The decentralized system of the Government already referred to was formally introduced in 1976 to among other goals, bring the administration closer to the people. Nineteen provincial departments each under a Provincial Government were created outside of the National Capital District which remains the seat of the National Government. The Provincial Governments have control over their own administration and budget. Each has provision for a nineteen-member Assembly (although several provinces are currently reviewing the Electrol Act) and each province has adopted a ministerial system of executive government. Nationally PNG has adopted the Westminster Parliamentary System of Government.

THE ECONOMY

PNG prides itself of a potentially very rich country. Its marketed Gross Domestic Product (GDP) is estimated to have grown by 12.3 per cent in 1983 to K1,643.8 million in nominal terms. The Government expenditure increased by 3.3 per cent to K484 million while private consumption expenditure increased more markedly by 12.8 per cent to K925 million. Investment which in 1979 represented 23 per cent of GDP increased its share of GDP to nearly 38 per cent in 1983. A greater share of this was associated with the construction of PNG's OK Tedi Mine.

Exports of goods and services increased by 20 per cent to K772 million in 1983, compared to a mere 0.2 per cent in 1982 to K644 million, reflecting the improvement primarily in commodity prices in 1983. Imports of goods and services increased by 7.2 per cent to K1,135 million in 1983, representing an average annual growth rate for imports of 11.1 per cent since 1979.

PNG is already a very open market economy, small though it is. As such it is very much dependent on its export sector for its survival in the global

area. It is a price-taker as far as its export commodities are concerned and thus it is very vulnerable in the global or even the regional market place.

Most of PNG's export revenue comes from the sale of agricultural and mining products.

Coffee remains the most prominent agricultural export and represented 44 per cent of agricultural export in 1983. The other agricultural export commodities are cocoa, copra, copra oil, palm oil and tea and rubber and represented 56 per cent.

PNG's mines and exports a concentrate of copper ore together with a small amount of silver, zinc and gold. However when the country's second mine, OK Tedi, is in full swing in 1987 (ceteris paribus) PNG will become a major gold exporter. Incidentally, aside from the OK Tedi gold and copper deposit and Bougainvillea, PNG has excellent prospects for the exploitation of a number of small scale alluvial gold deposits in the Medium term. These are the Misima deposit in Milne Bay Province, the Lihir deposit in the New Ireland Province and the Porgera deposit in the Enga Province. If these expectations are translated into reality, mining will continue to lead as the country's major revenue earner.

PLANNING AND ADMINSTRATION FOR DEVELOPMENT - THE NPEP SYSTEM

We shall now turn our attention to the Planning machinery that PNG uses to plan for People's Development.

You will recall that for the purpose of getting the Government closer to the people and hence services, the PNG leaders and people opted for decentralised form of government - decentralised into nineteen Provinces and Administrations.

All planning currently is co-ordinated through the Department of National Planning (DNP) of the Central Government. It is termed the National Public Expenditure Plan Process. This planning process has 3 components:

(1) The assessment of available resources;

(2) The determination of the policy objectives which those resources will be used to achieve; and

(3) The listing of all specific items of expenditure.

Of the above, (1) can be predicted easily as it is reviewed by Department of Finance and Department of National Planning. With regard to (2) the most comprehensive statement of policy objectives is contained in the National Development Strategy (NDS) approved in October 1976 and supported by policy reviews subsequent to that (NB. NDS are a refinement of constitutional aims and directive principles.)

There are nine strategic objectives each with a medium term expenditure target allocated to it.

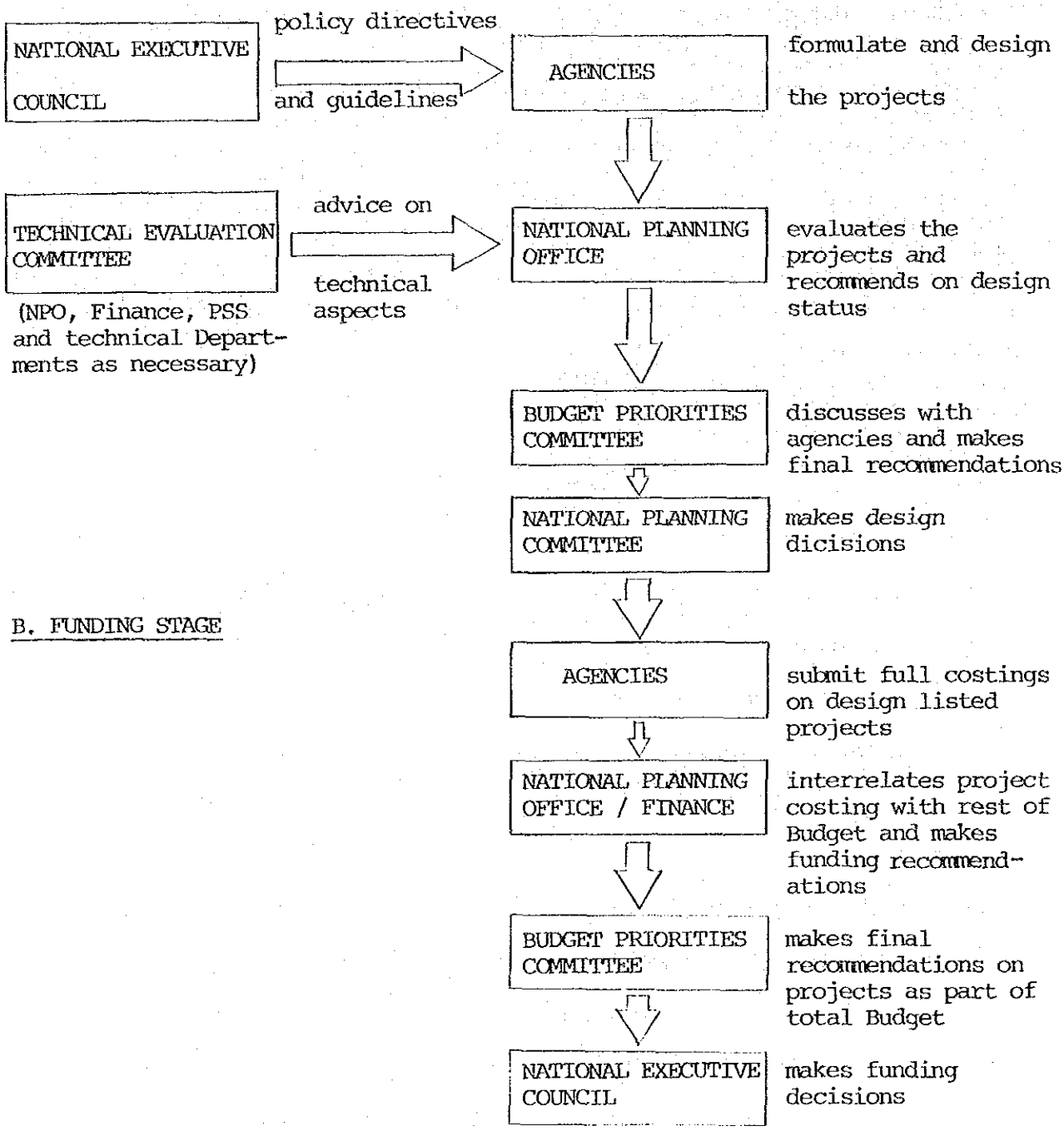
Rural Welfare	10%
Rural Economic Production	10%
Helping Less Developed Areas	8%
General Welfare	7%
Economic Production	40%
Food Production and Nutrition	4%
Training and Participation	5%
Urban and Environmental Management	6%
Effective Administration and Law	10%
	100%

It should be mentioned in passing that law and order problems have grown in prominence and the urgent need to find solution has thus forced its inclusion as part of the ninth strategic objectives.

Figure 1 shows the various stages through which the projects submitted to the National Government must pass before they can be finally approved by the National Executive Council and passed through Parliament at its annual Budget

FIGURE 1

THE NPEP PROCESS



Session. As can be seen there are two major stages before a project can be approved for funding and implementation.

MEDIUM TERM PLANNING SYSTEM

It must be said the the NPEP system has served the country well since its introduction. However, it has been judged to be lacking in a number of ways and therefore the present Government has asked for its revision and improvement.

It was said that the NPEP is a rather "undignified" and competitive bidding process each year, where departments compete for "new" money available for projects.

The new "improved" system, the Medium Term Planning System, when introduced will take a longer view and will eliminate that bidding process. Resources will be allocated well in advance so departments will be able to plan more efficiently. The new system will also have the following features:

(1) Planning will be based on Sectoral system so that more co-ordinated, nation-wide developments can be initiated.
(2) The planning cycle will be extended to 5 years and will endeavour to indicate initiatives over the whole period.

The Plan itself will have 2 major components: A medium term development strategy and a medium term development programme. The latter will include specific projects and programmes to achieve the objectives and targets of the former. The two together will form the National Development Plan.

It is of course too early to judge how useful this new system will be and how much improvement it will bring to planning in general. One thing is certain that the populace will be able to tell how much priority the Government of the day places on Human Resource Development and Co-operation. Programming of projects few years down the line will expose the respective priorities few years down the line.

The Government intends to have the new planning process in place by 1986 and therefore judgement as to its effectiveness will have to wait till the 1990s.

3. HUMAN RESOURCES DEVELOPMENT

GOVERNMENT POLICY

The National Government maintains the responsibility for general human resources development in the country. This includes all forms of general education and skills training conducted in primary, secondary, vocational and tertiary levels. The functions of Education and Training fall within the responsibilities of the Ministries of Education and Public Service respectively.

As stipulated in the Constitution and the Public Service Act, the Public Services Commission has specific legal responsibilities in recognising that training and manpower development is a necessary and inseparable function of each Department/Organization's management. As such the Commission adapts the crucial role of planning and promoting the development, improvement co-ordination and evaluation of all training and manpower development activities for both the private sector and more so the public sector.

It is recognised that timely and accurate assessments of training needs are an essential and integral part of developing and maintaining a capable and qualified workforce. As much as possible training needs are linked up with the manpower planning approach/system to ensure that short and long term staffing needs are met.

ROLES AND IMPORTANCE OF HUMAN RESOURCE DEVELOPMENT

Relative to many small states of the South Pacific Region, Papua New Guinea's manpower policies reflect the growing population, extensive resource

base, the infrastructural needs and the range of services provided. It has been recognised that the adoption of an appropriate manpower planning framework would greatly assist in the assessment of likely required skilled labour over a defined period of time, analysis of the employment possibilities in the formal sector of the PNG economy and the policy implications on education training and localization.

The newly established Department of National Planning has produced a report on National Manpower Assessment covering the period 1979-1990 with a revised version to be available soon. The report highlighted major issues on manpower, education and labour in PNG.

PRIORITY TRAINING NEEDS

Papua New Guinea, like many developing countries especially in the South Pacific Region is disadvantaged by the critical shortage of trained and skilled manpower which have adverse effects on development programmes.

An important distinction in the age distribution of citizen and non-citizen workers that worth noting is that almost two thirds of the citizens with jobs in the formal sector are less than thirty years of age while non-national workers average between thirty and forty years of age. This is partly explained as a consequence of the relatively recent history of education expansion in Papua New Guinea.

In relation to educational attainment it has been estimated that about 59 per cent of all citizen employed had no more than primary schooling. Further, among all employees with grade ten level education, 61 per cent were non-nationals.

At present about 70% of employed non-nationals occupy more Professional, Technical, Administrative and Managerial occupations.

In the Public Sector however more non-national occupy professional and technical jobs while in the Private Sector this ranges from Administrative/Managerial to clerical, sales and technical positions. Despite the relatively short history of education development it is encouraging to note that base levels of the public service and of the private sector are now all but localised. This has been brought about by direct government policy on localization and training.

The weak sector for localization mentioned above requires strengthening of training. Further the government should strengthen the machinery that is responsible for manpower development, planning and co-ordination. By doing so the Government would build up a cadre of national trained personnel with the skills and expertise necessary to efficiently manage the machinery of the National and Provincial Governments and to effectively implement development plans.

TRAINING FACILITIES

At present Papua New Guinea aims to adequately meet the general training needs within the country and where possible prefers to utilize training opportunities and facilities in the region. However, for post graduate training and certain technical and other specialized needs, training is acquired overseas.

Efforts are continuously being made to upgrade the standards of training to ensure that the programmes are responsive to the nations needs. More emphasis is also being placed on utilizing foreign aid for in-country training which is proving more appropriate, effective and economical.

HUMAN RESOURCE DEVELOPMENT IN THE PRIVATE SECTOR

At this stage of development in the country the Private Sector's contribution to human resource development is restricted to meeting their individual organizational needs. With their persuasive and favourable employment conditions they are able to attract (usually) the most qualified and skilled personnel from the Public Sector. While this trend may be considered as a form of 'brain drain' form one sector to the other the country does not as yet experience the problem of 'brain drain' to other countries. The internal 'brain drain' problem is considered not serious because such personnel remain in the country.

More recently, however, active interest and participation have been shown by professional groups in establishing and upgrading their respective code of practices. The Government when ever necessary invites or vise versa their participation in developmental issues. On the other hand larger firms such as those involved in mineral mining engage in extensive manpower training and development programmes for their own needs.

The Government nevertheless assists the Private Sector in their manpower training needs, especially for post graduate or specialised training skills not available in Papua New Guinea. Such opportunities are arranged under foreign aid schemes.

EXTERNAL ASSISTANCE TOWARDS HUMAN RESOURCE DEVELOPMENT

It is recognised that manpower development needs are diverse and large with associated training costs expensive. As such Papua New Guinea has been heavily dependent on external aid for financing training abroad and some in-country programmes.

Papua New Guinea is appreciative of the external assistance for training purposes available in the form of training awards and technical assistance from bilateral aid and/or multilateral sources.

Among the major aid donors are: Australia, Japan, New Zealand, some member countries of ASEAN, Commission of the European Communities (EEC), UNDP, other UN agencies, Commonwealth Secretariat, South Pacific Commission (SPC) and South Pacific Bureau for Economic Co-operation (SPEC).

Commencing in 1986 the Government will adopt the new system of Medium Term Development Strategy (MTDS) by sectors. Complementing MTDS is the current National Public Expenditure Plan (NPEP) system which will eventually be phased out in the future. In adopting the new system of Planning the Government will be in a better position to know the extend to which manpower development will be required in the respective sectors. Further, this would enable better co-ordination, planning and programming of external aid available for manpower development in the country.

As said earlier manpower development needs are large, diverse and costly. For this reason Papua New Guinea will continue for sometime to approach external aid agencies for funding diagnosed and priority manpower training needs.

4. CO-OPERATION BETWEEN PUBLIC AND PRIVATE SECTORS IN HUMAN RESOURCES DEVELOPMENT

It is generally agreed that within the central government structure the main concern is with issues of national economic, social or political interest which have international, regional or domestic implications that may need to be regulated at the national level. Examples of these issues would be;

- Formulation of national goals and objectives
- Resource allocation

- Co-ordination of multi-sectoral projects
- Formulation of human Resource Development Policies to name but a few.

It is common to find that the government machinery or part of it may not have the capacity or capability to prepare a comprehensive picture that extends beyond their limited sectoral interest.

In the area of Human Resources Development the National Government maintains a leading role in policy formulation, implementation, co-ordination, evaluation and development. The private sector on the other hand operate exclusively with short-term interests and a profit motive with its decision processes related to quick results.

Although the Government has formulated development strategies with incentives to attract further development in the private sector a number of constraints remain to be cleared, for example availability of skilled manpower, land and law and order situation to name a few.

With such a situation at hand, this calls for concerted effort from both sectors to develop and maintain understanding, co-operation and inter links which is essential for the healthy growth of a nation. The Government Agencies responsible for developing and maintaining these links need to reassess their positions with the aims for improvement and strengthening.

The private sector has yet to accept its responsibility to assist in a significant way in the development of human resource in the country. This situation, however is partly the consequence of the relatively short history of economic development in Papua New Guinea.

It is hoped that improved co-operation between the public and private sectors in the foreseeable future would pave way for developing a mechanism for strengthening human resource development in the country.

CONCLUSION

In the case of PNG, the Government is fully aware of the importance of HRD. This is born out by the fact that Education and Manpower Training consumes more than 25% of the National Budget, not to mention the fact that the private sector also allocates resources for this purpose.

The Government places such importance in HRD that it has always been one of its stated ideals to develop the capacity in Papua New Guineans to talk over that sector of the skilled and Professional workforce currently held by non-nationals.

To complement the Government's own resources committed to HRD, foreign aid is increasingly being utilised to assist in those areas not easily and readily obtainable in PNG. We would foresee and encourage an even greater use of such resources to assist the Government if it is to achieve a cadre of technically qualified professionals and managers that will contribute to achieving sustainable level of social and economic progress for its citizens.

7.8. Philippines

DEVELOPMENT STRATEGY OF A NATION AND THE MEANS TO ACHIEVE IT

by Mr. Samuel T. Ramel
Ministry of Foreign Affairs,
Mr. Gabino A. Mendoza
Asian Institute of Management

A nation's development strategy is born out of its vision of the future. For the Philippines that vision encompasses three translatable goals. And these are the attainment of:

1. increased productivity for sustainable economic growth;
2. more equitable distribution of the fruits of development; and
3. total human development.

Obviously, these three development goals suggest the development strategy. That strategy is one of balanced development. Social development is incorporated in the Philippine National Development Plan along with economic development.

In support of this strategy are certain specific objectives and programmes. For increased productivity and sustained economic growth, the Philippines has opted for a balanced growth among sectors and regions. This requires stronger and more efficient linkages between agriculture, industry, and services so that progress in any sector supports and encourages the development of the others. Small and medium scale agro-based industries that are labor-intensive are emphasized, while maintaining and sustaining gains

achieved in the major industrial sector. This calls for increased agricultural modernization and the establishment of selective import substitution industries that are less dependent upon foreign imports.

This approach addresses the needs of the greater portion of the population because it not only provides for the location of industries in depressed areas and regions of the Philippines where natural conditions and resources would give them comparative advantage, but also generates more opportunities for employment, development of depressed areas and regions, and facilitates a more balanced urbanization and population distribution, as well as lower population growth rates in the countryside as a result of the improvement of rural incomes. Increases in rual incomes generate savings and investments and encourage the industrial sector to meet the demand for more consumer and industrial goods. Higher productivity and self-sufficiency is attained, and a more self-reliant development is promoted through the efficient use of existing resources. The cost efficiency of these industries is expected to produce goods that are world-competitive.

In order to sustain this development thrust, adequate, timely, and secure energy supply shall be provided through the diversification of energy fuels and the development of indigenous sources of energy, especially those which are abundant and renewable. In this connection, the Philippines has exceeded its planned targets. By 1985 dependence on imported energy fuels will be reduced to 50%, and by 1987 to 44%.

Science and technology is harnessed to support national development. Emphasis is on the development of technologies using indigenous materials to enhance productivity and the world competitiveness of domestic products.

Foreign economic relations including eternal assistances will continue to be diversified to improve the Philippines' access to export markets, strategic supplies, capital, and technology.

The equitable distribution of the fruits of development is achieved by the provision of opportunities for productive employment not only through the small and medium scale, labor intensive, agro-based industries but also by multi-sectoral livelihood and productivity programmes and the expanded coverage of the integrated area development (IAD) projects. Improvement in the delivery system of extension services to assist local private efforts, seed capital, and appropriate package of technology, will hasten the development of agriculture. Along with these efforts at reaching the less priviledged of the population is a programme of agrarian and urban reform designed to give the landless tiller of the soil the land he works on and the roofless urban dweller security in his rented dwelling. Denuded, idle, and underutilized land are identified and made available to deserving individuals not only to enhance land productivity and provide income to a large segment of the population but also to satisfy the physical and environmental dimensions of development.

Total human development is an end as well as a means toward economic progress. It involves the enhancement of the physical, intellectural, moral and other attributes of the individual. This is sought to be attained through a programme that provides, among others, education and manpower development health and nutrition, housing and other social services, and the encouragement of individual participation in the administering and decision-making processes of development through regionalization, and greater local autonomy.

To assist in the implementation of this development strategy, the government has embarked on the streamlining of the government machinery to facilitate the delivery of services, a continuing reform and upgrading of the civil service toward a development orientation, incentives for private investment and participation are provided, among others.

Education and manpower development are given a renewed emphasis with a re-structuring of the educational system to produce graduates that are employable and not merely literate. The open entry system to out higher educational institutions wherever anybody can enroll and register for a course within his means has been modified. The objective of this educational reform is to meet the demand of industrialization and development for qualified manpower. Before this reform, the Philippines is consigned to be a nation that has a shortage of manpower in the midst of a surplus of labor. That is because our educational system was producing individuals that do not meet the demand of our growing industries.

Hand in hand with this redirection in our educational system is the provision of training facilities for out-of school youth, upgrading of skills for employees, skills development for the unemployed, and strengthening of the capabilities of our managerial and supervisory levels. A National Manpower and Youth Council is established to coordinate these activities. This has regional manpower development councils to assist it in implementing the manpower development plan incorporated in the national development plan. This National Manpower and Youth Council is also responsible for encouraging the participation of the private sector in HRD of this, my colleague and I will have more to say in tomorrow's session which zeroes in on HRD. And we will be glad to share our experiences as well as highlight the strong and weak points of this aspect of our National Development Strategy.

7.9. Singapore

HUMAN RESOURCE DEVELOPMENT STRATEGIES AND PROGRAMMES

by Mr. Winston Teow
National Productivity Board

I. INTRODUCTION

1. Being an open economy with no natural resources, Singapore's economic growth is largely affected by the world economic situation, especially in the industrialized countries. This was evident in Singapore's economic performance in 1982 and 1983.

2. Although the Singapore economy continued its growth in 1982 and 1983, it was at a slower rate than in 1981. Growth in GDP was 6.3% in 1982 and 7.9% in 1983 as compared to 9.8% in 1981.

3. Singapore's only resource is its Human Resource. Human Resouce Development has been identified as a key factor to Singapore's economic growth. How Singapore develops, educates and trains its Human Resource is of utmost importance and will determine the growth of the nation.

II. TECHNICAL ASSISTANCE AND HRD

4. In Singapore we focus on high-tech development geared towards higher productivity. Human Resource Development to have competent management and well-trained workforce are considered as essential requirements in achieving the objectives.

5. In this respect, technical assistance provided by developed countries plays a key role in Singapore's development. Assistance

in HRD was provided mainly in the form of fellowships, training awards, training attachments and the despatch of foreign experts.

6. The Colombo Plan Technical Assistance scheme, the United Nations Development Programme (UNDP), the Commonwealth Fund for Technical Co-operation (CFTC) and the Productivity Development Project (PDP) were the primary sources of assistance in Human Resource Development.

7. Due to its small technological base, Singapore would continue to need technical assistance from the developed countries and international development agencies to achieve its present objective of restructuring the economy.

8. Singapore on its part will continue to share its development experience with other developing countries through the provision of training awards and practical attachments.

9. Singapore offers training awards under its ASEAN and Colombo Plan Training Award Programmes. In 1984 116 Colombo Plan Awards and 90 ASEAN Training Awards were given. Under bilateral arrangements, Singapore has provided practical attachments for nationals from other developing countries. Singapore also provided host facilities for two UNDP sponsored courses in civil aviation and radio frequency management for trainees from the Asian Pacific region.

10. Despite its limited financial and manpower resources, Singapore will continue to share its development experience with other developing countries.

III. POLICIES FOR HRD

11. Early industrialization programmes start with labour intensive activities when the demand of skills is at a primary level. The development of human resources in such a situation is rudimentary and fundamental.

12. Singapore has reached a stage of satisfactory level of employment and is now in the stage whereby upgrading of technology and in turn the upgrading of skills is necessary.

13. To facilitate this process government policies were created to encourage the development of Human Resources. The Skills Development Fund established in 1979 has stimulated interest among employers in training programmes. It has focused the attention of employers and managers on the need for training and human resource development and concentrated the minds of companies on the importance of investing in training to upgrade the skills of their workers.

14. In the past five years, substantial wage increases have resulted in greater automation, mechanization and computerization. More institutions to provide for computer and technician training have been established.

15. The Basic Education for Skills Training Programme which started in 1983 was implemented to upgrade the skills of the Singapore workforce.

16. To encourage self development, the Singapore Government has recently decided to allow tax deductibility of expenses incurred by individuals in pursuit of further academic and professional qualifications or vocational qualifications related to their business, trade or employment.

IV. EDUCATION SYSTEM AND HRD

17. The Government's educational effort has also been targetted at intensive skills development programmes aimed at making the industry that is geared towards higher levels of technology. The educational system in Singapore before 1969 was academically biased. To meet the needs of the economy when Singapore embarked on an industrialization programme the educational system in Singapore was revamped in 1969. It was reoriented towards more technical and vocational training.

18. If institutions of higher learning ignore national objectives and take a traditional approach to imparting knowledge, such divergence may create barriers in achieving national goals. In Singapore, in planning and implementing courses and programmes in the institutions of higher learning, on awareness and recognition of the importance of national goals and objectives are kept in mind.

19. The importance of HRD has been given due recognition by the National University of Singapore, HRD courses were introduced with the following objectives:

To create an awareness and understanding of the importance of HRD so that benefits of such awareness can be carried over to work situations when placed in positions of responsibility for eople, machinery, physical facilities and finances;

To enable undergraduate to understand the importance of human relations at work in order to achieve twin goals of organization namely, greater productivity at work and greater human satisfaction within an organization.

V. HRD FOR HIGHER PRODUCTIVITY

20. In Singapore, we have had full employment throughout the last five years. When the scale of technology moves to a higher level under such condition of full employment, there is an urgent need to raise productivity because of the limited resources within the developing economy. It is here that the real human resources management at the corporate level needs to be looked at critically.

21. In this respect, the mission of the National Productivity Board, which is the implementing aim of the National Productivity Council, is "To have a highly productive nation."

22. The ultimate goal of HRD is to develop the individual to the fullest where he can be productive in his own field. HRD has been identified as one of three strategies to accomplish the NPB's mission.

23. National HRD Conference and workshops which were held to increase the awareness and knowledge of how training and staff development can improve the competence and productivity of our people. The workshops provided opportunity for the growing number of HRD practitioners in Singapore to meet, listen to and exchange views with other recognized experts in the area of human resource development.

24. A National Centre for HRD practitioner will be established to foster and promote the application of HRD practices and professionalism through training programmes, study missions, workshops and dialogues in which HRD professionals will exchange experiences and be exposed to developments and advances in HRD.

VI. CONCLUSION

25. Before I conclude my presentation, I would like to reiterate that to ensure continued economic growth, Singapore would continue to need technical assistance from the developed countries and international development agencies to achieve its present objective of restructuring the economy.

7.10. Thailand

ECONOMIC CHANGE AND HUMAN RESOURCES DEVELOPMENT

by Dr. Chira Hongladarom
Thammasat University

INTRODUCTION

At the present time, Thailand ranks 17th in the world in terms of the size of her population. The number of Thailand's labor force is approximately 25-26 millions where 68% in agriculture, 10% in manufacturing and 22% in services. Because of population growth rate in the past, the age structure of the labor force is considered to be relatively young (unlike Japan). The latest census in 1980 indicates that labor force in the age groups of 15-19, 20-24 and 25-29 constitutes the largest number. Young labor force is considered a two-edged sword: on the one hand it puts a great deal of pressure on the labor market and on the other hand it is a potential of the society if quality of young labor force can be improved resulting in a sustained increase in labor productivity. The young labor force means also that they are easier to adjust to the changing economic structure, hence changing skill requirement. However this does not mean that the relatively older labor force is not important. For older groups, the skill may be obsolete in the constantly changing technological world. Further retraining may be required.

Human Resources Development is a policy to improve the labor productivity among workers in view of the changing Thailind's economic structure. For Thailand the emphasis on HRD just recently started and the Government is aware of such policy. However we must carefully assess: What has been the role of the Government? Is HRD an integral part of development strategy? What has

been the role of the private sector? Can we learn or share our experiences with our Pacific and Asean friends. What are the future areas of co-operation in this region? What are the future skill requirements in the next century? These questions will not be answered perfectly in this paper but the general direction will be discussed in the country's paper aiming to stimulate further exchanges of views among the delegates.

HRD AS INTEGRAL COMPONENT OF DEVELOPMENT STRATEGY IN THAILAND?

Admittedly, the Thai planners or policy makers have not paid sufficient attention to HRD. To be honest, it is not a lack of trying but of various factors.

1. As a developing country with abundant supply of natural resources, land, forest, mineral, etc. - the priority of previous governments has been concentrated in building infrastructure such as roads, dams, power stations, etc. This clearly manifested in the plan documents of the last 3 plans (1960-1975).

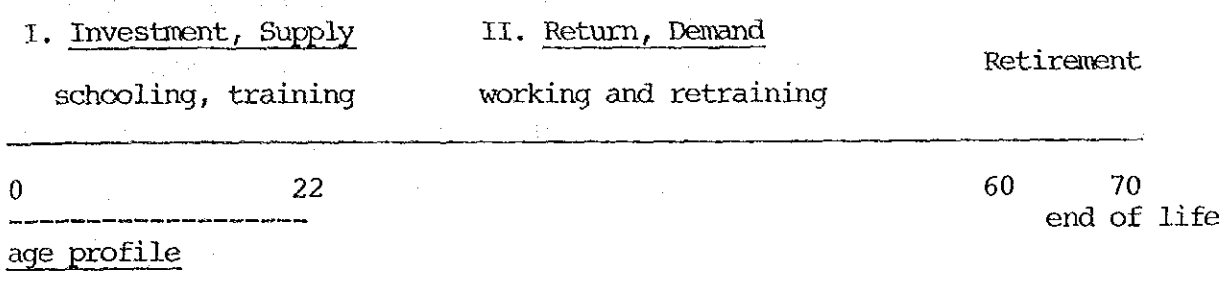
2. In the mind of the policy makers in the past the preoccupation with GDP growth rate in which Thailand has achieved very well 8% during the 60's and early 70's might have led to the neglect of HRD. Moreover the theory of trickle down effect that if growth can be sustained so can be productive employment and labor productivity. As one looks back, this may not be true any longer.

3. Given the nature of our political system and coupled with constantly changing world economy, Thailand is an open economy, the Government is deeply concerned with short run economic problems. The energy crisis during early and late 70's certainly reinforced the Government concern on short run problems. The external financial problems and the inflationary explosion

during the 70's and early 80's tended to preoccupy the Government's time and effort and hence not enough thinking has been spent for HRD.

4. The HRD as a concept and as a concrete policy options still pose a great deal of problems and confusion. It seems clear that many people look at HRD differently hence different policy instruments. Ideally the best concept is to try to look at HRD as a complete cycle in itself. The cycle is called the HRD cycle or Life cycle.

Chart 1 The HRD Cycle



It is important to divide the cycle into two phases, the investment period or the supply side and the return period, the demand side. Of course in the real situation, the periods can be overlapping and for Japan the working life does overlap significantly with investment in training.

In Thailand, we have adopted HRD policies in phases 1 and 2 but there is no co-ordination between the two phases. Certainly the Ministry of Education and the Bureau of University Affairs spend consistently 20% of the national budget to develop the future supply of our new labor force. But on the demand side, the job opportunities and the productivity of labor do not correspond with the supply. The work of economic ministries, such as agriculture, industry, commerce and finance does not correspond with the supply side. It is not a surprise because to match phase I (investment) and phase II (working) will be a paramount task, however it is important to have in the back of your

mind that the successful HRD policy is a very long and complicated system and it requires a great deal of co-ordination among key ministries. For examples, tax policy can hurt employment or prevent on the job training. Recently the Government discovered natural gas resulting in the birth of Eastern Seaboard project, however specific technical and managerial skills to meet this expansion in hi-tech, gas and energy related industries are in short supplies. The Education Ministry continues maximum effort to provide educational opportunities for many Thais without much success in labor market, let alone to sustain labor productivity improvement.

5. The success of HRD as spelled out in previous discussion is a challenge to the Government and it must realize the difficulty of achieving this policy. Given the Thai's bureaucratic structure, the coordination among various ministries is extremely crucial. In many countries, the Ministries of Labor and the Planning Ministry can join together to tackle such problem but for Thailand the status of both agencies is only at departmental level. The leaders will be fully aware of the difficulty. However this does not mean that HRD in a small and more acceptable scale should not be attempted.

THE CHANGING ECONOMIC STRUCTURE

1. Changing pattern of production

During the last two decades, the economic structure has undergone a significant change, moving quickly away from the traditional production of agriculture to manufacturing sector and other service industries such as trade, banking and service sectors itself. Table 1 clearly indicates that in 1960 GDP in agriculture accounted for 40%, in 1982 agriculture share went down 23.99%, while industry accounted for 11.9% in 1960 and jumped to 21.04 in 1983.

2. Changing pattern of employment

As the real sectors underwent a significant change in their structure, one expects that the employment structure followed the pattern of the production. However Table 2 indicates that despite the drastic change in the real sector, the structure of employment has not drastically changed. In 1960 agricultural employment accounted for 82% of the total employment but in 1982 the share of agricultural employment went down to 68.4% which is still considered to be substantial while industrial employment (including mining and construction) went up from 4.13% to 10.43%, a small increase while tertiary employment went up from the 11.74% to 21.16% in 1982. Even in a very crude figure, the change in economic structure has not induced a charge in employment, let alone a rise in labor productivity.

THE NEW EMERGING ISSUES

Let us at this stage go into details. The main hypothesis underlying this dynamic picture of economic change and employment is the new specific skills required in order to meet the economic change.

AGRICULTURAL SECTOR AND HRD

One can not simply ignore the role of agriculture in development strategy. Agriculture is still the most important but declining in its importance. In particular the significant change in the direction of moving away from expanding land for cultivation to better utilization of existing land by applying technology (agricultural productivity). Thai farmers must be able to adopt new technology. HRD policy is to improve the skills of farmers in the areas of technology. Training in the areas of marketing, finance and information system for effective farming is also very crucial. The role of

agricultural administrators at the sub-district level (Tambon) is crucial. These people are the target groups for HRD in the future.

INDUSTRIAL SECOTOR AND HRD

This is the most critical sector in HRD policy. Traditionally the industrial sector is divided into 4 sub-sectors. The first one is called the traditional industrial sector consisting of food processing industries which requires a low form of technology. Another is the labor-intensive sector such as textiles. Third, the expansion of rural industries which will require the application of science and technology and experience in management and marketing. Fourth is the modern industries the so-called hi-tech and natural gas and energy related industries through the development of Eastern Seaboard project which will give birth to petro-chemical industries, fertilizer industry, Soda ash, ship repairing industry, electronics, tire and rubber industries etc.

If industry is the key to our development strategy in the future which appears to be the case, the question to ask is; do we have adequate manpower to meet the future requirements? Unfortunately, the situation at the moment is very critical. The supply of future technical skill in many key areas is critically in shortage. Unlike Japan and Korea where planners have adequately prepared the manpower for the future needs. Moreover the traditional reliance from the view point of industries for the Government to produce the right kind of skill for the industries, does not promote on-the-job training at firm's level. Firms in Thailand do not conduct on-the-job training largely because in the past firms do not adopt advanced technology and economically firms do not want to do because it does not pay. In many instances, the workers do not stay in the companies. Turnover rate is extremely high in some case 20%[1/]. Until the Government in co-operation with private sector can devise an

effective system for firms to conduct on-the-job training, the ability to improve technical skill is still much below the optimal level.

GOVERNMENT EMPLOYMENT IS RAPIDLY DECLINING

During the past two decades, the Government employment has been the main sources of employment among the highly educated labor force especially the vocational and university graduates. Table 3 indicates clearly that in 1981 62% of the vocational graduates went to work for the Government while 52% of the university graduates were employed by the Government. Until recently the employment growth in the Government sector has been rising at 6-7% a year. During the last few year, the Government decided to freeze the hiring of the Government employment no more than 2%. The future of the vocational and university graduates depends a great deal on private sector. The demand from private sector for those seeking jobs is very competitive. Recently the number of unemployed graduates has been on a rapid rise. The Government and the private sector must be in constant consultation about the production and the consumption of future human resources in Thailand. If specific skill is in great shortage, advanced or technical training is so essential and it is in this context that the introduction of HRD in Pacific co-operation comes at the most opportune time.

1/ One area of on the job training is in the areas the computer science. The turnover for computer programmer in Thai International Company is 18%.

THE SUPPLY SIDE

Before discussion on the role of productivity in HRD, let us at this stage discuss briefly the role of supply of human resources.

Admittedly, the Government paid a great deal of attention to education. As clearly spelled out in the concept of HRD, the educational policy is only part of the whole HRD cycle. It is fair to say that our education policy has been heavily concentrated upon providing education for all people but we might have produced the wrong kind of education. There are few basic points regarding education.

1. Given the demographic structures reflecting on the age structure of our country, the supply of new labor force has been rising quickly around 3% a year and will continue to rise.

2. The educational attainment of new labor force has been increasing quickly. In the past, the 85-90% of our new labor force finish only primary school. At the present time, more people would have received higher education than that of primary school.[1/]

3. Having the labor force with high education attainment is a good policy. Japan and Korea, Taiwan went through this process. However the main difference is the right kind of education was produced for those countries. The criterion for success is not only the increase in schooling years but it also depends on kind of education. Does it fit with the demand side? Unfortunately the increase in educational attainment is in non-technical and not-scientific categories in the case of Thailand.

1/ In 1991, 39% of the new labor force will receive education above primary school.

4. Let's give some specific examples. In Table 4, it indicates the fields of study which heavily favors the social science categories. As a country is embarking upon the new technological age, the existing supply of skill is not conducive to technical and scientific progress. In addition, the study in business management is not yet given a top priority. This is a critical problem for future effective HRD. Perhaps one can sympathize with the fact that education expansion in social science is relatively cheap. Political pressure towards the Government to provide such educational opportunities also plays important role. What is vividly clear is that in the past the supply side has never correspond with demand side (Chart 1). The need for human resources planning as well as research in this areas of HRD cycle is urgently called upon. Perhaps it is not too late to learn from Japan and Korea.

FUNDAMENTAL PROBLEMS

Having painted the rather pessimistic picture of the lack of HRD policy as important component in development strategy, one has to ask what are the negative impacts to the economy and hence to the country as a whole. To me there is three areas of negative impacts to the economy.

1. Low labor productivity

The indicator on labor productivity is not available but Table 5 will be able to imply something in that direction. The difference of factor productivity between Thailand and Japan can be partially attributed to labor productivity. In Table 5, the critical sector is agricultural sector which shows that productivity in Japan went up by 4.01 while in Thailand it remained static. For manufacturing sector, factor productivity went up by 2.04 in Japan while only 0.64 in Thailand. For services, the factor productivity in Japan is 1.16 while it is only 0.22 in Thailand.

The average factor productivity in Japan is more than twice 2.88 to 1.26. Even this overall comparison is misleading because Thailand has done better in non-critical sectors such as construction and utility. If one looks at the factor productivity in other newly industrialized countries namely Hong Kong, Korea, Taiwan, Singapore, the factor productivity in manufacturing went up even higher than Japan (Table 6). It went up by 2.20, 3.43, 3.59 and 3.75 respectively. These four counties have adopted a successful HRD policy and it is important to learn the lessons from them.

2. Disequalibrium in the labor market

Because of the significant role of informal market in Thailand, the rate of open unemployment in Thailand is not very high. However the rate of graduate unemployment is rising rapidly. There is no need to dwell on the reasons for such imbalance. Table 7 will confirm the rate of unemployment by various fields of study. The most serious problem of graduate unemployment is the tremendous waste of our precious resources.

3. The shortage of certain specific skills

Again, as the economy develops quickly especially in the areas of hi-tech industries, Table 8 indicates that as one breaks down industries into various sub sectors, one can see that there is a tremendous demand for scientists and technologists which the existing supply of labor can not meet. Basic metal-industry, machinery, transport equipment, transportation and communication are critical sub-sector which will need a great deal of specific skill. As one looks ahead, the expansion of energy related industries as mentioned previously in the Eastern Seaboard Project will out more pressure on the shortage of specific skills.

WHAT TO BE DONE NEXT?

It is appropriate at this point to describe the future path of action regarding the HRD as a policy instrument for Thailand's development strategy.

1. The Government must give equal importance to the role of HRD in national development. As discussed in the earlier section, in the past the attention to employment, labor productivity and hence HRD is treated as residual after other economic and financial targets are set in the plan objectives. Fortunately, top planners in Thailand now realized the urgency of this problem, as Secretary-General of the National Economic and Social Development Board made a historic remark at Thammasat University in January 1983, "the problem of human resources will no longer be ignored". In the preparation for coming sixth Development Plan (1987-1991), the treatment of HRD will be one of the highlights of the plan objectives and targets.

2. The necessary condition is the commitment of the planners but the sufficient condition is how to carry out the plan objectives into successful operations. Here the formula for success is very elusive. However it is important to list a few criteria: (1) the concept of HRD cycle or life cycle linking the supply and the demand is extremely crucial. Of course one cannot expect the cycle to be achieved with instant success but this should be the guiding principles in which all policies and actions will closely follow: (2) the broader the participation of all the elements in the society, the better is the chance to succeed. The Government should invite active participation from private sector and exchanging views with them, the role of external assistance is welcome as long as it benefits the direction of HRD policy, the Asean-Pacific co-operation in HRD certainly will greatly speed up the successful HRD: (3) the Government must be willing to provide necessary resources for HRD operation: (4) political will in tackling the difficult problems must be there if one expects the success of HRD, for example social

demand for education will continue to be very strong but education and skill training must also be geared to the labor market situation. When hard choice will have to be decided, the Government must be willing to do. Another example is the fiscal policy-if tax policy must be adjusted to provide incentives for further development of skill in the enterprises, the Government must be willing to support such tax measures.

3. The Government must support the research activities which will be useful for future human resource planning. The study regarding the change in economic and industrial trends and the future manpower requirement is urgently needed. Research institutions both private and government must improve their capacity to conduct such rigorous research and improve techniques of research methodology. Information flow regarding job markets especially from the private sector must be available and efficiently processed to guarantee the success.

4. The Government must try to provide HRD indicators which reflect the changing economic situation both domestic as well as international environments. Such indicators as rate of unemployment, productivity, shortage of skills etc. must be produced quickly so that policy measures will follow. With the assistance and co-operation in Asean-Pacific program, the work in these areas can start right away. The Asean-Pacific programs will allow for the exchanges of information in HRD through symposiums, seminars and workshops, which will be extremely essential to policy makers, private sector representatives, scholars in these field from Pacific community; in other words, they should try to work closely.

5. There are many specific programs in HRD which Thailand is interested and hope to launch some of these programs quickly:

(1) The role of retraining especially among target groups which skill is obsolete in the job markets. For example, the introduction of computers into

higher school will make many teachers unable to adjust. The decline in primary school age children in Thailand will make primary school teachers very redundant.

(2) Develop the national training policy aiming at improving skills especially among the private sector firms. The introduction of "skill development fund" by taxing firms at certain percentage of their total sales and used this fund exclusively to pay back firms which actually conduct training.

(3) The Government must increase budget allocated for research and development (R & D) to allow the Government to be able to learn new things and to conduct and promote new research. The present budget for R & D in Thailand is only 0.05% of the total budget.

(4) Changing high school, vocational and university curriculum to include more science, management and marketing techniques.

(5) To promote small scale business, and self-employed activities. Training in entrepreneurial skill is urgently needed. Policy towards such activity including fiscal and monetary measures will be needed. The role of venture capital is a good example.

(6) The Government must encourage and provide incentives for private sector to pursue their economic activities. Unnecessary regulations hampering the progress of private sector activities should be eliminated. The Government must realize that private sector is the engine of growth.

FINAL NOTE

The lesson from other countries, Japan, Korea, Taiwan, Hong Kong, Singapore and other developed Pacific countries clearly confirms the hypothesis that if HRD is adopted successfully in the country's development effort, the prosperity of the country can follow. Each country must conduct

their own self-examination. Once each country is convinced of such belief, the additional push from the Pacific regional project such as the one we are aiming at will be a significant marginal benefit that the community of Pacific countries can mutually benefit. The journey ahead of the US is long and bumpy but let me finish by quoting George Bernard Shaw;

You see things and say why

But I dream thing that never were and I say why not

The dream is here - "Let us begin"

Table 1

Gross Domestic Product at 1982

Price by Industrial Origin 1960-1982 (Millions of Baht)

	1960	%	1970	%	1980	%	1982	%
Agriculture	28,227	40.24	48,322	32.20	73,924	25.11	77,784	23.99
Crops	21,877		35,544		53,942		59,045	18.21
Livestock	3,600		5,032		9,704		9,490	2.93
Fisheries	818		4,963		6,831		6,383	1.97
Forestry	1,932		2,793		3,447		2,866	0.88
Mining & quarrying	860	1.23	2,555	1.70	4,896	1.66	4,615	1.42
Manufacturing	8,389	11.96	23,320	15.54	61,381	20.85	68,224	21.04
Construction	3,343	4.77	8,705	5.80	16,709	5.68	15,721	4.85
Electricity and water supply	210	0.3	1,638	1.09	5.813	1.97	6,821	2.10
Transportation and Communication	4,827	6.88	9,195	6.13	18,996	6.45	21,939	6.77
Wholesale and retail trade	11,123	15.86	26,524	17.67	47,049	15.98	52,669	16.24
Banking, insurance and real estate	1,306	1.86	5,806	3.87	16,714	5.68	21,489	6.53
Ownership of dwellings	2,063	2.94	3,000	2	4,545	1.54	4,925	1.52
Public administration and defence	3,168	4.52	6,476	4.31	12,673	4.31	13,813	4.26
Services	6,623	9.44	14,541	9.69	31,676	10.76	36,290	11.19
Gross Domestic Product (GDP)	70,139	100.00	150,092	100.00	294,376	100.00	324,290	100.00

Source: National Economics and Social Department Board

Table 2

Employed Persons by Industries (Thailand) (persons, percent)

Industry / Year	All Industries	Primary Industry (Agri.)	Secondary				Tertiary				Others
				Mining & Quarrying	Construc-tion	Manufac-turing		Commerce	Transpor-tation/ Communica-tion, Public Utilities	Service	
1960	13,772,104	11,334,382	569,408	29,568	68,813	471,027	1,616,649	779,904	181,474	655,271	251,665
	(100.00)	(82.20)	(4.13)				(11.74)				(1.83)
1970	16,652,267	13,201,901	950,764	86,647	181,477	682,640	2,353,690	875,798	293,685	1,184,207	145,912
	(100.00)	(79.28)	(5.70)				(14.13)				(0.89)
1980	22,523,700	15,942,600	2,261,000	36,500	435,800	1,788,700	4,318,700	1,915,800	515,600	1,886,800	500
	(100.00)	(70.78)	(10.04)				(19.17)				(0.00)
1982	24,831,200	16,984,900	2,591,100	64,400	520,200	2,006,500	5,253,600	2,298,100	577,100	2,378,000	400
	(100.00)	(68.40)	(10.43)				(21.16)				(0.00)

Source : 1960,1970 : NSO Population Survey
1980,1982 : Report of NSO Labour Survey (Round 2), July-Sept., revised figures by the NESDB

Table 3

Employed Person by Education and Major Economic Sectors

Whole Kingdom (1981)

(Unit : Persons)

Economic Sectors \ Education	Non-Elementary	High School	Vocational	Graduate
Government	784,200	234,052	438,805	143,863
	(5.10)	(23.51)	(62.03)	(52.99)
State Enterprise	251,653	85,207	55,950	10,341
	(1.64)	(8.56)	(7.91)	(3.81)
Agriculture	9,049,062	155,494	24,540	3,531
	(58.87)	(15.62)	(3.47)	(1.30)
Industry	2,550,579	176,279	50,759	31,103
	(16.59)	(17.71)	(7.18)	(11.46)
Service	2,736,273	344,366	136,832	82,655
	(17.80)	(34.59)	(19.36)	(30.44)
Total	15,371,767	995,398	706,886	271,493
	(100.00)	(100.00)	(100.00)	(100.00)

Source : Calculation from Round 1, Labor Force Survey.

Table 4

Enrollment in Government Institutions by Field of Studies (1981)

Fields of Study	Undergraduate	
	Number	Percent
Humanities	30,523	4.7
Education	136,650	20.8
Fine Arts	1,644	0.2
Social Sciences	264,103	40.4
Law	180,356	27.6
Science	21,419	3.3
Engineering	6,106	0.9
Health Sciences	7,891	1.2
Agriculture	5,562	0.8
Total	655,354	100.0

Source : Office of University Affairs

Table 5

Growth Rate of Factor Productivity for Japan and Thailand during 1970's

Economic sector / Country	Agri-culture	Mining	Manufac-turing	Con-struction	Transpor-tation	Utility	Services	Total
Thailand	0.00	0.00	0.64	11.38	1.72	3.41	0.22	1.26
Japan	4.01	3.81	2.04	-0.20	0.27	2.15	1.16	2.88

Source : Bangkok Bank Annual Report

Table 6

Factor Productivity in Newly Industrialized Countries
(Manufacturing Sector)

Country	Growth Rate (percent)
Hong Kong	2.9
Korea	3.47
Taiwan	3.59
Singapore	3.75

Source : Bangkok Bank Annual Report

Table 7

Graduate Unempolyment by Field of Study 1982

(Unit : Percent)

Graduate Unemployment/ % Field of Study	No. of Graduate Unemployment / No. of Graduates Filling in Questionnaires
1. Higher Unemployment (above 20%)	
Political Science	45.06
Liberal Arts	42.61
Law	40.97
Archaeology	40.00
Fisheries	37.25
Communication Arts	37.04
Humanities	35.71
Statistics	32.56
Economics	32.42
Social Administration	26.23
Arts	25.17
Science	24.58
Forestry	22.73
Education Science	21.75

Source : Ministry of University Affairs.

Table 8

Percentage of Manpower in Science and Technology in each Economic Sector 1984

Economic Sectors	Government and Public Enterprise	Private	Total
Agriculture	-	4.51	2.62
Mining & Quarrying	-	12.45	7.23
Manufacturing	8.94	69.49	44.10
Food	1.05	18.50	11.18
Beverages	3.02	1.40	2.08
Tobacco & Sunff	-	2.92	1.70
Textiles	0.10	7.15	4.20
Wearing Apparel Except Footware	-	1.22	0.71
Leather, Leather Products & Footware	-	-	-
Wood and Cork	-	1.86	0.50
Furniture & Fixtures	-	0.09	0.05
Paper and Paper Products	2.25	0.97	1.51
Printing Publishing & Allied Industries	-	0.94	0.55
Chemicals and Chemical Products	2.50	1.15	1.72
Petroleum Refining	0.02	0.78	0.46
Rubber and Rubber Products	-	2.43	1.41
Non-Metalic Mineral Products	-	0.77	0.44
Basic Metal Industries	-	9.59	5.57
Metal Products	-	-	-
Machinery	-	15.43	8.96
Electrical Machinery & supplies	-	0.05	0.03
Transport Equipment	-	5.25	3.05
Miscellaneous N.E.C.	-	-	-
Construction	-	-	-
Electricity and Water	5.18	0.31	2.35
Wholesale and Retail trade	-	-	-
Transportation & Communication	2.06	8.84	6.00
Services	77.48	4.40	35.04
Banking Insurance and Real Estate	6.33	-	2.66
Number (After Weighed)	15,836	21,934	37,770

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7.11. Comments and Discussions

(After Prof. Odaka's presentation)

CHAIRMAN:

We have about half an hour till coffee break and I think this is a good opportunity for us to exchange our views and ask some questions. Yes, Professor Torii.

TORII:

I have a couple of questions to the friends from Brunei and Indonesia.

I understand the Negara Brunei Darussalam is the typical case in HRD which is fighting with the population pressure and the resources pressure. Because you are having the 3.5% annual population increase, which is very rapid: and also you are accepting many foreign workers from Sabah, Taiwan and even from Korea.

And as I understand, among the total 80 thousand workers maybe about 50 thousand are paid by the Government. Is that right? So, if you are still continuing to pay these work forces by the budget of the Government, you may easily face to the time when it must be impossible to continue to pay to afford these labour forces by the budget.

And secondly, as I understand, like Indonesia, the natural resources--I mean, oil and gas--are facing to the very serious problem of exhaustion before the year 2000. Also, you may have the time of expiration of the Oil and Gas Contract with our country in 1994.

So, my question is that in your new Plan started this year, what kind of new jobs are being planned for the coming population and resource pressures, in order to support the very rapidly increasing population?

And my second question: In Brunei, you have no colleges and universities. Most of the university or college educations are still done in Britain. My question is: How would you evaluate the contribution of the British education to the human resources development in Brunei? This is my second and last question for the Brunei friends.

And my question to Indonesia: The question is almost similar. Most of the human resources development, which has been presented in this paper, was just about the human resources development plans mostly done by the Government. But as I believe, the rest of the part of the human resources

development in Indonesia after the War has been done by the foreign investors, like oil and gas companies such as Standard, CALTEX or Japanese investors like INOCO, as well as manufacturing industries from Japan, West Gernamy, and some other countries like the United States. My question is that: How the Indonesian Government--or the Indonesian people would evaluate these contributions of the foreign investors to the human resources development of the Indonesian population?

CHAIRMAN:

I would invite Mr. Lim to answer the questions briefly, okay? And also, afterwards, Dr. Sayuti.

LIM:

Can I attempt, to answer the first question over the population pressure? In general terms, 3.5 percent growth annually is very high. But within the context of Brunei, I think it's very low, because, with 214,000 for our population, we are so short of personnel; in fact, which is in contradiction to your argument. Because 80 percent of the labour force, a substantial majority, comes from outside, we need more people, in fact. So, there is no question of pressure from the population.

On your second question about the contribution of the British to HRD this cannot be denied, because we have gotten at the moment about 2,000 student population in higher education in the United Kingdom, because of our past and our friendship with the United Kingdom. But over the last couple of years, we do send a lot to students to our neighbouring countries in ASEAN---to Malaysia, Singapore, and even to Japan. So, as far as the British are concerned, I think your question;--they have made the contribution, and we do acknowledge that.

CHAIRMAN:

Dr. Sayuti, please.

SAYUTI:

Your question essentially acts what to do about the large increase in the labour force, in what sectors can they be absorbed.

Well, as is written in the Indonesian country paper, employment is a total part of the development process. Partly spurred by the not too happy

situation in the oil sector, of course, the Government must change its emphasis and in the fourth Five-Year Development Plan, the emphasis is on labour-intensive types of activities.

In this particular respect, since employment problem also goes together with the foreign exchange problem, the emphasis lies on the exports of non-oil and non-gas goods. It was in this context , when I said the remark about the international environment from this point of view.

In this conjunction, policies on the exchange rate, and so forth has been changed in the direction of labour intensity--labour absorption, recently.

Now, I mentioned in the paper a short description about a special programme called the "trans-migration programme", which from the point of view of labour absorption is very cost effective, and from the point of view of the economy, it's also very effective.

Now, with regard to the participation of foreign investment in labour absorption, I must say that in terms of direct absorption, I think it is not so much, because that the cost of investment is so high per job. But there are other indirect effects that ultimately will affect the employment situation. For example, the foreign investment in the oil sector does not directly affect the employment very much, but it contributes to our budget, and investment through the government budget, at least absorbs about 40 to 50 percent of the additional labour force each year. So, it is very important.

CHAIRMAN:

Any other comments or questions? Dr. Prijono, please.

PRIJONO:

I would like to direct my question to Dr. Odaka.

Is it the fact that general school usually is more preferable than vocational school even in some other countries? In Japan, are people going to a general high school or university because of the status as in the case of Indonesia or because of the income difference between the graduates from those two kinds of schools?

The second question is related to the status of women. You mentioned over here that sometimes there is a discrimination against the female labour force. In Indonesia, the status of woman right now is rather high. At least, we have two Cabinet members of women. Could you give more information on that aspect in Japan?

CHAIRMAN:

Please.

ODAKA:

With regard to the differences in the social prestige between the so-called general high schools and vocational high schools, I would say the situation seems to be very similar in Japan.

As to the second question, maybe we should ask the lady participants in this room to answer. But anyway, partly because of the system and partly because of the behaviour of ladies themselves, I think the women in the Japanese society are really not taking the full advantage of employment opportunities. Personally, I think that probably Japan is most under-developed country in Asia with regard to the status of women in employment places. But I do not think that this is only due to the system's failure--you know, the fault, but also partly ascribable to the behaviour of women.

CHAIRMAN:

Yes, Mr. Abdul Ghani, please.

ABDUL GHANI:

Mr. Chairman, I would like to direct my question to Prof. Odaka.

If I am not mistaken, a long time ago, Japan embarked on the industrialization with the tremendous amount of import substitution, followed by development of small-scale and medium-scale industries, and finally into the heavy industries, and now at the very sophisticated level.

Now, what it means is really the manufacturing sector developed well, having well-structured kind of sector in the sense that you have the medium-size and the small-size industries which support the heavy industries. Unlike in some developing countries, say, in Malaysia, for example, we are now embarking into heavy industries, without having the proper structure--supportive structure in the form of medium and small-size industries. We are facing a serious problem of not having the kind of expertise required;--entrepreneurial, technical, which could develop the medium and small-size industries. So, if you could elaborate on the following:

Where does this training come from; either from the on-the-job training, from the place at work, and after that, leaving the employment to start his own industries? Or is it because they have their training from the technical colleges, trade schools and occupational training centers that you have been talking about?

CHAIRMAN:

Prof. Odaka, can you make it brief?

ODAKA:

In brief, I would say that at present, the occupational training or vocational training centers under the jurisdiction of the Ministry of Labour do a great deal of service to supply highly technical people to the small-and medium-scale firms, rather than the large big business sectors.

And also, you might call your attention to the fact that the inter-firm linkages may be stronger in Japan for various reasons; that is to say, in some cases, large companies may volunteer or offer technical training of the employees of the smaller scale firms with which they have very close connections.

So, that's one point. Maybe I will come back later.

CHAIRMAN:

Yes, Mr. Amaki, please.

AMAKI:

In order to tackle or cope with such a complicated issue as human resources development, it is my view that the systematic approach is of vital use. Of course, the concept of systematic approach varies widely;--educational system, or training system, or even the system of legal or administrative measures at each country. And at the same time, the idea like the university network, which was touched upon by Mr. Fujita's report, is another system at the international level.

And in this respect, I would like to ask Mr. Lim of Brunei to explain more specifically the idea of his proposal, because at the end of his report, he somewhat emphasized the importance of establishing necessary institutional framework.

CHAIRMAN:

Yes, please, Mr. Lim.

LIM:

When it comes to the question of transfer of technology and the question of developing the human resources development, each country may have its own problem. And there are various forums that you can work out on the system, like the UNDP. So, I wasn't thinking of any specific proposal but merely making a general point.

CHAIRMAN:

We have here around the table some experts from Australia, the United States, and New Zealand. They do receive a number of--thousands of students and trainees from the developing countries of this region. I wonder if you would like to make any comment.

Yes, Mr. Spurr, please.

SPURR:

One of the things that has struck me about the discussion both this morning and continuing on this afternoon was the tension which I think Dr. Okita brought out between the objective of trying to pursue development through a market approach on the one hand, and on the other hand, of our efforts to develop human resources through government planning approach, to provide, I guess, a precondition for that market system to work.

With the possible exception to some degree of the North American, we all have education systems that are largely government-funded, and are not very responsive to market forces.

And it raises the question in my mind that if we believe that our educational institutions are not producing enough, in some cases, the right sort of people for development or does this lead to the conclusion that we should be trying to make those systems respond more to market forces? Would people be more able to respond to the needs of the market if they were choosing for themselves where resources were to go if they were paying for their education, and if the institutions were survivable depended on whether it was providing what the market wanted?

CHAIRMAN:

Mr. Allen, please.

ALLEN:

I would like to echo the comments that Mr. Spurr made, and perhaps pursue some of the similar theme.

We in the United States tend to view economic cooperation as a mechanism by which experiences and ideas are exchanged. I wonder if we may not be moving too quickly in assuming that what we are after here is the development of a solution based on any particular model, which is going to be universally applicable in some of the developing countries of the region. I would think that it would perhaps behoove all of us to first identify what the current needs are, and then, for each of the countries who feel these needs most directly, to indicate ways in which the expertise or the experiences of the developed countries can be more fully utilized.

We are at somewhat at disadvantage in trying to recognize what those problems are, in as much as we are not in the same position as many of the developed countries find themselves in setting goals and objectives. So, I think we should be careful as we explore this area to avoid making assumptions regarding the ultimate form where the cooperation should take.

And finally, I think that we should also recognize that these processes are going to be a slow one; and it's going to require some trial, and hopefully a minimum amount of error, in achieving its objectives. But I think we should recognize that what's happening here in the Pacific is a fundamentally new and unique process, one which all of us are going to have to carefully explore and develop. And speaking for the United States, I should say that we are very encouraged by the many positive developments that have taken place, particularly those recent developments.

And in that spirit, it's our full intention to contribute in a participatory way whatever we can do to development of the region. Thank you.

CHAIRMAN:

Thank you very much, Mr. Allen. I may say that I think Mr. Allen is right. I think we are just beginning our process of learning each other. Only through the knowledge and intensive communications, we begin to understand what sort of cooperation we might be able to make on our respective

sides. So, I don't think we are really rushing at the moment in order to find out what is the best form of cooperation.

(After all the presentations of country papers)

CHAIRMAN:

We have just finished all the country paper presentations,and we have now about close to one hour, for discussion. I remember that we kept two participants from two developed countries rather reticent because of the shortage of time. So, I now would like to invite Mr. Blackstock from New Zealand first to contribute, and then Mr. Oldham from Canada.

BLACKSTOCK:

New Zealand certainly supports the concept of an HRD program. But if the object of this symposium, is to come up with some more precisely defined strategy, policy directions, objectives for an HRD program, then I think we feel that the initiative should very much come from the recipient countries. And of course, in New Zealand, we certainly hope we can respond to requests made of us when the time comes. We are, of course, a small country and furthermore one with a relatively narrow economic base. So perhaps there is less we can do in this area than some of the other developed countries represented here can do. But, nonetheless, we do have some areas of expertise where we have traditionally been able to make a modestly useful contribution in training in particular. Things like agriculture, forestry, geothermal energy, in particular. And for the future, too, we may be able to play some role in facilitating coordination between the South Pacific island countries and ASEAN.

Furthermore I have been interested in the emphasis several speakers placed on the need for private sector contribution in this area, because it ties in with some of the ideas we ourselves are trying to develop in pulling the private sector more into programs of training which we can provide. Nonetheless, we feel very much this is some way where we should be responding to the needs expressed by the recipient countries.

CHAIRMAN:

Thank you. Now, Mr. Oldham, please.

OLDHAM:

The one thing which struck me, listening to this great number of presentations, was the incredible diversity in the region. It reflects also

the quite diverse view on what human resource development is. I think the importance of this seminar is trying to put some content into that concept.

I think, often in the past, we were worried about finances, we were worried about infrastructures, we were worried about those kinds of things, and often forgot that the objective of all these things is the human beings that we're trying to assist. In that regard, I would like to compliment Japan in holding this seminar and for its foresight. I find it quite remarkable that Prime Minister Suzuki when he was on his ASEAN trip focussed on human resource development, I guess, three or four years ago as a prime focus and offered to set up human resource development centers throughout ASEAN. That was a fine piece of foresight, which I wish we could emulate.

I must say there are a number of issues that were raised, which I find exceedingly interesting. But particularly Mr. Ramel and Dr. Chira their remarks on the applicability of education struck home to us. In Canada we have a very developed education infrastructure. But often I think we are turning out people who are educated but don't have anywhere to go. We have a very acute problem in youth employment. I think Japan also shares this to some degree. We have a very difficult problem in trying to make an interface between what the government education system turns out and what industry and service sectors need. I would very much like to hear more about how the Philippines and Thailand, which have identified this problem, are facing this.

CHAIRMAN:

Now, the floor is open for any questions and comments on the papers presented by various speakers from different countries around the table, ...yes, Mr. Yamaguchi.

YAMAGUCHI:

I would like to say mainly two points.

Mr. Sallehuddin from Malaysia said that, in order to nurture entrepreneurs, it is really effective to have proper school in this regard. I have myself engaged for the past ten years in nurturing the entrepreneurship in the developing countries, particularly in industries of smaller and medium scale. The availability of potentially capable entrepreneurs holds the key. And I think it is very hard to nurture such persons over night. What is the environment which is conducive to bringing up competent entrepreneurs? That

is the question. Maybe the school is not the appropriate organ to rely on. This is may first point.

In this regard I hear that many of the entrepreneurs have already been established and nurtured in Singapore. Thus, perhaps Mr. Teow from Singapore can enlighten us and tell us what would be the good way to nurture entrepreneurs.

The second point--it is rather my comment. I have been listening to you speak throughout today and the manpower development by way of training has been the topic of our discussion. As was mentioned by Thai representative, there isn't any hows available yet.

When it comes to training, if the training centers are built, how can we address the problem of the language? In case of Japan, in which language is training to be conducted, in English or in Japanese? That is the concern that we have. The problem pertaining to language has not been brought up by anyone at this presentation forum. So, I felt that maybe you have to bring this matter up as well.

CHAIRMAN:

Would you like to respond about the development of entrepreneurship in Singapore?

TEOW:

In this respect of development of the entrepreneurship in Singapore, basically, it is the government who has got the role to play in a sort of giving broad guidelines for areas to go into. And in terms of training, we do not have any specific training. In fact we are thinking of looking to Japan, JPC, in terms of the consultancy service they provide for the small business and all that. We in Singapore just provide the broad guidelines for the entrepreneurs to follow.

CHAIRMAN:

Are there any questions or comments?

INUKAI:

My name is Inukai, of International University.

When I was listening to the presentations I had the same feeling that Mr. Yamaguchi mentioned. That is the question of how. In the human resources

development, the process of learning by doing is very, very important. However, in many developing countries which has the colonial legacy, there is an institutional reigidity for job entry by very sophisticated trade tests and very rigid job demarkation. So that the entry into certain jobs is not easy at all, even though the applicant might have the competency. So, I would like to know how you have been reviewing the legal framework for facilitating the process of learning by doing in your labor market. I would like to ask to the representative of Malaysia, because I was in Malaysia last year. And also to the representative of Singapore.

CHAIRMAN:

Please, Mr. Sallehuddin.

SALLEHUDDIN:

I think I do quite agree with you to the second point. Because of our colonial exprience there are some institutional rigidity that we need to overcome in order to solve the problem of how to facilitate "learning by doing".

In Malaysia, what we have done and perhaps my colleague Senator Abdul Ghani will assist me later in some of the areas where I am not perhaps that competent to talk about, --but I think we have tried our best. For example, under the schemes undertaken by our Ministry of National Rural Development through the vocational training which was undertaken by MARA--that is one area where perhaps the problem can be overcome. In the case of MARA, for example, under the vocational training scheme they have people from the private sector as well as from the government trained. And they have got various training centers in all parts of the country, where school-leavers go to the centers. They include not only for successful school-leavers but also some people who cannot go on to the secondary or graduate or postgraduate.

Under the agricultural sector we have also the Agricultural Training Institutes. These are the institutes more for training the skill that is needed not in the very sophisticated activities of agriculture, but the basic things in agronomy, basic things in agriculture.

We also have now--this is linked to the problem of youths. We have got under the Ministry of Youth Culture and Sports various vocational training institutes run by the government. And this is one area where, for example, ASEAN has been very active. And we hope, for example in our institutes just

outside of Kuala Lumpur, eventually we will not only be able to train our youths but also youths from other members of ASEAN.

I hope I have answered you sufficiently. If I have not, maybe Senator Ghani can fill up a little bit more.

ABDUL GHANI:

I just have one or two more points. The latest pattern on the part of the government is to allow its servants to take the leave from their job and to undergo a special training on entrepreneur development, particularly those who have been doing small businesses on their own, assuming that they are the better educated group of Malaysians, particularly those among the indigenous people. So, the government has adopted a rather liberal policy to allow them to go for special training on full pay, and if they decide to leave the service, they can go into full business after that training. We have yet to see the results of this strategy.

The other thing that has been mentioned by Mr. Odaka, that big businesses have allowed the small businesses' employees to be trained by big companies, this doesn't happen in Malaysia. In fact, I am worried about the possibility of a situation where industrialization that has taken place at this point which involved as many as 300,000 unskilled workers, if they want to leave the plants tomorrow they would have nothing in terms of skills. How are we going to carry out the intensive or elaborate free training program of those already in the industrial sector? One example that I would like to quote in order to answer the same question is this. One particular program has failed. We do try to place the youths in the small businesses, for example in welding or car repairs. This has been undertaken by the Ministry of Youth and Culture and Sports. I think we have failed miserably on this, either because the youths are not very happy working at very low pay or the training input in those small businesses does not come up to expectation. So, we are going through a trial-and-error kind of thing, and hopefully in the end we will come up with something substantive and in the end contribute to the development of skill and entrepreneurs at that level.

SALLEHUDDIN:

I think this is the problem faced by all the developing countries, unlike Japan where you had that natural process, agricultural, middle, small scale, and then you go eventually to high-tech industries. We in the developing

countries in the ASEAN are more or less trying to change the economic history. And this is the real problem. So, really, I think this is an area where perhaps we can get some assistance or directions or help from the developing countries who had gone through this natural process. This is, maybe, one area that within the context of APC HRD we can all think about how to fill in this gap.

CHAIRMAN:

Unlike a long history of industrialization in the United States, Japan, the U.K. and other countries, the developing countries in this area are all trying to do it quickly over a much shorter period of time, which means that you need more variety of industries coming at the same time and requiring a variety of industrial skills, technologies, at the same time. How do you do it? I think this is a very big question. I think this is the sort of conference where we can exchange ideas and see what can be thought of, considered, or even proposed if necessary. Mr. Teow, would you like to respond?

TEOW:

In terms of the kind of training that is required for human resources, basically by training institutions, it wasn't established just over night. It was as a result of the detailed study of the needs of the industry. In the first stage, we look at requirements of industries, and then determine the kind of training required. When the trainees come out from the training institutions, then they get into the companies. That is where they get the practical on-the-job training. In this respect we have experts from foreign countries to give them the on-the-job training.

When we talk about "learning by doing" at the moment we are sort of trying to look at what are the indicators we have for model companies, so that other companies can emulate in terms of the successful companies in Singapore. We try to identify model companies for the others to follow.

CHAIRMAN:

Thank you very much. Yes, Mr. Mendoza, please.

MENDOZA:

I would like to comment on something that Mr. Chira said in connection with something that Mr. Odaka said.

I thought it was very revealing when Mr. Odaka talked about how in Japan 100 percent of the kids go through elementary school. And I think here what is important is that we make it very clear that training and education are two very different things. Education to my mind is learning how to learn. While training is adapting a man to particular jobs. I found it very interesting in Japan that the education is done by the formal education system. And it lays a very strong foundation on which the companies can build to train people for particular jobs.

I think also we have to start thinking in terms of three very different kinds of things we are trying to do in human resource development.

I think the first element in HRD has to do with the development of those who will be working in the production line, the skilled workers. And those you need to have the kind of thing that Japan has--the very solid educational base. And that forms the strong foundation for workers who can then learn how to become skilled workers.

Then, there is a second kind of education. And this is for people who will be in the scientific and technological fields to do the applied research that many other countries cannot do. I think again there has been a tendency there to concentrate on teaching what rather than on teaching how to learn. So, they take what learned from the developed countries and they bring it back and they have not learned how to learn, so that they can modify this.

And finally, I think, also in management there has been a tendency in management to try to teach what the West has learned about management, instead of educating managers to think through the problems that they have, to think through the opportunities that confront them, so that from learning about this problem and learning about their opportunities they can come up with their own solutions to their problems.

I think all these--the important thing that I am trying to make is the distinction that we must make in our mind between education and training.

CHAIRMAN:

Thank you very much. I think it is a very vivid contrast and good distinction between the two. Prof. Odaka, please.

ODAKA:

Just to respond to some of the remarks made and also to be a little bit provocative, I would like to make three comments.

One of them is a sort of response to what Mr. Spurr said earlier this morning. I don't think personally that the government can do everything in the matter of education and training. In fact, I happen to believe that there are certain conditions under which the government may be justified from the economics point of view to play an important role.

But secondly, in the areas of how, what the government might be able to do in the area of training and education might be something like this. First of all I would like to echo in spirit what Dr. Mendoza just said. A good general education system is very important. And I am wondering whether maybe too much emphasis is given to the higher education rather than to the compulsory education, particularly in some developing countries.

No. 2. I was struck by a comment made by Mr. Hatch, during the coffee break. I think he has a very good point: namely, in the areas of professionals and in the areas of works for blue-collar workers, it may be very important to set up national standards, something which people can aim at.

No. 3. I think it is very important in the area of labor market to set up some kind of information system with regard to the occupation profiles or with regard to the occupational vacancies or occupational demands for various jobs and works.

And fourthly, it may be a good thing for governments to contemplate to establish good engineering schools. I was thinking about the experience of Japan. What Japan did about 80 or 90 years ago was to establish a good engineering school in Tokyo. It was very successful in turning out many high quality, indigenous engineers, who I think contributed a great deal for the industrialization of this country.

Finally, I might also point out something which everybody knows. And that is that motivation is very important as well as training. Japan wasn't successful all the time. In fact 80 or 90 years ago, Japanese factories had all sorts of difficulties. They had difficulties to train them, they had difficulties in disciplines, etc. I think we have to give attributes to the ingenuities of Japanese employers or managerial people to come up with some kind of system to innovate or to renovate this sort of problem. I am not

saying that everything we did was good and successful; nevertheless, I think we did something to improve the situation which was very bad.

CHAIRMAN:

Thank you very much, Prof. Odaka. Yes, please.

NOMACHI:

My name is Nomachi, of JICA.

This is a general question about education, in terms of the years of the education system in each country. I would like to know among ASEAN countries whether you have any discussions about education in terms of number of years, i.e., how many years of education are required before one can take up vocational training. As ASEAN countries, did you have any discussion in the past? Especially, the paneller from Brunei, please.

LIM:

I am quite new to the ASEAN scene as well, so I am not sure whether this particular question was discussed before. With reference to Brunei itself we have the educational system, where we are rather fortunate in the sense that the primary education right up to the university level is free, in the sense that we have the scholarships by the government. We have the primary system which is in Malay language as the national language up to 4 years. And then after that they can switch over to the English system which takes 3 years after the 4 years. And then another 5 years for the secondary education. Then after you have 2 years for what you call the six-form, prior to university.

CHAIRMAN:

Are there any questions or comments?

KUNII:

Yes, my name is Irene Kunii. I am with Kyodo News Service. This is to all the members and perhaps the Chairman can answer this question. As far as ASEAN member countries are concerned--I won't include the South Pacific representatives--this ideal or this concept of human resources development, has it been discussed before perhaps as intensely as you are doing at this

session? If it has, what conclusions have been reached? Or is this the first time that you are having a concise meeting on the subject?

CHAIRMAN:

Dr. Chira, please. He is the Director of the Human Resources Institute, by the way.

CHIRA:

I think your question is very important. There was a discussion among officials of the Ministries of Foreign Affairs last January basically defining the operational concept of HRD. In fact, in the Malaysian paper, they have defined seven broad areas of concentrations. Namely, we want to improve the specific skills in certain sectors in the society. So, we have a narrow definition of HRD. Because we want to use this in order to capture cooperation, and cooperation must be concrete. So, therefore, the human resource development in a nutshell is to improve labor productivity. Therefore, you need both investment as well as the maximum return on the investment. If the particular skill is going to be effective in the future of our economic development and if experience in the Pacific countries can speed up that process, I think that would be beneficial. Today is the second--I think--stage of the dialogue among ourselves. And I would like to say that we are hoping that there will be a subsequent forum like this where you go into more details of the definition but with the broader guideline as I mentioned.

CHAIRMAN:

Yes, Mr. Sallehuddin, please.

SALLEHUDDIN:

I would like to respond to that question in really setting out the actual situation.

I think all of us here know that the question of Pacific Cooperation has been talked about since the late '60s in so many forums. But this exercise undertaken by ASEAN and the Pacific dialogue partners is one--I think--of the first where governments are more committed to the question of cooperation. At the Jakarta meeting we zeroed in, because we know that the area like human resources is so big and so vast. So, we have zeroed in to do the seven areas.

Secondly, earlier on, people have been talking on APC in so broad areas ranging from trade, investment. But we in ASEAN and also at the Post-Ministerial Conference in Jakarta last July took on us the initiative, because we thought HRD was an area that is least sensitive and most non-controversial of all the possible areas of the ASEAN-Pacific Cooperation in the future.

CHAIRMAN:

Scholars have all along discussed what might be possible to promote the human resource development in respective countries and how we can cooperate with each other. I remember way back in late 1960s already we had an Asian Regional Conference on Industrial Relations sponsored by the Japan Institute of Labor, where we did take up the issues of human resources development at that time in Asia and the Pacific area. But this is more or less the first or the second time that ASEAN-Pacific countries have got together in terms of officials and others participating in the discussions with respect to the cooperation for human resource development.

Mr. Horiuchi, please.

HORIUCHI:

I am an administrator of JICA and daily working on planning and also implementing technical cooperation projects. Specifically, the distinguished delegate from Malaysia, Mr. Sallehuddin, in his paper said that technology can be transferred "or adapted to local conditions." This is exactly a sort of cracking the matter. We are always wondering how we are going to adapt Japanese technology to local conditions. So, my question is: How are the recipient countries evaluating technical cooperation from, let's say, us or other industrial countries? And what will be the recipient's part to adapt that technology to their own or assimilate the technology to their own technological system?

CHAIRMAN:

Mr. Horiuchi, I think we need another conference to answer that question. But if there is any person who would like to briefly respond to this question?

SALLEHUDDIN:

Perhaps I can't answer the question. But I think one way perhaps is, in the past, the relationship in terms of training between developed and developing countries has always been for people from the developing countries to go to the developed countries and learn the technology. But I think a part of it can be done by also for the professional people or for the qualified people from the developed countries to come and look by themselves----specially now in terms of the ASEAN we have our own institutions, we have our own industries.

CHAIRMAN:

Okay, one minute, please.

CHIRA:

In the case like foreign investments into ASEAN countries, the difficulty of transfer of technology is not the transfer of technology itself. It could be a broader issue of the way we look at foreign investments. We seem to devise certain incentive and certain strategy, but yet I think it is a fall to the ASEAN countries, particularly as we create so many disincentives, bureaucratic difficulties and other regulation, that sometimes we don't seem to encourage the transfer of technology.

When you look at the human resource development I would like to beg this to all of you that it is not a single one policy in isolation. It cannot be. Even training in itself has to be in the context of economic development.

Look, training has been done for years in these countries. And when you evaluate these training projects, they fail miserably. Because we have conducted certain policies which are not conducive to the economic development. I would like to say that in the case of training activity, the government has two roles to play. One is to encourage the private sector to do it. Perhaps the fiscal policy or the tax policy would be important, but not to conduct the training themselves. Because the government doesn't know what the private sector wants. Don't let governments play too many roles in HRD. Otherwise, we could go back to the same mistake.

CHAIRMAN:

Just one sentence from Senator Abdul Ghani, please.

GHANI:

Mr. Chairman, I just would like to respond to that in one sentence. I wrote somewhere that many decades ago when Japan imported railway technology somewhere from Europe, within a period of ten years, Japan managed to forget about the source of the technology and it developed its own technology in railways technology. I just wonder how Japan did it many decades ago. So, with the given resources that we have in our own countries, we thought perhaps we could adapt some technology on the basis of the resources that we have.

CHAIRMAN:

If there is one more question or comment. We have only a few minutes.

SUETAKE:

Yes, I would like to make a short comment on this symposium. My name is Suetake, Kanagawa University. And I would like to give a suggestion. Please use the audio-visual facilities in the next symposium. If you use the audio-visual facilities, the time duration would be shorter.

CHAIRMAN:

Thank you very much for your very positive contribution. Now, I would like to first of all thank you very much for the very active participation in the discussion, as well as the very succinct or precise presentation of the papers by various participants around the table.

8. SESSION REPORTS

8. 1. SESSION A

Human Resources Development in response to the Changing Industrial Structure

8.1. Session A:

8.1.1. Lead off Speech

HUMAN RESOURCES DEVELOPMENT IN ASEAN

INDUSTRIAL STRUCTURAL CHANGES

by Professor Yasuhiko Torii
Keio University

In this paper, the author will try, firstly to present a framework for defining human resources development, secondly to elucidate the relationship between the human resources development and industrial changes in the developing countries and, thirdly to discuss the relationship between human resources development and transfer of technology to the developing countries from the advanced countries.

A brochure, rather than a full text was circulated at the symposium in order to make it convenient for the participants to pick up the key words and concepts. This paper is the full text of the speech at the symposium.

Although the symposium was participated by many countries in the Asia Pacific region, including U.S.A., the discussion mainly focuses on the ASEAN countries.

1. DIRECTION OF ASEAN ECONOMIC DEVELOPMENT: INDUSTRIAL PATH

ASEAN countries, most of whom started their economic development in the last half of 1960s, have been typical "dual-structured" developing countries until recently with a huge share of the traditional sector, mainly composed of agriculture and a very small infant modern sector or modern industries. ASEAN

countries are now rising above their early stages of take-off, and are now stepping into the next stage of modern industrialization.

The industrialization path is the only promising conceivable path of ASEAN development for increasing production, income and wealth for these countries. Some people argue, with nostalgic illusion, that the traditional production path like agricultural industries can be conceivable at another margin. Of course, most ASEAN countries, except Singapore, are now deeply depending on the traditional production. The traditional production has its own virtues, such as traditional life and culture, and a large capacity of labor absorption, but it has its own defects of inefficiency in income generation and limitation of resources. In some countries, some kinds of resources are now being exhausted, technical changes in the traditional production are delayed, and the markets of these primary products are becoming more and more limited.

If one look at the reality of ASEAN development such as above, it would be imaginable that the industrialization path is the only one promising path for increasing the income and wealth of the ASEAN countries.

Economic development of ASEAN through the industrialization path would be possible if the conditions which will be discussed in the next chapter are satisfied.

2. CONDITIONS FOR INDUSTRIAL DEVELOPMENT

The conditions for industrial development should be captured in the following four different aspects: background factors and endowments, factors of production, industrial structure, and market and marketing.

(1) Background factors and endowment:

Firstly, industrial development is possible and promising only when a country has a stable Government and well organized domestic political system. Secondly, it needs stable international relations. Therefore, the Government has to be prepared for adjusting and maintaining the diplomatic and economic relations with other countries. Human resources development is deeply related to these conditions, i.e., internal and external political system. How to educate and create better and modernized statesmen and bureaucrats is the real key of industrial development.

Thirdly, needless to say, hard infrastructures compose the physical basis of industrial development. Every developing country is now in the midst of construction of them, in which wide range of human talent of construction and engineering is necessary. Fourthly, soft infrastructure, such as sanitarian system, health control, medical care, education, local-central bureaucracy and so on, are essential for the industrial development, though they are sometimes poor in some developing countries. Soft infrastructure should be the largest package of well developed human resources.

(2) Factors of Production:

The factors of production are quite popular in the textbooks of economics; enterpreneurial resources, stock of productive capital, flow of financial funds, raw and intermediate demands, and qualified and eligible labour, among which following three items are most relevant to the human resources development. First, enterpreneurial resource and managerial skill are scarce in LDCs. Specifically, they are less and less among the native people. It leads LDCs to depend more on the foreign investors. If a country wishes to obtain their own industrialization, they have to rush to create their own native enterpreneurial resources. Secondly, the necessity of technical knowledge and experience is increasing rapidly. Although the

transfer of technology is discussed rather easily, it is the most difficult and costable area of human resources development. Thirdly, qualified and eligible labour is scarce human factor of the industrial development, which will be touched upon in chapter 4 of this paper.

(3) Industrial Structure:

The industrial structure, the combination and linkage of industries is the base of industrial activity. As will be discussed in the next chapter, the evolutional changes of the industrial structure is the core feature of industrial development. An efficient system of accepting foreign industries is necessary for the industrial structural changes. The process of the industrial structural changes is possible in the peaceful free competition and fair trade among industries, which are usually maintained by means of fair trade legislations in the modern societies.

(4) Market and Marketing:

These are the most seriously lacking factors in the Asia and Pacific region. A free, effective domestic market and an open effective international market are crucially necessary for pushing the industrial development. The system and channels of domestic and international marketing are scarce in the region.

3. EVOLUTIONAL CHANGES IN INDUSTRIAL STRUCTURE

In this chapter, we will discuss, in more detail, on what the evolutional changes of industrial structure are. It may suggest us in what field we need human resources development.

(1) Three Aspects of Evolutional Changes in Industrial Structure:

There are three aspects of evolutional changes in industrial structure. Firstly, changes in combination of industries. This concept implies what industries exist now, and what industries are newly emerging, and perishing,

i.e., birth or installation of new industries and death or fade-out of senile or old industries.

The second aspect of evolutionary changes in industrial structure is the changes in the composition of industries. This concept implies the growth of leading industries, growth of efficient industries, growth of rapidly growing industries, and it also includes the slowdown of burden industries, inefficient industries, and declining industries.

The third aspect of the evolutional changes in industrial structure is changes in the linkage structure among industries. This concept includes the backward linkage and forward linkage. The "backward linkage" implies the following; for instance, if some industry may come to increase its own products, then it may have demands for raw materials to be supplied from other industries and induce the growth of those supplying industries. This is the idea of "backward linkage."

The "forward linkage" implies that if, for example, the iron and steel industry may come to produce more steel products, then all other industries who are using the steel products as their raw materials can grow by the support of increased supply of steel materials. This is the idea of "forward linkage."

Evolutionary changes in industrial structure, as I have explained, can be illustrated using the statistics of input-output table.

(2) Three Major Groups of Industries:

The industries in the process of evolutionary changes can be classified into three major groups by their role in the stage of evolutionary changes: "early industries," "middle industries" and "late industries."

The "early," "middle" and "late" industries are characterized as follows:

(a) "Early industries"

. produce final consumer goods for basic needs

. with small elasticity of income and price

. with limited forward linkage effects

. with substantial backward linkage effects

. require relatively small initial investment costs

. depend on relatively simple and indigenous technology

. with labour absorptive capacity

. examples; food processing, leather processing, textile, etc.

(b) "Middle industries"

. produce final consumer/duarable goods for high mass consumption, and raw/intermediate materials for the use of early industries

. with large elasticity of income

. with small forward linkage effects

. with large backward linkage effects

. require big initial investment

. depending on advanced technology

. with capital intensive process

. depending on large scale of market

. examples; metal product, machinery, rubber processing, furniture, etc.

(c) "Late industries"

. produce raw/intermediate materials for the use of early middle and late industries.

. with large elastisity of income

. with large forward linkage effects

. with large backward linkage effects

. require extremely big initial investment

. depending on high technology

. with extremely capital intensive process

. depending on large scale market

. examples; iron & steel, chemical, paper & pulp, heavy machinery, etc.

Each of the early, middle and late industries has its own life cycle or industry cycle: infant stage, expansion stage, maturity stage and senile stage.

In each stage of the evolutional industry cycle, the necessary characteristics of the human resources development are different, so that the problems of human resources development are to be designed industry by industry and stage by stage.

Generally speaking, middle industries need more qualified human resource, and late industries need much more. They are needed, too, more and more along the industry cycle proceeds stage by stage.

4. WHY HUMAN RESOURCES DEVELOPMENT IS NECESSARY ?

The conventional economic theory of industrialization has been the theories which are based on the assumption of automatic transition and homogeneous and eligible labour. In the conventional theory, the rural population has been assumed to be absorbed into modern industries. The migration and employment into the modern industries have been assumed to proceed automatically. Secondly, unlimited supply of labour with subsistence level wages has been assumed. Thirdly, homogeneity and eligibility of labour have been assumed. But these assumptions are actually not true. There have been some misleadings in the conventional theories as follows.

(1) In reality, labour absorptive capacity of modern industries is very limited. For example, in Thailand in 1970, about 91 percent of the total

population have been in the agricultural sector, while only 2.5 percent of the total population were in the modern industry sector. The rest of them, about 6 percent, have been in the urban informal sector. This is quite common in other developing countries. Thus, labor absorptive capacity of modern industries is quite limited.

(2) Wages are increasing rapidly under excess supply of labour. In the modern industries being surrounded by a huge scale of urban unemployment, and disguised unemployment and huge amount of unlimited supplies of labour, wages are increasing.

(3) Qualifiedness and productivity of labour are heterogenous, not homogeneous. Quality of human resources is different among different generations, between sex, among regions, among professions, and among different types of educational groups.

(4) Eligible labour is very scarce. The term, "Eligible labour" implies labour which is instantaneously adaptable to the modern industries, and the qualified and eligible labour makes the sense of "industrial man".

The basic requirements for industrial man are the followings.

(1) Health	
(2) Work ethics	Fundamental eligibility
(3) Discipline	
(4) General education	
(5) Technical knowledge	Technological eligibility
(6) Vocational experience & career	

1) Health and nutrition are self evidents. 2) Work ethics is that workers must have the willingness to work and will to accept training. They have to know how to obey the rules in the job stations. 3) Discipline: Workers must know the rules and order and obedience; 4) General education is most

important requirement for the industrial man. General education gives the basic ability to understand everything about modern industries, and ability to handle the abstract concepts.

Regarding the work ethics and discipline, I have been watching an automobile factory in Thailand and found a remarkable progress on the discipline of rule-and-obedience. In 1972, just at the commissioning of the factory, workers were obeying a man who was not the officially assigned team leader, but was a kind of charisma by their standard. In 1975, after three years, they were obeying another official leader, who was a kind of gangster for his physical force. In 1978, after three years again, they began to obey the official team leader. They explained the reason of their obedience that the leader was more wages than them. In 1980, they obeyed their leader because he could fire them. And finally in 1982, they obeyed because it is the rule itself. This experience gives the picture of human resources development in the sense of "progress of rule-and-obedience discipline;" charisma - physical force - pecuniary power - personal management - finally, rule itself. This experience tells us that the evolution of discipline could proceed in about ten years, in this case.

The Table-1 shows by what measures we can cultivate the basic requirements for industrial man. Health, work ethics, discipline, general education, technical knowhow, vocational experience and career can be attained by means of social education, school education, vocational education, off-the-job training, on-the-job training and employment.

Table-1 Measures for Cultivating the Basic Requirements for Industrial Man

	Social education	School education	Vocational education	Off-the-job training	On-the-job training	Employ-ment
(1) Health	x	xx				
(2) Work ethics	x	xx	x	x	x	xx
(3) Discipline	x	xx	x	x	x	xx
(4) General Education		xx				
(5) Technical knowledge			x	x	xx	xx
(6) Vocational ex. and career			x		xx	xx

xx : mainly in charge

5. HUMAN RESOURCES DEVELOPMENT AND TECHNOLOGY TRANSFER

The definitions of "technology" and "technology transfer" have been ambiguous. In this chapter we classify the concept of technology by its function in order to identify the necessity, types and methods of human resources development.

(1) Technology of Operation and Maintenance

(2) Technology of Hardware

(3) Technology of Software

(4) Technology of Management

These technologies of operation, hardware, software and management can be transferred in different types of measures in every step of implementation of industry, as follows.

(a) T.T. in Step of Approach

. project finding

. grand designing

. feasibility study

. details designing

(b) T.T. in Step of Acquisition

. import of plants and hardwares

. full turn-key

. joint venture

. technical assistance

. licencing

(c) T.T. in Step of Installation

. construction

. plant engineering

. project management

. commissioning

(d) T.T. in Step of Plant Operation

. operation

. hardware control

. software control

. management

(e) T.T. in Step of R. and D.

. problem finding

. research

. development

The first step, the step of approach, includes the jobs of project finding, grand designing, feasibility study and details designing. Second step, the step of acquisition of industry, includes the importation of plants

and hardware, or introduction of full turn-key projects, joint venture, technical assistance and licensing. Third step, the installation step, includes the construction of new industries, construction of plant engineering, project management, and commissioning. Fourth step, the step of pant operation, includes the operation on the installed hardware and factories, hardware control, software control and management. Fifth step, the research and development step, includes problem finding, research and development.

In these different steps of industrialization the necessity and transferability of technology are different. They are summarized in table-2. This table was compiled from my interviews with the 94 ASEAN companies which were done in 1978, 1980 and 1982. In every step of transfer of technology, the operation, hardware and software management technology are classified by its necessity and transferability.

In the step of approach, the transfer of technology and human resource development are very necessary but very difficult. In the step of acquisition, necessity of hardware technologies is medium and their transferability is medium, too. Software technology and management skill are of very high necessity, and their transferability is very difficult, too. In the step of operation, technology of operation and maintenance is almost self supportable, and they are easily transferable. But the technology of software and management is very necessary and very difficult to be transferred even in the operation step. These observations suggest us that our efforts of human resources development should be push forward especially in the area of software and management in every step, and in the area of hardware technology in the step of installation. This table of necessity and transferability of technology transfer suggests us, too, is what steps and area we should allocate more cooperation and assistance.

Table-2 Necessity and Transferability of Technology

Steps of T.T. \ Technology	Operation & Maintenance		Hardware		Software		Management	
	N	T	N	T	N	T	N	T
(a) Approach								
.project finding					a	A	a	A
.grand designing					a	A	a	A
.feasibility study					a	A	a	A
.detail designing					a	A	a	A
(b) Acquisition								
.import plants & hardware			b	C	a	A	a	A
.full turn-key			b	A	a	A	a	A
.joint venture			b	B	a	A	a	A
.technical assistance			b	B	a	B	a	A
.licencing			b	C	a	B	a	A
(c) Installation								
.construction	b	B	c	B	a	A	a	A
.plant engineering	a	B	a	A	a	A	a	A
.project management	a	B	a	A	a	A	a	A
.commisioning	a	A	a	A	a	A	a	A
(d) Plant Operation								
.operation	c	C	b	B	a	A	a	A
.hardware control	c	C	b	B	a	A	a	A
.software control	a	A	a	A	a	A	a	A
.management				b	B	A	a	A
(e) R. & D.								
.problem finding					c	A	a	A
.research					c	A	a	A
.development					b	A	b	A

Necessity	a = very necessary	(80% and over)
	b = necessary	(40-80%)
	c = self-supportable	(0-20%)
Transferability	A = very difficult	(80% and over)
	B = difficult	(40-80%)
	C = relatively easy	(0-20%)

8.1.2. Comments and Discussions

CHAIRMAN:

I think the Professor Torii has already presented a complete framework on which we should be able to place the experiences of the ASEAN countries in perspective as far as the issue on industrial structure change is concerned. I suggest that we proceed with presentations from ASEAN countries, and hope that the speaker will be able to place the experience of this country in the perspective of industrial structure change and after that relate human resources development in the context of that particular change.

I, therefore, request Mr. Danial from Brunei to give the Brunei experiences.

DANIAL:

Although we have been classified by so many nations as being an industrialized country simply because of the fact that our GDP is quite high in this region, but all this is mainly attributed towards I would say the major money earner for the country which is the oil and gas industry. But, as one of my fellow countrymen was saying, it is not an unlimited resource, and we are finding ourselves at the moment right in the middle of a crossroad as to the requirement for diversification of the development in Brunei, whether it be through industrialization or otherwise away from this major source of income.

The only thing I can say in relation to HRD is that we are probably in a fortunate position in that if we do embark on industrialization, we are fortunate in view of the fact that we can learn from so many mistakes which have been made by our ASEAN countries.

As far as what was being discussed yesterday as to the basic requirement for an industrialized country, I would say Brunei fulfilled itself quite sufficiently in that we have got a very good form of education.

Presumably, this is a very fortunate position as far as Brunei is concerned in that we are giving free education right from the kindergarten level right up to university.

As far as the other requirements we have got a very good health system. This is what has been mentioned by Prof. Torii as the basic requirement for industrial man. We have got a very good health system in Brunei, free up to any level, I would say.

problem of labor absorption because the path of fertility, population increase, also is proceeding naturally.

But in ASEAN countries like Indonesia with a large population, these two aspects are not so true at the present moment. For one thing, the population wants quick industrialization because of the result of the development of modern communication in which one nation cannot be separated from another in terms of ideas.

So the requirements are different from the time 50 or 100 years ago at the time when the presently developed country like Japan started its industrialization path when the conditions and the requirements and the efforts needed to produce a stable and well organized domestic political system was much easier.

And also in economics, savings become a lot easier then than it is now because consumption patterns are also transmitted from higher stage development to lower stage development.

Next, the problem of population increase. There is the problem of absorption of the labor force which was not faced in the past, and I would request Professor Torii to dwell more on this because if you look at the brochure, from step 2 to step 3, misleadings of conventional theory, I would fully agree with Professor Torii on these two aspects. Now, when you come to step 3, basic requirements of industrial man, it is assumed that there are industrial jobs open for all the population, the working force, to be filled in, and that the problem is in the characteristics and the requirements of the human resource to fill in these jobs.

Well, in a country like Indonesia with a large population, this assumption may not always be right and, therefore, the stages, the choice of what products and what industries may have to be put mixed together in order to fulfill the requirement of industrial jobs sufficiently to absorb the increasing labor force.

CHAIRMAN:

Can we proceed to our next speaker, Mr. Makis from Papua New Guinea, please.

I do not know about work ethics because we haven't tried ourselves yet.

Disciplinewise I would say we are reasonably okay. Technical knowledge, again this is something which is required later, but as long as we get the basic general education, presumably this technical knowledge will become easier later. And, of course, vocational experience is something to be developed very seriously in the future.

CHAIRMAN:

Can I ask our colleague from Fiji to give us some idea what is the position in Fiji?

TUDREU:

I must say this area in Fiji is largely an imported section. When we speak of industrialization in Fiji, there is a hell of a lot that we are dependent on, and I must say I would rather sit and listen to what is happening to the other people who are able to generate their own activities in this.

CHAIRMAN:

Can we go on to another country? Dr. Sayuti, please.

SAYUTI:

I would like to give some comments and ideas on the brochure provided by Professor Torii.

First of all, some general considerations. I would think in the light of the experience of Indonesia so far, the brochure provides systematic knowledge about the evolution of industrial development in the past, especially in developed countries.

But I have some questions with regard to the degree of relevance of some of the ideas of the experiences of the presently developed countries when you apply them to what Professor Torii put forward as dualistic structures of economies in the ASEAN countries.

There are at least two basic differences. One, for example, in Japan, if I am not wrong, if you count industrialization started in 1868, at the beginning of the Meiji Era, then it was about more than 50 years or 100 years or so that industrialization had time to mature naturally, and there was no

MAKIS:

In terms of an industrial structure, Papua New Guinea is really an infant. The structure of the economy is that it is basically a rural economy with a large rural sector and a very small urban sector.

The division of revenue from the rural sector is somewhat larger also, reflecting this relationship, mostly from commodities, agricultural commodities and, therefore, you can relate the sort of manpower or human resource that is related to that sector.

Now, there is also another sector. First of all, the urban sector is basically involve in light manufacturing, very small manufacturing sector, and retailing and service industry, service sector.

But in terms of skilled employment, I think much of the educated manpower or the manpower that has gone through general education, gets sucked into the urban sector.

We have another sector which is the mining sector. We export raw copper concentrate, and I do not foresee any forward linkages in the near future even in the medium term. However, it does have backward linkages into the construction industry, transportation, retailing and the service sector and, once again, the human resource that is related to that is basically in that area.

It is very interesting to note the sort of outline which has been given in the brochure which seems to remind me of the theory of linear development, and if I were to look at Papua New Guinea according to that theory, I would be probably at a loss to explain the unexplainables within. I think it would be necessary to look at some of these countries and then maybe develop the modified or revised model.

We, in fact, have never really talked about industrializing until quite recently. The first thing that was talked about was import substitution, and that has been going on. We have the light industry, but we are still importing a lot of our products, especially food which bothers me sometimes.

Papua New Guinea has got a bit land area. We have been talking about rice production, and that is one area that we are been trying to get foreign assistance to help us develop the capacity, the manpower capacity, to establish our own rice industry.

The next stage is to talk about export promotion. We are now talking about producing to export to external markets.

But what I think is probably going to happen is in the area of human resource development we are going to see the acceleration of transfer of skills not only through the school system but also through investment, and through the mining sector, for instance, we have seen a fast development in skills related to transportation, construction and, in fact, one of the mining companies has a College of Mining which trains its own personnel on the requirements for the work force.

Also fisheries is one of our big areas. Papua New Guinea is situated in an area where tuna resources are quite large, and with the assistance of the Japanese Government we have been able to establish a Fisheries College which trains fishermen.

Again, forestry is one of our resources, and we also have a Forestry College, thanks to the assistance of the Japanese Government again.

These resource-related activities, in fact, I believe will bring about an acceleration in the transfer of technology to Papua New Guineans, but I also have some concern about the way of organizing transfer of skills. I think our formal education system ought to become more related to our needs in the development of industrial structures.

CHAIRMAN:

I now invite Mr. Ramel to speak on the Philippines experience.

RAMEL:

Lately we have experienced a labor shortage, although we have quite a large labor force, around 20.46 million, not exactly eligible, first, because of the exodus of skilled labor overseas and, second, because of shortcomings in our educational institutions producing more graduates in the liberal arts courses, commerce and law, rather than in the technical courses like engineering. This the government has taken into account and has instituted certain reforms to meet the increasing demands of industry, and here our HRD program may be discussed extensively.

In 1969, we set up this National Manpower and Youth Council to coordinate the HRD activities of the government, private sector, I mean industry and labor. We call it a trisectoral approach to HRD, and here I would like to show my appreciation to the Japanese Government for helping us in this aspect.

On the part of government, it has instituted reforms in our educational system. They have now restructured our educational system so as to encourage more students to take up vocational and technical education.

The government has also given some incentives to the private sector to participate in the training of technical people not only for the needs of their industries, but for future needs of other industries, and this is based on manpower requirements that are projected over a period of time.

The one incentive, for instance, is that private industries are allowed tax deductions on the cost of training. The government also reimburses around 70 percent of such training costs if they do involve themselves actively.

Previously, the private sector had limited its human resource development on the supervisory and management levels, so there is a need for this lopsided development of manpower in private industry to be tilted towards the technical people below these supervisory and managerial levels.

The National Manpower and Youth Council has also established industrial boards which conduct training for employees or people that may be accredited to the industry and are certified eligibles for employment in that industry. We have industry boards for all industries. We have also instituted Regional Manpower Councils which take care of training in the other regions of the Philippines but unfortunately we don't have that much industries to absorb these trained people.

CHAIRMAN:

Can we ask Mr. Chawat to speak on Thailand?

CHAWAT:

First of all, I would just like to make two comments on Prof. Torii's presentation. One is on the political environment which has been mentioned. I think it would be very useful to mention here that in most ASEAN countries, if not all, even though the political vicissitudes would create some uncertainty among foreign investors, I believe the structure is such that the stability in our political scene would more or less be guaranteed.

The other comment is that to work for a company--and let's talk about Japan--under Japanese management, the mentality of the Thai laborer or the worker would not be the same as working under a management wholly owned by Thai businessmen. I think this comparison shows that the direction towards

industrialization in Thailand would be more efficient if it were run by Thai people.

So this is to introduce you to the plan that the Thai Government has towards industrialization. Perhaps I should give a few pointers as to the future direction of our industrialization plan vis-a-vis the Japanese since we are here in Japan. We, unfortunately, are suffering from a huge trade deficit and vis-a-vis the Japanese it runs to about 60 percent of our whole trade deficit. We mainly export agricultural products, but we feel that trade in agricultural commodities would not be able to offset the trade imbalance that we specifically have with the Japanese. So we have to industrialize. This is the aim, and the main thrust of our industrialization would be not for import substitution products but, rather, for export products.

So this is what the thrust of our plan would be with Japan, particularly.

Industrialization, I think, should have to be approached on a two-stage. In the short term, I think one should emphasize that there has to be a revision of our investment agreements with our Japanese partners, and these agreements, I think, should be aimed at using more local material so that our own industry would be promoted, and I think this is what Prof. Torii has mentioned as "backward linkages".

The other aspect which should be looked into would also be marketing mainly for products for export.

But, in the long term, the modification that we really have in mind is in the industrial production structure, and this is where I think HRD would be very appropriate insofar as creating the right environment for industrialization because we would like to go into the third stage of industrialization. This is where we feel that, first of all, technology is required. Transfer of technology from industrialized countries like Japan would be needed, and also we would like to promote the transfer of industries that are already obsolete in societies like Japan to be established in countries like Thailand and many other ASEAN countries as well. So the industries that should be promoted should be small and medium scale.

So this is to give you a broad picture as to the idea or the plan of the Thai Government insofar as the future is concerned.

Now, Mr. Chairman, I perhaps would like to make a few comments on the activity that we are now conducting, a symposium that JICA and the Government of Japan have organized.

The next stage would have to come once this HRD exercise has taken root. Now, it is very important that whatever project that we adopt--and I think maybe it would be useful for this forum to concentrate on this idea---we feel that it should be projects that could give immediate results insofar as to have an input in the industrialized or the economic process of each country concerned. As far as Thailand is concerned, we would very much be interested in activities that could be plugged in into our economic development efforts. Now, we are identifying these projects and we will submit them in June to the senior officials to finally have them accepted by the Foreign Ministers of ASEAN and the Five Dialogue Partners. Concerning this urgency, now, one should not just talk but we should get down to business and have something concrete come out of this exercise.

CHAIRMAN:

Thank you Mr. Chawat. Now please allow me to say a few words about Malaysia on the subject matter.

We went through a process of rapid development in the sixties and seventies. In the context of the rapid growth, there was a tremendous amount of structural change taking place, particularly in the seventies. For example, the share of agriculture in GDP decreased from 30.8 percent in 1970 to about 22 percent in 1980. In manufacturing the share in GNP grew from 13 percent to about 20 percent. There was also an increase in the share of construction and the service sectors.

Apart from the structural change, there has been a considerable amount of changes in the composition within the sectors. For example, in the agricultural sector there is a shift from rubber to oil palm, from oil palm to cocoa, and in the industrial sector we also went through some considerable amount of compositional change. We went through a process in the sixties of import substitution which was exhausted in that particular decade, and then we went through a process of what we call the "export-oriented industrialization".

A considerable amount of footloose industries from developed countries decided to take advantage of cheap labor in countries like Malaysia. So you do find electronic industries being set up in Malaysia in the seventies, electronic components assembled in Malaysia exported back to the countries that use those components.

In terms of employment, you can also see the impact of the structural change. Production workers in the industrial sector grew from about 25 percent in 1970 to about 30.8 percent in 1980, and in agriculture the workers reduced from about 48 percent to about 38 percent.

Now, in the eighties, like any other developing country, Malaysia is facing a tremendous challenge. We are trying to improve productivity of labor in the agricultural sector. We do find about 45 percent of the so-called "poor" defined in absolute as well as comparative terms, so we have to take care of eradicating poverty, at the same time increasing productivity in the agricultural sector.

There is also this problem of some amount of introduction of what we call technical change in the agricultural sector, particularly in the production of paddy. The introduction of machinery has brought about displacement of labor. So as far as paddy is concerned, there is a surplus amount of labor with no alternative jobs available within the vicinity of the paddy area.

But if you look at the rubber sector, the other parts of the agricultural sector, you do find the problem of labor shortage to the extent that we have decided to allow workers from neighboring islands to come over to Malaysia.

Of course, the problem of labor shortage in rubber has been very much because of the wage differential. Local labor finds it more lucrative to move over to the urban area for jobs and employment, and the natural process of attracting labor from the neighboring islands takes place who finds that it is lucrative to work in the Malaysian rubber estates.

Now, as far as the industrial sector is concerned, after having gone through "import substitution process" and then "export oriented", we are now embarking on what we call the industrialization towards the greater use of local resources. At the same time, Malaysia has decided to take the very difficult step of moving into heavy industries, so we have already embarked on the production of motor cars. We are also investing in petrochemical industries and in steel production.

Rubber is only processed in Malaysia to the extent of only about 12 percent of its production of rubber, so there is a tremendous area in the use of local resources in Malaysia. If we talk about rubber in that context, we can also talk about timber, tin, cocoa, oil palm.

So these are resources which Malaysia produces in significant amount for world consumption, and yet it has not been able to process it to add more value added to its economy.

The other part that is related to the industrial sector is the medium and small-scale industries which have not been developed. This is one aspect of the industrial structure which remains weak and undeveloped. You see, whatever incentives given by the government have been meant to cater to big investment and big companies.

So within that particular structure there is a soft area that needs to be strengthened, industries which are small scale, which are traditional in terms of their technology and methods of production, but which have great potentiality in strengthening the total structures of the Malaysian economy.

So in this aspect the human resources development definitely must move towards providing sufficient amount of skill of whatever industries that exist in this particular sector. In other words, there is a need for upgrading the skills and technical expertise of people who are in the undeveloped medium and small-scale industries and this should be priority number one.

Coming back to the heavy industry and the development of local resources, definitely there is a need for skilled manpower here either in terms of scientific expertise or technical expertise or managerial expertise. If we want to go into heavy industries in the production of motor cars, definitely we have to make sure that there is enough skilled manpower, either managerial, technical or scientific.

From a survey carried out and release a few months ago, we are short of about 23,000 engineers and technical expertise. So, that will be the one big area in which we have to devise some kind of program to develop our resources.

The other area which seems to bother some of us is pertaining to the size of population in the industrial sector as a result of import substitution and export-oriented industries: one study being carried out showed that although it employs as many as 1.4 million people, which accounts for about 33.6 percent of the total labor force, it gets only 18.9 percent of the income from that particular sector. That means the wage component is very small.

So the wage component reflects on the skill of the workers in that particular sector. So I would want to argue that skill has to be upgraded in this particular sector as well. Skill is very minimal in this particular section of the Malaysian labor force, so a program which allows for upgrading of skill should be provided either by the public or the private sector.

Finally, as I mentioned earlier, there is a displacement of labor in the rural sector, particularly in the production of paddy. Jobs have to be found for them, but they do not have the skill to move to another job.

Growth of rural industries is rather slow, and our effort to relocate industries to the rural setting has not been very successful.

We anticipate that the size of labor in the rural and agricultural sector has to decrease in the long run, but these people who have been displaced are in the range of about 40-plus, and it is very difficult for them to move to any other environment.

CHAIRMAN:

For this particular session we will have another hour and a half for open discussion from the floor.

OHTA:

I would like to make brief comments related to the presentation by Prof. Torii.

We recall that with regard to basic requirements for what Prof. Torii calls "industrial man" he has divided eligibilities into two parts, one termed as "fundamental eligibility" and the other one as "technological eligibility". I believe that this classification is a very meaningful one.

I believe that in this symposium we more or less concentrate on the second eligibility but, at the same time, I think that we should not lose sight of the basic importance of fundamental eligibility.

In this connection, I would like to make my second observation. It seems to me that will to work or motivation is a very important element or very important eligibility. No matter how much knowledge one acquires, or no matter how much workers are trained, unless they are motivated it is difficult for these workers to translate their acquired knowledge or skill into higher productivity. I would like to emphasize the importance of this motivation.

Now, my third comment is related to technological eligibility. Various speakers this morning referred to shortage of skilled labor. It seems to me that because training of skill requires time, there is always a gap between the realization of the need and the actual obtaining of skills.

If I am to generalize a little bit further, probably in the case of growing industries there are always shortages of needed skilled labor, and in case of declining industries there is always an excess of labor which once was very much in demand. So there is a need to cope with this situation, and depending upon the situation I believe there is a role for the government to

play and also there is a need for the private sector to play, but on this score I do not want to discuss in detail.

CHAIRMAN:

Yes, Mr. Horiuchi, please.

HORIUCHI:

Professor Torii's paper concentrated in the discussion of industrial structure strictly in the manufacturing sector. It is quite valid, but from the administrator of this technical cooperation, various technical cooperation, I would like to make a couple of comments.

The first comment was, of course, how to define industrial structure. Mechanization is being introduced in agriculture and productivity in agriculture is going up. Maybe in one sense the demarcation between agriculture and industry may be getting a little bit fuzzy right now, and some of the agriculture becoming more of manufacturing as well. Again, the demarcation between the service and manufacturing sectors is not very clear these days especially in terms of information and communication industry which is a very important sector regardless of the stage of development in every country. So I would like to indicate that maybe we should expand our scope a little bit wider than the manufacturing sector alone. That is my first comment.

The second one is confining our discussion to industrialization. I quite agree with the exposition of Prof. Torii. In the industrial structure of the Pacific and ASEAN region, I would say that there are obsolete industries or industries shifting from, say, Japan or the United States to other developing countries. A good example is shipbuilding. And in 20 years maybe steel and the automobile manufacturing may shift. In other words, if you catch those opportunities, there is a good opportunity to develop, to sort of transfer the industry from the sort of obsolete industries to developing countries.

The second category of industries include small and medium scale industries. As our income increases, or as our technology develops or advances, certainly regardless of the stage of development, it certainly enriches our life style but also requires a lot of new manpower to maintain newly created services or industries.

Lastly, I believe the industries like high tech industries, bio-chemistries and so forth are emerging industries and I do not believe any

country is able to manage without computers from now on. In that sense, we need programmers, system analysts and so forth for these emerging industries. If we classify our industrialization into those three categories, then--and this leads to my third comment--what we need as a common denominator of those industrial structural change, first, is an increase of management capacity, and second--and maybe the word is not appropriate--is the increased capacity or ability of bureaucracy.

The private sector is more in connection with management ability.

And also to a certain extent R&D has to be developed in terms of capacity of manpower. So from the point of view of administrating the technical cooperation, I would like to have some comments from our participants on these areas for practical purposes so that our organization can aim at our future activities. Thank you.

CHAIRMAN:

Thank you.

CHAWAT:

I think the intervention of our friend from JICA is very pertinent. It brings to my mind the points that I have mentioned this morning that the process of relocating obsolete industries in industrialized countries is part of the restructuring process that we, the developing countries, have been calling for in the North-South dialogue. When we talk about HRD, one should not only aim at developing countries. It's a two-way street. I think efforts should be aimed at accommodating both the needs of the developed industrialized societies and the requirements of the developing countries.

The other point, as for comments, several times we have mentioned during the course of our seminar is to train bureaucrats. That is I think a very difficult area. The bureaucracy in each country, particularly in the developing countries, are very big organizations that are difficult to change and move. So to tackle this problem the initiative would have to come from within, and this is why I think HRD comes in very well here so that you can select people who have potential to make such changes and slowly, of course.

CHAIRMAN:

Thank you. Yes, please.

OUCHI:

My name is Ouchi, of Institute of Developing Economies.

Prof. Torii's lead-off speech presented an articulated framework for research on HRD in ASEAN industrial structural changes this morning. My impression was, however, that Prof. Torii emphasized much on the classification of industries at stages and the demand side of labor. The question to be addressed to this session, it seems to me, however, should be how to cultivate eligible or capable workers, how to meet the needs of the industries at a certain level of development, how to cope with the difficulties of developing human resources, how to overcome nontrasferability of the technical transfer.

Another point I would like to call to your attention for discussion is the receiving side of HRD not only the delivery side of the HRD the problem of acquisition of technology training, acquisition of knowhow and other things.

Now, probably as Dr. Chawat of Thailand mentioned in reference to Thai workers, the mentality of the workers does matter, and also the motivation of the workers, incentives for workers.

My point is this. Of course, we have to discuss this human resource development and discuss at what stage, as Mr. Horiuchi of JICA mentioned, at the public sector level or private sector level, or training of trainers level or at the fields level. You see, we have to distinguish these questions and, in summary, I must also mention the receiving side, their mentality, motivation, incentives and other things.

So my point comes back to Prof. Torii's paper, my question is this: how to accumulate technical knowledge and experiences collaboratively, how to facilitate the accumulation of experiences and encourage the mutual learning process among the workers. So it is not the answer just to establish training institutes but how to really substantiate the training contents or curriculum for the workers.

So my suggestion is that a participatory institution building might be an answer, in other words, atmosphere building for the unity and mutual help setup. So probably by this way we can induce the potential capabilities of workers. This is I think the crux of the problem for human resource development.

CHAIRMAN:

I will ask Prof. Torii to comment at this stage before it becomes too much for him to respond.

TORII:

I think I have to answer seven or eight major questions. The first question from Dr. Sayuti and some other persons. In answering this question, I have to explain my understanding of what is industrialization. Please allow me to pick up the experience of my country.

Usually we measure the degree of industrialization in the terms of production, employment, and that's all, but I would rather invite another concept in their terms of land usage, so we try to evaluate the degree of our industrialization in my country in terms of these three terms.

First of all, the most important thing is land usage. In our country, only 0.5 percent of the total land is supporting about 40 or 50 percent of modern industry workers and producing more than 60 percent of GNP. This is the character of industrialization.

So coming back to the question of Dr. Sayuti, labor absorption by modern industry is very difficult even in the United States, even in Japan. Actually the United States and Japan are not absorbing a substantial amount of labor force, like 30 or 40 percent, into modern industry. We are absorbing our labor forces into medium and small-scale industries as well as the commercial and business services. Modern manufacturing industries are absorbing only around or less that 20 percent of the labor force.

So if you want to absorb the huge amount of labor force in Indonesia or some other developing country in the Asian and Pacific region, you have to absorb the labor forces into the small scale, medium scale industries, first of all, rather than the modern industries.

Secondly, another source of absorbing the labor force you have. In most of the Asian countries, except Japan, there is a huge amount of urban informal sector. By my calculations in 1970 and 1975 in Bangkok, I estimated 64 percent of the total population in Bangkok are living in the urban informal sector or urban poverty sector, and usually the official bodies like the National Housing Authority in Bangkok are treating the slum problems or urban poverty problems just as poverty problems, but the urban informal sector, or slum in strict words, is a very important place or sector which has the absorptive capacity of labor.

So my observation is that the urban informal sector should be regarded or treated as having a very formal potential to absorb the labor force only if your government would treat these sectors formally. I mean you can give their licenses or registration or something like that for the people in the slums.

A second question, not necessarily a question but comments I felt very important, is industries other than manufacturing industries. Construction and mining industries are very important industries to support the economic development of these countries. The construction industry is a very important sector because it has the maximum backward linkages. The construction industry purchases raw materials, intermediate goods, so on and so forth from almost all industries, so you can stimulate or induce the growth of other industries by stimulating the construction businesses.

Also the construction industry has a very large labor absorptive capacity. Unfortunately, our constructors are now being kicked out from Malaysia but, very frankly speaking, even though the local constructors in Malaysia still continue to support the construction boom, you can also absorb the huge amount of Bumiputra workers, so that I think the construction industry should be stimulated.

Thirdly, the mining industry. I observe that at this moment most ASEAN countries are relying upon the mining industry: especially in Indonesia and Brunei. But, maybe before the year 2000, the oil reserves, gas reserves in Indonesia and Brunei will completely be exhausted, and also the agreements or contracts between major consumers like Japan will be expired in or around 1993 in Brunei and 1994 in Indonesia, and after that we cannot imagine the prosperity through their oil and gas businesses. We have to prepare for these years. We have to introduce some other labor absorptive and backward linkage industries to these countries.

My other point is to the comments raised by Mr. Chawat and Mr. Horiuchi on the tightness of industrial competition. As they have said, the relocation or restructuring of industries is very important, but the restructuring or relocation of industries is very difficult, and by this reason, as a result of this phenomenon, I observe a very serious tendency or symptom in the world industrial market. The symptom is the symptom of synchronization of industrial structure which is a very dangerous phenomenon in this world. In other words, every country is producing the same goods. Japan is producing iron and steel, so does Korea as well as Malaysia and the Philippines, and they are competing very tightly in the world market. Why is this so?

In the agricultural industries the competition in the world market is the tightest. Foodstuffs, food processing industries, and textile industries, the competition is very, very tight, and in the middle industries the competition is slightly better. You can export electronics, and at this moment in the iron and steel industries there is some easiness but becoming very tight competition.

Why does the synchronization occur? The first reason is that in every country the conservative political pressure to conserve the existing industries is very strong. Consequently, the industrial adjustment, is very difficult.

I think, therefore, in concluding, how to push forward the industrial adjustment, among Pacific and Asian countries is a very important fundamental necessary thing to push forward the industrialization of these countries.

Maybe I have to answer the training problems and technology transfer problems, but let me wait for the next round.

CHAIRMAN:

Can we have more comments and questions?

KOGA:

My name is Koga, of Asian Club. This is not a question, but a sort of comment. This morning I was quite impressed by the brilliant speech made by Prof. Torii of Keio University, but when he showed the input/output table over there, particularly the Korean one, I was struck by the fact that nobody from Korea is around this table.

But I think Korea somehow succeeded in transferring their agricultural labor to industrial labor, and they are very competent, now competitive in the world market in their exports, so I think if we had someone from Korea here we could have learned very much.

If I may, I would like to make a request to JICA to be kind enough to invite someone from Korea if JICA will host the second symposium on this subject.

CHAIRMAN:

Anybody here who knows the Korean experience? Professor?

TORII:

I have little experience with Korea, but in regards with the difference between Japan and Korea and other ASEAN countries, the functions of major cities and second largest cities and third, fourth, are quite different.

A typical feature of the developing countries, is that only one major city can absorb population from the rural areas, but this is not the case for Korea or Japan. That is why Korea has succeeded in transferring the rural population to the modern or urban population, urban workers, and the same thing can be applied to our country, but not for the ASEAN countries. This is a very big problem. You have to promote the urbanization of the second largest, third largest cities.

CHAIRMAN:

Anybody else, please.

MATSUMOTO:

I would like to point out one basic problem. The symposium has been organized here in Tokyo. It has particular meaning. Japan used to be one of the latecomers in industrialization. However, there are certain advantages that latecomers can enjoy. In case of Japan the pluralistic development or the time allocated for development was very short. Therefore, we had observed a concurrent and simultaneous development of all of the industries. We had seen the popping up of industries one after another in Japan. Perhaps you can learn something out of the experience that Japan has gained. I am not the person representing JICA but I have heard that the International Center was established in Okinawa, so you can use this institution as a source of information.

CHAIRMAN:

Certainly we have come to a point when perhaps we could spend a bit of time on how ASEAN could learn from Japan, Japanese experience.

Can I have more comments, please?

CHAWAT:

I was listening very intensely to the comments made by Mr. Matsumoto, but I think the comparison that he tries to make could not perhaps be applicable to most of the developing countries because Japanese case is very exceptional.

The infrastructure that we in ASEAN countries particularly have would not perhaps enable us to emulate what Japan has been able to do because of various factors.

I just wanted to make two points here, I think a very touchy question of South Korea, and the other one would be the restructuring that Prof. Torii has mentioned.

The fact that South Korea has not participated I am sure is not because we want to keep the Koreans away, but we feel that the forum that has been established has already identified the countries that are going to be the promoter of these undertakings, the six ASEAN and the five Dialogue, and we are glad to have the participation of the South Pacific Island countries. So exclusion is not definite.

We have in the back of our mind the eventual participation of other interested countries, including South Korea, but I think they could come when we have identified the projects, and if a valuable contribution can be made then, we would very much want to have them in.

Now, the very pessimistic note that Prof. Torii has injected as far as restructuring is concerned, of course we realize the difficulties, but one has to think that when we want industrialization it is not to catch up with the Japanese. I don't think we can do that. What we are trying to do is to resolve our own economic problems and we can't do it by increasing our agricultural products exports. The only solution that we can see is toward industrialization. It's just a process but we want to resolve our own problem, and it would also bring stability because the developing countries are not only faced with economic difficulty. They are also faced with other problems.

So this is a message I think that we are trying to convey, not a race. I should like to emphasize. We have no ambition to catch up with the Japanese. It is impossible. We are more realistic than that.

SAYUTI:

I would just like to make a few comments. First of all, if we talk about human resource development, I would say that the most fundamental problem is of providing employment. Secondly, therefore, it is very difficult sometimes to generalize about stages of economic development. For example, with regard to the role of cities, in ASEAN Bangkok is the primary city, very large, and secondary cities are not so very important in terms of population. But this