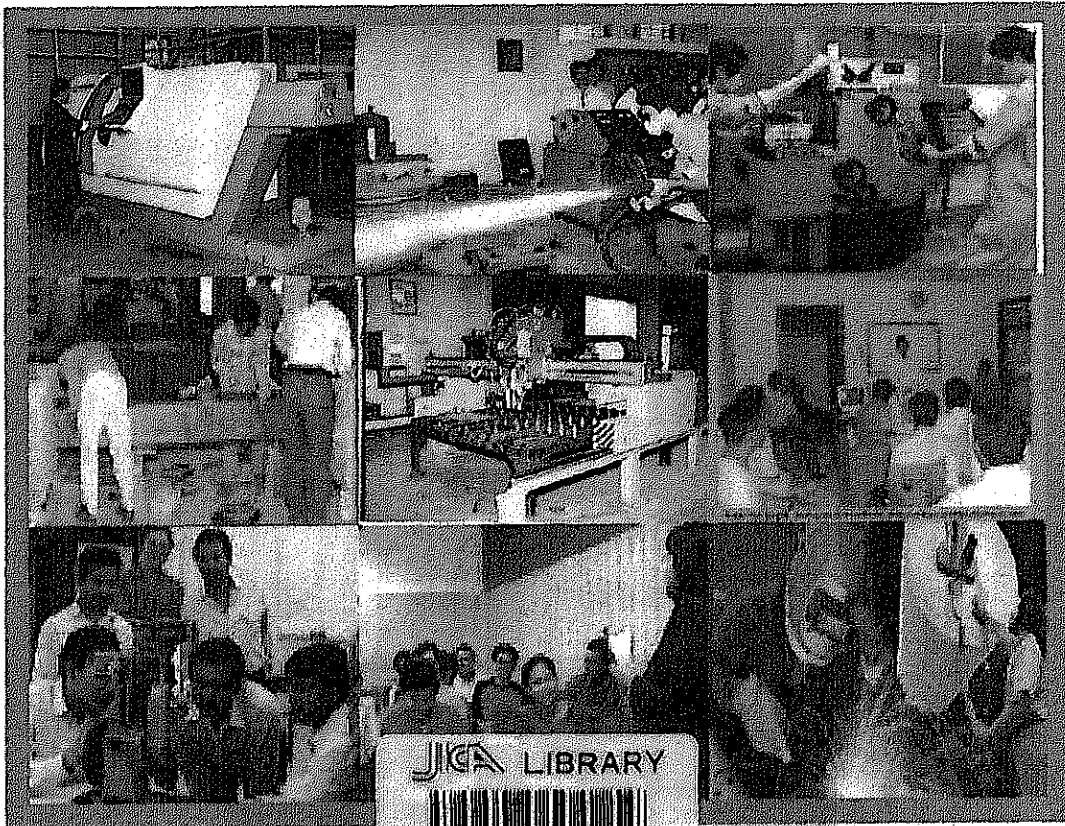




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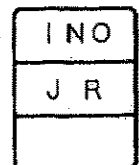
**THE BASELINE SURVEY ON INDONESIAN
POLICY ON INDUSTRIAL HUMAN RESOURCES
DEVELOPMENT FOCUSING ON VOCATIONAL
TRAINING INSTITUTIONS**

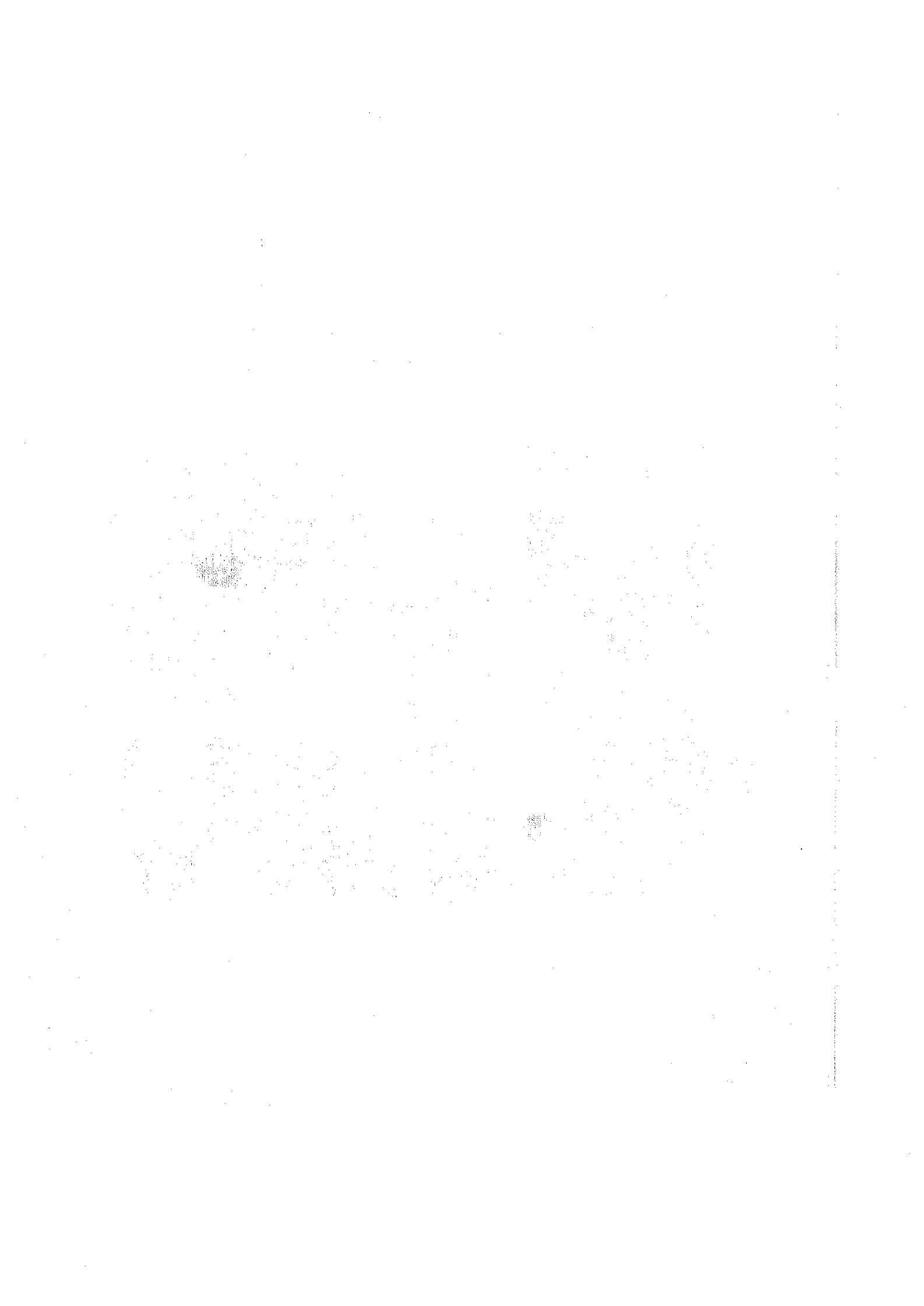


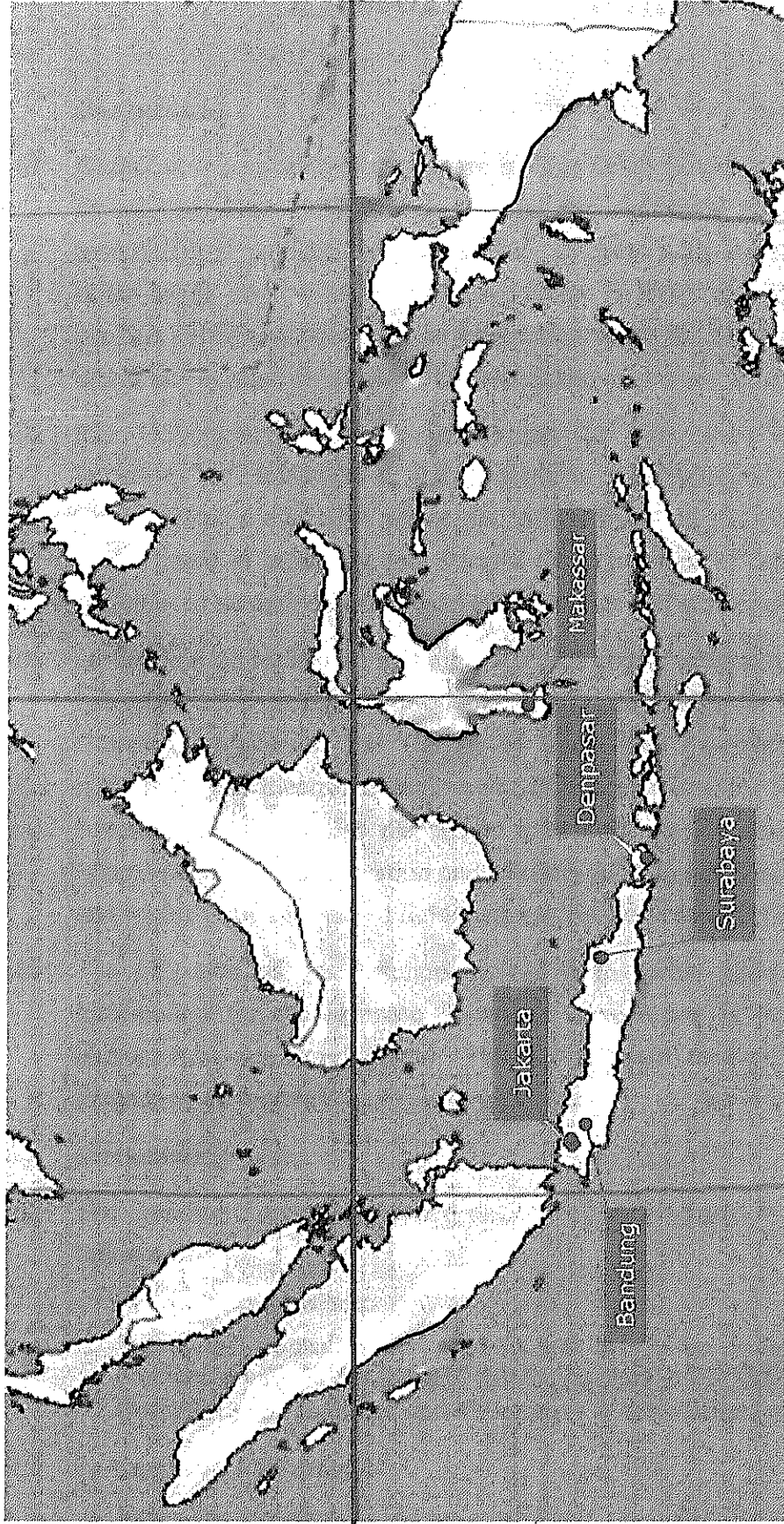
FINAL REPORT
MARCH 2005



P.T. INDOKOEI INTERNATIONAL
Engineering and Management Consultant







THE BASELINE SURVEY ON INDOONESIAN POLICY ON INDUSTRIAL HUMAN RESOURCES
DEVELOPMENT FOCUSING ON VOCATIONAL TRAINING INSTITUTIONS

Location Map



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EXECUTIVE SUMMARY

1. Background

- S-01 Global economy era and speedy technology development has given an impact on strong competitiveness as well as rapid environmental changes. Domestically manufactured products have to directly compete with imported goods. On the other hand, rapid worn out of production facilities and shortening period of product circulation constitute an implication which has to be accepted by business world due to rapid development of technology.
- S-02 The Government of Indonesia stresses the importance of sophistication of industries and transition of its economy to a knowledge-based economy from export-oriented economy, where the basis is on Multi National Companies. The Government of Indonesia also stresses the importance of development of human resource, to acquire elevated level of knowledge and technology.
- S-03 In the field of vocational training, JICA has consistently extended cooperation to Indonesia, as represented by cooperation to the Center for Vocational Training Center in Makassar, the Center of Vocational Extension Service Training (CEVEST) and Electronic Engineering Polytechnic Institute in Surabaya (EEPIS). Recently, JICA has also dispatched individual experts attached to Ministry of Manpower and Transmigration and Ministry of National Education, Senior Expert and Junior Expert in related fields order to develop capability of lecturers there.
- S-04 The objective of the Baseline Survey is to gather comprehensive data and information for the Japanese Technical Cooperation in the area of Industrial Human Resource Development. This will be useful to identify appropriate areas in the area of vocational training in Indonesia.

2. Methodology of the Study

- S-05 The Baseline Survey has carried out several surveys and in-depth interviews as follows:
- Survey of Institutions:
Survey questionnaires were sent out and face-to-face in-depth interviews were conducted with 7 Vocational Training Centers, 4 Polytechnics, 5 Chamber of Commerce and Industry, and 4 Employer's Association Indonesia.
 - Survey of Industries:
Interview questionnaires were sent out to more than 40 manufacturing industries, including Japanese MNCs, Non-Japanese MNCs and Indonesia-

owned firms. JICA also assisted the Study Team to produce and send out letter to MNCs.

- Interviews with Agencies:

The Study Team carried out interviews with the key agency stakeholders, including: Ministry of Manpower and Transmigration, Ministry of National Education, Ministry of Industry, Ministry of Agriculture, Ministry of Marine Affairs and Fisheries, Ministry of Social Affairs, and State Ministry of Cooperative and Small & Medium Enterprises.

3. Policy Strategy of Indonesian HRD

S-06 There were 80.1 millions labor forces out of the total of Indonesian population in 1995, which was 192.2 millions people. Among the actual number of labor force, 61.5% was classified as full time workers with only 38.5% worked part timely. In comparison, the predicted number of labor force in 2003 was 90.8 millions, consisted of 58.1 millions people working full time and only 32.7 millions worked part timely.

The Indonesian labor force participation rate (LFPR)¹ in 1994 was recorded 58% and remains unchanged in about three years period (1994-1997), but it was gradually increasing within 1998 to 2003 with an average of 67.1%, which presumably affected the uncertainly of the national socio-economics condition. The member of working population can not be considered as the member of presence working opportunities due to mismatch in labor market.

The total unemployment in Indonesia was estimated 2.2 millions people in 1994, increased significantly in 10 years period and moderately reached 9.5 millions people in 2003. The Indonesian population, Labor Force Participation Rate, full time and part time labor force², and unemployment in 1994-2003.

S-07 Policy strategy on manpower is directed to encourage widely community participation, through:

- Creation of employment in line with macro economic policy base on effort of decreasing unemployment in various sectors and regions;
- Increasing competency and manpower stand alone in order to increase mobility and manpower welfare;
- Increasing manpower welfare through determination of wage system and proper welfare assurance, and benefit both sides;
- Provision of manpower freedom to be alliance;

¹ Labor Force Participation Rate (LFPRs) is the number of population classified as labor force every 100 manpower.

² Labor force is defined as part of total inhabitant in working age who are both employed, but being actively or inactivity.

- Increasing safety protection for workers who directly involves in production process of goods and services; and
- Upgrading of training system, placement, monitoring, and Indonesian workers overseas.

S-08 Major tasks of Agency for Training and Productivity of MOMAT in education and training, as well as improvement of labor force productivity are covering the followings:

- Education and training of officers, both central and regional;
- Training of labor force in services industry and manufacture, either for domestic or international market;
- Improvement of labor force productivity, micro and macro; and
- Training of transmigration community, before and after settlement.

Recapitulation of budget planning for sub-program and activities of Agency for Training and Productivity of MOMAT in 2004-2009 indicated that about 29.97 % of the planned budget is allocated for education and training of officers and only 7.23 % for training is proposed for training of labor productivity.

4. Position of VTC/I and Polytechnics in the Industrial HRD

S-09 Vocational training of manpower is urged to create qualified skilled labor, professional, and productive. In order to attain an optimal result, training should be guided and matched the demand of labor market. Besides, the equipment of each VTC/I urgently need to be periodically upgraded. Regional Autonomy that is referred to decentralization program is accounted to successfully manage resources in their own region. Before regional autonomy era, VTIs that were spread out around the country (about 157 BLK/LLK and 19 BPPD/Agency for Region Productivity Development), 176 units, and their management was handled by Directorate General Supervision and Employee Productivity, which was then altered to be Directorate General Settlement of Domestic Employee.

S-10 After regional autonomous era, about 47 VTC/I handed over to local government, aimed to suit the training plans which hopefully match the demand of each region. Meanwhile, five VTC/I are still managed under Central Government control and responsibility through Directorate of Job Training, Directorate General for Supervision and Placement of Domestic Manpower, covering: VTC/I Ujung Pandang, Medan, Bandung, Bekasi, and Mataram.

S-11 Training reformation as a strategic policy is urgently required, which is considered as a restructuring of training management, covering:

- Training reformation from Supply Driven to Demand Driven orientation that is suitable to training requirement and competency;
- Training reformation from Social oriented to Economic oriented; and
- Reformation from Government Based Training to Private Based Training.

S-12 Polytechnic in Indonesia has been established since 1976 in Institute of Technology Bandung (ITB), as a result of bilateral cooperation between ITB on behalf of Indonesian government and the Swiss Confederation. The Bandung Polytechnic for Manufacturing which is now called Politeknik Manufaktur Bandung (POLMAN-Bandung) previously named Politeknik Mekanik Swiss - ITB. Success of this polytechnic became a model of Polytechnic development in Indonesia.

S-13 The further development of Polytechnic in Indonesia was in 1979 where Polytechnic's model has been further assisted by World Bank through establishment of six polytechnics. Development of those six polytechnics for several years was successful, therefore, in the year of 1984 Indonesian government decided to extend Polytechnic in other states of Indonesia by establishing eleven newly polytechnics.

5. Estimation of Demand from Industry for Human Resources

S-14 Labor force problems in Indonesia are presumed to be complicated, enormous and complex. Enormous, because involved millions of people, and complex, because of the problems was affected by plenty of factors that their interaction in track difficult to be understood. Population growth of working age for period 2000-2005 was estimated about 1.7% per year. Number of population in 2009 is estimated 226.9 million and about 168.9 million or 73.7% is working age and about 116.5 million or 69.0% of working age will go into labor market. This is realistically an enormous number. Unemployed people is estimated to decrease starting from 2006, hence, in 2009 the number will reach 7.5% million or about 5.5% from total labor force.

S-15 Prediction of macro economy according to Keynesian model and focused on demand with moderate assume. Variables that were used in this model covering family consumption, export, import, Rupiah exchange rate, inflation, and economic situation in USA and Japan.

Refer to this model economic growth rate per year 4.1% in period of 2000-2004 and 6% in 2005-2009 periods.

The complete models share the property that provided money wages, prices and the interest rate are perfectly flexible, the equilibrium of the system will be one

with full employment, in the sense that the labor market is cleared. This does not mean, however, that the force. Given the market clearing wage, some people may be quite willing to remain unemployment. In the Classical version of the model, where labor supply depends upon the real wage, the equilibrium level of employment and hence output are determined solely by the labor market and are independent of any monetary or fiscal policies. In the other polar case, where labor supply depends on the money wage, monetary and fiscal policies are generally effective in being able to influence the market clearing level of activity.

Both models, however, exclude the possibility of involuntary unemployment, in the sense of a non-clearing labor market. To incorporate this phenomenon into the model requires some form of rigidity, and inflexibility money wages, prices, or the rate of interest are capable of explaining it.

For simplicity, we shall return to the case where both labor demand and supply depend upon the real wage.

Formally, the model with rigidities can be described by the following set of equations.

$$Y - C(Y - T) - I(r) - G = 0 \quad (a)$$

$$\frac{M}{P} - L(Y, R) = 0 \quad (b)$$

$$W/P = \phi(N^D) \quad (c)$$

$$W/P = \varpi(N^S) \quad (d)$$

$$Y = F[\min(N^D, N^S)] \quad (e)$$

$$P = \bar{P}, \text{ or } W = \bar{W}, \text{ or } r = f \quad (f)$$

Source: Turnovsky (1982)

Equations (a), (b), just as before are the *IS* and *LM* curves, while (c) and (d) describe labor demand and labor supply respectively. The only difference is that now, since we wish to allow for the possibility of unemployment, we discard the equilibrium condition $N^D = N^S$. The production function (e) relates output to employment, which is given by the smaller of the two quantities N^D, N^S . If $N^D < N^S$ employers hire N^D leaving $N^S - N^D$ involuntarily unemployment; if $N^S < N^D$ employers hire the available supply of labor N^S . The final equation fixes P, W or r , depending upon the rigidity assumed.

The system (a) defines six equations determining the six endogenous variables Y, N^D, N^S, P, W, r , and in general these can be uniquely determined. It is clear that there is non reason for $N^D = N^S$, in which case the model will imply either an

excess demand for, or excess supply of, labor. The nature of the equilibrium solution, however, depends upon the rigidity assumed.

Suppose prices were rigid so that $P = \bar{P}$. In this case Y and r are determined by the IS and LM curves, just as they are in the simple model. The production function then determines employment, the smaller of N^D and N^S . Substituting this value of employment into (c), (d) enables one to determine whether $N^D > N^S$ or $N^D < N^S$, as well as the corresponding money wage. The equilibrium is thus determined recursively.

A recursive solution is also obtained when $r = f$. In this case, output is determined by product market equilibrium, and given this value of Y , P is now determined so as to equilibrate the money market. Given Y , P , r , the remaining variables N^D , N^S , W are determined through the production function and labor market, just as they are in the rigid price case.

The third case, $W = \bar{W}$, is more complicated. Equilibrium cannot be attained in any simple sequential manner. All variables are determined simultaneously.

Labor Force Participation Rate (LFPR) is defined as number of person in labor force divided by population.

$$LFPR(t) = LF(t) / POP(t)$$

Where:

LFPR(t) = Number of LFPR in t period

LF(t) = Number of Labor force in t period

Formulation used in calculating total labor force is:

$$LF(t) = \sum_{i,j} LF(i,j,t) * POP(i,j,t)$$

Where: i = age

j = sex

t = time

POP = Population

6. Promotion Program of the Industrial HRD by Private Sector

S-16 Promotion program is expected to support job seekers to improve their quality, particularly in their specialization. The low quality of Indonesian labor due to professional competency standard did not attained at various levels. Consequently, it is a need to develop education and training system rapidly, which can be conducted through link and match of higher education/university's curriculum with actual situation, so that the graduate are prepared to find the job. National Agency for Profession Certification (NAPC) has been established according to Government Act No. 23/2004 as an independent institution that

directly responsible to President, to carry out labor certification by competency assessment. With its task, NAPC become an institution to control the quality of labor in Indonesia.

7. Institutional Stakeholders Program

S-17 Manpower development is closely related to the national economical development and labor force problems such as inadequate of qualified labor. Quality of labor force, which represented by workers educational level, is not developed significantly. The number of low educated labor in fact is still tremendous. Besides, there is an imbalanced situation between graduates of higher education and demand of employment, generate typical problems. Many skilled labors are definitely required by employment market; however, it could not be fulfilled by existing labor, while graduates of social discipline of higher education are mostly unemployed.

S-18 Requirement of industrial sector for skilful labor needs a proper standardization and competent certification. Therefore, the main activities are improvement of current standardization and competent certification through creation of standardization and competent certification institutions. This program requires active participation of the profession associations, company association, labor organization, related government institutions, and professionals. Other activities are improvement of relevant disciplines, training quality and efficiency through supervision and empowerment of VTCs that is managed either by government, private sector, or companies. Besides, enhancement labor productivity could be done through socialization productive culture, system development and productive improvement method, and cadre development as well as improvement of productivity experts.

8. Government Sector Providers of VET in Indonesia

S-19 The main government providers for the industrial sector are Ministry of Manpower and Transmigration, Ministry of National Education, and Ministry of Industry. Other institutions are also involved in VET for the industrial sector such as Ministry of Agriculture, Ministry of Social Affairs, State Ministry of Cooperative and Small & Medium Enterprises, and Ministry of Marine Affairs and Fisheries.

S-20 Strategic plan of Ministry of Manpower and Transmigration in 2005-2009 covering improvement of standardization and certification systems of manpower competency, improvement of competency and community based training system, and development of national productivity movement.

S-21 To achieve an excellent quality of human resource to control technology should be considered to provide impact on the development of human resources:

- The equal distribution of development process and results;
- The speedy growth of non-agriculture jobs in various economic sectors to encourage expansion of industrial sectors in all fields of business; and
- The need to develop and utilize efficiently the national-base technology which is likely to be the driving force for investment and expansion of employment opportunities.

S-22 To face various issues and challenges, within the framework of improving the quality of human resources in line with the PROPENAS, MONE has decided to have the following main strategies:

- Equity in educational opportunities;
- Relevancy of education to development;
- Educational quality; and
- Efficiency in educational management.

S-23 Development Planning of MOI

- Long Term Plans, covering: strong basic manufacturing industry to be “world class industry”; the prime industrial mover of economic growth; and enhanced contribution of SMI to GDP in comparison with large scale industry contribution.
- Mid Term Plans, covering: to create large employment opportunities; to prolong the revitalization, consolidation, and restructure of industrial programs; to optimize the effective usage of domestic potencies; to increase export competitiveness, to initiate new selected potential industries; and to initiate and develop the small scale industries.
- Short Term Plans, covering:
 - a. To grow such industries which enable the creation of job opportunities in large scale;
 - b. The effective completion of revitalization, consolidation, and restructure of industries programs;
 - c. To optimize the demand fulfillment of domestic market on raw material and components of domestic products, especially who implement local resources;
 - d. To increase industries competitiveness with export oriented;
 - e. To develop industries which has potency to be prime mover of prime competitive industry in the future; and
 - f. To develop SMI, especially medium industries three times faster than small scale industry.

S-24 HRD Master Plan of Industry is as follows:

- Motivating, socializing and enhance of the job training activities and labor productivity to supply qualified, productive, high competitiveness labor in domestic or international labor market;
- The rapid development and urgent requirement of industry on qualified labor force require standardization and labor competency certification development, consequently, the main activity is establishment of standardization and competency certification by standardization and competency certification institution. This activity involving the association of professions, company associations, labor units, government and related experts; and
- Enhancement of the relevant fields, training quality and efficiency by supervision and empowering training institution that are conducted by government, private sector or company. On the hand, to improve working productivity, it should implement the socialization of productive value and culture, system development and productivity improvement methods, and cadre and experts of productivity development.

S-25 HRD Program of Ministry of Agriculture, comprising:

- To create assessment of agricultural human resources;
- To develop agricultural agency cooperation network in agricultural human resources development;
- To construct agricultural officer career development system;
- To arrange educational and training system based on work competency;
- To develop agricultural education system (Middle and Higher education);
- To develop participative agricultural information system;
- To improve farmer competition and other farmer society;
- To enhance affective and efficient distribution of the information of science and technology, market and production inputs; and
- To strengthen the agricultural institution function and roles as a center for information and specifically local technology.

S-26 Program in HRD of Agency for Training and Social Development of MOSA among others covering:

- To perform assessment and analysis of education and training of social welfare human resources in regional scale;
- To built and develop education and training of social welfare human resources networking;
- To build and develop education and training of social welfare human resources information system;
- To increase and develop knowledge, attitude, and skill of education and training of social welfare human resources organizer;

- To improve facilities and infrastructure of education and training of social welfare human resources;
- To create guideline and manual of education and training operation;
- To perform monitoring and evaluation of education and training of social welfare human resources operation in regional scale;
- To plan, develop, and manage education and training on technical and function of social welfare for officials and technical staff of social service management and practice of social work for social worker in regional scale, urgent, and strategic; and
- To improve and develop methodology and technology of education and training of social welfare human resources.

S-27 Strategy in Ministry of Marine Affairs and Fisheries (MOMAF), comprising:

- Reaching the international standard education by serving suitable curriculum, complete facilities, and best quality teachers;
- Helping the industry to grow by bringing professional human resources in the field;
- Developing the fisherman and fish breeding through the "Partner Village" program and series of training;
- Creating a paradigm suited to the dynamic situation in developing and democratic society;
- Expanding the network and information by developing relationship with other universities, research institutions, inter-related sectors, businessmen, and other communities; and
- Exploring the great potential of the tropical of the sea based on the application of science and technology.

9. Vocational Training Center

S-28 The management system for the most of the government VTCs surveyed has been changed aiming to simplify program planning according to local needs. According to Article 21 of Government Act No. 71/1991, training plans should be relied upon job market, development of science and technology, and match the requirement of industries. Personnel supervision is conducted based on competency and reformation of training on which should be supported by strategic program in order to reach the objective and goal, which covers: demand driven, human resources development approach, and private basis.

S-29 Mid Term Plan of the surveyed VTCs include:

- To conduct program and improve training quality;
- To develop comprehensive and advanced training system;

- To develop network with related sectors, particularly with industries;
- To support the realization of training standardization and certification at national level;
- To upgrade trainers and equipments according to future industry needs;
- To provide service centers for training information and problems; and
- To support availability of national labor requirement data.

S-30 Long Term Plan of the VTCs includes:

- To improve labor quality which has an ability to compete either in country or overseas;
- To support training system availability based on competency and community needs;
- To support international training standardization and certification; and
- To support availability of international labor requirement data.

S-31 The main source of the VTCs budget was financial support of government, either central government (54.53%) or local government (24.88%). This result indicates that support from local government on education and training of human resources was quite significant. Contribution of private sector comprised about 12.91% (on job training), and 4.79% (off job training). Expenditure was mostly allocated for training activities, comprising 81.90% of the total budget, which was regularly utilized for training activities, equipment operation & maintenance, and for production of training modules. Expenditure for routine expenses was only 18.10%.

S-32 Selection methods of trainee were mostly conducted through written test (50%) whereas interview and other method comprised about 33.33% and 16.67%, respectively. Survey results indicate that written test was considered as the best method to assess capability of trainee general knowledge. Interview was conducted to judge interest of trainee, and other test, such as psycho test was also conducted by VTCs. Trainees from SME were not examined prior to acceptance such as VTI Cibaduyut and IFSC Sidoarjo, whereby selection was conducted by cooperative and each SME association.

S-33 Training period at VTCs was carried out mostly based on request by interested industries (50%). The requests were generally covered basic training for the new labor and upgrading the skill of the existing labors. The second training period of VTCs was performed according to the allocation budget of annual Budgeted Government Revenues and Expenditures (37.50%).

S-34 Graduates of VTCs were mostly returned to their resourced company, the acceptance by local industries which comprised about 7.28%, and the rest of the

total were creating their own job as entrepreneur (22.22%). VTCs graduates were commonly employed by industries in their surrounding areas. The number of training graduates from private VTCs comprised about 93.73%. Training graduates of Central VTCs was only 4.3%, slightly higher than that of Provincial VTCs (1.73%).

- S-35 Training of VTCs was divided into two categories, namely: Training of Trainer (TOT) and Technical & Non-technical Trainings. Education and training model was grouped into technical (e.g. automotive) and continuous packaged model. In the case of TIU Surabaya, E & T was consisted of 20% theoretical session and 80% practical work in three categories, covering induction training for three weeks, basic training for 20 weeks, and advance training for 30 weeks. Curriculum of Central TIUs commonly enabled to meet the industry requirements, but regular upgrading was certainly needed to gain better achievement. While curriculum that used in Provincial TIUs was relatively out of date and needed harsh improvement to encounter current industry needs. In regard with textbooks, it was revealed that most of the literatures used were out of date and limited in quantity.
- S-36 Curriculum of Provincial TIUs was basically relied on the synchronized requirement of Provincial Manpower Offices and local needs on specific competency. Basic requirement of TIUs had partly satisfied, but there was a need of enhancement and refreshment of curriculum to pursue future rapid technology development. It was noticeably experiential during the survey that modules of courses have been arranged to conduct the training. However, it was observed that the updating of literatures was very limited due to financial constraint. Curriculum was entirely prepared by General Planning Division, Ministry of Manpower and Transmigration, to be implemented at each VTC, either at Central Technical Implementation Unit or Provincial Technical Implementation Unit. Regular review on curriculum and textbook was not actually carried out by the institution.
- S-37 Curriculum of Private VTCs has been fashioned to anticipate imperative needs of education and training activities. It was noted that modules supported the curriculum, but barely updated to suit the demand of latest technology. However, since the private VTCs performed the real business, they intended to update modules and other program activities to pursue the current technology necessity.
- S-38 The survey results reveal that most of the instructors in VTCs are degree holders (51.29%) including Bachelor, Master, and PhD. Diploma holders comprised about 20.17% and other (Junior High School and Senior High School) about

28.54%. Analysis of the qualification by type of the institution reveals that central VTCs has the highest proportion of lecturers/instructors (56.65%) followed by provincial VTCs (27.25%) and private VTCs (16.10%).

- S-39 Recruitment of lecturers/instructors was conducted by proposed recommendation from regional to central government. The survey results reveal that 27.27% of the lecturers requested to central government, and 18.18% was conducted through official recruitment. In-depth interview results conducted in Central TIU indicates that the most of existing facilities and equipments were old and out of date to be used for training. It was noted during visitation to the location that some equipments were made in 1973, which is believed to be out of date to the latest technology.

10. Polytechnics

Objectives

- S-40 The objective of Polytechnic program is to generate professional human resources that has high competency on their optional job position. Polytechnic is an education institution that carries out applied educational programs in various study programs. Applied education is specialized on industry requirement oriented. The specialized educational program is expected to produce skillful labor force. Currently, Polytechnic programs consist of Diploma 1, Diploma 2, Diploma 3, and Diploma 4 programs, within 1 to 4 years period. Polytechnics programs have been enormously developed due to the fact that some advantages were attained covering: lesson period is critically controlled and monitored through a positively fixed system, high bargaining position of the graduates to fulfill job position in industries since they are more skillful and professional, and graduates could upgrade their education to the higher level.

In comparison with VTCs, Polytechnics were initially established with proper infrastructures, higher qualified instructors, undergo a regular revision of curriculum, greater budget allocation from central government, and relatively better HRD program. Polytechnics in fact, more focus on formal education, which become a package of long term education, therefore it is expected that Polytechnics will produce more capable and qualified human resources in term of quantity and quality.

- S-41 Polytechnics establish a packaged credit system as compulsory tutorial system whereby all subjects are offered in each academic year and applicable to all department within the institution. To assist educational programs the students

have to complete the compulsory subjects in each semester both theory and practical work. Mid Term plan of the institution covering: to establish strong collaboration with industry thus Link and Match system can be optimally applied and to develop an excellent and optimal collaboration with stakeholders, which consisted of government, industry, community, and other universities and polytechnic. Long Term plan of the institution covering: to reduce gap between educational institution and employment market, to empower and/or collaborate polytechnic potencies with working partner to support HRD, to synergize the polytechnic objectives with national development in technology/industry, and to potentially produce and fulfill working opportunities and enable to compete during globalization era, therefore, enable to reduce unemployment.

- S-42 Allocation of expenditure was mainly proposed for routine expenses (43%) followed by expenses on TPSDP¹ (23%). Expenditure on DIKS/SPP² and DIP/APBN¹ comprised about 13% and 17%. The least expenses were utilized for local government (2%) and collaboration with the third party.
- S-43 Polytechnic in Indonesia mainly conducted the selection of its new students according to academic year, only 25 percent was conducted through incidental programs according to the needs and request by industries or extension services, Polytechnic conducted three different type of test comprising of: administration, academic, and physical tests. Qualification of trainee for polytechnic comprising: good performance with good personality person, graduate from Senior High School or Technical High School, with a maximum age of 24 years old, and not a disabled person.
- S-44 Polytechnic performed practical work both in-house and external training/practical programs. External practical were conducted Practical Field and study visit to related company according to their specialization. Practical Field was classified as a compulsory subject, was not only to experience the work of the real industry with in-house practical and theory, but also to obtain data for writing up the Final Assessment Report. Besides, there were apprenticeship program about one to two semesters in related companies. Alumni of polytechnic until 2004 in average (n=2) was 5453, and spread out at various placements such as: in country and overseas; private industries and government institutions.
- S-45 Polytechnics have revised competency based curriculums in accordance with Ministry Act No. 232/O/2000, whereby all subjects are divided into five groups,

¹ TPSDP is Technological and Professional Skill Development Project.

² DIKS/SPP is Supplemented Activities Content Lists/Education and Development Contribution.

¹ DIP/APBN is the Budgeted Government Revenues and Expenditures.

namely: Personality Development Subjects (MPK), Skilled Education Subject (MKK), Working Specialization Subject (MKB), Working Behavior Subjects (MPB), and Socialization and Community Subject (MBB).

- S-46 The survey results indicates that minimum 110 credits must be deliberately passed to complete the degree, or at maximum 120 credits that are distributed in six semesters, or can be taken within six semesters to a maximum of 10 semesters. One academic year consists of two semesters with total session time at least 16 weeks per semester; and Session composition was divided into 62% practical work and 38% theory.
- S-47 Most of the equipment used in the surveyed polytechnics are either provided by the ministry or partly provided by donor agencies. Some equipment was also provided by local industry. Most of the facilities and equipments were properly maintained according to the standard system/procedures.
- S-48 The survey results indicate that most of the lecturers' degree was Bachelor (78.81%), followed by Masters holders (16.5%), Diploma holders (4.53%) and PhD holders (0.13%). Polytechnic recruited their instructors/lecturers mainly through government guidelines and regulations; however, part timer instructors/lecturers were also recruitment annually accordingly to the needs of the institutions.

11. Industry Survey Findings

- S-49 Five CCIs, four EAIs, 10 Japanese MNCs, 10 Non-Japanese MNCs and 20 Local Companies were either contacted, interviewed or surveyed by questionnaires. As at the end of March 2005, fortunately eight industrial associations and all companies have responded, thus giving a response rate of 96%.
- S-50 Analyses of the respondents by their main activities indicates that the Indonesia companies are engaged in construction (20.0%), agro-industry and cosmetics (20.0%), textile manufacturing (15.0%), electronics/electrical (10.0%), steel/fabricated metal (10.0%), chemicals/rubber/plastics (10.0%), ceramics and furniture (10.0%) and automotive (5.0%). About 50.0% of the Japanese MNCs are engaged in chemicals/rubber/plastics, and each of 10.0% are in construction, electronics and electrical, automotive, tourism, and other manufacturing activities. In the case of Non-Japanese MNCs, it was observed that 30.0% are engaged in steel and fabricated metal as well as agro-industry and cosmetics, and each of 10% are in chemical/rubber/plastics, automotive, tourism and other manufacturing

- S-51 The survey on employment by education, size and ownership shows that most of the employee holds an education level between Junior High School and Senior High school for Indonesian companies (73.78%), Non-Japanese companies (74.0%) and Japanese companies (36.11%), and only 7.16% of the employee in Indonesian companies graduated from VTC/Is. The analysis of recruitment method of their employees for respondents from industry indicates that Indonesian companies (48.34%), and Non-Japanese firm (56.49%) recruited their workers mainly through advertising. In the case of Japanese MNCs, most of their employees were recruited through outsourcing (64.7%).
- S-52 Most of respondents of Indonesian companies (56.67%) stated that the formation of their employees did not meet their expectation. However, both Japanese MNCs (88.89%) and Non-Japanese MNCs (70.84%) stated that their expectation was mainly achieved. Analysis of the industry survey shows that training in house on management administration and technical activities was conducted by Indonesian companies, Japanese MNCs and Non-Japanese MNCs. Among the training by category, most companies carried out management training including Internal Management (67.5%), Good Manufacturing Practices (30.0%), and Total Quality Management (27.5%). For technical training, the main training in house was on operator training (25%), personality (10%), electronic (5%), computer (5%), English language (5%) and others.
- S-53 The type of proposed training by industry companies that are relevant to the industry needs, covering: internal management (47.5%), technical aspects (32.5%), marketing (22.5%), and others (70.0%) according to the internal needs and necessities.
- S-54 The companies expectations include needs of capable workers and ready to be employed (55.0%), improvement of competency and leadership (40.0%), improvement of attitude/Good manner (22.5%), requirement of overseas training (Japan, Malaysia, etc) (7.5%), and improvement of language proficiency (7.5%) and apprentice program (7.5%). The criticisms and suggestion were made by the industry survey on urgent requirement on advanced training (45.0%), performances on weakness on skills and improper attitude/behaviors of workers (37.5%), low motivation achievement (20.0%), and enormous requirement of national and international certifications (5.0%).

12. Industry Association Survey Findings

- S-55 Most of the employee holds graduate degree (37.5%), followed by Senior High School (14.06%), diploma (7.81%), and Junior High School (6.25%).

Unfortunately, 65.62% of the Industry Association respondents did not provide information on the qualification of their employees. Analysis of the Industry Association survey shows that the relevant training were mainly: on public relation and industrial relationship (63.0%), as well as new entrepreneurships and safety (50.0%). Ten other relevant topics of training was also carried out, covering: Leadership (38.0%), management (25.0%), intellectual right (25.0%), computer (25.0%), English Language (25.0%), export and import (25.0%), design management (0.96%), training on presentation (13.0%), heavy equipment (13.0%), and design management (13.0%).

S-56 Type of proposed training offered by Industry Associations. The proposed topics are mainly on Entrepreneurship (50.0%) and export & import (50.0%), followed by topics on business management (25.0%), English course (25.0%), tourism (25.0%) and safety (3.13%).

S-57 The expectations of the Industry Association include the urgent need of training either locally or overseas (6.25%), improvement of labor skill capability (8.75%), improvement of curriculum and program of VTCs (3.75%), requirement of recognition on national and international certification (1.25%), and updating of its (1.25%). It was revealed that advanced training and skill capability improvement are critically required (88.0%), business access was insufficient (50.0%), improper skill and attitude of labor needs improvement (75.0%), national and international certifications are urgently required (38.0%), updating of Its (38.0%), as well as program and curriculum for training (25%) are needed.

13. Conclusion and Recommendation

S-58 Type of Training of VTCs:

- Training system need to be reformed to develop a new system with market/industry oriented. Such system should covers curriculum and training period of each training category. To attain the impractical system, collaborations are needed with related institutions, particularly users/industries, whether training in one category is required (such as welding or tune-up) or continuous packaged system at once;
- The curriculums have to be critically arranged in a proper manner between VTCs and users/industries. Therefore, roles and active participation of associations, industries, related institutions, and universities are primarily required to be accomplished; and
- Need to accomplished national and international certification of training, thus graduate of VTs enable to be employed either at domestic companies or overseas.

S-59 Training Budget of VTCs:

- VTCs training budget was mainly obtained from government, consequently the amount and frequency of the approved budget will entirely depend on the government financial plan. Financial support is fairly needed from government, local industries, or overseas grant. Besides, VTCs must proactively build networking, especially expected users or interested trainee from industries;
- There is also a need to gain other additional budget to upgrade and procure new equipment and its maintenance; and
- Salaries of trainers are proposed to be augmented to encourage teaching capacity and enthusiasm.

S-60 Trainers/Instructors of VTCs:

- Most trainers of VTCs are relatively close to retirement. Replacement is vitally required and actively mutual collaboration with other concerned institutions, such as universities, government staff, or interested companies is needed to attain the training objective;
- Insufficient number of trainers in the VTCs requires recruitment of new fresh instructors;
- Proficiency and capabilities of the trainers in VTCs occasionally does not match subject requirements. Refreshment training is highly recommended for those instructors to put the objective in place; and
- Salaries of trainers are proposed to be augmented to encourage teaching capacity and enthusiasm.

S-61 Facilities and Equipments of VTCs:

- The equipments of VTCs are typically out of date and short in number, so there is an urgent need to upgrade and support procurement of equipments and facilities accordingly;
- The existing equipments occasionally do not match with the obligation current industry development. Need to procure equipment which fitted with the latest technology; and
- Lack of participation of industry on training, especially for procurement of equipment. Need to develop more active collaboration between VTCs and institutions or industries to attain more participation.

S-62 Type of Training of Polytechnics:

- Education and training systems on polytechnic in Indonesia showed progressive improvement, even though this effort remains to be maintained and develop in the future. Competency based curriculum reflected that polytechnics expanded the system to be the excellent vocational institution in the country. Currently, various programs have been accomplished to match the need of company/industry with graduates;
- Development of excellent systems at each polytechnic would build the fair competition among the polytechnics and the higher education institutions.

Parallel with the objectives and functions, polytechnic in Indonesia had successfully run the activities, therefore, need to be enhanced and improved following the future technology;

- Need to accomplish national and international certification of training, thus graduate of polytechnic enable to be employed either domestic companies or overseas; and
- Need to construct sturdy performance to fight during high competitive era by conducting the education and training in line with market orientation on their curriculum, at lease by offering entrepreneur subjects.

S-63 Training Budget of Polytechnics:

- Polytechnic budget was restricted by new government regulation in regard to higher education institutions that have to search out their own budget to conduct their activities. Recently, government budget was still provided but it will be gradually diminished;
- Competitive budget system was applicable to support polytechnics activities. Therefore, institution with qualified and excellent activities would be able to seek budget definitely easier than others. Currently, budget for polytechnic was focused on renewal and rehabilitation of their facilities and equipments.

S-64 Lecturers/Trainers/Instructors of Polytechnics:

- Most lecturers in polytechnic were relatively capable to support the education systems. However, due to rapid advancement of technology, refreshment training and capacity building of the lecturers must be accomplished either regularly or periodically; and
- Need to develop networking among the polytechnics to collaborate and exchange experiences in information and technology.

S-65 Facilities and Equipments of Polytechnics:

- The equipments of polytechnic were relatively sufficient to support education and training programs on polytechnic. Budgeting system of facilities and equipment procurement occasionally were provided through grant system;
- The existing equipments tended to match with the obligation of current industry development. Proper maintenance is needed for long lasting use and preparation budget is required for renewal with the latest version, which fitted with the most recent technology; and
- Good collaboration with industry and users must be built to meet the needs and supply between the producer and the user.

THE BASELINE SURVEY ON INDONESIAN POLICY ON
INDUSTRIAL HUMAN RESOURCES DEVELOPMENT FOCUSING
ON VOCATIONAL TRAINING INSTITUTIONS

FINAL REPORT

LOCATION MAP

EXECUTIVE SUMMARY

Contents

	<u>Pages</u>
CHAPTER 1 INTRODUCTION.....	I - 1
1.1 Background	I - 1
1.2 Objective, Scope of Work and Location of the Study	I - 2
1.2.1 Objective	I - 2
1.2.2 Scope of Work.....	I - 2
1.2.3 Location of the Study.....	I - 4
1.3 The Survey Period and Study Team	I - 4
1.4 Work Plan and Approach	I - 6
1.5 Structure of Report.....	I - 8
 CHAPTER 2 REVIEW OF INDONESIAN POLICIES ON INDUSTRIAL HRD.....	 II - 1
2.1 Policy Strategy of Indonesian HRD.....	II - 1
2.2 Allocation of Budget for Industrial HRD.....	II - 3
2.3 Position of VTC/I and Polytechnics in the Industrial HRD	II - 5
2.3.1 VTC/I	II - 5
2.3.2 Polytechnics.....	II - 6
2.4 Estimation of Demand from Industry for Human Resources.....	II - 7
2.4.1 National Labor Force Plan	II - 7
2.4.2 Situation Analysis of Labor Market.....	II - 8
2.5 Promotion Program of the Industrial HRD by Private Sector.....	II -13

CHAPTER 3	INSTITUTIONAL STAKEHOLDERS PROGRAM	III - 1
3.1	General	III - 1
3.2	Government Sector Providers of VET in Indonesia	III - 2
3.2.1	Ministry of Manpower and Transmigration	III - 2
3.2.2	Ministry of National Education	III - 5
3.2.3	Ministry of Industry	III -10
3.2.4	Other Institutions	III -17
CHAPTER 4	VOCATIONAL TRAINING CENTERS.....	IV - 1
4.1	Introduction	IV - 1
4.2	General	IV - 2
4.3	Budget	IV - 2
4.4	Trainees	IV - 5
4.5	Curriculum and Textbooks of CTIU.....	IV - 7
4.6	Facilities and Equipments	IV - 8
4.7	Human Resources Qualification of VTCs.....	IV - 9
CHAPTER 5	POLYTECHNICS	V - 1
5.1	General	V - 1
5.2	Budget Allocation.....	V - 2
5.3	Trainees	V - 3
5.4	Curriculum.....	V - 5
5.5	Facilities and Equipment.....	V - 6
5.6	Lecturers.....	V - 6
CHAPTER 6	INDUSTRY SURVEY.....	VI - 1
6.1	Industry Survey Findings	VI - 1
6.2	Industry Association Survey Findings	VI - 6
CHAPTER 7	CONCLUSION AND RECOMMENDATION.....	VII - 1

List of Tables

Table 1.1	The Location of the Study	I - 4
Table 2.1	Indonesian Population, LFPR, Labor Force and Unemployment in 1994-2003	II - 2
Table 2.2	Composition of Working Population in 1994 - 2003	II - 2
Table 2.3	Percentage of Budget Allocation in HRD of Ministries in 2005	II - 3
Table 2.4	Budget Planning Recapitulation of Program, Sub-program and Activities of Agency for Training and Productivity in 2004 - 2009	II - 4
Table 2.5	Central Technical Implementation Unit by Location.....	II - 5
Table 2.6	Name and Number of Polytechnics in Indonesia.....	II - 7
Table 2.7	Estimation of Population, Labor Force, Economic Growth, Economically Active and Unemployment 2003-2009	II -12
Table 3.1	Percentage of Budget Allocation of Ministries in HRD.....	III - 2
Table 3.2	List of VTIs under MOMAT	III - 4
Table 3.3	Planning Program of Education and Training of Ministry of Industry in Fiscal Year 2005.....	III -15
Table 3.4	The Center of Fisheries Education and Training (CFET) in Indonesia.....	III -25
Table 4.1	In-depth Interview by Type of Institutions.....	IV - 1
Table 4.2	In-depth Interviews of VTCs by Location.....	IV - 1
Table 4.3	Allocation of Budget of VTCs.....	IV - 3
Table 4.4	Expenditure of VTCs.....	IV - 4
Table 4.5	Percentage of Revenue of VTCs.....	IV - 4
Table 4.6	Selection Method of Trainees in VTCs.....	IV - 5
Table 4.7	Criteria of Recruitment.....	IV - 6
Table 4.8	Placement of VTCs Graduates.....	IV - 7
Table 4.9	Number of Graduates	IV - 7
Table 4.10	Condition of Facilities and Equipments of VTCs.....	IV - 9
Table 4.11	Education Level of Instructors/Lecturers	IV -10
Table 4.12	Lecturers/Instructors Recruitment Method.....	IV -10
Table 6.1	Industry Survey Status and Response Rates	VI - 1
Table 6.2	Distribution of Respondent by Main Activities and Ownership	VI - 1
Table 6.3	Employment by Education, Size, and Ownership.....	VI - 2
Table 6.4	Relevant Training of Industry	VI - 5

Table 6.5	Proposed Training by Industry Companies	VI - 5
Table 6.6	Expectations and Criticisms of Industry Companies	VI - 6
Table 6.7	Relevant Training in Industry Associations.....	VI - 7
Table 6.8	Proposed Training by Industry Association.....	VI - 7
Table 6.9	Expectations and Criticisms of Industry.....	VI - 8

List of Figures

Figure 1.1	Implementation Schedule	I - 5
Figure 1.2	Organization Chart of The Study Team	I - 6
Figure 1.3	Work Plan Diagram.....	I - 7
Figure 2.1	Percentage of Budget Planning of Agency for Training and Productivity of MOMAT in 2004-2009	II - 4
Figure 2.2	Prediction Chart of Unemployment	II -11
Figure 2.3	Estimation of Economic Growth and Unemployment Growth.....	II -12
Figure 3.1	Organization Structure of State Government of Indonesia.....	III - 3
Figure 3.2	Apprenticeship Training Participants to Japan During 2001- 2003 (DGSSDM, 2005).....	III - 5
Figure 3.3	Organization Structure of Ministry of Manpower and Transmigration.....	III - 6
Figure 3.4	Organization Structure of Ministry of National Education	III - 9
Figure 3.5	Revitalization Program, Restructuring and Industrial Development and Development of Small and Medium Industries in MOI	III -11
Figure 3.6	Organization Structure of Ministry of Industry	III -16
Figure 3.7	Organization Structure of Ministry of Agriculture	III -18
Figure 3.8	Organization Structure of Ministry of Social Affairs.....	III -21
Figure 3.9	Organization Structure of State Ministry of Cooperatives, Small & Medium Enterprises.....	III-24
Figure 3.10	Organization Structure of Marine Affairs and Fisheries	III-26
Figure 4.1	Allocation of Budget by Type of Supporting Institutions	IV - 3
Figure 4.2	Allocation of Budget by Type of VTCs	IV - 3
Figure 4.3	Revenue by Type of Supporting Institutions	IV - 4
Figure 4.4	Revenue by Type of VTCs	IV - 5
Figure 4.5	Criteria of Recruitment for Trainee by Category.....	IV - 6
Figure 4.6	Criteria of Recruitment for Trainee by Type of Institutions.....	IV - 6
Figure 5.1	Expenditure of Polytechnics	V - 2
Figure 5.2	Revenue of Polytechnics.....	V - 3

Figure 5.3	Criteria of Selection for Trainee	V - 3
Figure 5.4	Method of Selection	V - 4
Figure 5.5	Composition of Session	V - 6
Figure 5.6	Distribution of Lecturer Qualification.....	V - 7
Figure 5.7	Method of Recruitment of Instructors/Lecturers.....	V - 7
Figure 6.1	Distribution of Respondent by Size and Ownership	VI - 2
Figure 6.2	Recruitment Methods in Indonesian, Japanese, and Non-Japanese Companies.....	VI - 3
Figure 6.3	Employment Formation in the Companies	VI - 4
Figure 6.4	Employment by Educational Level	VI - 6

List of Annexes

Annex 1	Scope of Work
Annex 2	List of Person/Institution Interviewed/Met
Annex 3	Lists of Facilities and Equipments of Polytechnics
Annex 4	Questionnaires

LIST OF ABBREVIATIONS

APBD	Local Government Budget
APBN	National Government Budget
ATP	Agency for Training and Productivity
BAPPEDA	Provincial Development Planning Agency
BAPPENAS	National Development Planning Agency
BDS	Business Development Service
BLK	Vocational Training Institution
BPPD	Agency for Regional Productivity Development
BPS	Central Bureau of Statistic
CCI	Chamber of Commerce and Industry
CETO	Center for Education and Training of Officials
CMP	Center for Manpower Productivity
CTT	Center for Training for Transmigration
CEVEST	Center of Vocational Extension Service Training
CTIU	Central Technical Implementation Unit
DGHE	Directorate General of Higher Education
DGSDM	Directorate General of Settlement of Domestic Manpower
DIKS	Supplemented Activities Content Lists
DIP/APBN	The Budgeted Government Revenues and Expenditures
EAI	The Employer's Association of Indonesia
EEPIS	Electronic Engineering Polytechnic Institute Surabaya
GBHN	Guidelines of the State Policy
GDP	Gross Domestic Product
HACCP	Hazard Analysis Critical Control Point
HRD	Human Resource Development
IFSC	Indonesian Footwear Service Centre
INPRES	Presidential Instruction
ITB	Bandung Institute of Technology
JICA	Japan International Cooperation Agency
LFPRs	Labor Force Participation Rates
LLK	Vocational Training Agency
LSM	Non-Government Organization (NGO)
MBB	Socialization and Community Subject

MKB	Working Specialization Subject
MKK	Skill Education Subject
MNCs	Multi National Companies
MOA	Ministry of Agriculture
MOI	Ministry of Industry
MOMAF	Ministry of Marine Affairs and Fisheries
MONE	Ministry of National Education
MOSA	Ministry of Social Affairs
MPB	Working Behavior Subjects
MPK	Personality Development Subject
NAD	Nangroe Aceh Darussalam
NAPC	National Agency for Profession Certification
NVTDC	National Vocational Training Development Center
O&M	Operational and Maintenance
PKL	Field Work
POLMAN	Polytechnic for Manufacturing
POLTEK	Polytechnic
PP	Government Regulation
PROPENAS	National Development Plan
REPELITA	The 5-Year Development Plan
SDM	Human Resource
SMCSME	State Ministry of Cooperative, Small and Medium Enterprises
SME	Small and Medium Enterprises
SMI	Small Medium Industry
SNI	Indonesia National Standard
SPP	Education and Development Contribution
TIU	Technical Implementation Unit
TOT	Training of Trainer
TPSDP	Technological and Professional Skill Development Project
VET	Vocational of Education and Training
VTC/I	Vocational Training Center/Institute
WTO	World Trade Organization

INDONESIA BASIC FACTS SHEET

Population (millions) ²	215.3 (2003)
Land Area (km ² '000) ¹	1,922.6 (2002)
Exchange Rate (per \$) ¹	9,311.20 (2002)
GDP (\$ billions) ¹	172.9 (2002)
GDP Per Capita (\$) ¹	802 (2002)
Real GDP Growth (%) ¹	3.7 (2002)
Consumer Price Inflation (%) ¹	10.0 (2002)
Current Account Balance (\$ bn) ¹	7.6 (2002)
Direct Investment ¹ :	
• Stocks Inward (\$ billions)	57.36 (2001)
• Flows Inward (% of GDP)	-2.32 (2001)
Labor Force (millions) ²	90.78 (2003)
Labor Force Participation Rate (%) ²	65.7 (2003)
Unemployment (millions) ²	9.5 (2003)
Unemployment rate (%) ¹	9.00 (2002)
Employment by Sectors (millions) ²	90.8 (2003)
• Agricultural Sectors (millions) ²	42 (2003)
• Trade (millions) ²	16.85 (2003)
• Manufacturing Industry (millions) ²	10.93 (2003)
• Construction (millions) ²	4.11 (2003)
• Services (millions) ²	16.91 (2003)

Source: ¹IMD World Competitiveness Yearbook (2003)
²Statistical Yearbook of Indonesia (2003)

INDONESIA EDUCATION STATISTICS

Illiteracy rate for 10 years and above in rural area 12.16%

Illiteracy rate for 10 years and above in urban area 4.91%

Illiteracy rate for 25 - 29 years in rural area 1.71 - 3.43%

Illiteracy rate for 25 - 29 years in urban area < 1%

Population 7-24 Years of Age Attending School by Age Category in 1999-2003

(in thousand)

Age Category	1999	2000 ¹	2001 ²	2002 ³	2003
7-12	25,710.1	23,767.9	24,595.6	25,013.5	26,577.5
13-15	10,910.6	10,053.1	9,693.7	9,461.3	10,309.4
16-18	7,049.0	6,582.0	6,266.8	6,240.4	6,572.1
19-24	2,695.2	2,590.6	2,494.6	2,480.7	2,630.4

Notes: ¹Excluding Nanggroe Aceh Darussalam and Maluku.

²Excluding Nanggroe Aceh Darussalam.

³Excluding Nanggroe Aceh Darussalam, Maluku, North Maluku, and Papua.

Percentage of Population Aged 10 Years or Over Whom Illiterate by Age Category and Urban-Rural Classification, in 2002-2003

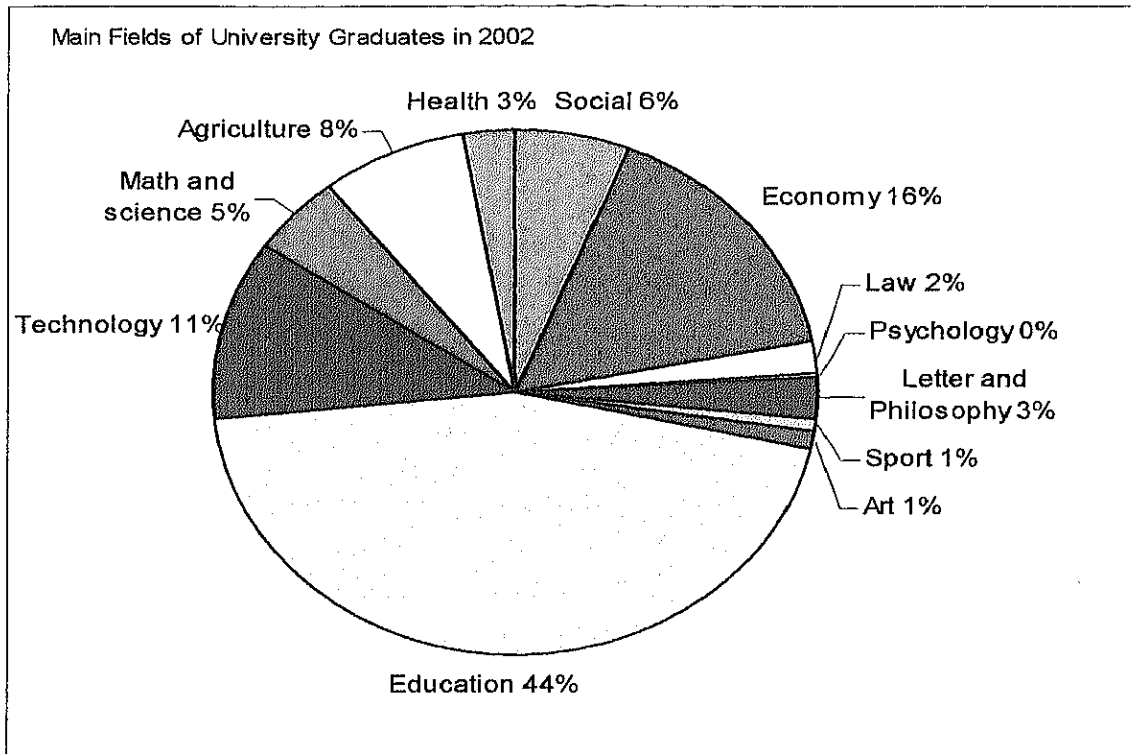
Age Category	Urban		Rural		Urban + Rural	
	2002 ¹	2003	2002 ¹	2003	2002 ¹	2003
10-14	0.64	0.49	1.69	1.71	1.26	1.24
15-19	0.58	0.54	1.71	1.85	1.18	1.28
20-24	0.65	0.58	2.37	2.61	1.51	1.63
25-29	0.75	0.86	3.09	3.43	1.98	2.27
30-34	1.75	1.36	5.53	5.31	3.75	3.54
35-39	3.19	2.82	9.18	9.47	6.44	6.62
40-44	4.91	4.98	13.71	13.34	9.69	9.75
45-49	6.03	6.30	17.01	16.75	12.17	12.38
50 +	22.02	19.68	39.04	37.12	32.15	30.33
Average	5.31	4.91	12.54	12.16	9.29	9.07

Note: ¹Excluding Nanggroe Aceh Darussalam, Maluku, North Maluku, and Papua.

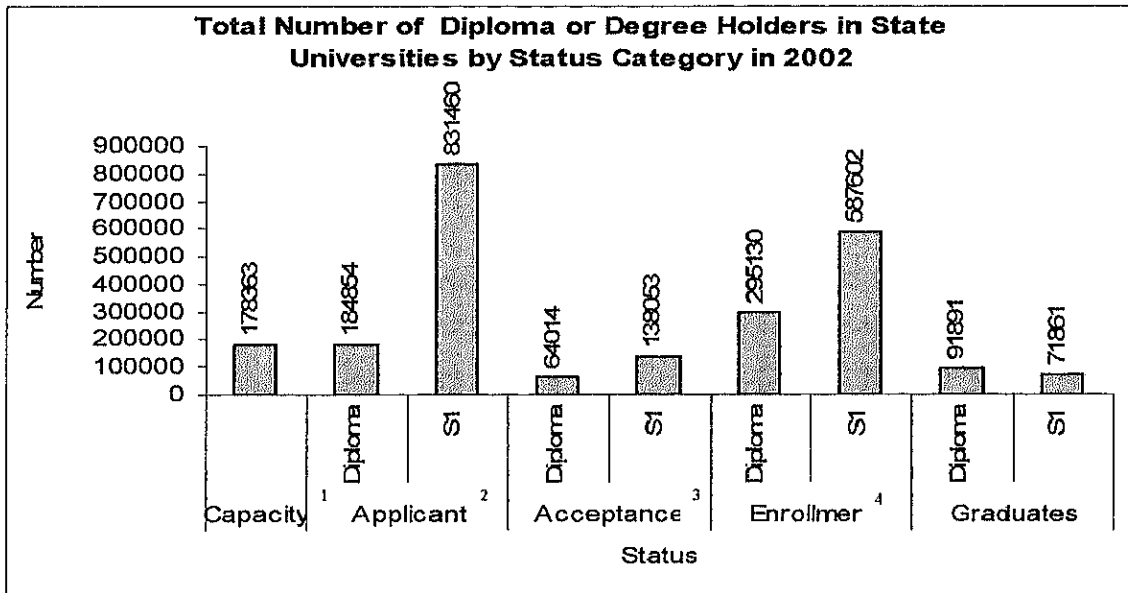
Number of Schools/Universities and Students in 2002/2003

Level	Schools	Students
Primary School	146,052	25,918,898
Junior High School	20,918	7,447,270
General Senior High School	8,036	3,143,730
Vocational Senior High School	4,943	2,099,753
State University	78	918,276
Private University	1,846	1,926,351

Source: Statistical Yearbook of Indonesia (2003)



Source: Statistical Yearbook of Indonesia (2003)



Notes: ¹Capacity = Total number of students which are able to be accepted by the existing Universities.

²Applicant = Total number of interested students submitting application form for entrance test.

³Acceptance= Total number of students passing the entrance University test.

⁴Enrollment= Total number of students completing the enrollment procedures.

Source: Directory, State Higher Education in Indonesia, DGHE MONE (2003)

CHAPTER 1

INTRODUCTION

1.1 Background

Global economy era and speedy technology development has given an impact on strong competitiveness as well as rapid environmental changes. Domestically manufactured products have to directly compete with imported goods. On the other hand, rapid worn out of production facilities and shortening period of product circulation constitute an implication which has to be accepted by business world due to rapid development of technology.

Industrial sector development needs to be supported by sturdy trading sector development covering: empowerment of domestic products, creation of efficient distribution system, and proper supervision of product circulation which in turn enable to enlarge the usage of domestic products as well as development of domestic business sector to anticipate the glow of foreign sector entering domestic market. It is expected that during the period of 2005 - 2009, industrial and trading sectors in Indonesia will grow about 8.3% and 7 - 9% per year, respectively.

The Government of Indonesia stresses the importance of sophistication of industries and transition of its economy to a knowledge-based economy from export-oriented economy, where the basis is on Multi National Companies. The Government of Indonesia also stresses the importance of development of human resource, to acquire elevated level of knowledge and technology.

Indonesia has to transform its labor force, especially in this era of globalization, to improve competitiveness and productivity if it wants to speed up economic recovery. The government, in the next five years, has to be able to improve the quality of the labor force, particularly their productivity, to achieve economic growth of seven percent per year. The government has seen that it has no alternative but to improve the quality of human resources in this country since almost 70 % of workers are poorly educated and unskilled. Unemployment numbers have also reached alarming levels. The government plan to raise the national standard of graduation at all education levels in order to improve the quality of human resources. It also must establish many training/apprenticeship centers to train graduates in such a way that they can compete in the domestic and international labor market. Otherwise the labor issues will become more complicated and our workers will not have the skills to work internationally, which would mean Indonesia, as a country, would never be able to compete with even the other countries in the Southeast Asian region.

Besides improving the quality of human resources, workers also have to improve their work ethos and culture in order to improve their productivities. The government should raise the education budget to improve the quality of education and establish a cross-department agency to handle the unemployment problem and improve the quality of workers. The improvement of educational quality is a key requirement so that it will be easier for private companies and government agencies to provide on-the-job training for fresh graduates. This will help create conditions that are conducive to investment and support the government's program to encourage the real sector to grow faster.

In the field of vocational training, JICA has consistently extended cooperation to Indonesia, as represented by cooperation to the Center for Vocational Training Center in Makassar, the Center of Vocational Extension Service Training (CEVEST) and Electronic Engineering Polytechnic Institute in Surabaya (EEPIS). Recently, JICA has also dispatched individual experts attached to Ministry of Manpower and Transmigration and Ministry of National Education, Senior Expert and Junior Expert in related fields in order to develop capability of lecturers there.

The Government of Indonesia has also emphasized policy on development of human resource and has performed several measures such as strengthening of capabilities of vocational training institutions and polytechnics.

Therefore JICA Indonesia decided to conduct Baseline Survey, "Indonesian Policy on Industrial Human Resource Development - Focusing on Vocational Training Institution" in order to gather comprehensive data and information which contribute to the future Japanese Technical Cooperation in the area of vocational training.

1.2 Objective, Scope of Work and Location of the Study

1.2.1 Objective

The objective of the Baseline Survey is to gather comprehensive data and information for the Japanese Technical Cooperation in the area of Industrial Human Resource Development. This will be useful to identify appropriate areas in the area of vocational training in Indonesia.

1.2.2 Scope of Work

(1) Vocational Institutes that had been Baseline Surveyed

Vocational institutes which had been baseline surveyed are outlined as follows:

- a). Vocational Training Centers/Institutes, Ministry of Manpower and Transmigration;
- b). Vocational Training Centers/Institutes, local government (provincial level);

- c). Polytechnics, Ministry of National Education;
- d). Vocational Training Centers/Institutes under the private sector; and
- e). Vocational Training Centers/Institutes under related Ministries such as: MOA, MOI, MOSA, SMCSME, and MOMAF.

(2) Item which had been Baseline Surveyed

Item which had been baseline surveyed includes:

- a). Gathering basic information of policy and program on industrial development from related ministries, covering:
 - Strategy on industrial human resource development;
 - Allocation of the budget for industrial human resource development;
 - Position of vocational training center/institute and larger education institute including university in the industrial human resource development;
 - Methodology on the estimation of the demand from industry for human resources; and
 - Program on promotion of the industrial human resource development by private sector.
- b). Gathering basic information of vocational training institutes by documental and interview Baseline Survey, covering:
 - General: a) midterm and long term plan of the institutes; b) management system; c) objectives; d) function; and g) activities on introduction of place of employment;
 - Budget: a) allocation of the Budget; b) expenditure; c) income from tuition and amount of tuition; and d) school expenses; and
 - Trainees: a) methodology of selection of trainees; b) qualification of trainees; c) place of employment of ex-trainees; and d) alumni.
- c). Analyzing curriculum and text books of vocational training institutes by documental and interview Baseline Survey, covering:
 - Analyzing structure, covering area, and consistency of curriculum and text books;
 - Gathering information of procedure on preparation of the curriculum and text books; and
 - Analyzing curriculum and text books from the point of matching with the needs from industry.
- d). Gathering information of facilities and equipment in vocational training centers/institutes by documental and interview Baseline Survey, covering: 1) contents (Specification, Manufacturer and Manual); 2) role in the curriculum; 3) rate of operation; 4) allocation of expert/lecturer; 5) system for maintenance; and 6) needs for new facilities and equipments.

- e). Gathering information of lecturers in vocational training institutes by documental and interview Baseline Survey, covering: 1) qualification of lecturers (experience and educational background); 2) number and allocation of lecturer and related staff; 3) method of recruitment of lecturer and related staff; 4) method and system of training of lecturer and related staff; and 5) salary of lecturers.
- f). Analyzing needs and request from industry by interview and questionnaire Baseline Survey, covering:
- Needs and request from industrial associations such as CCI and EIA to the public and private vocational institutes and the government;
 - Needs and request from private companies (10 selected Japanese MNCs, 10 selected other MNCs, 20 selected Indonesian companies) to the public and private vocational institutes, including: 1) gathering information on graduates from vocational training institutes in MNCs; 2) gathering information on policy of MNCs' employee training and recruitment; and 3) gathering information on expectation of industry toward government policy on human resource development.
- g). Discussing on future direction for vocational training through interview with related ministries such as Ministry of Manpower and Transmigration, Ministry of National education, and Ministry of Industry.

1.2.3 Location of the Study

The Baseline Survey had been conducted in six major cities in Indonesia, as listed in Table 1.1 below.

Table 1.1 The Location of the Study

No.	Location	Province
1.	Jakarta	DKI Jakarta
2.	Bekasi	West Java
3.	Bandung	West Java
4.	Surabaya	East Java
5.	Makassar	South Sulawesi
6.	Denpasar	Bali

1.3 The Survey Period and Study Team

The period of the Baseline Survey on Indonesia Policy on Industrial Human Resources Development Focusing on Vocational Training Institutions is from the beginning of January to the beginning of March 2005. Collection of data and information was conducted from early January to the third week of January 2005. The implementation schedule of the Baseline Survey is shown in Figure 1.1.

No.	Work Items	Jan-05					Feb-05			Mar-05			
		1	2	3	4	1	2	3	4	1			
I. Stage I Collecting Data & Review													
1	Kick off Meeting		☐										
2	Collecting Data & Information												
3	Review & Extration of the Data												
II. Interview & Questionnaires Survey													
1	Interview and Questionnaire Survey in Jakarta and Bandung												
2	Interview and Questionnaire Survey in Surabaya												
3	Interview and Questionnaire Survey in Makassar												
4	Interview and Questionnaire Survey in Denpasar												
5	Progress Meeting									7 Feb			
III. Structural Analysis & Discussion													
1	Structural Analysis												
2	Draft Final Report & Executive Summary												
3	Discussion with JICA												
IV. Presentation on Final Report													
1	Presentation Meeting												
2	Final Report & Executive Summary												
	Report											DFR	IR
													FR

Figure 1.1 Implementation Schedule

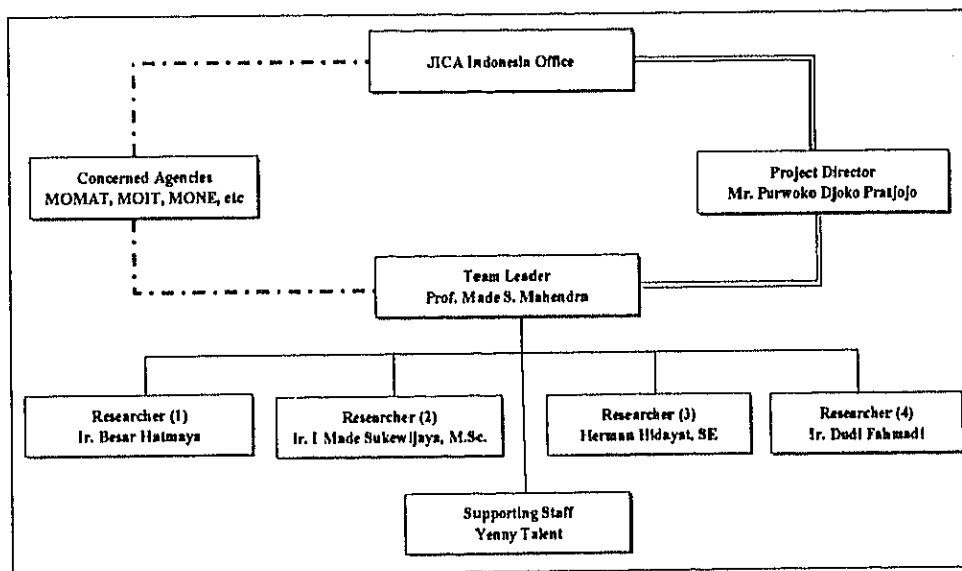
The Study Team is consisted of Team Leader, four researchers and one supporting staff, under the organization of Project Director and JICA Indonesia Office, as illustrated in Figure 1.2.

1.4 Work Plan and Approach

An overview of work plan of the Study is illustrated in Figure 1.3. The Baseline Survey has carried out several surveys and in-depth interviews as follows:

- Survey of Institutions:
Survey questionnaires were sent out and face-to-face in-depth interviews were conducted with 7 Vocational Training Centers, 4 Polytechnics, 5 chamber of Commerce and Industry, and 4 Employer's Association of Indonesia.

Figure 1.2 Organization Chart of The Study Team



- Survey of Industries:
Interview questionnaires were sent out to more than 40 manufacturing industries, including Japanese MNCs, Non-Japanese MNCs and Indonesia-owned firms. JICA also assisted the Study Team to produce and send out Letter to MNCs.
- Interviews with Agencies:
The Study Team carried out interviews with the key agency stakeholders, including:
 - Ministry of Manpower and Transmigration;
 - Ministry of National Education;
 - Ministry of Industry;
 - Ministry of Agriculture;
 - Ministry of Marine Affairs and Fisheries;
 - Ministry of Social Affairs; and
 - State Ministry of Cooperative and Small & Medium Enterprises.

The list of persons and institutions met and interviewed is listed in Annex 2.

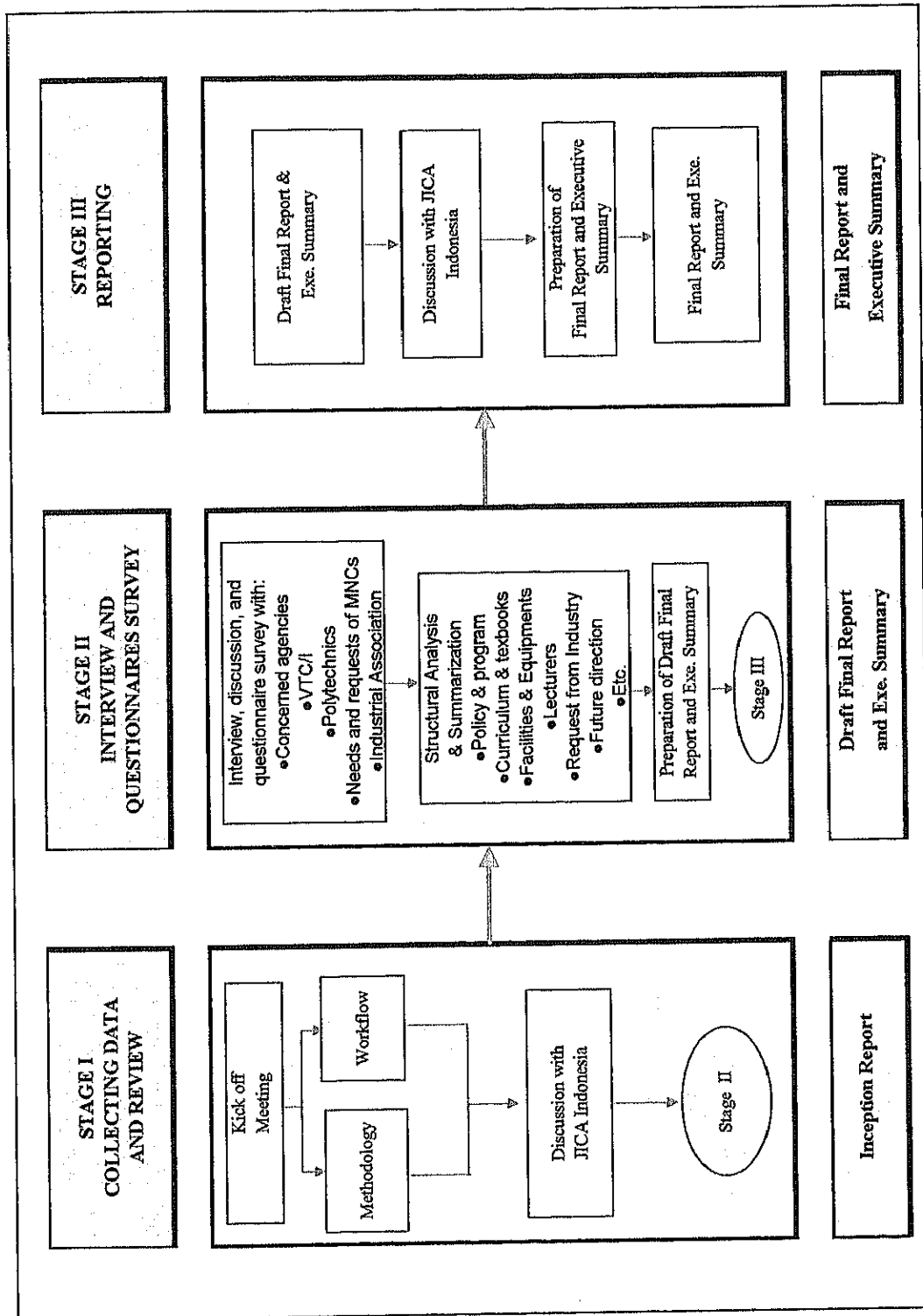


Figure 1.3 Work Plan Diagram

1.5 Structure of Report

Draft Final Report is divided into seven chapters as listed below:

- Chapter 1** Presents the background, objective, scope of work, location, survey period and the Study Team. It also summarizes the work plan, approach and structure of DFR.
- Chapter 2** Reviews the Indonesian policy on HRD for the industrial sector including national development program, allocation of budget, position of VTC/I and Polytechnics, and estimation of demand from industry for human resources.
- Chapter 3** Presents institutional stakeholders program and government sector providers of VET in Indonesia. An overview of ministries program of MOMAT, MONE, MOI, and other related institutions is included in this chapter.
- Chapter 4** Presents the finding of the Survey in Provincial Vocational Training Institutions covering: budget, trainees, curriculums and textbooks, lectures, facilities and equipments.
- Chapter 5** Presents the finding of the Survey in Polytechnics covering: budget, trainees, curriculums and textbooks, lectures, facilities and equipments.
- Chapter 6** Presents the findings of the survey of Industry.
- Chapter 7** Presents the conclusion of the Baseline Survey.

CHAPTER 2

REVIEW OF INDONESIAN POLICIES ON INDUSTRIAL HRD

2.1 Policy Strategy of Indonesian HRD

The world is currently marked by a revolutionary change in industry and economy as well as numerous transformation in types of employment and position qualification. The development of labor force structure in Indonesia is marked with the continuous decrease of employment opportunities. The impact of high technology is a great change in the composition of work force by education level. The proportion of workers with low education is still dominant in Indonesia. However, the use of modern technology in the production process requires workers with higher education so that the number of better skill workers will increase and gradually replaces and, in effect decreasing the number of non-skill workers.

There were 80.1 millions labor forces out of the total of Indonesian population in 1995, which was 192.2 millions people. Among the actual number of labor force, 61.5% was classified as full time workers with only 38.5% worked part timely. In comparison, the predicted number of labor force in 2003 was 90.8 millions, consisted of 58.1 millions people working full time and only 32.7 millions worked part timely.

The Indonesian labor force participation rate (LFPR) in 1994 was recorded 58% and remains unchanged in about three years period (1994-1997), but it was gradually increasing within 1998 to 2003 with an average of 67.1%, which presumably affected the uncertainly of the national socio-economics condition. The member of working population can not be considered as the member of presence working opportunities due to mismatch in labor market.

The total unemployment in Indonesia was estimated 2.2 millions people in 1994, increased significantly in 10 years period and moderately reached 9.5 millions people in 2003. The Indonesian population, Labor Force Participation Rate, full time and part time labor force, and unemployment in 1994-2003 is illustrated in Table 2.1.

Table 2.1 Indonesian Population, LFPR, Labor Force and Unemployment in 1994-2003

Year	1994	1995	1996	1997	1998	1999	2000	2002	2003
Total Population ('000)	192,216.5 ¹	194,755	198,320.0 ³	201,353.1 ³	204,392.5 ³	206,517.0 ³	205,843 ⁷	212,003 ⁸	215,276 ⁹
LFPR (%)	58.0	56.6	58.3 ²	58.0 ⁴	66.9 ⁵	67.2 ⁵	67.8 ⁶	67.8	65.7
Labor Force:									
• Full time ('000)	*	49,263.1	50,159.1	52,711.3	53,370.6	55,278.3	56,210.0	57,968.8	58,091.9
• Part time ('000)	*	30,847.0	35,542.7	34,338.4	34,301.9	33,538.6	33,627.8	33,678.4	32,693.0
Unemployment ('000)	2,245.53	6,251.20	4,407.77 ¹⁰	4,275.16 ¹¹	5,062.48 ¹²	6,030.32 ¹³	5,813.23 ¹⁴	9,132.10 ¹⁵	9,531.09 ¹⁶

Notes: ¹Calculated based on Population Census 1990
²Based on Intercensal Population Survey
³Projection based on 1995 Intercensal Population Survey
⁴Based on National Labor Force Survey
⁵Excluding East Timor
⁶Excluding Maluku
⁷Including 2,283,981 persons (preliminary non response) and 2,317,216 persons (estimation)
⁸Preliminary figure of population estimation, calculated using mathematical methods
⁹Estimation figures June 2003
¹⁰Based on 1996 National Labor Force Survey
¹¹Based on 1997 National Labor Force Survey
¹²Based on 1998 National Labor Force Survey
¹³Based on 1999 National Labor Force Survey
¹⁴Based on 2000 National Labor Force Survey, excluding Maluku
¹⁵Based on 2002 National Labor Force Survey
¹⁶Based on the 2003 National Labor Force Survey

LFPR ~ Labor Force Participation Rate

* Data was not specified in 1994

Source: Indonesia Statistical Year Book (1994, 1995, 1996, 1997, 1998, 1999, 2000, 2002 and 2003)

From 80.1 millions people who have been working in 1995, around 44% were working in agricultural sector, followed by wholesale trade/retail/restaurants/hotel (17.4%), public services (15.1%) and processing industry sectors (12.9%). Similar trend was fortuitously observed in 2003, where around 42 millions people were working in agriculture/forestry/hunting/fisheries sectors (46.3%), followed persistently by wholesale trade/retail/restaurant/hotels (18.5%), processing industries (12.0%), and public services sectors (10.7%). The composition of working population in 1994-2004 is illustrated in Table 2.2.

Table 2.2 Composition of Working Population in 1994 - 2003

(in thousand)

Sector Year	Agriculture Forestry Hunting Fisheries	Mining and Quarrying	Processing Industry and Quarrying	Electricity, Gas and Water	Construc tion	Whole- Sale trade, Retail, Restaurant and Hotel	Trans- portation, Storage, Communi- cation	Financing, Insurance, Real Estate and Business Services	Public Services
1993 ¹	40,071.85	653.30	8,784.30	171.57	2,810.36	12,508.07	2,931.35	564.97	10,566.41
1995	35,233.27	643.33	10,127.05	216.13	3,786.08	13,883.68	3,458.16	658.50	12,121.87
1996	37,720.25	774.21	10,773.04	164.14	3,796.23	16,102.55	3,942.80	689.73	11,728.50
1997	35,848.63	896.61	11,214.82	233.24	4,200.20	17,221.18	4,137.65	656.72	12,637.53
1998	39,414.77	674.60	9,933.62	147.85	3,521.68	16,814.23	4,153.71	617.72	12,394.27
1999	38,378.13	725.74	11,515.96	188.32	3,415.15	17,529.10	4,206.07	633.74	12,224.65
2000 ²	40,676.71	*	11,641.76	*	3,497.23	18,489.00	4,553.86	882.60	9,574.00
2001 ³	39,743.91	**	12,086.12	**	3,837.55	17,469.13	4,448.28	1,127.82	11,003.48
2002 ⁴	40,633.27	631.80	12,109.99	178.28	4,273.91	17,795.39	4,672.58	991.75	10,360.19
2003	42,001.40	729.10	10,927.30	156.40	4,106.60	16,845.00	4,977.00	1,294.8	9,746.40

Notes: ¹Data in 1994 was not specified
²Based on the 2000 National Labor Force Survey, excluding Maluku
* Not specified, grouped in others (89,837.73)
³Based on the 2001 National Labor Force Survey
** Not specified, grouped in others (1,091.12)
⁴Based on the 2002 National Labor Force Survey

PROPENAS (1999-2004) had formulated five major agendas, among others include improvement of community welfare and culture endurance. This specific agenda covers development in demography, family planning, health, religion, youth, sport, social welfare, women empowerment, culture, as well as science and technology sectors.

In association with manpower, development in labor force cannot be separated from national economic development during monetary crisis. In general, manpower problems can be classified into three categories as follows:

- Increasing number of unemployment;
- Improper quality of labor force; and
- Displeased right and obligation of labor force.

Understanding the varieties of problems encountered, manpower policy should keep look out at sustained economic growth process through integrated policies, as well as compliment macro economic policy and real sector. Policy strategy on manpower is directed to encourage widely community participation, through:

- Creation of employment in line with macro economic policy base on effort of decreasing unemployment in various sectors and regions;
- Increasing competency and manpower stand alone in order to increase mobility and manpower welfare;
- Increasing manpower welfare through determination of wage system and proper welfare assurance, and benefit both sides;
- Provision of manpower freedom to be alliance;
- Increasing safety protection for workers who directly involves in production process of goods and services; and
- Upgrading of training system, placement, monitoring, and Indonesian workers overseas.

2.2 Allocation of Budget for Industrial HRD

Allocation of budget for human resource development in Indonesia is mainly proposed for non formal training (41.82%), training for officials (35.57%), and human resources development (21.85%), as illustrated in Table 2.3.

Table 2.3 Percentage of Budget Allocation in HRD of Ministries in 2005

Item	Budget Allocation (%)
Human Resources Development	21.85
Training for Officials	35.57
Non-Formal Training	41.82
Education	0.26
Higher Education	0.50
Total (%)	100

Source: Ministry of Finance (2005)

Notes: ¹Average of proposed budget at ten Ministries including MOA, MOIT, MOT, MONE, MOMAT, MOSA, MOF, MOMAF, MPW and SMCSME

Major tasks of Agency for Training and Productivity of MOMAT in education and training, as well as improvement of labor force productivity are covering the followings:

- Education and training of officers, both central and regional;
- Training of labor force in services industry and manufacture, either for domestic or international market;
- Improvement of labor force productivity, micro and macro; and
- Training of transmigration community, before and after settlement.

Recapitulation of budget planning for sub-program and activities of Agency for Training and Productivity of MOMAT in 2004-2009 is illustrated in Figure 2.1 and Table 2.4. About 29.97 % of the planned budget is allocated for education and training of officers and only 7.23 % for training is proposed for training of labor productivity.

Figure 2.1 Percentage of budget Planning of Agency for Training and Productivity of MOMAT in 2004-2009

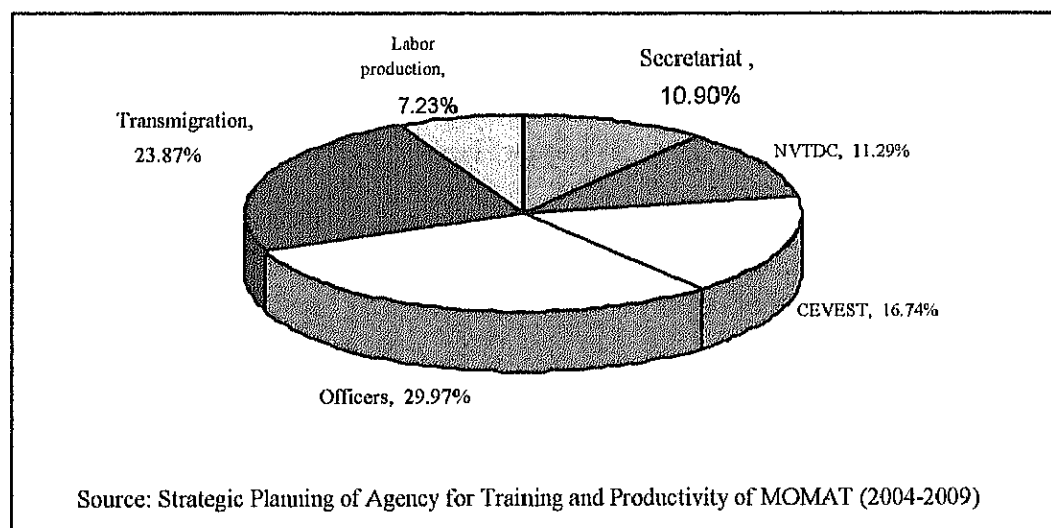


Table 2.4 Budget Planning Recapitulation of Program, Sub-program and Activities of Agency for Training and Productivity in 2004-2009

(in millions Rp.)

No.	Unit	Year						Total
		2004	2005	2006	2007	2008	2009	
1	Secretariat ATP ¹	6,017.9	11,960.7	14,515.0	14,185.1	14,552.1	16,097.2	77,328.0
2	NVTDC ²	11,034.5	13,484.6	15,218.2	13,821.4	13,735.7	12,754.9	80,049.4
3	CEVEST ³	11,076.1	21,514.8	20,890.5	23,114.6	20,620.7	21,471.8	118,688.5
4	CETO ⁴	30,605.2	38,842.1	32,989.4	34,140.5	36,670.7	39,287.1	212,535.1
5	CTT ⁵	18,031.5	39,182.1	36,292.1	31,859.5	21,567.2	22,322.6	169,255.0
6	CMP ⁶	4,123.4	6,382.0	7,712.0	9,930.0	10,605.0	12,555.0	51,307.4
	Total	80,888.7	131,366.3	127,617.2	127,051.2	117,751.4	124,488.7	709,163.4

Source: Strategic Planning of ATP MOMAT (2004-2009).

¹ATP = Agency for Training and Productivity; ²NVTDC = National Vocational Training Development Center/Puslatker; ³CEVEST = The Center for Vocational Extension Service Training/Puslatker TKLN-CEVEST; ⁴CETO = Center for Education and Training of Officials; ⁵CTT = Center for Training for Transmigration; ⁶CMP = Center for Manpower Productivity.

2.3 Position of VTC/I and Polytechnics in the Industrial HRD

2.3.1 VTC/I

Vocational training of manpower is urged to create qualified skilled labor, professional, and productive. In order to attain an optimal result, training should be guided and matched the demand of labor market. Besides, the equipment of each VTC/I urgently need to be periodically upgraded.

Regional Autonomy that is referred to decentralization program is accounted to successfully manage resources in their own region. Before regional autonomy era, 176 VTIs that were spread out around the country (which consisted of 157 Vocational Training Institutions/BLK and Vocational Training Agencies/LLK, as well as 19 Agencies for Regional Productivity Development/BPPD), their management was handled by Directorate General Supervision and Employee Productivity, which was then altered to be Directorate General Settlement of Domestic Employee. Through the policy and training and labor productivity program, Directorate General Settlement of Domestic Manpower, recently, managed six VTIs in the region as Central Technical Implementation Unit, as listed in Table 2.5.

Table 2.5 Central Technical Implementation Unit by Location

No.	Institution	Location
1.	CTIU Serang	Banten
2.	CTIU Makassar	South Sulawesi
3.	CTIU Samarinda	East Kalimantan
4.	CTIU Medan	North Sumatra
5.	Agricultural CTIU Lembang	West Java
6.	CTIU Surabaya	East Java

After regional autonomous era, about 47 VTC/I handed over to local government, aimed to suit the training plan which hopefully match the demand of each region. Meanwhile, five VTC/I are still managed under Central Government control and responsibility through Directorate of Job Training, Directorate General for Supervision and Placement of Domestic Manpower, covering: VTC/I Ujung Pandang City, Medan City, Bandung City, Bekasi City, and Mataram City.

Recently, the management of training and productivity unit through regional autonomous policy was not performing as expected. The fact reveals that some VTC/I were not operating smoothly, and some were not properly maintained. It seemed that local government was only interested in occupying the asset of VTC/I.

As a consequence, hand over of VTI from Central to local government created many unexpected problems such as personnel, machineries, training program, training facilities and infrastructures. Even more, some VTI were utilized as Regional Education and Training, Training Agency for Overseas Labor, or make use for unclear functions and tasks, causing regional egotistical problems. Their main obstacles recently including: instructors, programs, equipments, and VTI management.

Training reformation as a strategic policy is urgently required, which is considered as a restructuring of training management, covering:

- Training reformation from Supply Driven to Demand Driven orientation that is suitable to training requirement and competency;
- Training reformation from Social oriented to Economic oriented; and
- Reformation from Government Based Training to Private Based Training.

The objective of training reformation is to form training policy and supervision, including:

- Link and match of training;
- Training flexibility;
- Centralization and decentralization training management; and
- Improvement of community role.

To ensure sustainability of operational program and national productivity in improving of human resources quality and also to face global competition, Minister of Manpower and Transmigration has suggested the local government who unable to manage VTI to return the management to the Ministry of Manpower and Transmigration with a proper procedure.

2.3.2 Polytechnics

Polytechnic in Indonesia has been established since 1976 in Institute of Technology Bandung (ITB), as a result of bilateral cooperation between ITB on behalf of Indonesian government and the Swiss Confederation. The Bandung Polytechnic for Manufacturing which is now called Politeknik Manufaktur Bandung (POLMAN-Bandung) previously named Politeknik Mekanik Swiss - ITB. Success of this polytechnic became a model of Polytechnic development in Indonesia.

The further development of Polytechnic in Indonesia was in 1979 where Polytechnic's model has been further assisted by World Bank through establishment of six polytechnics including: Polytechnic of Brawijaya University, Polytechnic of Diponegoro University,

Polytechnic of Institute of Technology Bandung, Polytechnic of Indonesia University, Polytechnic of North Sumatra University, and Polytechnic of Sriwijaya University.

Development of those six polytechnics for several years was successful, therefore, in the year of 1984 Indonesian government decided to extend Polytechnic in other states of Indonesia by establishing eleven newly polytechnics. Development of the polytechnics was assisted by World Bank and Australian Government.

According to National Education Law No. 2/1989 and Government Act No. 30 /1990, which was then revised by Government Act No. 57/1998, polytechnic became an independent institution. Presently there are 25 polytechnics in Indonesia, as listed in Table 2.6.

Table 2.6 Name and Number of Polytechnics in Indonesia

No.	Name of Polytechnic	Province
1	Lhokseumawe State Polytechnic	Nangroe Aceh Darussalam
2	Medan State Polytechnic	North Sumatra
3	Padang State Polytechnic	West Sumatra
4	Payakumbuh Agricultural Polytechnic	West Sumatra
5	Sriwijaya State Polytechnic	South Sumatra
6	Lampung State Agricultural Polytechnic	Lampung
7	Jakarta State Polytechnic	DKI Jakarta
8	Bandung State Polytechnic	West Java
9	Bandung Manufacture Polytechnic	West Java
10	Semarang State Polytechnic	Central Java
11	Surabaya State Shipping Polytechnic	East Java
12	Electronics Engineering Polytechnic Institute Surabaya	East Java
13	Malang State Polytechnic	East Java
14	Jember State Polytechnic	East Java
15	Pontianak State Polytechnic	West Kalimantan
16	Banjarmasin State Polytechnic	South Kalimantan
17	Samarinda State Polytechnic	Central Kalimantan
18	Samarinda State Agricultural Polytechnic	Central Kalimantan
19	Manado State Polytechnic	North Sulawesi
20	Ujung Pandang State Polytechnic	South Sulawesi
21	Pangkep State Agricultural Polytechnic	South Sulawesi
22	Ambon State Polytechnic	Maluku
23	Bali State Polytechnic	Bali
24	Kupang State Polytechnic	East Nusa Tenggara
25	Kupang State Agricultural Polytechnic	East Nusa Tenggara

Source: Directory, DGHE (2003).

2.4 Estimation of Demand from Industry for Human Resources

2.4.1 National Labor Force Plan

Labor force problems in Indonesia are presumed to be complicated, enormous and complex. Enormous, because involved millions of people, and complex, because of the

problems was affected by plenty of factors that their interaction in track difficult to be understood.

Population growth of working age for period 2000-2005 was estimated about 1.7% per year. That calculation is relatively high comparing to total population growth in period of 2000-2005 and 2005-2009 which are about 1.3% and 1.1%, respectively.

The problem of employee in Indonesia was affected by several factors, such as difficulties of return flow of capital, export protection of developed countries to developing countries, investment climate, global market, various regulations, and non-conductive bureaucracy behavior of business development, as well as pressure of increasing wages level. Other encountered problems are the implementation of regional autonomy, in many cases are not support the creation job opportunities.

There are three main ways to create job opportunities, including:

- Slow down the population growth considered to constrict labor demand growth;
- Increasing worker intensity to produce output (labor intensity of output); and
- Hastening economical growth.

2.4.2 Situation Analysis of Labor Market

There is some mismatch in Indonesian labor market between graduate and job opportunities. It can be clearly noticed by increasing of wage index of educated labor (up to Senior High School) relatively to uneducated labor (below Primary School), especially in last two years. It indicates the followings:

- a. Demand of educated labor faster than number of total labor;
- b. Demand of educate labor faster than supply of educated labor; and
- c. Both a and b.

The implications are: increasing of wage gap, unfulfilled labor demand, and high number of educated unemployment.

To compress unemployment rate according to PROPENAS (National Development Program), hard and systematic efforts are required. Until 2009, unemployment rate is estimated about 7.5 million or about 5.5% from total labor force. PROPENAS also targeted the decrease unemployment rate to prompt economic growth, however difficulties will be unavoidably faced due to the average of economic growth at about 6% per year during 2005-2009.

Estimation in population growth assumes that fertility and mortality rate are decreasing, with total fertility rate of 2.15% and expected of woman life until 70 years. Estimation of

labor participation rate in 2010 is in linear growth, thus labor force is predicted to increase faster than total population growth.

Number of population in 2009 is estimated 226.9 million, and about 168.9 million or 73.7% is working age and about 116.5 million or 69.0% of working age will go into labor market. This is realistically an enormous number. Unemployed people is estimated to decrease starting from 2006, hence, in 2009 the number will reach 7.5 million or about 5.5% from total labor force.

Prediction of macro economy according to Keynesian model and focused on demand with moderate assume. Variables that were used in this model covering family consumption, export, import, Rupiah exchange rate, inflation, and economic situation in USA and Japan. Refer to this model economic growth rate per year 4.1% in period of 2000-2004 and 6% in 2005-2009 periods.

The complete models share the property that provided money wages, prices and the interest rate are perfectly flexible, the equilibrium of the system will be one with full employment, in the sense that the labor market is cleared. This does not mean, however, that the force. Given the market clearing wage, some people may be quite willing to remain unemployment. In the Classical version of the model, where labor supply depends upon the real wage, the equilibrium level of employment and hence output are determined solely by the labor market and are independent of any monetary or fiscal policies. In the other polar case, where labor supply depends on the money wage, monetary and fiscal policies are generally effective in being able to influence the market clearing level of activity.

Both models, however, exclude the possibility of involuntary unemployment, in the sense of a non-clearing labor market. To incorporate this phenomenon into the model requires some form of rigidity, and inflexibility money wages, prices, or the rate of interest are capable of explaining it.

For simplicity, we shall return to the case where both labor demand and supply depend upon the real wage.

Formally, the model with rigidities can be described by the following set of equations.

$$Y - C(Y - T) - I(r) - G = 0 \quad (a)$$

$$\frac{M}{P} - L(Y, R) = 0 \quad (b)$$

$$W/P = \phi(N^D) \quad (c)$$

$$W/P = \varpi(N^S) \quad (d)$$

$$Y = F[\min(N^D, N^S)] \quad (e)$$

$$P = \bar{P}, \text{ or } W = \bar{W}, \text{ or } r = f \quad (f)$$

Source: Turnovsky (1982)

Equations (a), (b), just as before are the *IS* and *LM* curves, while (c) and (d) describe labor demand and labor supply respectively. The only difference is that now, since we wish to allow for the possibility of unemployment, we discard the equilibrium condition $N^D = N^S$. The production function (e) relates output to employment, which is given by the smaller of the two quantities N^D, N^S . If $N^D < N^S$ employers hire N^D leaving $N^S - N^D$ involuntarily unemployment; if $NS < ND$ employers hire the available supply of labor N^S . The final equation fixes P, W or r , depending upon the rigidity assumed.

The system (a) defines six equations determining the six endogenous variables Y, N^D, N^S, P, W, r , and in general these can be uniquely determined. It is clear that there is non reason for $N^D = N^S$, in which case the model will imply either an excess demand for, or excess supply of, labor. The nature of the equilibrium solution, however, depends upon the rigidity assumed.

Suppose prices were rigid so that $P = \bar{P}$. In this case Y and r are determined by the *IS* and *LM* curves, just as they are in the simple model. The production function then determines employment, the smaller of N^D and N^S . Substituting this value of employment into (c), (d) enables one to determine whether $N^D > N^S$ or $N^D < N^S$, as well as the corresponding money wage. The equilibrium is thus determined recursively.

A recursive solution is also obtained when $r = f$. In this case, output is determined by product market equilibrium, and given this value of Y, P is now determined so as to equilibrate the money market. Given Y, P, r , the remaining variables N^D, N^S, W are determined through the production function and labor market, just as they are in the rigid price case.

The third case, $W = \bar{W}$, is more complicated. Equilibrium cannot be attained in any simple sequential manner. All variables are determined simultaneously.

Labor Force Participation Rate (LFPR) is defined as number of person in labor force divided by population.

$$\text{LFPR} (t) = \text{LF} (t) / \text{POP} (t)$$

Where:

LFPR (t) = Number of LFPR in t period

LF (t) = Number of Labor force in t period

Formulation used in calculating total labor force is:

$$\text{LF} (t) = \sum_{i,j} \text{LF} (i,j,t) * \text{POP} (i,j,t)$$

Where:

i = age ^{i,j}

j = sex

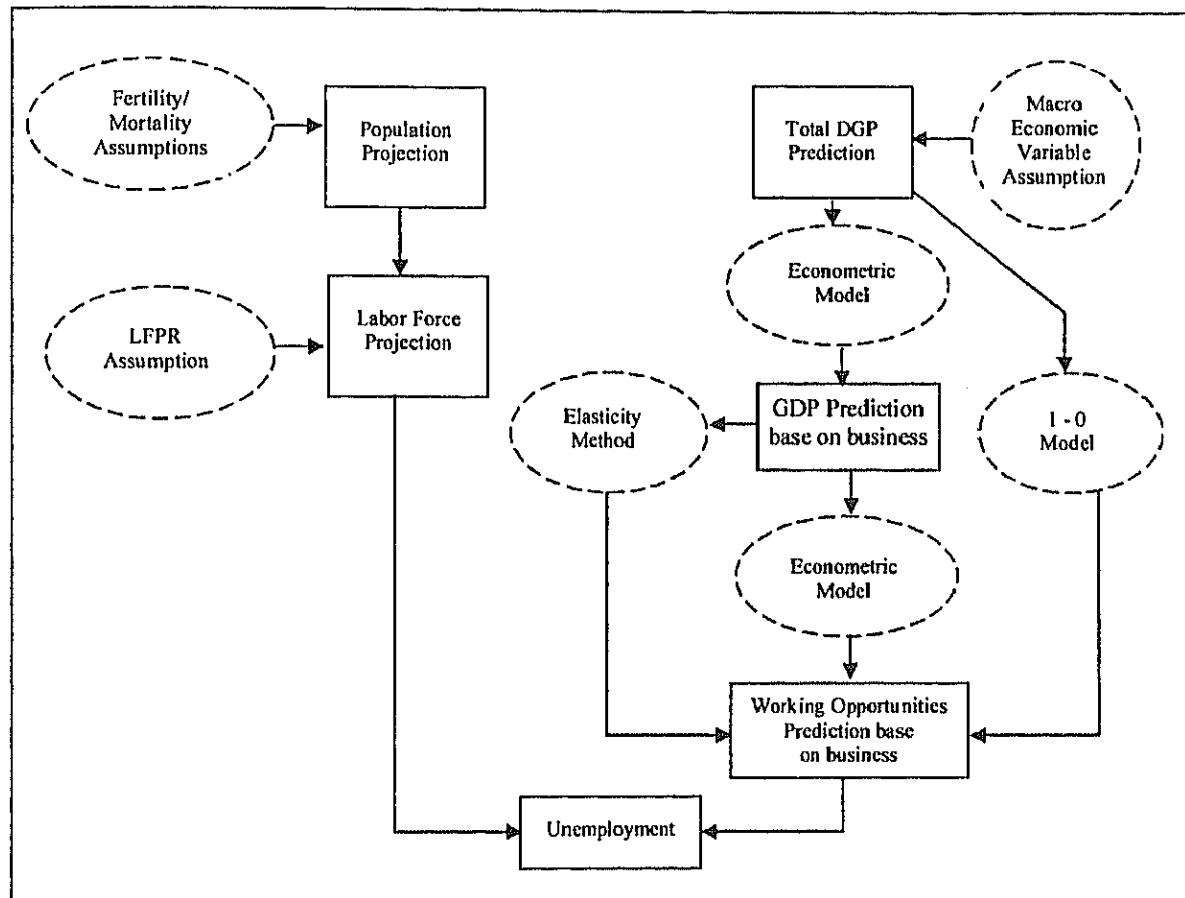
t = time

POP = Population

Source: National Labor Force Plan 2004-2009, MOMAT and BPS (2004)

Estimation of unemployment is obtained as a subtraction between supply and labor force demand sides, as illustrated in Figure 2.2.

Figure 2.2 Prediction Chart of Unemployment



Source : National Labor Force Plan 2004-2009, MOMAT and BPS (2004)

In period of 2003-2005, the total labor force to be employed in Indonesia is about 6.1 million, and about 12.7 million in period of 2005-2009. Estimation of economic and unemployment growths is illustrated in Figure 2.3. Table 2.7 shows the estimation of Indonesian population, labor force, economic growth, economically active and unemployment in 2003-2009.

Figure 2.3 Estimation of Economic Growth and Unemployment Growth

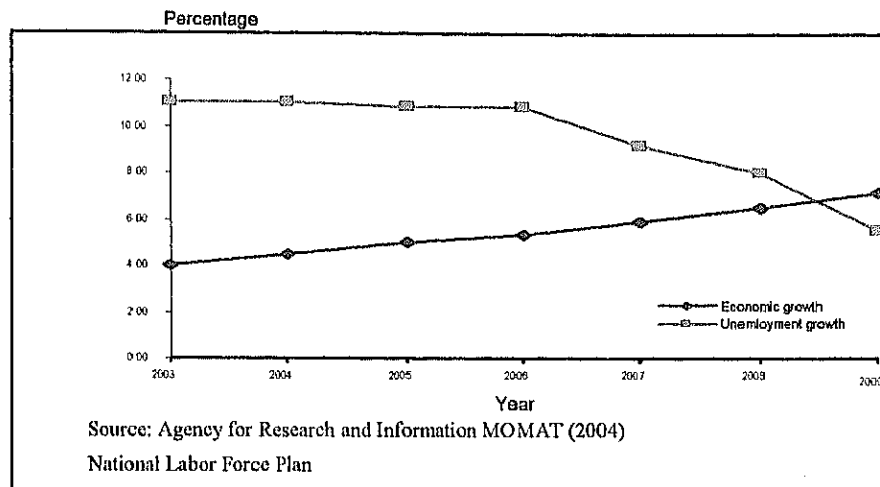


Table 2.7 Estimation of Population, Labor Force, Economic Growth, Economically Active and Unemployment 2003-2009

Item	Year						
	2003	2004	2005	2006	2007	2008	2009
Total population (thousand)	213,734	216,372	219,010	221,496	223,962	226,468	226,954
Population of working age (thousand)	151,936	154,858	157,780	160,550	163,320	166,090	168,880
Labor force (thousand)	103,416	105,678	107,940	110,064	112,228	114,372	116,516
Economic growth (%)	4.20	4.43	5.01	5.29	5.91	6.50	7.14
Working population (thousand)	92,057	94,048	96,310	88,984	101,941	105,254	108,969
Agriculture (thousand)	40,309	40,591	40,995	41,372	41,730	42,054	42,356
Mining and exploration (thousand)	642	654	688	707	729	752	776
Processing industry (thousand)	12,148	12,451	12,880	13,346	13,852	14,403	15,006
Electric, gas, and drinking water (thousand)	192	206	218	234	253	275	301
Construction	4,322	4,410	4,518	4,635	4,764	4,914	5,167
Trade, hotel and restaurant (thousand)	17,785	18,080	18,431	19,121	19,942	20,880	21,884
Transportation and telecommunication (thousand)	4,939	5,183	5,483	5,852	6,296	6,888	7,547
Bank and other finance services (thousand)	1,069	1,171	1,295	1,442	1,623	1,849	2,131
Services (thousand)	10,672	11,263	11,794	12,276	12,752	13,26	13,802
Total unemployment	11,359	11,630	11,630	11,100	10,287	9,118	7,547
% to labor force	11.000	11.000	10.800	10.800	9.200	8.000	5.500

Source: Agency for Research and Information MOMAT (2004).

2.5 Promotion Program of the Industrial HRD by Private Sector

Promotion program is expected to support job seekers to improve their quality, particularly in their specialization. The low quality of Indonesian labor due to professional competency standard did not attained at various levels. Indonesia have not implemented labor competency standard which must be available at each work field or the contribution is still very low to prepare the professional labor (Kompas, 2004).

Consequently, it is a need to develop education and training system rapidly, which can be conducted through link and match of higher education/university's curriculum with actual situation, so that the graduate are prepared to find the job.

National Agency for Profession Certification (NAPC) has been established according to Government Act No. 23/2004 as an independent institution that directly responsible to President, to carry out labor certification by competency assessment. With its task, NAPC become an institution to control the of quality labor in Indonesia (SP, 2005). Recently, evaluation on quality assurance of labor is conducted by licensed school or licensed training. That means that producer and quality assessor are in one management. Therefore, monitoring of quality does not function effectively. Further impact is uncontrolled condition in job market, incredible gap between job seeker and user become more distant.

Actually, job market is organized according to region, such as district/city job market, provincial job market, and national job market. For foreign job market, there are Middle East job market, Asia Pacific job market, European job market, American job market, and others. In the future, job market need to be specialized on professional fields and certain competencies.

Changes on job market paradigm are necessary to anticipate reposition and restructuring of job market. It needs to be accomplished through several steps, covering:

- Job market institution is organized according to job specialization;
- It needs to conduct obvious task and responsibilities differs between government and private job market institutions;
- It needs to arrange a regulation on job market mechanism to assure protection of weak applicant; and
- It needs to develop network and information between government and private job market institutions at national level.

CHAPTER 3

INSTITUTIONAL STAKEHOLDERS PROGRAM

3.1 General

Manpower development is closely related to the national economical development and labor force problems such as inadequate of qualified labor. Quality of labor force, which represented by workers educational level, is not developed significantly. The number of low educated labor in fact is still tremendous. Besides, there is an imbalanced situation between graduates of higher education and demand of employment, generate typical problems. Many skilled labors are definitely required by employment market; however, it could not be fulfilled by existing labor, while graduates of social discipline of higher education are mostly unemployed.

This problem is mainly caused by the existence of tremendous number of unskillful labor. Labor recruitment need to be followed up by vocational training in accordance with company's scope of work and requirement. Trainee of vocational training center could then be fully employed by the company. In some MNCs, there is training center held for their own workers. On the other hand, there are many VTCs which are managed by Ministry of Manpower and Transmigration, private sectors/NGOs, or provincial government. Manpower policy that is related to industrial HRD is to enhance competency and self-sufficient labor in regard to improved mobility and labor welfare. It certainly could be done by providing proper education and training.

The preparation programs are including quality improvement program and productivity of the existing labors. The main objectives are to encourage, socialize, and to rise-up the training program and labor force productivity; therefore, the availability of qualified labor by means of high productivity and competitiveness in both domestic and international market, could be gradually achieved.

Requirement of industrial sector for skillful labor needs a proper standardization and competent certification. Therefore, the main activities are improvement of current standardization and competent certification through creation of standardization and competent certification institutions. This program requires active participation of the profession associations, company association, labor organization, related government institutions, and professionals.

Other activities are improvement of relevant disciplines, training quality and efficiency through supervision and empowerment of VTCs that is managed either by government, private sector, or companies. Besides, enhancement labor productivity could be done through socialization productive culture, system development and productive

improvement method, and cadre development as well as improvement of productivity experts.

Organization structure of state government of Indonesia is illustrated in Figure 3.1.

3.2 Government Sector Providers of VET in Indonesia

The main government providers for the industrial sector are as follows:

- Ministry of Manpower and Transmigration;
- Ministry of National Education; and
- Ministry of Industry.

Other related institutions are also involved in VET for the industrial sector such as Ministry of Agriculture, Ministry of Social Affairs, State Ministry of Cooperative and Small & Medium Enterprises, and Ministry of Marine Affairs and Fisheries.

Budget allocation of ministries in human resource development is illustrated in Table 3.1.

Table 3.1 Percentage of Budget Allocation of Ministries in HRD

Ministries	HRD	Officials	Non-Formal Training	Education	Higher Education	Total (%)
MOA	47.67	52.33	0.00	0.00	0.00	100
MOIT	56.18	43.82	0.00	0.00	0.00	100
MOT	7.34	92.66	0.00	0.00	0.00	100
MONE	1.07	0.00	98.32	0.61	0.00	100
MOMAT	100.00	0.00	0.00	0.00	0.00	100
MOSA	44.19	55.81	0.00	0.00	0.00	100
MOF	0.00	100.00	0.00	0.00	0.00	100
MOMAF	0.00	100.00	0.00	0.00	0.00	100
MPW	72.06	27.94	0.00	0.00	0.00	100
SMCSME	35.38	0.00	0.00	0.00	64.62	100

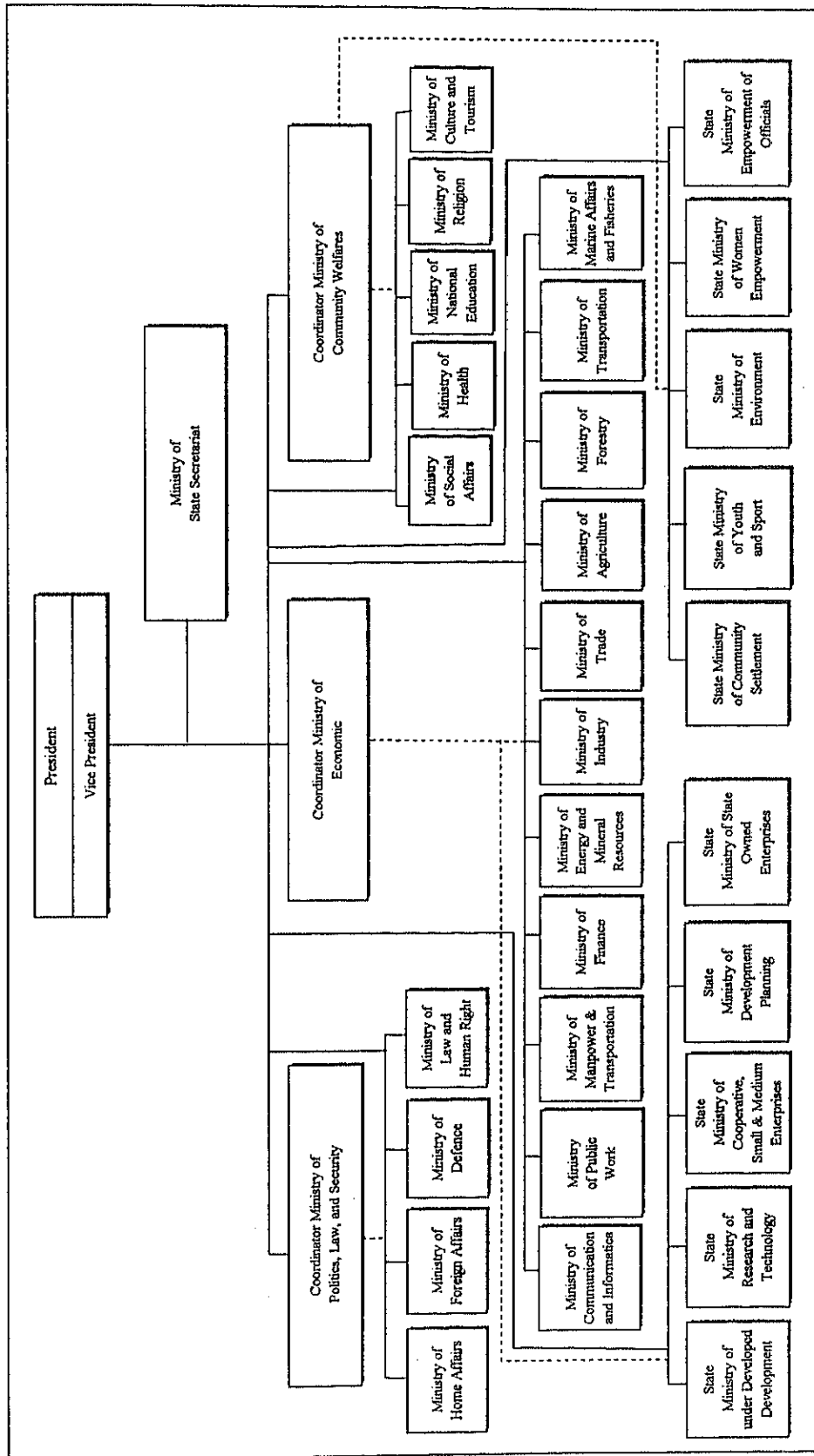
Source: Ministry of Finance (2005)

3.2.1 Ministry of Manpower and Transmigration

Development of HRD is directed to increase HRD quality, for instance through elevated access, increase in quality of basic social services, especially education and health, as well as augmentation of labor force quality and competitiveness, in line with effort in controlling population growth rate, and arrangement of distribution and mobility of population, which follow regional development according to carrying capacity and take in capacity of the environment.

In development of HRD, attempt to be made, is as follows:

Figure 3.1 Organization Structure of State Government of Indonesia



Source : President Decree of the Republic of Indonesia No. 10 Year 2005

- Improvement of labor force quality and competitiveness outfit of skills, professionalism and competency, which is supported by providing comprehensive training in accordance with requirement of in-country and overseas labor market;
- Standardization and certification of profession for regarding the confession and honor to competent workforce, and to form board of national profession certification, to guarantee quality of labor; and
- Forming the Professional Certification National Board toward competency of standardization that supporting the quality improvement and productivity of labor force.

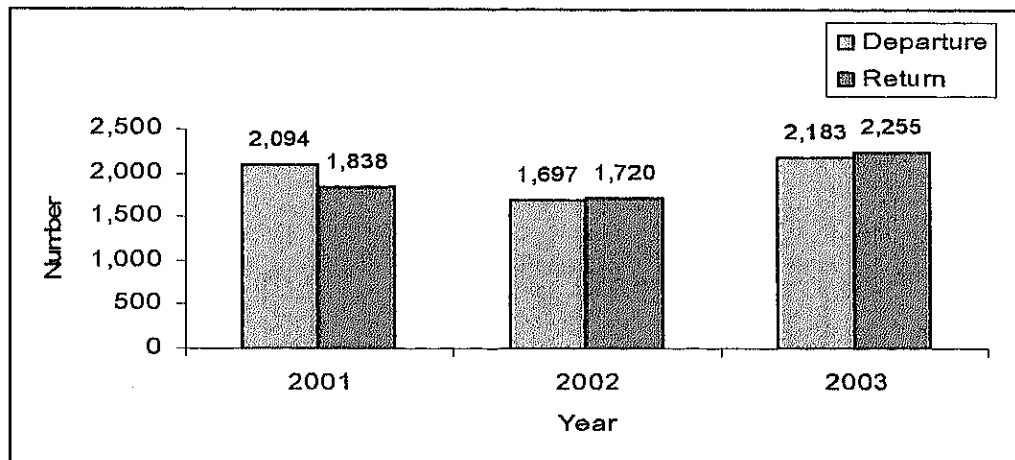
Directorate General of Settlement of Domestic Manpower under MOMAT is currently managed six Central Technical Implementation Units, CEVEST Bekasi and NVTDC-Bandung. List of VTIs under MOMAT is shown in Table 3.2. Apprenticeship training participants of Indonesian manpower to Japan during 2001-2003 is illustrated in Figure 3.2.

Table 3.2 List of VTIs under MOMAT

Institutions	Year of Establishment	Instructor Number	Main Course Training	Location
<i>Central Government</i>				
CEVEST Bekasi	1983	48	Electricity & Electronics, Mechanics, Automotive and Building	Bekasi, West Java
NVTDC Bandung	1952	70	Mechanic Technology, Electricity & Electronics, Automotive, Constructions, Business Administration	Bandung, West Java
CTIU Serang	1986	15	Automotive, Electricity & Electronics,	Banten
CTIU Makassar	1973	49	Automotive, Mechanic Technology, Electricity & Electronics, Building and Business	South Sulawesi
CTIU Samarinda	1981	18	Mechanic Technology, Electricity & Electronics, Automotive and Business	East Kalimantan
CTIU Medan	1985	57	Mechanic Technology, Electricity & Electronics, Building and Business	North Sumatra
Agricultural CTIU Lembang	1985	10	Agriculture	West Java
CTIU Surabaya	1985	55	Automotive, Electricity & Electronics, Handicraft and Building	East Java
<i>Local Government¹</i>				

Note: ¹47 VTIs are currently managed by Provincial Governments including: Riau, Jambi, South Sumatra, West Kalimantan, South Kalimantan, Central Sulawesi, Central Java, Bali and West Nusa Tenggara Provinces.

Figure 3.2 Apprenticeship Training Participants to Japan During 2001-2003 (DGSSDM, 2005)



Strategic plan of Ministry of Manpower and Transmigration in 2005-2009 covering:

- Improvement of standardization and certification systems of manpower competency;
- Improvement of competency and community based training system; and
- Development of national productivity movement (Depnakertrans, 2005).

Organization structure of Agency for Training and Productivity of Ministry of Manpower and Transmigration is illustrated in Figure 3.3.

3.2.2 Ministry of National Education

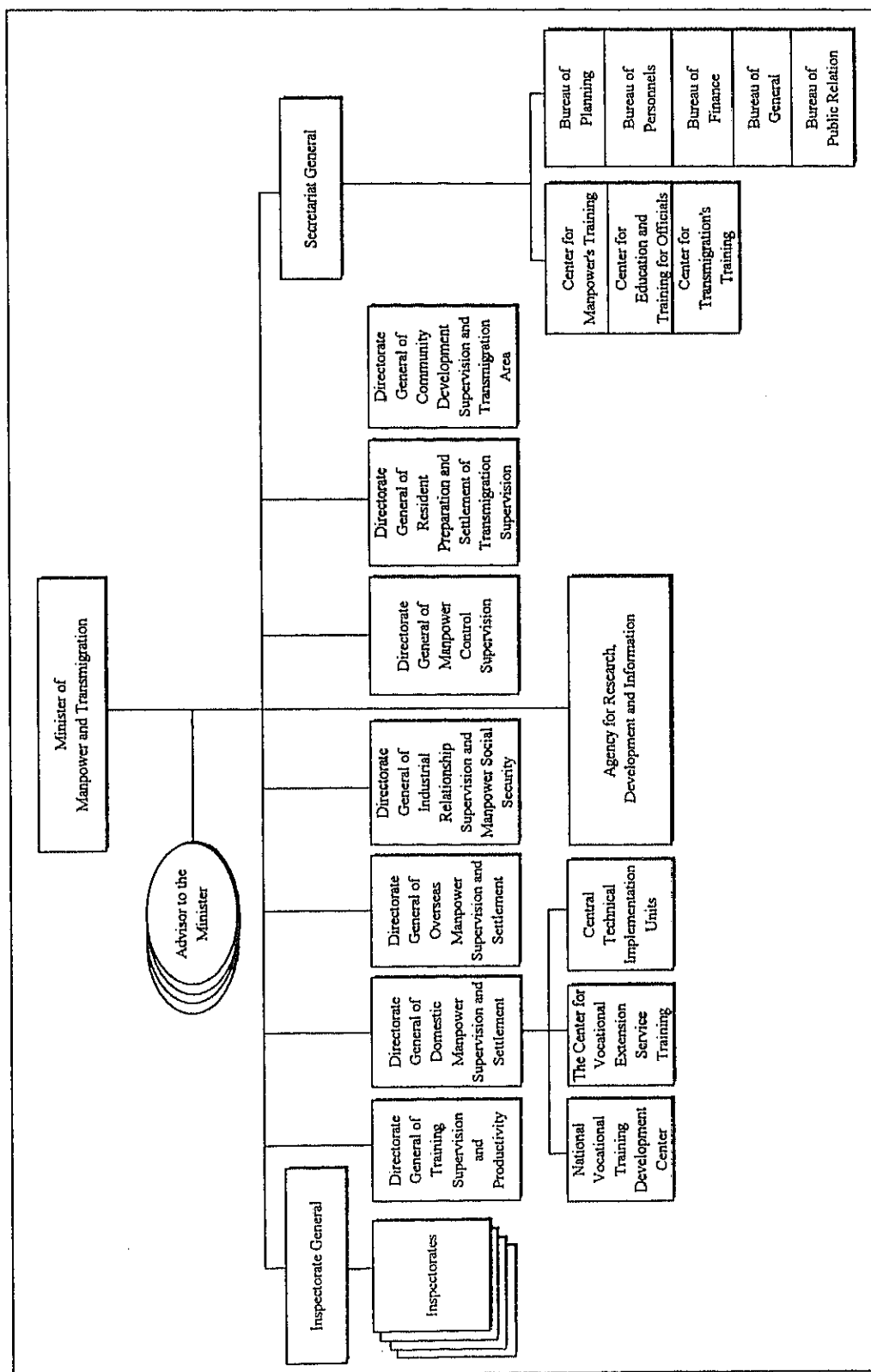
a). Policy

The emphasis on human resource development which appears in all sectors and sub-sectors of the national development is a testimony that Indonesia has made a large commitment to attain excellence in mastering science and technology to equal other nations in the world. The government is aware of the role of quality human resources in mastering science and technology as a governing factor in achieving excellence.

As the main issues reside in human resources development, the Ministry of National Education is accountable in the framework of national education development for the improvement of human resources quality. For this reason, it is critical for MONE to apply numerous policies on education that will address the above challenges.

Development of national education and culture cannot be separated from elements that effect economic development. Various studies indicate that among the significant elements, population and labor force possess close association with the development effort of the national education and cultural systems.

Figure 3.3 Organization Structure of Ministry of Manpower and Transmigration



Sources : President Decree of the Republic of Indonesia No. 10 Year 2005

The faster the expansion of the industrial economic sectors, the faster the economic structure transforms into a more advanced social institution. The gradual transformation usually occurs in a market activity by way of natural processes.

It is anticipated that with the expansion of education in the future, the labor force structure in Indonesia will be dominated by workers with higher skills. At this point, the Indonesian economic structure will begin to shift, in real terms, towards achievement of a more industrial structure. The change of labor force structure will occur faster when the education system in Indonesia has the quality and is relevant to the development needs.

To achieve an excellent quality of human resource to control technology, the following factors should be considered to provide impact on the development of human resources as follows:

- The equal distribution of development process and results;
- The speedy growth of non-agriculture jobs in various economic sectors to encourage expansion of industrial sectors in all fields of business; and
- The need to develop and utilize efficiently the national-base technology which is likely to be the driving force for investment and expansion of employment opportunities.

b). Education System in Indonesia

MONE stated that the education system in Indonesia recognizes two different education paths, i.e., (1) school based, and (2) out-of-school education. School based education is coordinated in schools through teaching and learning activities which are gradual, hierarchical, and continuous. Out-of-school education is organized outside the formal schooling through teaching and learning activities which do not have to be hierarchical and continuous. Education in the family as an important part of the national education system (out-of-school education) functions in providing religious, cultural and moral values and skills.

The Indonesian national education system consists of seven types of education as below:

- a. General education prioritizes expansion of general knowledge and improvement of skills for the students. Specialization is required in the last grade;
- b. Vocational education arranges as well as prepares students in mastering a number of specific vocational skills needed for employment;
- c. Special education provided important skills and abilities for students with physical and/or mental disabilities;
- d. Service related education aims at increasing abilities required as a job preparation as an official or a candidate for a Government Department or non-departmental Government agency to implement a certain task;

- e. Religious education prepares students to play a role which demands the mastering of specific knowledge about religion and related subjects;
- f. Academic oriented education focus primarily on improving mastery of sciences; and
- g. Professional education prepares students primarily on mastering specialized or job related knowledge's and skills.

Unit of education which organizes vocational secondary education is designated as vocational secondary school. The vocational secondary education programs are classified into six different groups of vocational fields, covering:

- a. Agriculture and Forestry;
- b. Technology and Industry;
- c. Business and Management;
- d. Community Welfare;
- e. Tourism; and
- f. Arts and Handicraft

Implementation of vocational education is based on the national curriculum and adjusted to the local and environmental needs, and distinctive features of the concerned vocational education. The vocational program that composes basic and professional vocational subject matters aims at forming an ability to develop and adapt in accordance with the development of science, technology and arts. The professional subjects intents at generating a productive ability to be applied in the concerned field of work.

Types of occupations that is expected to develop are as follows:

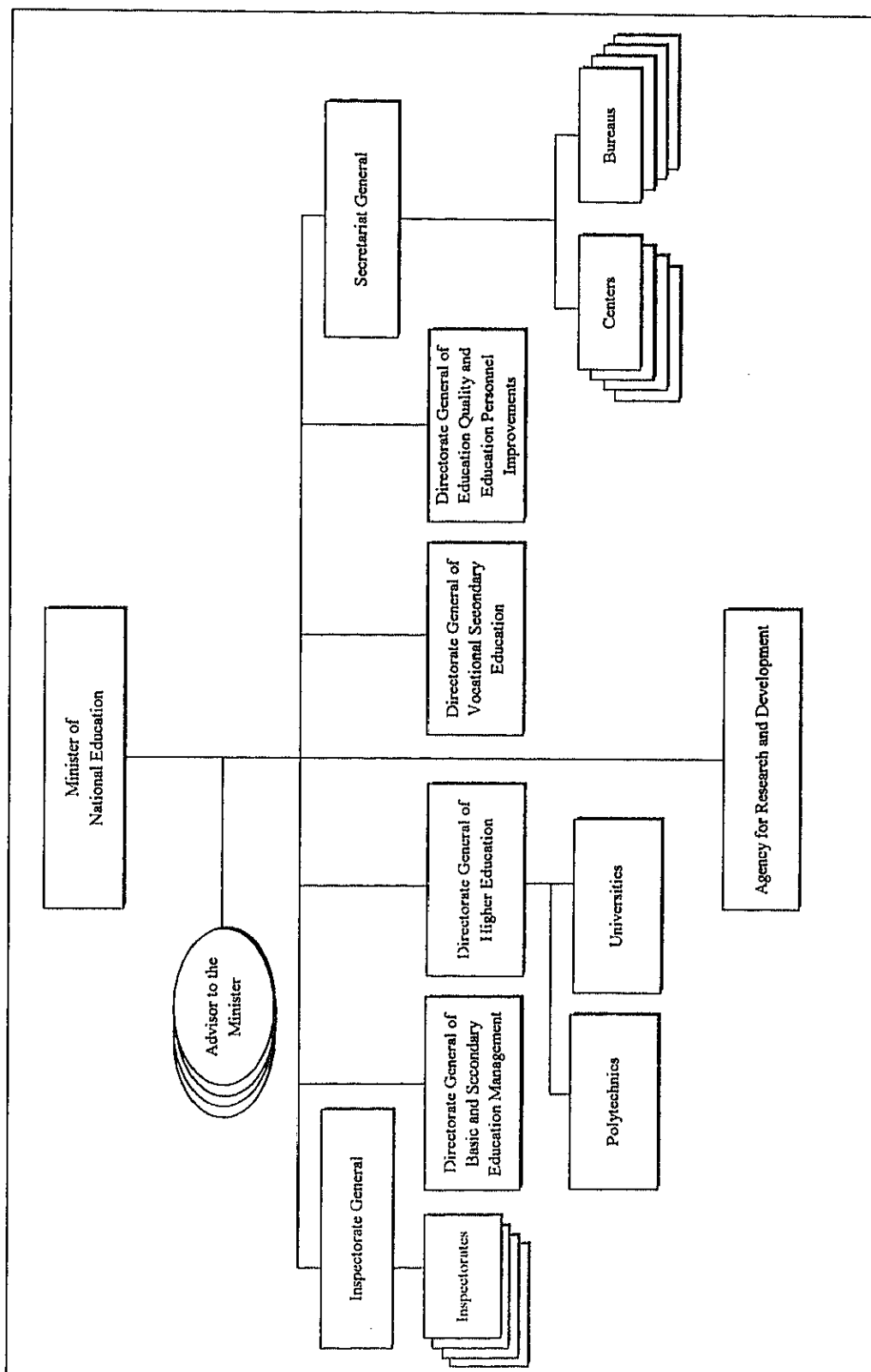
- The development of mind workers;
- The development of needs to improve self-training skills in order to be able to participate in the decision making process relevant to his/her level;
- The development of complex expertise and needed skills; and
- The development of manpower that is able to process and utilize information.

To face various issues and challenges, within the framework of improving the quality of human resources in line with the PROPENAS, MONE has decided to have the following main strategies:

- Equity in educational opportunities;
- Relevancy of education to development;
- Educational quality; and
- Efficiency in educational management

The organization chart of Ministry of National Education is illustrated in Figure 3.4.

Figure 3.4 Organization Structure of Ministry of National Education



Source : President Decree of the Republic of Indonesia No. 10 Year 2005

3.2.3 Ministry of Industry

a). Economic and Industrial Development

General target of economical development in 2005-2006 is enhancement of gradual economical growth, that is 5 percent in the year 2005 and 5.5 percent in the year 2006, and restrain inflation rate about 6 and 5.5 percent at the same period. Special target on economical development, for instance: diminishing of the unemployment and decreasing of the number of poor community.

Description on the economical development program, covering:

- a. Program of enrichment of quality and productivity of labor force that aims to enhance expertise, skillfulness, and competency of labor force with the target on availability of qualified labor force, productive and highly competitive to fulfill the market requirement;
- b. Program of protection and development of labor force board which intends to generate harmony situation of work relationship through improvement of industrial relation aiming a harmony situation between labor and company owner, as well as institutions healthy industrial regulation; and
- c. Program of extensiveness and development of labor force aiming to improve job opportunity for unemployed and hidden unemployed with the program target to widen job opportunity for labor.

Industry and trade are recognized as important sectors in Indonesian national development. However, domestic obstacles and problems significantly influence the implementation and enhancement of industry and trade development. These difficulties would affect the performance of national export, since these sectors constitute as the prime mover of national economy. Considering such difficulties, government had proposed policies and concrete action through revitalization and development of industry and trade sectors (Profile of MOIT, 2002).

b) Focus of Revitalization and Industrial Development

To achieve the goals of revitalization programs and industrial development, election of industrial should be focused on industry which could create greater working opportunities, export oriented, and utilize domestic resources, covering:

- Textile and textile product industries;
- Electronic industry;
- Footwear industry; and
- Wood processing and pulp/paper industry.

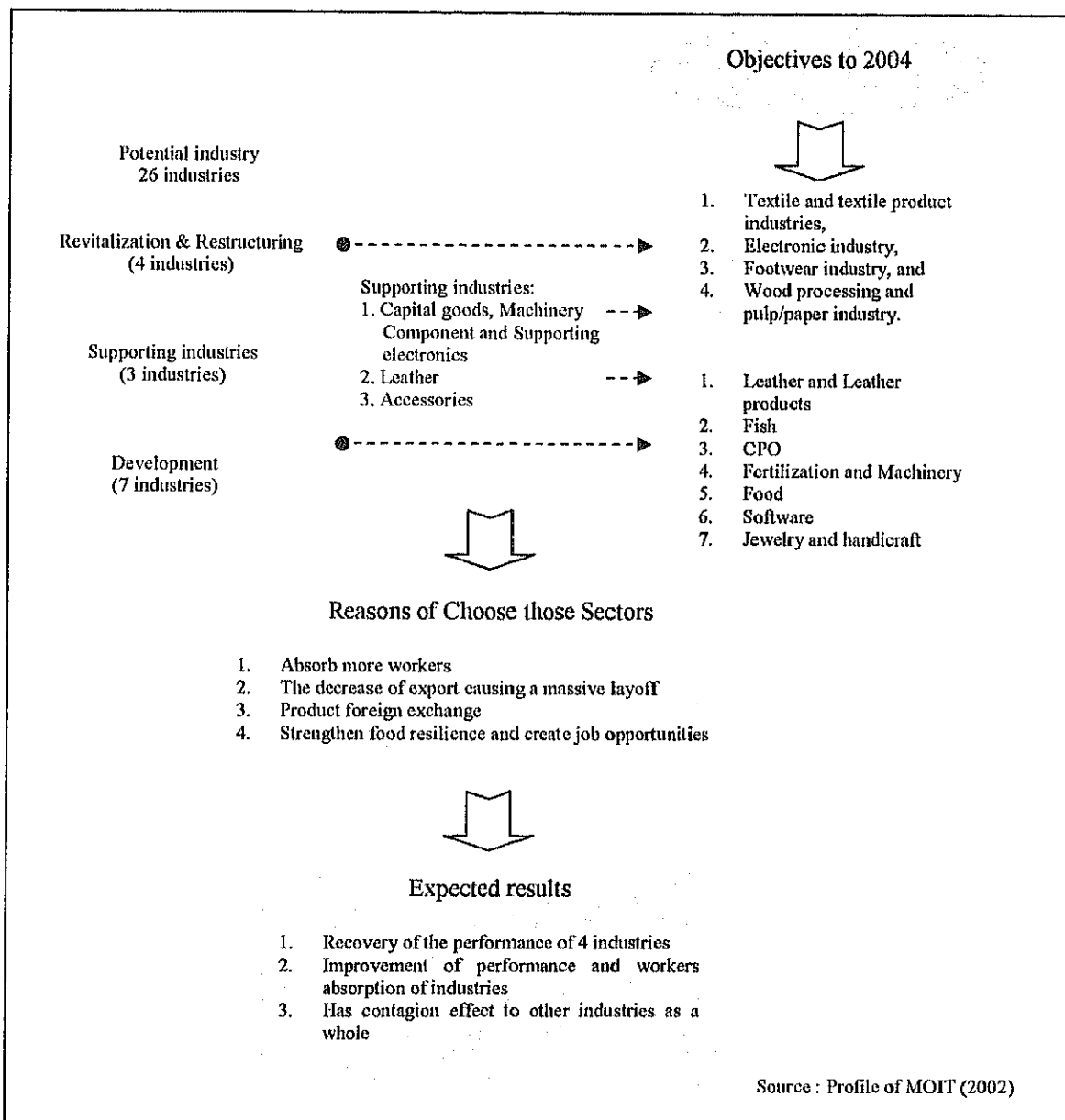
Besides those four major sub-sectors, development of potential industrial needs to be conducted, including:

- Leather and leather products;

- Fish processing;
- CPO processing;
- Fertilizer and agricultural tools/machinery;
- Food;
- Software; and
- Jewelry and handcraft.

The revitalization program, restructuring and industrial development, and development of small and medium industry, is illustrated in Figure 3.5.

Figure 3.5 Revitalization Program, Restructuring and Industrial Development and Development of Small and Medium Industries in MOI



- c) Development Planning of MOI
- Long Term Plans, covering:
 - a. Strong basic manufacturing industry to be “world class industry”;
 - b. The prime industrial mover of economic growth; and
 - c. Enhanced contribution of SMI to GDP in comparison with large scale industry contribution.
 - Mid Term Plans, covering:
 - a. To create large employment opportunities;
 - b. To prolong the revitalization, consolidation, and restructure of industrial programs;
 - c. To optimize the effective usage of domestic potencies;
 - d. To increase export competitiveness;
 - e. To initiate new selected potential industries; and
 - f. To initiate and develop the small scale industries.
 - Short Term Plans, covering:
 - a. To grow such industries which enable the creation of job opportunities in large scale;
 - b. The effective completion of revitalization, consolidation, and restructure of industries programs;
 - c. To optimize the demand fulfillment of domestic market on raw material and components of domestic products, especially who implement local resources;
 - d. To increase industries competitiveness with export oriented;
 - e. To develop industries which has potency to be prime mover of prime competitive industry in the future; and
 - f. To develop SMI, especially medium industries three times faster than small scale industry.
- d) Indonesia Planning (2004-2009) for Ministry of Industry
- 1) **Arrangement and Strengthening of Production Base and Distribution Program**
- (a) Research on basic of industrial sector competitiveness, as well as others production and distribution sector linkages;
 - (b) Formulation of global competitive improvement strategy with priority on natural resources basis especially in agriculture industry including marine industry, industry cluster based on skilled and trained labor and industry cluster of capital basis;
 - (c) Organization of production and distribution linkage with industry cluster approach method;