retailing activities, etc. Most of the employers report their satisfaction with the basic skills and knowledges of the university graduates. Moreover, the employers also rather content with the graduates' personal qualities and attributes such as their sense of responsibility and enthusiasm, morality, working discipline, industriousness etc. (Table 10).

However, there were some other characteristics that the employers demanded for some further improvement from the university graduates. These characteristics included, for instance, previous work experiences, broad knowledges and perspectives, analytical ability, creativity, writing ability, having some special knowledge and experiences in foreign languages, computer or typewriting, being highly motivated, and having strong supervisory and leadership quality. Most of the university graduates, however, have tried to adjust and improved themselves to suit the employers' needs.

The huge decline in the growth of public sector employment means that the majority of the university graduates now have to seek jobs in the private sector or become the self-employed. However, the skill and other characteristic requirement of the graduates for working in the private sector or in the self-employment activities are quite different from those required by the public sector jobs in the past. In response to this changing situation of graduate employment, what adjustments should then be made in the university education so as to be capable of producing the kinds of graduates needed in the labour markets.

The results of survey reveals that manpower requirement in the private sector in the 1990s will be quite similar in such disciplines as those in the public sector mentioned earlier. The graduates in the fields of science and technology will be most demanded in both labour markets. However, there still be the needs of the social science graduates in the private sector jobs. Yet, these needs will be largely concentrated in such fields as commercial and business administration, economics, mass communication and documentation.

There are a wide range of factors which determine future manpower requirement trend in the private sector. Nevertheless, the most crucial factor is the growth of the economy. Economic growth in Thailand has been due to favourable local and international economic conditions. A large inflows of foreign direct investment, huge domestic investment projects to relieve infrastructural bottle-necks, the high growth of Thai exports to foreign markets, and the boom in tourism industry are among the major factors contributing to the high growth of the Thai economy. Economic growth in Thailand, like in many countries, has accompanied with changes in the structure of production.

These structural changes have some impacts on manpower needs of the country. Recently, there exists the shortage of manpower in the fields of engineering and related technology as well as those manpower with the technical trainings in some areas, particularly those involved with textile and garment industries. As for the university graduates in the fields of engineering and related technology, it is forecasted that, next year, the economy will need around 7,000 of engineers, whereas all of the educational institutions have the capacity to produce only 2,777 of them each year. Hence, the supply of engineering graduates will fall short of their potential demand.

The shortage of manpower in engineering and related fields, therefore, drive up the wage rate of these groups compared with the other groups. The levels of monthly wage rates for engineering graduates are around 8,000 baht and up compared with the relatively low rates of 4,500 baht and up for the graduates in other fields.

In the 1990s, the skill and other characteristic requirements of the university graduates to work in the private sector will be quite similar to what is needed at present. Academic excellence of the graduates is not something that the private sector is looking for. The most important characteristics of the graduates needed by the private sector are hard-working and having good potentials for development. They should be active highly-motivated, and enthusiastic to learn things. In addition, they should possess some character of self-confidence, strong supervisory, and leadership ability. Moreover, the graduates must be good persons and have good personalities, particularly being capable of working with others in work-teams. Also, previous work experiences are often required to obtain jobs in the private sector.

In summary, the roles of the private sector labour market have been increasing in recent years. This trend is expected to continue in the 1990s. The university education in Thailand, which has been mainly producing the graduates to serve the public sector, need to be adjusted in response to the changing condition in the labour markets. The production of graduates in some certain fields of study must be increased, particularly those in the fields of science and technology and some social science fields, while in some other fields with relatively high unemployment rates, their production must be kept constant or reduced.

The course curricula should also be revised and developed to produce the kinds of graduates who posses the desired qualifications. The government organizations and the private enterprises must also adjust and improve their internal systems in response to the changing situation. They should be aware of the fact that, under the present situation of high economic growth and severe shortage of some kinds of manpower, they will have to face more acute problems of 'brain drain', their graduate employees will change jobs more frequently than what has happened in the past.

The graduates in self-employment

Besides the public and private sector jobs, some proportion of the university graduates are engaged in their own activities as the self-employed. Nevertheless, most of them used to work as the public or private sector employees to accumulate some experiences needed before becoming engaged in the self-employment activities. Otherwise, they must be in the families that own the business activities. Income earned within the groups of self-employed university graduates are varied, ranging from around 2,000 baht per month up to as high as 100,000 baht per month, depending on the kinds of activity carried out by the graduates.

The survey results indicated that some of the university graduates who wanted to become the self-employed after their graduation faced with the problem of not knowing how to start up the business. Moreover, those who wanted to enter into self-employment faced with a wide range of problems.

One of the most crucial obstacles to entry was the lack of initial funds to start a business. In some kinds of enterprises, start-up costs were so high, and it was not easy for the graduates to obtain funds from other sources other than their own savings. The majority of the self-employed graduates had to save money from a relatively modest income obtained from previous work.

Other problems faced by the self-employed graduates included, for instance, finding good location to conduct their businesses, and getting cooperators and hired labour to work with them. The last problem, but not least, was that of the acquisition of entrepreneurial skills necessary to conduct their business. The acquisition of these skills provided the motive for the self-employed graduates in establishing the independent business. From the survey results, more than half of the sampling self-employed graduates acquired the necessary skills from on-the-job training while working in small-scale enterprises and family businesses in similar line of activities.

It appeared, therefore, that for the graduates who had no previous work experiences, they needed some vocational training in specialized skills, and in business management and marketing, as well as in other aspects necessary for conducting the self-employment businesses. The university education in cooperation with other concerned government agencies and private enterprises should provide the graduates with necessary knowledge and skills for self-employment. Moreover, after some time of their working life, the self-employed graduates may need some retraining to obtain new skills corresponding to the changing situations in economy. University education and other organization should also make joint efforts in providing these needed services to the self-employed graduates.

Most of the self-employment activities for the university graduates are in trading and service groups of activity, only fews being in the manufacturing group. Some of the

graduates may be engaged in the activities which match their fields of study. For instance, those who graduated in dentistry may have their own dental clinics, electrical engineering graduates may own electrical repair shops, law graduates can have their own law offices. These groups of graduates normally can utilize their knowledge and skills acquired from the university education directly and more efficiently in their businesses. They may need some training mainly on business management and marketing.

The graduates who are engaged in the activities that do not match their fields of study have to acquire their skills and experiences from other sources apart from the university education. The results of survey showed that previous work experiences as a worker in some enterprises or family enterprise provided a training ground for the graduates in self-employment.

CONCLUSION AND RECOMMENDATION

As has been discussed, the situations in the labour markets and the whole economy have changed substantially in recent years. The university education seems to have a whole lot of adjustments that need to be made in the 1900s if they want to take the lead and guide the society to the most desired direction. They must produce and develop the kinds of human resources highly needed by the society, and provided various kinds of services to the community.

To improve the unemployment situation of bachelor degree graduates further, the government should review university education plan to bring them in line with labour demands and projected economic growth. The unemployed graduates themselves should also change their attitudes towards employment such as social science graduates should consider retraining to gain skills in other fields of work so that they can be substituted to work in other areas outside their fields of study.

The most acute problem of manpower shortages are in the fields of science and technology, particularly in engineering, computer science, and related technologies. However, this problem has been realized by the government; various policies and measures, both in the short run and long run, have been set up to solve this problem. Among these are, for instance, the setting up of the two-year programmes in engineering for those who have already completed the Bachelor's degree in sciences and related fields, and also the expansion of university capacity in producing an increased number of engineering graduates.

In addition, the government has allocated more of their budget for sending students to study abroad on the government scholarships in the fields of engineering, sciences, and technology. Foreign expertises in engineering and related fields are also given some special

privileges if the experts come to teach at the Thai Universities. Many more of the programmes and measures have been set up and implemented to solve this manpower shortage problem as well.

Besides, the survey results found that a large number of students studied in the wrong fields which do not match their preferences. This was due to the fact that some of them had no knowledge about the details of the subjects, so they made a wrong decision at the beginning of their study at the university. In consequence, this may change the whole life of their career. Because of this problem, some educational counselling services from the university educational system should be provided to the students sometime before they enter the university.

Moreover, university education should establish a system to monitor closely the labour market fluctuations. This system should create the whole network linkages among the Ministry of University Affairs, all universities and higher education institutions (public as well as private), other government agencies concerned, and the private sector. With the information flows along this line of networks, university education will be able to adjust themself in line with the changing situation.

Vocational counselling services and job placement services should also be promoted and improved in all universities and higher education to provide active and fast services to the graduates as well as to employers. This, thus, help the university graduates in reducing their unemployment rate and their waiting time for jobs.

The course curricula should be modified in order to prepare the graduates, not only for academic excellence, but also to have all the desired qualifications discussed earlier. University education should be, in part, vocational-oriented. In other part, it should provide the graduates with wider perspective viewpoints and flexible skills, knowledges, and experiences to be able to perform various tasks under the changing circumstances. University education should also improve and adjust itself in various aspects in order to perform its functions efficiently and effectively in producing higher educated human resources and in leading and guiding the society into the most desired direction.

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Table 1. The percentage distribution of the sampling employed graduates

Main characteristics	Sampling employed graduates	
	Number	%
Sex :		
Male	473	48.6
Female	501	51.4
Age* :		
20-25 years	379	38.9
26-30 years	364	37.4
31-35 years	140	14.4
36 years and over	91	9.3
Work status** :		
Public sector employee	191	19.6
Private sector employee	511	52.5
Self-employed	272	27.2
Field of study*** :		
Education	66	6.8
Humanities	47	4.8
Fine and applied arts	13	1.3
Law	100	10.3
Social sciences	500	51.3
Natural sciences	62	6.4
Medical sciences	79	8.1
Engineering	75	7.7
Agriculture	16	1.6
Other fields	16	1.6
Total	974	100.0

*The employed graduates of younger age group, less than 36 years, were given relatively more weight in the survey, since they were the younger generation which should be more relevant to the present situation of university education.

**Private sector employees and the self-employed were given relatively high weights in the survey due to the roles of the private sector employment and the self-employment will be increasing in the 1990s.

***The high weights were given to the employed graduates in the social science fields in relation to those in the fields of science and technology in order to be consistent with the real pattern of the graduate population.

Table 2. Percentage distribution of sampling employed graduates by reason for changing jobs

Reason for changing job	% Sampling employed graduates
Job mismatching their fields of study	13.1
Job not fit to their preferences	17.3
Inadequate remuneration	31.5
No career prospects	36.9
Dislike job due to personal reasons	26.0
Job failure	2.9
Taking job only temporary while waiting for other job	25.6
Other	17.5

Table 3. Social direct costs and private direct costs of education for university student by field of study

Field of study	Social direct costs (Baht/year)	Private direct costs (Baht/year)
Natural science	30,110	1,844
Agriculture	70,039	2,865
Fine art/Architecture	45,912	8,017
Humanities/Social sciences	9,042	1,811
Medical sciences	156,648	4,686
Commerce	7,330	2,660
Law	6,079	1,596
Education	17,651	1,978
Engineering	58,447	3,376

Table 4. Percentage distribution of the sampling employed graduates by type of problems in job application

Type of problems in job application	% Sampling employed graduates
Not knowing job sources	14.2
No satisfied job	35.2
Not applied because of a test	5.5
Lack of inside connection	17.8
Lack of cash or personal guarantees	4.7
Failure in job test	19.4
Lack of some specific qualifications required by employers	16.7
Want to become the self-employed but do not know how to start business	13.1
Other	14.1
Total	100.0

Table 5. Percentage distribution of the employed university graduates by economic sector and type of labour market, 1987

Economic sector and type of labour market	% Of the employed graduates
Economic sector	
Agriculture	6.0
Manufacturing	11.0
Service	83.0
	100.0
Type of labour market	
Public sector	56.0
Private sector	31.5
Self-employment	12.3
	100.0

Table 6. Percentage distribution of employed graduates by type of labour market and by year of graduation (and survey year)

(per cent)

Type of labour market	The graduates in 1983/1984 (1985 survey year)	The graduates in 1986/1987 (1988 survey year)
Public sector	46.7	33.8
Private sector	45.3	55.5
Self-employment	7.2	10.2
Other*	0.8	0.8
Total number of graduates	100.0	100.0

*The percentage of graduates who worked in the international organizations and did not identify their workplace.

Table 7. Percentage distribution of the sampling employed graduates by some characteristics of their present jobs

Characteristics of present job	% Sampling employed graduates
Match both their fields of study and their job preferences	44.7
Match their fields of study but not fit with their job preferences	10.3
Mismatch their fields of study but fit with their job preferences	26.4
Mismatch both their fields of study and their job preferences	13.0
Other	5.0
Unspecified	0.6
Total number of employed graduates	100.0 (974)*

*The number of sampling employed graduates

Table 8. Percentage distribution of the sampling employed graduates by type of job preference

Type of job preference	% Sampling employed graduates
Government job	15.7
Public enterprise	17.7
Private sector job	24.0
Self-employment	35.4
Others	1.3
Unspecified	5.9
Total number of sample employed graduates	100.0

Table 9. Percentage distribution of the sampling employed graduated by source of knowledge and skill acquisition necessary to perform their job duty and by type of labour market

Sources of knowledge and skill acquisition	Type of labour market			
	Aggregate	Public sector	Private sector	Self-employment
University education	61.9	65.4	66.3	51.1
Off-the-job training	29.3	29.3	30.3	27.2
On-the-job training	49.4	62.8	58.3	23.2
Family's advice	14.6	6.3	9.0	30.9
Friends' and others' advice	24.9	18.8	22.1	34.6
Self-learning and self-experience	69.7	67.0	68.5	73.9
Other	5.9	5.2	6.8	4.4

Table 10. Percentage distribution of the sampling employers by their satisfaction or not satisfaction on various qualities and attributes of the university graduates

Graduates' qualities and attributes	Public employers		Private employers	
	Satisfied	Not satisfied	Satisfied	Not satisfied
- Basic skills and knowledges on the chosen field of study	93.5	6.5	90.0	6.0 (4.0)
- Analytical ability	61.3	38.7	54.0	38.0 (8.0)
- Report writing ability	54.3	45.2	60.0	32.0 (8.0)
- Verbal ability	67.7	32.3	68.0	28.0 (4.0)
- Special knowledges and experiences (Foreign language) computer, or typing)	58.1	32.3 (9.7)	58.0	38.0 (4.0)
- Previous work experiences	58.5	35.5 (6.5)	48.0	42.0 (10.0)
- Broad knowledges and perspective	67.7	29.0 (3.2)	48.0	42.0 (10.0)
- Creativity	64.5	25.8 (9.7)	62.0	30.0 (8.0)
- Personality and attitudes	100.0	0.0	78.0	18.0 (4.0)
- Enthusiasm	93.5	3.2 (3.2)	80.0	12.0 (8.0)
- Honesty and working discipline	93.5	3.2 (3.2)	86.0	8.0 (6.0)
- Industriousness	83.9	9.7 (6.5)	76.0	18.0 (6.0)
- Ability to work with colleagues	83.9	12.9 (3.2)	74.0	20.0 (6.0)
- Morality	80.6	9.7 (9.7)	82.0	12.0 (6.0)
- Sense of responsibility	83.9	6.1	72.0	22.0 (6.0)

Note : The figures in the brackets represent the percentage of sampling employers who declined to respond.