**DRAFT FOR DISCUSSION – DO NOT CITE**

# EQUITY AND ACCESS IN HIGHER EDUCATION

## The case of Indonesia

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# Contents

# Chapter 1 Introduction

## 1.1 Background

Education is a fundamental human right, providing youth and adults with the power to reflect and benefit from the prosperity. It could break the poverty cycle and directly contributing to the economic and social development. Every person shall be able to benefit from educational opportunities designed to meet their basic learning needs.

These needs comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to survive, develop their full capacities, live and work in dignity, and participate in the development to improve the quality of their lives, make informed decisions, and continue learning. The scope of basic learning needs and how they should be met varies with individual countries and cultures, and inevitably, changes with the passage of time.

The fulfillment of these needs empowers individuals in any society and confers upon them a responsibility to respect and build upon their collective cultural, linguistic and spiritual heritage, to promote the education of others, to further the cause of social justice, achieve environmental protection, and be tolerant towards social, political and religious systems which differ from their own, ensuring that commonly accepted humanistic values and human rights are upheld, and to work for international peace and solidarity in an interdependent world.

Another and no less fundamental aim of educational development is the transmission and enrichment of common cultural and moral values. It is in these values that the individual and society find their identity and worth. Basic education is more than an end in itself. It is the foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training.

The Constitution of the Republic of Indonesia stipulates that the State is obligated to provide access to quality education for all citizens. Furthermore, it assures that each individual has the basic right in developing himself/herself through education, acquiring benefits from science, technology, arts, and culture to improve their quality of life. In Indonesia the 9-year compulsory education has been implemented for almost a decade.

Nevertheless, access to education is unequally possessed by different population groups. Therefore it is the responsibility of the State to make intervention for assuring that access to education is equally provided to all citizens. In the context of Indonesia, as the world largest archipelago, inequality in access to education could potentially become an issue of national integrity.

## 1.2 The study

In order to learn more about the current issues in providing access to education, particularly higher education, the World Bank commissions this study. This document presents the findings,

facts, analysis, and recommendations, on the issue of equity and access to higher education in Indonesia.

Due to the limited time frame provided for the work, this study relies mostly to the secondary data available in documents, digital as well as hard copy. It doesn't include any visits to any higher education institutions, though the author communicated intensively with a few Rectors, Vice Rector, and experts in acquiring the necessary data.

The author would like to extend his appreciation to the World Bank, who grants the opportunity for the author to conduct this study. Appreciations are also extended to the Mr Dadang Sudiyarto, the Head of Planning at the Directorate General of Higher Education (DGHE), for his generosity in providing the necessary data; and Mr T. Basaruddin for his comments and critics.

## 1.3 Objectives

The objectives of this study are, in the context relevant to historical, cultural, and political climate of Indonesia,

a) to acquire information on the disparities in higher education opportunities;
b) to identify the main determinants of inequality, including secondary education, monetary as well as non monetary barriers, and
c) to recommend policies for effectively addressing the inequality in access to higher education.

# Chapter 2 Social profile of the country

## 2.1 Population

Indonesia is a large country with a population of almost 235 million, covering an area of 1,910,931 square km. The country comprises more than 17,504 islands, makes it the largest archipelago in the world.

| Age group | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| 0-4 | 20,952.20 | 21,167.50 | 21,374.00 | 21,571.50 |
| 5-9 | 20,060.20 | 20,227.20 | 20,381.50 | 20,522.50 |
| 10-14 | 21,041.50 | 20,833.80 | 20,618.20 | 20,396.10 |
| 15-19 | 21,373.60 | 21,287.40 | 21,195.70 | 21,098.70 |
| 20-24 | 21,051.50 | 21,090.60 | 21,121.20 | 21,146.30 |
| 25-29 | 20,385.30 | 20,504.00 | 20,627.10 | 20,734.30 |
| 30-34 | 19,149.20 | 19,465.10 | 19,698.20 | 19,878.20 |
| 35-39 | 17,431.60 | 17,754.00 | 18,066.60 | 18,364.90 |
| 40-44 | 15,489.10 | 15,840.30 | 16,179.10 | 16,507.70 |
| 45-49 | 13,234.70 | 13,650.70 | 14,041.90 | 14,415.10 |
| 50-54 | 10,486.60 | 10,964.30 | 11,435.50 | 11,897.30 |
| 55-59 | 7,819.80 | 8,226.30 | 8,645.10 | 9,073.80 |
| 60-64 | 5,727.90 | 5,867.90 | 6,138.50 | 6,480.20 |
| 65-69 | 4,457.70 | 4,476.00 | 4,501.10 | 4,584.10 |
| 70-74 | 3,413.30 | 3,471.50 | 3,523.30 | 3,566.20 |
| 75+ | 3,567.80 | 3,696.70 | 3,822.50 | 3,944.50 |
| TOTAL | 225,642.00 | 228,523.30 | 231,369.50 | 234,181.40 |

*Table 2-1: Population distribution by age group [BPS, 2009]*

As a developing country, its population is still dominated by young generation. As illustrated in table 2-1, 44.72% of its population is younger than 25 years. This is particularly important due to the increasing needs to provide education and employment for the young.

The national average of human development index in 2007 is 70.59, whilst the provincial HDI is spread from a maximum of 76.6 to a minimum of 63.4. The index is relatively low even compared to other developing countries with lower GDP. The main contributor of low HDI among others is the infant mortality rate (IMR), which was 27 in 2007.

## 2.2 Basic and secondary education

The Constitution guarantees the right of all Indonesian children to receive a basic education, and the subsequent Law 20/2003 on National Education System reaffirmed again this right. As a result of 2 decades of 6-year and almost a decade of 9-year compulsory education, the enrolment has significantly improved across all regions, gender, and income groups. In 2008 the gross enrolment rate (GER) in primary education has reached 116.44% and the net enrolment ratio (NER) is 95.14%, whilst in junior secondary education GER is 96.18% dan NER is 66.5%.

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| GER Early childhood | 39.09% | 42.34% | 45.63% | 48.32% | 50.62% |
| NER Primary education | 94.12% | 94.30% | 94.48% | 94.90% | 95.14% |
| GER Junior secondary education | 81.22% | 85.22% | 88.68% | 92.52% | 96.18% |
| GER Senior Secondary education | 49.01% | 52.20% | 56.22% | 60.51% | 64.28% |
| GER Higher education | 14.62% | 15.26% | 16.91% | 17.25% | 17.75% |
| Illiteracy rate > 15 yrs | 10.21% | 9.55% | 8.07% | 7.20% | 6.21% |

*Table-2-2: Gross enrolment rate 2004-2008 [MoNE, 2009]*

The basic education is provided by public and private general schools (SD/SMP) and madrasah (MI/MTs), as well as non-formal education. In 2008 the share of madrasah in providing enrolment in primary education is about 9% and 19% in junior secondary. Since compulsory basic education only covers 9 years of education, the enrolment rate in the senior secondary education is significantly lower, as illustrated in table 2-2. Due to the success of 9-year compulsory education, illiteracy rate among population younger than 15 years old is currently approaching nil. The remaining illiteracy problem is mostly found in older population (> 15 years old) living in remote islands / areas.

## 2.3 Higher education

### 2.3.1 Institutions

The higher education system in Indonesia doesn't have a long history. The first medical college was established in late 19th century in Jakarta by the colonial government, and later followed by an engineering college in Bandung, agriculture in Bogor, and dentistry in Surabaya. On its independence in 1945, the Indonesian system had less than 1,000 active students, whereby only around half of them are natives[1].

Nowadays the higher education system has become a very large and highly complex system, housing more than 4.5 million students distributed in public, private, service, Islamic institutions, and Open University, as presented in table 2-3.

| | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Public | 805,479 | 824,693 | 978,739 | 965,970 |
| Private | 2,257,436 | 2,567,879 | 2,392,417 | 2,410,276 |
| Service | 48,493 | 51,253 | 47,253 | 47,253 |
| Islamic | 508,545 | 518,901 | 506,247 | 556,763 |
| Open university | 262,081 | 322,854 | 450,849 | 521,281 |
| Total | 4,020,583 | 4,285,645 | 4,375,505 | 4,501,543 |

*Table 2-3: Student enrolment [DGHE, 2009]*

[1] In the old continental system implemented in those days, after being registered as students only graduation could remove them from the enrolment. Therefore accumulated enrolment could be more than 3,000, though only less than 1,000 were active.

Table 2-4 presents the present institutions, whereby 83 public, 52 Islamic, and almost 2,800 private institutions are existed. Islamic institutions are administered by the Ministry of Religious Affairs. Service institutions are administered by line ministries, other than Ministry of National Education, and not included in this figure. Example of service institutions is the Military Academy. Common characteristics of service institutions among others are students receive full scholarship, some are on campus boarding, and graduates have an obligation to work as civil servants for the government.

Colleges are higher education institutions which only offer programs in one single academic discipline. In a traditional university or institute such single academic discipline is usually offered by one Faculty.

| Institution | Public | Private | Islamic | Total |
|---|---|---|---|---|
| University | 48 | 372 | 52 | 470 |
| Institute | 7 | 42 | | 49 |
| College (Sekolah Tinggi) | 2 | 1249 | | 1,250 |
| Academy | | 985 | | 985 |
| Polytechnic | 26 | 118 | | 144 |
| TOTAL | 83 | 2,766 | 52 | 2,898 |

*Table 2-4: Distribution of institutions [DGHE, 2009]*

### 2.3.2 Student contribution

Previously public institutions received government subsidy and charge minimal tuition from students. Most or all staff are civil servants and have to follow the universal civil service salary structure. In the last few years, however, public institutions have increased the tuition and some also introduced admission fee. Private institutions have to rely solely on student contribution in terms of tuition and fees, that student enrolment is critical. Among the 2,766 private institutions, only a handful has successfully attracted adequate number of students, whilst the majority is small and struggling to survive.

Since revenue generated by institutions is becoming larger and its proportion is becoming significant in the total budget, it is important to understand the structure of student expenses. It could provide inputs for designing the appropriate strategy for government intervention and developing policy on how public fund should be allocated. Unfortunately accurate data on this aspect is unavailable, that the author had to develop an estimated figure in consultation with some university Rectors and experts[2].

[2] Most private institutions don't differentiate tuition based on parent's income, instead it is set based on student's performance in the entrance examination. It clearly disadvantages applicants from rural areas, who didn't have the opportunity to study in good quality high schools. Those who cannot afford the tuition set could apply for scholarship.

| | Public institutions | | | Private institutions | | |
|---|---|---|---|---|---|---|
| Student expenses | Low | Middle | High | Low | Middle | High |
| Tuition per semester | 450,000 | 1,000,000 | 4,000,000 | 750,000 | 5,000,000 | 15,000,000 |
| Admission fee | 750,000 | 3,000,000 | 15,000,000 | 2,500,000 | 20,000,000 | 40,000,000 |
| Monthly living cost[3] | 500,000 | 1,000,000 | 1,500,000 | 500,000 | 1,000,000 | 1,500,000 |
| Average annual cost | 6,087,500 | 12,750,000 | 26,750,000 | 7,125,000 | 25,000,000 | 55,000,000 |

*Table 2-5: Estimated average annual cost of education in Rp [UPH Ubaya UWM, 2010]*

Table 2-5 attempts to estimate, for each student, the average annual student expenses. In this table institutions are grouped into 3 categories, namely low, middle, and high, which represents the cost and more or less the quality. It should be noted that tuition and fees vary between subject fields, that the figure presented is an average figure. In most private institutions, fee per credit unit is also applied in addition to fixed tuition.

In order to be adequate, 71.5% of respondents in a survey conducted by DGHE said that a scholarship is supposed to be in the range of Rp 2 – Rp 3 million per semester, or Rp 4 - Rp 6 million per year [DGHE, 2010], which confirmed the estimation. Since per capita income for those categorized in Quintile-1 is Rp 180,000 per month or Rp 2,160,000 per year, they will not be able to register even in institutions in the Low group [Susenas, 2006].

The student population in the Low group, in public as well as private institution, seems come from similar population group of family income, and more detailed discussion is presented in section 3-2. That is why the figure of average annual cost doesn't vary too much between public and private institutions in this group. Most public institutions in this group are located in the less developed regions, whilst private institutions in the Low group are more distributed in different regions. The difference in student expenses between public and private institutions becomes larger for the Middle group, and strikingly large in the High group.

| | Q-1 | Q-2 | Q-3 | Q-4 | Q-5 |
|---|---|---|---|---|---|
| Admission fee | 750,000 | 750,000 | 5,000,000 | 15,000,000 | 25,000,000 |
| Tuition per semester | 900,000 | 900,000 | 2,000,000 | 3,500,000 | 3,500,000 |
| Student activities | 1,000 | 1,000 | 2,500 | 2,500 | 2,500 |
| Teaching material (photo copy) | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| Text Book | 5,000 | 5,000 | 10,000 | 10,000 | 10,000 |
| Stationary | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| Transportation | 50,000 | 100,000 | 250,000 | 350,000 | 1,000,000 |
| Meals | 200,000 | 300,000 | 450,000 | 650,000 | 800,000 |
| Accommodation | 300,000 | 300,000 | 500,000 | 1,000,000 | 1,250,000 |
| Total | 7,722,500 | 9,222,500 | 17,550,000 | 31,050,000 | 44,050,000 |

*Table 2-6: Estimated annual household expenses for higher education in Rp[4]*

As illustrated in table 2-6, the major differences between income quintiles are in the cost of living, since tuition and other fees are affected more by institutions instead of financial

[3] Living cost is calculated for 10 months per year.

[4] Admission fee is charged one time that it is spread over 4 year period. Other expenses is calculated for 10 months per year

capacity. Most institutions set a uniform rate for tuition and didn't collect data on parent's income. Institutions charging admission fee, however, have to collect such information since admission fee depends almost entirely on financial capacity. Since admission fee is usually only applied for particular schemes, students from Q-1 will avoid such schemes and prefer to participate in entrance examination. In best institutions, entrance examination is highly competitive, and 2%-5% competitiveness is not unusual. Students from Q-5 could study in cheaper institution, whilst students from Q-1 could study in more expensive institution.

### 2.3.3 Quality

Quality could be interpreted and defined differently by different stakeholders. Some parents might define quality as the possibility or likeliness of their children to be admitted to a world class graduate school. Some others might expect their children to be able to acquire opportunity to get better career position. Rectors might define quality as the result of the success of acquiring competitive grants, better accreditation result, better graduates' performance in the certification process, or better resources, i.e. infrastructure, equipment, books, and teachers. Therefore it is not surprising when Ton Vroeijenstijn wrote that "*quality is in the eye of the beholders"* [Vroeijenstein, 1995].

However, in order to measure quality some kind of standards is required. Even if not all institutions can be judged by the same set of criteria, a threshold minimum level is required to assure quality. Such national standards will be needed to enable students and graduates to move between schools nationwide, to enter the national job market, enabling cross social and cultural activities, and eventually strengthening the national integration.

Any effort aims to implement quality assurance should basically be an internally driven initiative. Since the primary beneficiary of quality improvement is the institution itself, it is deemed important to disseminate the concept to all relevant parties in the institution, i.e. Rector, Dean, teachers, students, parents, and Trustees. Although such approach might be more difficult and require time to make an impact, it will be more sustainable in the long run.

*Internal quality assurance mechanism*

In order to impose a continuous process of internal review and evaluation, the DGHE requires that all institutions should establish a quality assurance (QA) unit. A training program was conducted for teaching staff who are assigned to conduct the process. In 2008 all institutions were requested to submit a document describing its internal QA operation, and a review ream was assigned to assess the documents.

| Public institution | Private institution |
|---|---|
| Universitas Indonesia | Univ. Atma Jaya Yogyakarta |
| Institut Teknologi Bandung | Univ. Bina Nusantara |
| Universitas Gajah Mada | |
| Universitas Sebelas Maret | |

*Table 2-6 Institutions with good internal QA [DGHE, 2009]*

Table 2-6 presents the list of institutions considered as already implementing a good QA system after desk review. Another 20 public and 42 private institutions are added after site verification

was conducted. The result indicates that internal QA system still needs to be improved in most institutions.

*Accreditation result*

In addition to internal QA, one of the parameters used for defining quality is the result of accreditation, which basically represents external QA. Table 2-6 illustrates that 78.26% Diploma programs in public is rated A or B, whilst only 56.67% in private institutions. The figure is 85.82% and 55.53% for undergraduate programs, whilst for graduate programs the figure is 91.54% and 66.93%.

It shows that the proportion of programs offered by public institutions is significantly higher in term quality compared to programs offered by private institutions. However the accreditation process only measures quality against the minimum standard that performance above that level is difficult to be rated against each other. The accreditation result presented in table 2-7 represents the number of programs, without taking into its consideration its enrolment. Although the majority of programs in private institution is lower in quality and has small enrolment, some programs offered by larger private institutions are better than programs offered by the weakest public institutions.

| | Diploma program[5] | | | | Undergraduate program[3] | | | | Graduate program[6] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | A | B | C | D | A | B | C |
| Public | 12.81% | 65.45% | 21.51% | 0.23% | 30.63% | 55.19% | 13.84% | 0.34% | 49.62% | 41.92% | 8.46% |
| Private | 6.57% | 50.10% | 42.02% | 1.31% | 8.41% | 47.11% | 42.36% | 2.11% | 18.73% | 48.21% | 33.07% |
| Islamic | 0.00% | 100.00% | 0.00% | 0.00% | 10.42% | 54.35% | 30.34% | 4.88% | 64.71% | 11.76% | 23.53% |
| Service | 4.00% | 56.00% | 40.00% | 0.00% | 5.88% | 61.76% | 29.41% | 2.94% | 0.00% | 100.00% | 0.00% |
| National | 8.38% | 54.91% | 35.74% | 0.96% | 14.27% | 49.99% | 33.77% | 1.97% | 39.85% | 43.63% | 16.52% |

*Table 2-7: Accreditation result [BAN-PT, 2009]*

*Competitive grants*

Competitive grants for study programs and institutional development are administered by the Board of Higher Education DGHE, whilst competitive research grants are organized by the Directorate of Research DGHE. Although objectives of each competition vary between schemes, the selection process is more or less similar. The process is conducted by involving independent reviewers, mostly subject specialists recruited from university. The Board of Higher Education has a long experience in carrying out such process since 1995, and has developed an international reputation as objective, transparent, and reliable process.

Until recently the grants were awarded to study programs instead of institutions. In order to support the integrity of institutional policy, in 2006 the DGHE changed the scheme by imposing an institutional grant (called PHKI) instead of study program. All proposals should be proposed

[5] A=very good, B=good, C=accredited, D=not accredited
[6] A=very good, B= accredited, C=not accredited

by the institution, ensuring that the programs proposed by study programs are in line with the institutional policy and strategy.

In the DGHE funded PHKI-2008, 9 public, 17 private, and 5 BHMN institutions were granted, whilst in PHKI-2009 12 public, 31 private, and 1 BHMN were selected. It indicates that the better off private institutions are able to compete with public institutions. Since the evaluation and selection process includes an in-depth desk review and thorough site visit, the result might better reflect quality. However, competition is always organized as a tiered competition, and the weaker institutions don't compete with the stronger one.

*Teaching staff*

Although the education process is probably the most important aspect in the provision of quality education service, the qualification of teaching staff is a deemed important aspect. Table 2-8 presents the qualification of teaching staff in public as well as private institutions.

| | D-3 | D-4 | S-1 | S-2 | S-3 | Sp1 | Sp2 | Profession | Total |
|---|---|---|---|---|---|---|---|---|---|
| Public | 60 | 277 | 26,292 | 29,853 | 7,800 | 881 | 270 | 299 | 65,732 |
| Private | 1,584 | 1,325 | 52,447 | 31,270 | 2,834 | 605 | 67 | 550 | 90,682 |
| Total | 1,644 | 1,602 | 78,739 | 61,123 | 10,634 | 1,486 | 337 | 849 | 156,414 |

*Table 2-8: Qualification of teaching staff [EPSBED, 2009]*

It indicates that a lot of work has still to be done to improve qualification of teaching staff, particularly in private institutions. According to the Law 14/2006 teaching staff in undergraduate (S-1) program should have at least S-2 qualification. Table 2-8 shows that 78,739 staff has to be upgraded into at least S-2 within the next few years.

*International recognition*

International reputation is represents among others by ranking, though a continuous worldwide debate on whether institutional ranking represents the institutional quality is still going on. Table 2-9 presents the rank according to THES.

| Institution | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| Universitas Gajah Mada | 341 | 270 | 360 | 316 | 250 |
| Institut Teknologi Bandung | 408 | 258 | 369 | 315 | 351 |
| Universitas Indonesia | 420 | 250 | 395 | 287 | 201 |

*Table 2-9 Institutional ranking according to THES [THES, 2009]*

DGHE continuously encourages institutions to improve their international recognition. New schemes have been introduced to provide incentives, among others supporting staff to publish their articles in reputable international journals.

### 2.3.4 Institutional reform

The institutional reform evolves along with the evolution of the Higher Education Long Terms Strategy. The evolution is described in the following section, as quoted from the documents published by the DGHE.

In 1975 the first initiative to develop a national higher education policy was started by developing the first Higher Education Long Term Strategy (KPPT-JP) for the period of 1975-1985 [DGHE, 1975]. The national system, that includes the public and private sectors, emphasizes on the aspect of relevance by taking into account the need to establish strong linkages to the regional and national development. A dual system, consisting of academic and professional streams was introduced. Three program levels in higher education were introduced: Diploma program, S-1 program, and Graduate program. The organizational and management aspects were given serious attention through the introduction of credit system, student academic evaluation, student load, and staff promotion system.

In 1986-1995, development was focused to consolidate previous achievement and improvement of quality [DGHE, 1985]. The economic downturn caused by the sudden drop of oil prices in the 1980s had prevented the student enrollment to further expand. Nevertheless, the enrollment in private sector was steadily expanded at the rate of 9% per annum.

Between 1996-2005 the strategy focused on the need of a more dynamic management mode in higher education to cope with the dynamic changes, the need to take quality and relevance as the basic reference for higher education development, and the need for enhancing social mobility and equity through higher education development [DGHE, 1995]. The strategic plan comprises the following three core programs: the implementation of the new paradigm in higher education management, improvement of relevance and quality, and promote geographical and social equity.

The Indonesian higher education system is a very large and highly complex system, and cannot be managed in a centralized fashion. Therefore the DGHE has begun to gradually decentralizing its authority and providing more autonomy to the institutions since early 1990s by introducing the new paradigm concept through competitive grants through the provision of more autonomy. It is worth to note that that since this was the era of strongly centralized government, the new paradigm was considered as against the main stream and a very brave experiment.

The financial crisis hit the Indonesian economy in 1997-1998 followed by economic, political, and social crises as well. In order to respond to the changes in political, economic, and social structure introduced after the crises, a new higher education strategy was launched in 2003. The Higher Education Long Term Strategy 2003-2010 based its strategy on the 3 following pillars [DGHE, 2003].

a) Nation's competitiveness
   The objective of higher education is to contribute to the nation's competitiveness, demonstrating its relevance and sensitivity to its natural as well as social environment.

b) Decentralization and autonomy
   As the largest archipelago and very diverse country, centralization is considered as an inappropriate approach for managing the Indonesian higher education sector. Therefore the authority needs to be decentralized and it is essential to provide greater autonomy to institutions.

c) Organizational health
   Providing autonomy requires that institutions are properly managed within a healthy organization. Since improving internal management and developing a healthy organization needs longer term, the decentralization and autonomy should be implemented on gradual basis.

On 9 January 2009 the President of the Republic of Indonesia signed the bill for enacting the Law No 9 / 2009 on Educational Legal Entity, which previously had been passed by the Parliament. The long awaited and heatedly debated Law provides the necessary legal basis for the provision of autonomy to institution. This is a very important milestone in the process of decentralization of authority.

Such a large system has many problems and challenges as elaborated in the following section.

### 2.3.5 Access

The Gross Enrolment Rate (GER) has been constantly increasing from 14.62% in 2004 to 17.75% in 2008, as presented in table 2-2. However, the higher education GER is still considered low compared to neighboring Asian countries such Malaysia (29%), the Philippines (28%), Thailand (50%), and China (22%) [UNESCAP, 2007]. Therefore the government priority is still to improve the figure to 25% within the next 5 years period.

In addition to economic growth, the increasing number of high school graduates who aspire to pursue further study in higher education is projected to be steadily increased with the increasing number of graduates from secondary education. The economic growth also drives employees to improve their education, adding to the demand for higher education. In coping with the challenge, alternative mode such as distance education has been introduced.

### 2.3.6 Efficiency

Unlike the basic and secondary education, higher education system is decentralized that the responsibility to report to a national office doesn't exist, particularly for private institutions. In attempt to regularly collect data, a Ministerial decree enforcing the obligation to submit report was enacted a few years ago. However, the data submitted have never been validated and monitoring is limited that as for now reliable data on efficiency is considered unavailable.

Data extracted from EPSBED in 2008 gives the national figure for graduating students 1,427,094, whilst the total number of students reported is 2,552,696. The EPSBED is an on line reporting system administered by DGHE, and currently covers around 80% of the existing education programs. Table 2-10 shows that the efficiency for 4 year S-1 program is the lowest after S-3 program. Due to the nature of its education process, Diploma programs demonstrate better performance in term efficiency.

| Program | Female | Male | Total graduating in time | Total graduates | Percentage |
|---|---|---|---|---|---|
| D-1 | 7,369 | 4,241 | 11,610 | 14,128 | 82.18% |
| D-2 | 58,951 | 18,042 | 76,993 | 117,867 | 65.32% |
| D-3 | 260,829 | 161,790 | 422,619 | 569,346 | 74.23% |

| | | | | | |
|---|---|---|---|---|---|
| D-4 | 1,901 | 1,081 | 2,982 | 3,459 | 86.21% |
| S-1 | 455,458 | 353,888 | 809,346 | 1,679,327 | 48.19% |
| S-2 | 32,596 | 70,293 | 102,889 | 164,691 | 62.47% |
| S-3 | 155 | 500 | 655 | 3,878 | 16.89% |

*Table 2-10: Efficiency in higher education system [EPSBED, 2008]*

Although improving in recent years, the national average of study period in 4 year S-1 program is estimated still hanging at around 5 years, though not evenly distributed among the existing institutions. This condition resulted in less capacity of the higher education system to provide access to high school graduates.

The efficiency for female has far exceeded their male counterparts, as illustrated in table 2-7 and 2-11. It indicates that female tend to finish their study earlier than male students. One of possible reasons is that male students tend to take employment before graduating to satisfy their self esteem and social confidence, resulted in prolonging their study. Although females tend to finish their study faster, their male counterparts tend to get more pressure for finding employment after graduated, as shown by data taken from Sakernas 2008 in table 2-8.

| D-1 / 2 | | D-3 | | S-1 / D-4 | | TOTAL | | EMPLOYED | |
|---|---|---|---|---|---|---|---|---|---|
| Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 67 | 101 | 67 | 102 | 198 | 206 | 332 | 409 | 244 | 241 |
| 39.88% | 60.12% | 39.64% | 60.36% | 49.01% | 50.99% | 44.80% | 55.20% | 50.31% | 49.69% |

*Table 2-11: Students who finished their study in time [Sakernas, 2008]*

In addition to time required to graduate, inefficiency is also demonstrated by overstaffed programs, particularly in public institutions. A considerable number of teaching staff in public institutions are working full time outside their university resulted in unacceptable level of teacher absenteeism. After the introduction of the new paradigm concept in 1995, whereby efficiency is imposed as one of the key performance indicators, many institutions launched efforts to discipline them and devote more time to teaching responsibilities. Some improvements have been achieved, particularly in larger and more established institutions.

### 2.3.7 Relevance

Relevance in higher education is a deemed pressing issue, since the graduate employability shows an alarming trend. The national figure on the rate of unemployment shows a decreasing trend in 2005-2008 except graduates of primary education. Graduates employability is also strongly affected by externally driven factors, such as economic growth, investment, and technological trend.

| Unemployment rate | 2007 | 2008 | 2009 (Feb) |
|---|---|---|---|
| Less than primary | 2.81% | 4.54% | 2.42% |
| Primary education | 5.43% | 4.54% | 5.58% |
| Junior secondary | 10.73% | 9.39% | 9.38% |
| Senior secondary | 18.01% | 15.27% | 13.46% |
| Diploma | 13.26% | 11.22% | 15.38% |

| | | | |
|---|---|---|---|
| University/Institute | 13.61% | 12.60% | 12.94% |
| Total | 9.11% | 8.37% | 8.14% |

*Table 2-12: Unemployment rate by education attainment [Sakernas, 2009]*

The national figure of unemployment rate shows a decreasing trend over the last 3 years, as presented in table 2-12. However, the figure for higher education graduates is increasing after a slight decrease in 2008. The absolute number of unemployed graduates is also steadily increasing, from 963,779 in 2007 to 1,113,020 in 2009.

Many university graduate's competence doesn't match with the competence and qualification needed by the current job market. Since the Indonesian economy is still dominated by labor intensive and lower technology industries, the number of graduates produced by higher education system is far greater than the current employment opportunity in the market [Kuncoro, 2008]. In the case of university graduate are needed, the competence of most applicants doesn't fit with the requirements.

Due to the economic pressure, most job seekers have to accept employment that might not suit their aspiration or qualification. Contrast with other job seekers, most university graduates come from middle or upper class whereby support from their relatively well off family allows them to be unemployed while waiting for more appropriate employment opportunity. Nevertheless, the supply side also needs to be rectified by improving the relevance of programs currently offered.

## 2.4 Public funding

The allocated public fund for education has been steadily increasing in the last 5 years, particularly after the Supreme Consultative Assembly (MPR) amended the Constitution in 2005 by imposing 20% of the government budget allocation for the education sector. By a sharp increase in 2009, the target to allocate 20% government budget for education sector has been achieved, as shown in figure 2-1. In 2009 the share of higher education in the total budget allocated for Ministry of National Education is close to 30%.

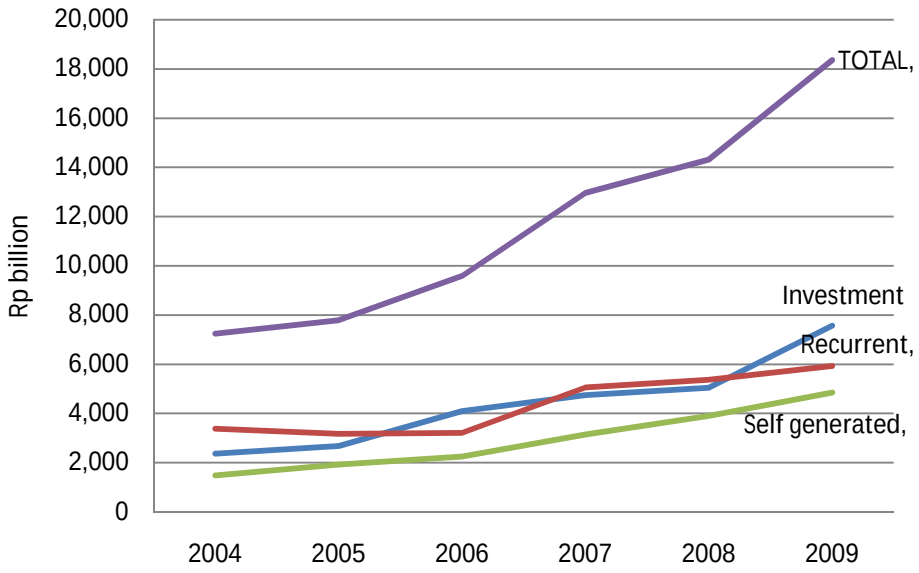


*Figure 2-1: Government budget for tertiary education [DGHE, 2009]*

Revenue generated by higher education institutions from other sources is lumped into self generated category. The sources are mostly from student tuition and fees, though in few more established institutions contract with outside agencies has also a significant share. Since almost all self generated revenue is used for activities related to maintenance and operation, it is only fair to group it under the recurrent budget. According to the latest estimation, only around 15%-20% of the self generated revenue is allocated for investment.

Almost the entire MoNE budget is allocated for public institutions under the auspice of the Ministry of National Education. Islamic institutions are administered and receive budget from the Ministry of Religious Affairs. The same allocation scheme is also applied for service institutions. However, considering that the private institutions are housing two third of the student enrolment, they are beginning to also enjoy government subsidy in recent years, although only less than 7% of the total government budget. The support covers among others, partial salary for teaching staff, laboratory equipment, fellowship for teaching staff, and grants acquired through competition.

| | Public institutions | | | Private institutions | | | |
|---|---|---|---|---|---|---|---|
| | I | II | III | I | II | III | TOTAL |
| Est. proportion of enrolment | 25.00% | 55.00% | 20.00% | 20.00% | 75.00% | 5.00% | |
| Estimated enrolment | 241,493 | 531,284 | 193,194 | 482,055 | 1,807,707 | 120,514 | |
| Personal expenses (Rp million) | 120,746 | 531,284 | 289,791 | 241,028 | 1,807,707 | 180,771 | 3,171,326 |
| Tuition and fees (Rp million) | 271,156 | 1,325,652 | 1,928,221 | 361,541 | 9,038,535 | 1,807,707 | 14,732,812 |

*Table 2-13: Estimated private contribution*

Table 2-13 presents an estimated private contribution, based on the estimation presented in table 2-5. The estimated proportion of student enrolment in each group is presented in the first row of the table. The table demonstrates that the private contribution to education (Rp 14.732 trillion) is slightly higher than the government contribution (Rp 13.504 trillion).

According to the recently enacted Law 9/2009, a higher education institution is obligated to allocate at least 20% of the student population to students with disadvantage economic background. In order to meet this requirement, financial support will be gradually made available from various sources, among others from the government.

In order to provide more access to the underprivileged population, the government provides quite a few number of different scholarship schemes. The government's budget allocated for scholarships has been significantly increased in the last few years. In 2009 the government allocates Rp 720 billion for the major scholarship schemes, and projected to be substantially increased further in 2010. In 2009 the beneficiaries are 240,000 students receiving partial scholarship in term of Rp 250,000 per month stipend for each student. In addition to the currently available scholarship, in 2010 a new scheme is introduced by allocating Rp 10 million per year full scholarship per student for 20,000 students, or additional Rp 200 billion in total. The full scholarship includes tuition and fees, living cost, books, and one time travel expenses from the student's home town to the institution's location.

## 2.5 Open university

The Open University *(Universitas Terbuka or UT)* is important for at least 3 different reasons. Firstly, its student enrolment is 11.58% of the total national enrolment, which is a very significant proportion. Secondly, it might be the only available alternative for teachers who are assigned in remote area to upgrade their qualification. Thirdly, it is an attractive alternative for significantly improving the GER in the next 5 years.

This institution was established in 1984 as a single mode institution using open and distance education. UT is one of the "mega universities" in the world, housing more than 650,000 students. Although initially designed for coping with the challenge of accommodating high school leavers who cannot be absorbed by the traditional institutions, most of its currently registered students are employed.

The proportion of female students is more than two third across different age groups, as illustrated in table 2-14. This might be an indication that female students tend not to leave their home town when they cannot enter local institutions. This is understandable since 89.48% of the students are school teachers, enrolled in the in-service training program. Thus UT indirectly contributes to the quality improvement of incoming students to higher education through improvement of the quality of teachers, particularly female teachers, without UT their needs will not have a chance to be accommodated.

Since more than two third of the population is adults or more than 30 years old, the current operation of Open University cannot be considered as an alternative for fresh high school leavers. Although contributes to the GER improvement, UT doesn't contribute to the improvement of Net Enrolment Ratio (NER), which was the original intention when it was established.

| Age groups | | | | | | Gender | | Occupation | |
|---|---|---|---|---|---|---|---|---|---|
| 18-24 | | 24-30 | | >30 | | | | | |
| Male | Female | Male | Female | Male | Female | Male | Female | Teacher | Others |
| 22,298 | 41,511 | 52,496 | 101,527 | 129,249 | 275,871 | 204,044 | 418,914 | 557,424 | 65,534 |
| 34.94% | 65.06% | 34.08% | 65.92% | 31.90% | 68.10% | 32.75% | 67.25% | 89.48% | 10.52% |
| 10.24% | | 24.72% | | 65.03% | | | | | |

*Table 2-14: Student profile in Open University by age and gender [UT, 2010]*

Consistently, the most favored subject field studied by UT students is education, and only 10.52% is studying in other fields such as social sciences, mathematics, sciences, and economics, as presented in table 2-15. High school leavers need a variety of subject fields to allow them to acquire jobs in the market. Thus unless the courses offered become more vary and its operation is changed, UT cannot be considered as an alternative for fresh high school graduates.

Although might not be suitable for fresh high school graduates, it could provide a good alternative for young employed high school leavers in the age of 20-24 years old. For economic reasons they couldn't directly enter the higher education system and have to find employment instead. After 1-2 years working, they might be able to financially support themselves for entering higher education system, but cannot afford to lose their employment.

| Subject fields | Enrolment | Percentage |
|---|---|---|
| Education | 557,424 | 89.48% |
| Social sciences | 46,457 | 7.46% |
| Mathematics and natural sciences | 3,557 | 0.57% |
| Economics | 15,520 | 2.49% |
| Total | 622,958 | 100.00% |

*Table 2-15: Student profile at Open University by subject fields[7] [UT, 2010]*

[7] The latest figure received from the Rector of UT in February 2010, thus there is discrepancy with table 2-3

# Chapter 3 Disparity in education

Disparity in access to education could be seen in at least 3 different aspects, namely geographical, economic background, and gender. The following sections discuss these 3 aspects in more detail.

## 3.1 Geographical disparity

Geographical disparity in Indonesia is mostly due to the unavailability of social and economic infrastructure in the less developed regions, though the unavailability of natural resources also has a significant impact. Table 3-1 shows that disparity in economic development between provinces is striking. The highest provincial GDP per capita (Kalimantan Timur) is more than 20 times higher compared to the lowest (Maluku Utara).

The most serious challenge is to provide the necessary educational infrastructure and facilities, as well as teachers in remote islands and locations. The disparity potentially becomes structural, since school leavers from basic education cannot afford financially and academically to be admitted to the better schools in more established regions, and have to stay at local senior secondary school with inadequate quality due to lack of quality teachers and sufficient infrastructure. After graduating from the secondary education, they have less ability to compete with graduates from more established regions to get into the better higher education institution.

| Province | 2006 | 2007 | Province | 2006 | 2007 |
|---|---|---|---|---|---|
| NAD | 17,380.60 | 17,329.35 | Kalimantan Barat | 9,158.07 | 10,166.00 |
| Sumatera Utara | 12,684.53 | 14,166.63 | Kalimantan Tengah | 12,633.20 | 13,765.22 |
| Sumatera Barat | 11,448.15 | 12,729.26 | Kalimantan Selatan | 10,362.44 | 11,610.98 |
| Riau | 35,078.81 | 41,412.85 | Kalimantan Timur | 67,970.62 | 70,120.04 |
| Jambi | 9,712.62 | 11,697.44 | Sulawesi Utara | 9,840.92 | 11,100.20 |
| Sumatera Selatan | 13,902.94 | 15,654.74 | Sulawesi Tengah | 8,219.24 | 9,074.11 |
| Bengkulu | 7,119.87 | 7,930.11 | Sulawesi Selatan | 7,982.35 | 8,996.06 |
| Lampung | 6,811.12 | 8,357.19 | Sulawesi Tenggara | 7,628.24 | 8,837.21 |
| Bangka Belitung | 14,812.89 | 16,170.34 | Gorontalo | 4,314.95 | 4,957.33 |
| Kepulauan Riau | 34,544.70 | 37,206.98 | Sulawesi Barat | 5,162.73 | 6,091.29 |
| DKI Jakarta | 55,981.20 | 62,490.34 | Nusa Tenggara Barat | 6,716.36 | 7,808.66 |
| Jawa Barat | 11,934.52 | 13,048.17 | Nusa Tenggara Timur | 3,881.42 | 4,301.53 |
| Jawa Tengah | 8,763.27 | 9,648.74 | Maluku | 3,996.61 | 4,377.09 |
| DI Yogyakarta | 8,680.93 | 9,584.05 | Maluku Utara | 3,066.30 | 3,346.52 |
| Jawa Timur | 12,861.33 | 14,498.20 | Papua Barat | 12,994.59 | 14,483.03 |
| Banten | 10,610.24 | 11,400.59 | Papua | 23,761.85 | 27,468.42 |
| Bali | 10,895.40 | 12,166.39 | National | 15,029.73 | 17,581.38 |

*Table 3-1: Per capita gross regional domestic product at current price market by provinces (Rp 000) 2006-2007 [BPS, 2009]*

Most top universities provide scholarship for applicants from less established regions. But even if scholarship is available, it is still difficult for them to academically qualify for admission due to their low quality secondary education. One option to compensate is to enter "cramp schools", widely available even in less established regions. But such school is very expensive, and only students from higher income families can afford it.

| | Location of senior secondary school | | | |
|---|---|---|---|---|
| Institution | Jawa-Bali | West | East | Total |
| Universitas Indonesia | 3,145 | 418 | 36 | 3,599 |
| | 87.39% | 11.61% | 1.00% | |
| Institute Technology of Bandung | 1,137 | 427 | 47 | 1,611 |
| | 70.58% | 26.51% | 2.92% | |
| Gadjah Mada University | 1,324 | 126 | 61 | 1,511 |
| | 87.62% | 8.34% | 4.04% | |
| Bogor Agricultural University | 656 | 116 | 17 | 789 |
| | 83.14% | 14.70% | 2.15% | |
| Airlangga University | 1,594 | 23 | 44 | 1,661 |
| | 95.97% | 1.38% | 2.65% | |
| TOTAL 5 INSTITUTIONS | 7,856 | 1,110 | 205 | 9,171 |
| | 85.66% | 12.10% | 2.24% | |

*Table 3-2: Students admitted to top 5 public institutions [SPMB, 2007]*

Once admitted, students from less developed regions have to cope with challenges that are not limited to academic issues only. Most also has to struggle with the cosmopolitan life style, culture, and even slang. Table 3-2 shows that the proportion of admitted students in top 5 public institutions located in Jawa, who finished their secondary education outside Jawa is just less than 15%.

Most or all top institutions are located in the island of Jawa, which also has the highest population density. In the 2007 national entrance examination, the percentage of students from East Indonesia admitted to the top 5 public institutions is merely 2.24%, as presented in table 3-2. Even students from Western regions, which is more developed compared to regions in the East Indonesia, is only represented by 12.10% of the admitted population.

In addition to regional disparity, the other dimension of geographical disparity is between urban and rural area. The country is administratively divided into 387 districts and 96 municipalities. Since districts is area based and municipalities is population based, districts could be considered as rural whilst municipalities as urban. Table 3-3 illustrates the disparity in gross enrolment rate between urban and rural in primary and secondary education.

| Disparity in GER | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Primary education | 2.49% | 2.43% | 2.40% | 2.28% |
| Junior secondary education | 25.14% | 23.44% | 23.00% | 20.70% |
| Senior secondary education | 33.13% | 31.44% | 31.20% | 46.37% |

*Table 3-3: Disparity between urban and rural [MoNE, 2009]*

Basic education provides practically free education that the disparity between rural and urban could be maintained below 2.5%, with a decreasing trend over the years. The disparity

increases more than 9 times at junior secondary, and increases further 2.3 times at senior secondary education. The disparity in junior secondary has been decreasing by the extending compulsory education from 6 to 9 years in 2000. Since senior secondary is not included in the compulsory education, the disparity has been significantly worsened at this level in the last few years.

Higher education is mostly an urban phenomenon that the government considers the disparity between urban and rural as not an issue. According to data extracted from the national entrance examination in 2007, the proportion of applicants originated from rural schools is more or less the same as applicants from urban schools. However, those who finished their high school in urban area are slightly more likely to be admitted by the public institutions, as illustrated in table 3-4. Table 3-4 indicates that those come from rural area tend to perform better by finishing their study earlier, and perhaps due to financial pressure to get employed earlier. But it should also be noted that data on applicants and admitted students are acquired based on high school locations, whilst data on graduates are based on their household locations.

| | RURAL | | URBAN | |
|---|---|---|---|---|
| Applicants | 196,214 | 49.99% | 196,258 | 50.01% |
| Admitted | 42,737 | 47.06% | 48,078 | 52.94% |
| Graduating in time | 511 | 68.96% | 230 | 31.04% |

*Table 3-4: Applicants, admitted, and graduates in public institutions [SPMB, 2007 and Sakernas, 2006]*[8]

Considering the fact that applicants from rural area with economically disadvantage background might not afford to go to the nearest university to apply and take the examination, the government provides financial support for them covering transport and test fee. The Open University also provides an opportunity for those who cannot afford to leave their home location.

## 3.2 Economic background

As the global financial crisis takes its toll in the world economy in 2008-2009, the country demonstrates its resilience by keep growing at the rate of 2.3% in 2008, 4.5% in 2009, and projected to be at least 5.3% in 2010. Some even begin to consider include Indonesia into the promising countries with large population, by adding an additional I to the BRIC.

The percentage of population who live below the poverty level as well as the absolute number have been steadily decreasing. The percentage has been decreasing from 17.75% in 2006 to 15.42% in 2008, whilst the absolute number from 37,168,300 in 2006 to 34,963,300 in 2008. However the population living in poverty is still staggering at almost 35 million people, and it has significantly affected the access to education.

[8] Data on graduates is extracted from Sakernas using different sample frame.

| School level | Quintile 1 | | Quintile 2 | | Quintile 3 | | Quintile 4 | | Quintile 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Primary | 6,290 | 92.28% | 5,595 | 94.79% | 5,131 | 96.03% | 4,665 | 97.02% | 3,856 | 97.90% |
| Junior secondary | 2,218 | 70.60% | 2,262 | 78.76% | 2,178 | 84.35% | 2,043 | 89.85% | 1,822 | 93.46% |
| Senior secondary | 891 | 33.96% | 1,093 | 43.32% | 1,249 | 52.61% | 1,432 | 62.02% | 1,583 | 71.32% |
| Higher education | 138 | 4.90% | 266 | 9.39% | 492 | 15.08% | 570 | 19.37% | 1,336 | 32.03% |

*Table 3-5: Participation in schooling by income brackets [Susenas, 2006]*

Table 3-5 shows that due to the government program on 9 year compulsory education, the percentage of population who participate in primary education is more or less uniform across the income brackets. In junior secondary some variations between income brackets begin to show up. Since compulsory education doesn't include senior secondary education, the variations becomes more visible and striking, whereby only 33.96% of population is in school among the population with lowest income bracket (quintile I) compared to 71.32% in the highest income bracket or quintile 5. The figure drastically drops for higher education, whereby only 4.90% of quintile-1 is in school compared to 32.03% in quintile-5 (see also section 3.4.1).

In order to better understand the contribution of economic background to the disparity in accessing higher education, the profile of high school leavers who participate in the national entrance examination could provide some indications. The examination is conducted annually to enter all public universities and institutes, excluding polytechnics. In 2007, the number of applicants to this national examination was 362,336, whilst 58,346 applied to public polytechnics[9]. Since the number of graduates from senior secondary schools in the same year was 1,147,720 [Puspendik, 2007], only less than 40% attempted to continue their study to public higher education institutions. The remaining 60% might simply terminate their education, or directly apply to private or overseas institutions without any attempt to enter public institutions (see also section 3.4). Unless receiving scholarship, private and overseas education is usually much more expensive.

Table 3-6 shows that the majority of applicants to higher education come from lower middle income (45.3%) or Q-2, and only 31.94% come from the lowest income family or Q-1. Those who come from upper class or Q-5 (2.7%) have more alternatives and better opportunities, such as pursuing further study in overseas institutions. Therefore the top institutions have to directly compete in the global market to attract the brightest and richest high school leavers, by continuously improve the education quality and most importantly intensify the staff research.

| | Q-1 | Q-2 | Q-3 | Q-4 | Q-5 |
|---|---|---|---|---|---|
| Applicants | 31.94% | 45.30% | 15.6% | 4.5% | 2.65% |
| Admitted | 29.88% | 47.33% | 16.15% | 4.30% | 2.34% |

*Table 3-6: Distribution of applicants and admittance by parents' monthly income [SPMB, 2007]*

Table 3-6 also illustrates that the distribution across parents' income is more or less the same between applicants and admitted students[10]. It indicates that the selection process doesn't

[9] If an applicant participates in both examinations, he/she will be double counted.
[10] Brackets in the quintile is approximately the same as used by the Statistics Indonesia

imply any favors to the higher income population. however, it should be noted that parents' income in table 3-6 were self proclaimed by applicants and not verifiable, whilst data on income brackets presented in table 3-5 were calculated based on data on household expenses collected by the Susenas. Therefore, though data on parents' income are frequently used by universities for developing their student profile, it should not be considered as very accurate and reliable.

## 3.3 Gender disparity

In a more traditional society, girls usually are considered lower priority to be selected when family's financial ability matter to send children to school, even when they are intellectually more potential for pursuing academic excellence. The discrimination resulted in the loosing of potential candidates who could significantly contribute to the country's development in the future.

| Gender disparity in GER | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| Secondary education | 6.16% | 6.07% | 5.50% | 5.45% | 4.45% |
| Literacy | 7.32% | 6.59% | 5.33% | 5.09% | 3.37% |

*Table 3-7: GER disparity between gender [MoNE, 2009]*

In terms of gender equity, NER female in primary school is 99.1% of its male counterpart in 2008. In secondary education the gender disparity had been significantly reduced from 6.16% in 2004 to 4.45% in 2008.

The gender disparity has practically been completely eradicated in higher education. The number of female students for the first time even surpassed their male counterpart in 2008, as illustrated in table 3-8. However, stereotyping is still strong, where female students are mostly concentrated in subject fields that are stereotyped for female, e.g. nursing, dentistry, home economics, and education. Although improving, the proportion of female students is still low in subject fields such as engineering.

| | 2005 | | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Population 19 - 24 years old | 12,708.4 | 12,638.8 | 12,745.5 | 12,603 | 12,782.6 | 12,568.3 | 12,786.7 | 12,572.3 |
| Public institution | 415.9 | 389.6 | 425.8 | 398.9 | 505.3 | 473.4 | 464 | 502 |
| Private institution | 1,109.70 | 1,134.10 | 1,270.00 | 1,297.90 | 1,270.00 | 1,103.20 | 1,254.80 | 1,155.50 |
| Service institution | 26.3 | 21.8 | 28.2 | 23.1 | 26.0 | 21.3 | 26.0 | 21.3 |
| Islamic institution | 252.7 | 255.8 | 257.9 | 261 | 251.6 | 254.6 | 192.1 | 364.7 |
| Open University | 134.2 | 127.9 | 165.3 | 157.6 | 171.9 | 279 | 187.8 | 333.5 |
| Total | 1,938.80 | 1,929.20 | 2,147.20 | 2,138.50 | 2,224.80 | 2,131.50 | 2,124.60 | 2,376.90 |
| GER | 15.25 | 15.26 | 16.85 | 16.97 | 17.55 | 16.96 | 16.62 | 18.91 |

*Table 3-8: Gender disparity in higher education, in 000 [DGHE, 2009]*

The current challenge is perhaps to increase GER for male students to at least match their female counterparts. In 2008 GER for male students (16.62%) is significantly lower compared to female (18.91%). It is also important to improve female participation in the field such as engineering and sciences, which traditionally dominated by male students.

## 3.4 Student profile

Table 3-9 presents a consolidated picture illustrating the problems of disparity. The very small GER of students come from Q-1 is particularly alarming. Most of the current resistance for implementing the Law 9/2009 is triggered by fears that over-commercialization becomes rampant and uncontrollable. It will reduce even further the opportunity of poor students to enjoy higher education. Therefore it is paramountly important to address the issue of providing assistance to the poor to access services in higher education.

Although economic background seems the most important aspect affecting access, other aspects need to also be properly addressed. Table 3-9 illustrates that financial ability is affected by other aspects such as regional disparity and types of high school. The design of future intervention has to comprehensively take into account these aspects.

| | Q-1 | Q-2 | Q-3 | Q-4 | Q-5 |
|---|---|---|---|---|---|
| Applicants | 31.94% | 45.30% | 15.58% | 4.53% | 2.65% |
| Gross enrolment rate | 4.90% | 9.39% | 15.08% | 19.37% | 32.03% |
| | | | *Types of high school* | | |
| General | 72.00% | 80.16% | 82.53% | 82.92% | 88.07% |
| Vocational | 7.10% | 4.77% | 3.88% | 3.74% | 1.25% |
| Madrasah | 20.90% | 15.08% | 13.58% | 13.34% | 10.68% |
| | | | *Geographical location of high school* | | |
| Rural | 57.71% | 44.09% | 39.01% | 35.67% | 28.03% |
| Urban | 42.29% | 55.91% | 60.99% | 64.33% | 71.97% |
| | | | *Gender* | | |
| Male | 50.22% | 49.26% | 48.73% | 48.38% | 47.43% |
| Female | 49.78% | 50.74% | 51.27% | 51.62% | 52.57% |

*Table 3-9 The problems of disparity in higher education*

Disparity in access to education only reflects part of the problem in disparity. The other issue is how to provide adequate support for those who are already within the system. Without such support, many students with disadvantaged economic background will not be able to finish their study. Since most of them come from rural area in outer islands, they also have non academic problems in adjusting themselves to the campus life. In addition to a new environment and culture, the majority have to live by themselves for the first time. The university curricula rely on student capacity to study independently in self disciplined, quite a contrast with guided study in the context of the Indonesian basic and secondary education.

Therefore understanding the student profile is essential in designing any attempt to provide support for students from underprivileged population. The worst case they could be dropping out from university, having GPA that is barely sufficient for not to be flunked, or prolonged their study at best. In Indonesia the competition to enter the top universities is highly competitive that 2%-5% selectivity is not uncommon for highly demanded programs such as medicine, electrical engineering, management, or computer science. With such selectivity, student drop outs could become a nightmare for any university managers.

### 3.4.1 Economic background

Unfortunately though individual institution might possess accurate figure on the profile of their students, a reliable national figure is currently not available. Without such reliable data, a good approach employed by this study is analyzing the entrance examination. The profile of the admitted students could represent the profile of the entire student population in public higher education institutions. It has to be noted that for private institution, a sample institution was taken to represent the profile of student population in private institution. Although this sample was carefully selected to be able to represent a typical private institution, it is impossible to assure that it represents the entire student population in private institutions.

Table 3-10 illustrates the student profile by parents' income. As illustrated in table 3-11, the proportion in the lowest bracket is more or less indifferent in public and private institutions, but the difference in the middle and upper income is increasingly larger. It might indicate that only the brightest from the poorest population can enter the better quality public institutions. Most of the poorest are failed in the national entrance examination, and have to study in the low quality private institutions instead. The brightest from the richest population are successfully admitted to the best public institutions, if they don't choose overseas institutions. The competition to attract the richest is fierce, whereby domestic providers should also directly compete with overseas institutions. The bulk of the population is divided proportionally between public and private institutions.

| Parents' income | Q1 | Q2 | Q3 | Q4 | Q5 | |
|---|---|---|---|---|---|---|
| Public institutions | 29.88% | 47.33% | 16.15% | 4.30% | 2.34% | 100.00% |
| Private institutions | 34.52% | 52.05% | 10.85% | 1.25% | 1.34% | 100.00% |

*Table 3-10: Distribution of students by parent's income [SPMB, 2007 and UWM, 2010]]*

The slightly lower proportion of students from Q-1 compared to Q-2 in SPMB indicates that only the brightest from the poorest dare to participate in the examination. The lower percentage of students from higher income brackets indicates that the majority of the richest might not intend to participate in the examination. Other possibility is that only the brightest of the richest participated, whilst those who were less confident applied through other recruitment schemes. Most established institutions have other recruitment schemes based on academic performance in high school. These schemes waive the requirement of entrance examination, but charge much higher admission fee.

Data presented in table 3-10 is based on the self proclaimed data collected through the national entrance examination, whereby around 30% of students entering public higher education institutions come from Q-1 population. However, previous study indicated that only 2-5% of the students come from the Q-1 population [Triaswati, 2003]. As mentioned earlier, self proclaimed data is unverifiable and it explains the significant difference with the findings from the earlier study. Table 3-11 presents data extracted from Susenas and shows a much lower percentage, whilst Q-4 and Q-5 population is significantly higher. But it should be taken into account that Susenas used only a small sample size of 2,802 students out of 268,683 respondents.

| Proportion | Q-1 | Q-2 | Q-3 | Q-4 | Q-5 | |
|---|---|---|---|---|---|---|
| Public | 5.26% | 10.53% | 17.33% | 19.69% | 47.19% | 100.00% |
| Private | 4.71% | 8.82% | 17.71% | 20.76% | 48.00% | 100.00% |

*Table 3-11: Distribution of students by parents' income [Susenas, 2006]*

### 3.4.2 Senior secondary school

Almost two third of the incoming students in public institutions comes from public senior secondary schools, as presented in table 3-12. The proportion of those who come from vocational schools is merely 4.5%, whilst from madrasah is 15.2%. The number of graduates from vocational education in 2007 was 640,820 or 32.78% of the total high school graduates in 2008 [Puspendik, 2008]. Hence the figure indicates that they are in general less prepared to enter higher education. This is particularly important problem considering that the majority of those who are graduated from vocational schools and madrasah come from lower income, as illustrated in table 3-9.

| | Senior Secondary Schools | | | | | |
|---|---|---|---|---|---|---|
| | Public | | | Private | | |
| | General | Madrasah | Vocational | General | Madrasah | Vocational |
| Total | 61,369 | 3,302 | 3,366 | 11,561 | 10,500 | 717 |
| Percentage | 67.58% | 3.64% | 3.71% | 12.73% | 11.56% | 0.79% |

*Table 3-12: Distribution of admitted students by types of school [SPMB, 2007]*

Although vocational education traditionally provides more emphasis on preparation to enter the job market, the graduates' competence in mathematics and basic sciences need a serious attention as the technology used in the market is rapidly changed.

# Chapter 4 Current intervention

The most common support from community and the government is the provision of scholarship for the underprivileged population group. The Directorate General of Higher Education (DGHE) also provides other support such as allocating additional budget for less established institutions, policies aim to give privileges to the population group who has weaker economic background, as well as develop economic and social infrastructure necessary for development for the less developed regions. This chapter elaborates the currently available support and possible future intervention.

## 4.1 Scholarships

Although scholarships are provided in a wide spectrum of schemes, in terms of coverage they could be grouped only in full and partial scholarship. Full scholarship covers supports for tuition (including fees) and living cost (monthly allowance). Tuition component is set forth by the institution, whilst living cost is set based on the consumer price index for the region where the students pursue their study. Until recently, full-scholarship is provided only by the government and a few private companies as well as philanthropic foundations. Unfortunately such scheme is very limited in number, the majority limited to graduate students, and usually requires a very high academic performance that it is ineffective for supporting the underprivileged group.

Partial scholarship is intended to partially support students' financial needs. It is usually provided for topping up students' living allowance, and is uniformly set at a fix amount without taking into account the regional consumer price index. Most scholarships currently available for undergraduate students fall within this category. A small number of scholarships waive the tuition (full as well as partial).

Except for graduate students, most if not all schemes of scholarship currently implemented is targeted only for those already enrolled. None of the schemes provide financial support for high school leavers who want to pursue higher education before they are admitted. This inevitably limits the opportunity for economically disadvantage students to pursue higher education.

Most or all schemes don't give adequate attention for managing the scholarship, though some are very serious during the selection process. Monitoring of recipients' academic performance and their academic as well as non academic difficulties are rarely becomes a concern. Therefore, the effectiveness of the program is difficult to assess and evaluation of the impact has never been conducted.

### 4.1.1 Undergraduate Students

The Government provides various schemes of scholarship for undergraduate students implemented and managed by several ministries. Under the service institutions, scholarship is provided to support fully all students regardless of their socio-economic background and

academic performance. Financial support package includes tuition and fees, board and lodging, as well as monthly stipend.

The Directorate General of Higher Education (DGHE) provides scholarship for undergraduate students in the form of full and partial scholarship. Full scholarship aims to support highly talented high school leavers who are winners of international competition, e.g. science & mathematics, athletics. Partial scholarship program is mandatory for the recipients of competitive grants, but the quantity is relatively small. Most scholarship programs provide only partial scholarship in the form of monthly stipend. In total it is estimated that the coverage of the current government scholarship is around 5.6% of the total population of undergraduate students.

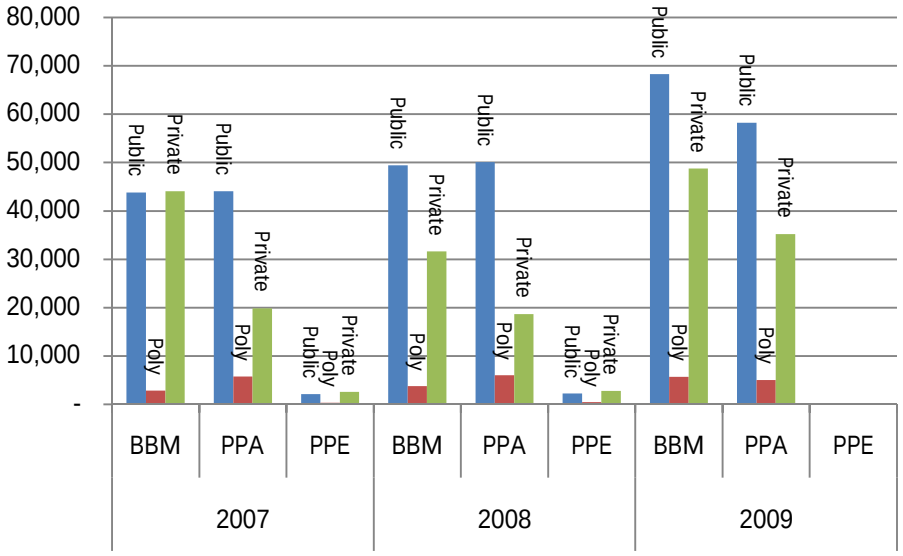


*Figure 6-1: DGHE scholarship for undergraduate students [DGHE, 2010]*

As explained earlier that when data from the Susenas is used, only 4.9% or 220,691 students belong to Q-1. The BBM and PPA scholarship provided by the DGHE covers around 200,000 students, as illustrated in table 4-1. If the selection of recipients is properly conducted (which might not be the case), and by taking into account other types of scholarship, the entire Q-1 students could be more or less covered. However, the scholarship only provides Rp 250,000 per month or Rp 3,000,000 per year, whilst the lowest estimated figure requires at least Rp 6,087,500 for annual expenses as illustrated in table 2-5. A survey conducted by DGHE also found that two third of respondents think that the scholarship is inadequate [DGHE, 2010]. Therefore the currently available scholarship could only cover less than half of student expenses. A more in depth and wider scope survey and study is needed to evaluate the scholarship program, including its selection process, implementation, impact, and effectiveness.

Data extracted from the Susenas reveals that 13.64% recipients use the scholarship for short meals, 7.27% for supporting their family, and only 60% for schooling [Susenas, 2006]. Whilst the DGHE survey found that only 39.8% use the scholarship for tuition, 23.8% for books, and 24.8% for other educational needs [DGHE, 2010]. In the survey, 38.1% respondents said that there are recipients who actually ineligible to receive support, particularly due to their current financial

ability. The fact indicates that not all students from Q-1 population are covered. Therefore the selection and monitoring process of distribution of scholarship need to be improved for higher effectiveness.

In attempt to provide more access to the needy, in 2010 the DGHE allocates budget to provide 20,000 full scholarships under a new scheme called "*Bidik misi"* targeted for high school leavers. Although considered as a good initiative, inadequate preparation could hamper the implementation to achieve the intended outcome.

### 4.1.2 Graduate students

The government provides a sufficient number of full scholarships for graduate students, particularly for teaching staff in public and private institutions. This is a direct consequence of the prevailing Law 14 / 2002 on Teachers and Lecturers, which imposes that all university lecturers should hold at least S-2 degree. Domestic providers have to be accredited (A or B), and overseas providers have to be approved by the DGHE. In 2008 the number of recipients of this government scholarship has reached 6,941, comprises 1,104 studying in overseas and 5,837 in domestic institutions [DGHE, 2008]. In this scholarship scheme, however, only university lecturers are eligible to receive the government graduate scholarship.

### 4.1.3 Scholarship from private entities

Private institutional donation is relatively new in Indonesia, though personal donations have been long accepted as a tradition. Institutional donation has just become popular when a new tax incentive was introduced, whereby donation for education is considered as part of corporate social responsibility and tax deductable. Traditionally scholarship is the most popular scheme for philanthropic donations.

Most personal donations are not registered in the institution that the necessary information is not available. But the number is estimated as small and insignificant in higher education since most personal donation are targeted to students in primary and secondary schools.

| | Supersemar | | Regional Government | | State enterprises | | Banks | | Private Inst. | | Philanthropic foundations | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| Public | 2,852 | 2,984 | 44,290 | 22,588 | 469 | 612 | 766 | 1,213 | 778 | 1,064 | 3,162 | 3,861 | 52,317 | 32,322 |
| Private | 136 | 155 | 360 | 1,183 | 151 | 0 | 66 | 105 | 27 | 56 | 421 | 639 | 1,161 | 2,138 |
| Total | 2,988 | 3,139 | 44,650 | 23,771 | 620 | 612 | 832 | 1,318 | 805 | 1,120 | 3,583 | 4,500 | 53,478 | 34,460 |

*Table 4-1 Scholarship from private entities [DGHE, 2010]*

The private companies and philanthropic foundations usually deal directly with the institution, that national picture on institutional private donation is not available. Table 4-1 presents scholarships from private entities reported to the DGHE. But a significant portion of private scholarship is not properly reported to the DGHE. The beneficiaries of the scholarship could be grouped into the following categories,

*Geographical:* Students from areas close to the company location or from particular regions, such as less developed Eastern Indonesia

*Academic performance:* Students who demonstrate good academic performance

*Economic background:* Students come from disadvantage economic background

*Non academic performance*: Students who demonstrate excellent potentials in certain areas, e.g. sports, arts.

### 4.1.4 Student loan

Student loan was introduced in the 1980's, but terminated just after a few years of implementation. The main failure is the inability to track down graduates and impose the repayment promises. Although some discussions have been conducted to explore the possibilities to reintroduce such system, a more viable system has not been come up into the picture yet.

## 4.2 Establishing new institutions

The capacity of the higher education system to absorb high school leavers will be directly increased by establishing new institutions. An institution that is newly built from scratch provides the opportunity to design its system, culture, and programs according to its purpose and mission. The challenge is to acquire the "brand" recognition that attracts the best students, since in many cases the strength of higher education comes from its reputation. Quite a few private institutions are currently in financial trouble due to its failure to attract adequate number of students.

Some kind of assurance is needed in establishing new institutions that it will not add to the pool unemployed graduates, who are incompetent and irrelevant. Therefore establishing new institutions requires a significant amount of capital, long term commitment to provide the necessary recurrent budget, and currently is considered as the least preferred option by the government. Therefore the central government has been experimenting with other alternatives in coping with the challenges, as elaborated in the following sections.

### 4.2.1 Public polytechnics

Currently there are 27 public polytechnics, including 5 focusing on agriculture or fisheries. In the private sector there are 118 polytechnics. Most polytechnics focus on engineering fields, though some institutions also offer accountancy and management. Since polytechnic education is preparing students to directly enter the job market in businesses and industries, the student staff ratio is small and practical works are dominant. Due to these characteristics, the initial investment is expensive and student unit cost is high, whilst it only insignificantly affects the GER. Therefore developing polytechnics should not be seen as improving GER, but more for improving relevance and supporting the industrial development.

The first and model polytechnic in Indonesia is *Politeknik Manufaktur Negeri Bandung (Polman)*, established in cooperation with the Swiss government in 1976. Its reputation is so high that most final year students have been recruited by the industries, and all of its graduates are employed. It has developed collaboration with various industries, generating sufficient revenue to partially support itself. Its main strategy is bringing the production line into the campus, creating the necessary industrial environment, requirement, discipline, and revenue.

Other polytechnics developed solely by the government, supported by the local public university, have failed to replicate the success of Polman. Only a handful private institution established by major industries is performing well. In order to ensure relevance the involvement of stakeholders, particularly the private industries, right from the early initiative is deemed important. A successful model of cooperation between the central and regional governments is demonstrated by the establishment of 14 new private polytechnics in 2007/2008, whereby the district governments contribute 30% of the total investment for 3 year period, whilst the DGHE covers the remaining cost [DGHE, 2008].

### 4.2.2 Public universities

Currently there are 83 public institutions, including public polytechnics. Inefficiency in public institutions is persistently endemic that before this problem is resolved establishing new institutions is difficult to be justified. Therefore the current approach is acquiring several of the existing local private institutions and merging it into one public institution for that region. There is a political unwritten consensus that each province should have at least one public institution. In the last 10 years only the following 7 public institutions have been established, as presented in table 4-2. In the very near future at least 6 additional institutions will be added to the list of public higher education institutions.

| Institution | Province | Previous status |
|---|---|---|
| Universitas Khairun | Maluku Utara | Private university |
| Universitas Negeri Papua | Papua Barat | Faculty of Agriculture under Universitas Cenderawasih |
| Universitas Trunojoyo | Madura, Jawa Timur | Private university |
| Universitas Tirtayasa | Banten | Private university |
| Universitas Malikussaleh | DI Aceh | Private university |
| Universitas Negeri Gorontalo | Gorontalo | Faculty of Education under Universitas Negeri Manado |
| Universitas Pendidikan Ganesha | Singaraja, Bali | Faculty of Education under Universitas Udayana |

*Table 4-2: Newly established public universities [DGHE, 2008]*

### 4.2.3 Private institutions

Since private institutions don't require public funding, its establishment is a private matter as far as funding is concerned. However the government needs to ensure that the public interests are well protected by requiring a set of requirements to be met, e.g. availability of infrastructure and facilities, qualified human resources, and programs that are relevant to the market needs. After acquiring license to operate from the government, a new institution is allowed to operate for 2 years before applying for accreditation.

# Chapter 5 Future intervention

## 5.1 Support for individuals

### 5.1.1 Scholarship[11]

In 2009 the parliament passed a new Law imposing higher education institution to become autonomous legal entity. A 4 year transition period is given to public and 6 year for private institutions. The new law mandated that the higher education institution shall provide scholarship for at least 20% of the students' population. Since there are varying degrees of support needed by the underprivileged students, and that the limited capacity of the institution as well as government to provide full support, new schemes are recommended, as elaborated in the following sections.

*a) Voucher (Full scholarship):*

This voucher is to cover fully financial need for pursuing undergraduate study at a higher education institution. Its coverage includes: tuition & fees, monthly stipend, travel, books and special allowances. The voucher is intended for a highly selective group of students satisfying the criteria of coming from the underprivileged group (Q-1 and Q-2) and admitted at good quality study program (accredited A).

As discussed in section 3.4.1, the brightest of the poorest is expected to survive by acquiring full scholarship provided by either government or private entities. But since bright students are rarely come from Q-1 and Q-2 due to their lower quality secondary education, the percentage is very small. The bulk of high school leavers from Q-1 and Q-2 have barely adequate academic performance to continue their study in higher education. Therefore, this scheme might not able to recruit adequate number of eligible recipients.

Alternatively, this scheme should allocate additional budget for institutions to provide additional supports, such as remedial courses, special academic advisors, and counselors for non academic problems.

*b) Partial scholarship:*

The existing scheme of scholarship can still be implemented with some modifications. The amount should at least cover a minimum standard cost of living and to be determined based on local consumer price index. The criteria, which shall be strictly adhered and regularly monitored, have to include economic background and academic performance.

The 5% students from Q-1 income bracket should become the primary target for full scholarship, whilst those come from Q-2 bracket (around 10%) might need partial scholarship from various sources (see section 3.4.1). The government is expected to fulfill the aforementioned needs in partnership with the higher education institutions. Higher education

[11] Part of this section was taken from a report written by Prof. T. Basaruddin in Moeliodihardjo, et.al, 2009

institutions can significantly contribute by for instance waiving students from paying their fees. Such fee waiver will significantly support students coming from low income group but still capable of supporting their own living.

### 5.1.2 Management of the scholarship

The management of scholarship is centrally important for an effective support scheme. A special unit should be established both at the central level (DGHE) and institution. The unit is responsible to determine the amount of support per students, develop annual plan, disseminate information to the beneficiary population (high schools and higher education institutions), conduct selection process, and monitor as well as evaluate recipient's academic performance.

Most of the current schemes rarely give adequate attention to monitoring and evaluation that improvement is difficult. Many even have limited attention to properly conduct selection process. Monitoring and evaluation mechanism is deemed necessary for measuring whether the implementation has achieved the original intended outcome. Deficiencies identified could be then be used to improve the scheme.

In order to implement the necessary management, a certain amount of budget needs to be allocated for this purpose. Both the DGHE and the institution have to assign appropriate officers to carry out the aforementioned tasks. In order to carry out those tasks, officers are required to possess a certain qualifications, such as adequate knowledge and empathy for the underprivileged students. Periodically a national survey might be needed to better understand the changes occurred in the job market, student profile, and student needs.

## 5.2 Expanding access

While scholarship could help underprivileged population with excellent academic potentials to compete with their economically well off counterparts in higher education, it will not help those who are adequately good though not excellent. This population group could only enjoy higher education when the higher education's capacity to absorb high school graduates is increased.

### 5.2.1 Expansion of the existing programs

Many public higher education institutions are currently operated in very low efficiency that increasing their absorption capacity will not require significant new resources. However all existing programs need to be thoroughly assessed to evaluate its relevance before any decision is made, and only relevant programs can be expanded. The remaining programs have to be merged, modified, phasing out, or even immediately terminated.

Improving equity could also be done by providing more access to those who failed in the competition for securing places in the best institutions. However, expansion should take into account the trend of increasing unemployment for university graduates, as illustrated in table

3-6. The trend indicates that higher education needs to improve its relevance, and expansion of the existing programs could risk further increase the unemployment. In order to prevent decreasing quality and increasing unemployment, expansion requires a carefully designed policy, strategy, and plan.

Since the employability of graduates becomes one of the important criteria in the accreditation process, the accreditation result could indicate the profile. There are 95 Diploma programs and 500 undergraduate programs in public institutions receiving C or D accreditation, as illustrated in table 3-6. These programs should become the first priority to be thoroughly assessed, particularly their ability of their graduates to get employment.

The common perception is to directly link relevance with academic discipline. For example, engineering is commonly considered as more relevant than linguistics. However, engineering programs operated with inadequate facilities and unqualified teaching staff will not be able to produce employable graduates. In many cases these graduates don't have the competence necessary for any engineering works that they failed to acquire jobs relevant with their training. Even worse, the engineering curriculum doesn't provide them with adequate transferable skills (communication, IT, and English), hence make them more difficult to get employment in other occupations. At the same time students in Chinese or Japanese Department have been employed even before graduating, for examples as translators in lucrative foreign investment companies. Therefore relevance should be defined more by the program's ability to produce employable graduates, rather than merely its academic discipline.

### 5.2.2 New programs and institutions

Another alternative strategy is to diversify the higher education to accommodate a wide spectrum of different needs, interests, and potentials. A significant proportion of high school graduates experience difficulty in passing the entrance examination into higher education institutions. Top institutions are usually research universities, whereby most programs are designed to prepare students for jobs requiring substantial analytical capabilities. But many high school leavers don't aspire for such profession, don't possess the academic potential for such education, and cannot afford to stay that long in universities. They need an education that can quickly provide them with the necessary practical skills required in a working environment.

In order to accommodate the variety of job opportunities in the market, the higher education system needs to diversify its programs. Programs distinction could be based on scientific disciplines, nature of delivery (academic, professional, and vocational), and duration of study (4, 6, and 8 semesters). The existing institutions could open new programs to respond market needs, and the government has to facilitate the process by providing the necessary legal infrastructure. Even an entirely new institution could be established, either by the government or the concern parties in the community or industries.

Currently most teaching institutions aspire to eventually become research institution, and polytechnics envision themselves to become a university in the future. It is the responsibility of the DGHE to ensure that the variety of jobs, occupations, and careers in the market is properly

responded by the higher education system by offering a wide variety of programs. The DGHE also has to securely guard that the irrelevant programs will not proliferate again in the future.

In the long run, Indonesia will enter the post industrial era, whereby the organization structure becomes flatter, reducing the need of middle level between top decision makers and floor plant operators. The advancement of ICT will substitute many of the currently needed middle supervisors, exactly the positions targeted in polytechnic education. Due to technological advancement, the labor market is also changed in a much shorter period, and relevant skills today might become obsolete within 1 or 2 years. Vocational education provides skills that are very close to the market, hence sensitive to any changes of market requirements, and potentially could be easily obsolete. Therefore the expansion of polytechnic education has to be carefully planned, involving the private industries right from the beginning, and periodically review the strategy,

### 5.2.3 Open and distance education

The emerging alternative to expand enrolment in the last decade is capitalizing the information and communication technology (ICT) in open and distance education. The technology could potentially reach out students who cannot afford to enjoy higher education, either due to financial or geographic reasons. Due to financial reasons, some might have to enter directly the job market and have to study while working. For them, opportunity to enjoy education will not be available without the services provided by UT through ICT. Due to their geographic location of their job, they cannot afford to register as full time students at the location where higher education institution is located, whilst the ICT will enable them to enjoy the service.

Currently UT still concentrates its operation to provide services to school teachers. However, the bulk of school teachers will be graduated with S-1 degree in 3-4 years time. Beginning 2013 the number of school teachers to be upgraded will be gradually decreasing, as new recruits are required to already have the degree. In order to anticipate the trend, UT has to diversify their target audience, mostly to 20-30 years old employees who need to improve their qualifications. In preparing to do so, UT will have to capitalize the available expertise possessed by the traditional universities to develop contents in a variety of subject fields. At the same time UT could concentrate to strengthen further its capacity in delivering the content, particularly using new technology.

It is true that open and distance education will not be able to improve the NER. But by the nature of distance education doesn't fit for fresh high school graduates who still need social life in traditional university, and more suitable for matured students with strong self discipline. Therefore open and distance education could contribute significantly to improve access, though perhaps not for those who are freshly graduated from high school.

## 5.3 Strengthening institutional capacity

### 5.3.1 Structural deficiency

Recipients of scholarship are supposed to finish their study in higher education, graduated, and find jobs according to their own interests. The best graduates might be able to compete with their fellow graduates who have better social and economic background, and find jobs at the best organizations. The rest might have to find jobs closer to their home town, where competition is less fierce. A few graduates, after some successes in their career, might come back in attempt to devote their capacity for developing their home regions. However, many find that the local institutional capacity is inadequate to satisfy their aspiration, and give up after some time.

Such structural deficiency in institutional capacity is also found in education institutions, whereby less competitive graduates have to stay and teach at the institutions where they are graduated from. The inbreeding process will eventually affect the academic atmosphere, and decrease the academic quality. Therefore the institutional capacity in the less developed regions has to be systematically improved.

In most cases institutional capacity is not limited to the lack of skills and knowledge. It includes the leadership necessary to develop the working spirit and ethics, as well as believe in common goals. While lack of skills and knowledge could be solved by the provision of 3 to 5 day training, leadership, spirit, and ethics have to be developed from within. Many interventions were designed solely from Jakarta by bureaucrats, who have inadequate knowledge on the local condition. Some officers in Jakarta were directly assigned to hold important office after earning degrees from overseas universities, without sufficient knowledge and field experiences, particularly about the local condition of higher education institutions in the regions. When indicators show that an institution is lagging behind, their immediate response is providing additional budget, and request a proposal from the respective institution. With limited planning capacity, only new physical infrastructure is proposed, since it is easier to build and monitor compared to institutional capacity building. It will end up with an overbuilt institution without adequate capacity to operate and maintain, whilst the institutional capacity has not improved much.

In an attempt to solve the deficiency, the government introduced “detachment” program, which is a temporarily assignment (time based) of senior staff from established institutions to less established institutions. These staff should apply to the DGHE to be selected after acquiring approval from their respective Rector. In 2009, 50 senior staff are temporary “detached” from their institutions and assigned to 8 less established institutions. Examples of activities are revising the curriculum, developing information system, designing student practical works, and designing new laboratories. Since the program only involves individuals who voluntarily apply for the assignment, the results are partial or unfinished due to time constraints, overlapped with each other, not sustainable, and in some cases lack of commitment from staff at the recipient institution.

### 5.3.2 Developing institutional commitment

The “detachment” program is mainly an initiative of individuals, who voluntarily apply for the assignment. In order to provide a systematic institutional capacity development, the program should attract the established institutions to institutionally involve, creating a kind of twinning or networking program. Institutional involvement will strengthen the program by the assignment of the most experience staff and ensure result as well as sustainability.

The design for the twinning and networking program should be structured according to the following points,

a) Established institutions are invited to develop a joint proposal with less established partners for developing their institutional capacity. The proposed multi-year program requires a well structured mechanism and design of each activity, accompanied by a set of measurable performance indicators.

b) As compensation, the established institution could propose a special investment program aims to boost its international reputation, e.g. research, laboratory equipment, or overseas fellowships.

c) The compensation could be revoked when the institutional capacity in the less established partners fail to show significant improvement, which will be demonstrated by the achievement of performance indicators.

In order to ensure that the program is well planned and the necessary preparation is made available, the program should be competed among the established institutions. A pilot scheme is currently being implemented in a World Bank assisted project for medical education [HPEQ, 2009].

### 5.3.3 Investment priority

The result of accreditation shows that more than one third of the existing programs failed to reach Good (grade B), as illustrated in table 2-6. If we focus our attention to public institutions (excluding service and Islamic institutions), the percentage is 21.74% for Diploma and 14.18% for undergraduate program.

Thus it is suggested to put investment on programs with C and D accreditation in public institutions as the highest priority. Considering the 95 Diploma programs and 500 undergraduate programs are relatively small number, the required investment is supposed to be quite affordable for the DGHE.

Every organization has its own capacity to effectively absorb new influx of fund, whereby “too much and too fast” tends to be ineffective, wasted, or even abused. Hence though the DGHE DGHE might be able to provide the necessary investment in 1-2 years, it is suggested to stagger it in line with the improvement in institutional capacity.

## 5.4 Public funding

In section 2.4, it was discussed that the private contribution is at the same level or even slightly higher than the government contribution. Although it is commonly understood that higher education provides more personal benefits compared to basic and secondary education, the decreasing government contribution is alarming. The risk of inadequate government contribution is the weakening role of the government in steering the system through policy direction, and protecting the community through regulation.

Without a proper government role as regulator and facilitator, the higher education will very much steered by the market force. The one who will be directly affected is of course the underprivileged population group, who are disadvantage in terms of economic and geographical disparity. In a diverse and democratic country such Indonesia, it impact will not be limited to social condition, but potentially could also threaten the national integrity.

The proportion of public fund allocated for higher education, which is less than 30% of the education budget in 2010, is considered low compared to the neighboring developing countries. As the 9-year compulsory education is approaching its target, the public fund allocated for higher education needs to be gradually increased.

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