

June 2014

# Tertiary Education in Indonesia: Directions for Policy



Public Disclosure Authorized  
Public Disclosure Authorized  
Public Disclosure Authorized  
Public Disclosure Authorized  
Public Disclosure Authorized



# Acknowledgements

The team is grateful to officials and staff in the Ministry of Education and Culture, the Directorate General of Higher Education (DGHE), and National Development and Planning Agency (Bappenas) the Directorate of Education, for discussions that initiated this report; and for various inputs throughout the production of the report. We are particularly grateful to Prof. Patdono Suwignjo, Secretary for DGHE and Mr. Subandi, Director of Education of Bappenas, who provided inputs and support for the task team to complete this report.

We thank colleagues at DFAT - Rivandra Royono, Steven Ellis, and Hannah Birdsey - for their support throughout the production of the report.

The report is managed by a team comprising of Siwage Negara (Task Team Leader, Operations Officer, EASHE); Michael Crawford (Lead Education Specialist, EASHE), Shang Gao (Consultant, EASHE), Adam M. Gann (Consultant, EASHD), Andrew Ragatz (Education Specialist, EASHE) and Gedsiri Suhartono (Consultant, EASHE). Dyah Kelasworo Nugraheni, provided the most efficient team support. The preparation of the report was under the overall guidance and support of Luis Benveniste (Sector Manager, EASHE).

The production of this report was made possible through the generous financial support of DFAT Indonesia.

June 2014

**Tertiary Education in Indonesia:  
Directions for Policy**

# Abbreviations & Acronyms

AHELO	Assessment of Higher Education Learning Outcomes.
ASEAN	Association of Southeast Asian Nations
AusAid	Australian Aid
BAN-PT	Badan Akreditasi Nasional Perguruan Tinggi (National Accreditation Board)
BBM	Bantuan Belajar Mahasiswa (Student Learning Assistance)
BHMN/PTN-BH	Badan Hukum Milik Negara/Perguruan Tinggi Negara Badan Hukum (State Owned Legal Entity Universities)
BPS	Badan Pusat Statistik (Central Bureau of Statistics)
BSNP	Badan Standarisasi Nasional Pendidikan (National Education Standard Agency)
DIKTI/DGHE	Directorate General of Higher Education
DUOC	Community College Franchise in Chile
GOI	Government of Indonesia
HR	Human Resources
HS	High School
IDR	Indonesian Rupiah (Currency)
INACAP	Instituto Nacional de Capacitacion Profesional, the largest TE institute in Chile
LIPI	Lembaga Ilmu Pengetahuan Indonesia (Indonesia Institute of Science)
LF	Labor Force
MOEC	Ministry of Education and Culture
MORA	Ministry of Religious Affairs
NTEI	Non-University TE Institutions (polytechnics, community colleges, etc.)

OECD	Organization for Economic Co-Operation and Development
PPA	Peningkatan Prestasi Akademik (Improving Academic Achievement)
PIACC	Program for the International Assessment of Adult Competencies
PISA	Program for International Student Assessment
PTN-BLU	Perguruan Tinggi Negeri – Badan Layanan Umum (State Universities – General Services Agency)
Q1	Lowest quintile by consumption
Q5	Highest quintile by consumption
R&D	Research and Development
SES	Socio-economic Status
SAKERNAS	National Labor Force Survey
SBMPTN	Seleksi Bersama Masuk Perguruan Tinggi Negeri (second chance for students to enter public TEI system. The selection process is held by clusters of public TEIs).
SNMPTN	Seleksi Nasional Masuk Perguruan Tinggi Negeri (first chance for students to enter public TEI system. This selection process is held by respective public TEIs, based on invitation, with negotiable, generally higher, tuition fees.)
SPMB	Seleksi Penerimaan Mahasiswa Baru, Selection Admission
SUSENAS	National Socio-Economic Survey
STI	Science and Technology Innovation
TE	Tertiary Education
TEI	Tertiary Education Institutions
UI	Universitas Indonesia (University of Indonesia)
USD	United States Dollar (Currency)

# Table of Contents

<b>Abbreviations &amp; Acronyms</b>	<b>2</b>
<b>Table of Contents</b>	<b>4</b>
<b>Executive Summary</b>	<b>6</b>
<b>The Analytical Framework for this Report</b>	<b>11</b>
<b>Introduction</b>	<b>12</b>
<b>1 Tertiary Education in Indonesia is a Good Investment for Individuals and for the Economy</b>	<b>15</b>
<b>2 Demand for Tertiary Education Will Continue to Grow as High School Graduation Rates Increase</b>	<b>19</b>
<b>3 Making Tertiary Education More Equitable</b>	<b>25</b>
<b>4 Broadening the Definition of Quality and Relevance while Raising these across the System</b>	<b>33</b>
<b>5 Institutional Autonomy is Needed for Tertiary Education Institutions to Be Responsive to Student Demands</b>	<b>41</b>
<b>6 Data and Information</b>	<b>49</b>
<b>Annex</b>	<b>54</b>
<b>References</b>	<b>56</b>

## List of Exhibit

---

Exhibit 1.	Labor force composition (headcount and percentage): workers below and above age and total, by education level, 2012	16
Exhibit 2.	Returns to education by education level, all labor force, 2001-2010	18
Exhibit 3.	Returns to education by education level, 35 years old or younger, 2001-2010	18
Exhibit 4.	High School Graduates and TE Enrollment, 1999-2012	20
Exhibit 5.	Compound Annual Growth Rates for Various Indicators, 1999-2012	21
Exhibit 6.	Size of the 19-23 year-old age cohort with historical and projected enrollment data	21
Exhibit 7.	Gross Tertiary Enrollment by Quintile, 2012	26
Exhibit 8.	Gross Enrollment of Q4-Q5 versus Q1-Q3, 2012	26
Exhibit 9.	TE Enrollment by Consumption Quintile, 2012	27
Exhibit 10.	Number of enrolled students by consumption quintile and degree type	27
Exhibit 11.	Highest Degree of the TE Institution teaching force, 2004-2010	35
Exhibit 12.	Domestic PhD Production in the US Rose Ten fold in One Generation	36
Exhibit 13.	The accreditation results (programs) from BAN-PT and DGHE as of year 2012	37
Exhibit 14.	Education Expenditures in Indonesia	44
Exhibit 15.	Education Expenditure as a Percentage of Total Budget and GDP	45
Exhibit 16.	Public Spending by Level of Education, 2008-2009	46
Exhibit 17.	Conceptual Framework of Disconnects in TE	50
Exhibit 18.	Summarizing four main information subsystems on tertiary education in Colombia	52

## List of Boxes

---

Box 1.	The case of Canada: high percentage of post-secondary graduates indicates an over-education of its youth?	23
Box 2.	Chile's move toward a comprehensive TE student financial aid system	30
Box 3.	Defining Quality and Relevance as "Value": The US's Proposed Aid-linked College Ranking System	39
Box 4.	Goals for increasing autonomy with accountability	47
Box 5.	Areas of improvements on data and information in Indonesia	51

# Executive Summary

Indonesia has made notable progress in raising attainment levels in primary and secondary school. More than 1 million additional students graduated high school in 2012 when compared with 1999, and graduation rates are expected to increase further. Major efforts are being made throughout the system to improve learning outcomes and ensure graduates have more knowledge and better skills.

This progress at primary and secondary school creates more demand for tertiary education (TE). Most students (88 percent in a recent survey<sup>1</sup>) profess a desire to continue studying after high school. Indonesia's TE system, however, is not well prepared to help create relevant, high-quality opportunities for this growing pool of high school graduates.

Wages for those with TE are high and have remained so even as more and more workers enter the labor market with at least some TE. TE is a good investment in Indonesia, even when one attends a TE institution (TEI) of perceived low quality. Empirical analyses of labor markets do not support the anecdotes about large numbers of unemployed and underpaid workers with TE. This fact is a main general conclusion that should shape the direction of TE policy in Indonesia.

However, the current existence of positive returns to TE to date is no guarantee of future positive returns. In fact, trends for increasing skill demands in labor markets will put pressure on TEIs and graduates to offer more and better skills to employers. The government should seek to formulate and implement policies that can raise skill levels and relevance before labor markets get saturated with workers with current skill levels and before returns decline.

The paper's general conclusion is that TE is a good investment—for individuals and for the economy as a whole. This is true even at the current levels of quality and relevance of TEIs. The paper suggests that five important Policy Directions should follow from this conclusion.

Indonesia has actively debated and implemented TE reform since at least the mid-1990s. It has experimented with numerous new or adapted policies to increase the quality, responsiveness, and accountability of its universities. Greater institutional autonomy and increased use of competitive funding mechanisms for resource allocation have been the cornerstones of the reform efforts. A "New Paradigm" was promoted under which the strongest and most academically advanced institutions were granted increasing authority to manage their own affairs and in return were to be held accountable for producing superior results. As the flagship institutions progress, autonomy would be widened and conceded to additional institutions. Bold pilot initiatives were implemented and a great deal of experimentation took place.

Lessons from pilots and experimentation paved the way for a new legal framework. Law 9/2009 created a new legal framework that provided the basis for a vast expansion of institutional autonomy. Regrettably for the advancement of the reforms, the constitutionality of this law was successfully challenged in court and it was repealed in 2010. However, new legislation from 2012 re-established most of the new legal framework. Resistance to Law 12/2012 has been less intense than it was to Law 2009 and calls for repeal have been fewer and less vociferous. The Ministry of Education and Culture is preparing the regulations under which the law will be implemented. The benefits of the new framework are largely still to come and depend on successful implementation of the law. Four leading universities whose autonomy was nullified by Law 2009's repeal have had it restored. Other universities await this privilege, and the TE community as a whole expects that expanded powers and more liberal rules about the use of funds will make all TEIs more effective and efficient.

---

1 Myriad. (2013). Improving Access and Equity to Indonesian Higher Education for Candidates from Economically Disadvantaged Backgrounds.

This important debate has centered on improving the quality and efficiency of TEIs, especially universities. An important, realistic assumption is that increased freedom for TEIs will translate into higher quality and more relevant education for TE students and to more efficient use of resources by TEIs. Although there are legitimate implementation concerns related to inefficient funding mechanisms, complicated and opaque budgeting processes, insufficient quality assurance systems, civil service requirements for teachers, etc., increased autonomy can and should remain a key part of overall policy.

But this debate leaves several important issues in TE policy unaddressed. It looks primarily at the experiences of those who are in the TE system; it does not focus on aspirants who seek to attend but cannot. In effect, the debate tends to center on the needs and actions of TEIs, not on the needs of students and aspiring students.

This policy note seeks to change the perspective of the policy debate toward the needs of aspiring and actual TE students. It intends to use a new lens to view the adequacy of TE policy. It starts from the assumption that TE policy should seek to create relevant, affordable opportunities for all high school graduates. It endeavors to pay as much attention to the people being left out of TE unfairly as to the experiences of those who already attend TEIs.

In addition, the paper seeks to use the best available data to support its conclusions. Data on TE in Indonesia is scarce and sometimes of poor quality. Nevertheless, policies can only be effective if they address the real issues and constraints of the sector (as revealed by data and accurate analysis). The general findings and the five policy directions are therefore underpinned by what the authors believe is the best available evidence.

With respect to the value of TE as an investment, the evidence shows a doubling of the number of workers with TE in the labor forces between 2001 and 2010. Despite this vast increase in supply, wages for public-sector workers with TE have remained stable, and wages for private-sector workers with TE have increased. This inelasticity of demand for workers with TE strongly suggests that employers value their skills, even when those skills are gained at TEIs of mediocre or low quality. Various other indicators from labor force surveys, such as the labor force participation rate and the skills-demands of growing employment sectors, further support the value of TE.

The fact that current TE graduates can earn well does not lessen the need for improvements to the quality and relevance of TE. The more skills and knowledge can be gained through TE, the more and the longer it will support high wages and good jobs for those who have it.

Each of the main policy directions in this note is associated with a key finding and supporting evidence.

**Finding One**  
**Increased high school graduation rates are driving increased demand for TE. This trend will continue for years to come and define the type of TE most needed.**

High school graduation rates have increased more than TE enrollment rates between 1999 and 2012. What looks like a large expansion is actually a smaller share of a larger group of high school graduates continuing on to TE. More than eight out of ten high school students express a desire to continue to TE, but only about three in ten are able to enroll (Myriad, 2013).

Further increases in the annual cohorts for high school graduates are expected, and these will further raise the demand for TE. The fact that 12 years of schooling is now mandatory is likely to increase demand for TE significantly, mostly among “new” high school graduates from the lower three income quintiles. The TE system will likely need to double in size again—to about 10 million students—before enrollment stabilizes.

Most marginal entrants will be “first generation” students: that is, the first from their families to attend TE. These aspirants will generally lack the preparation to succeed in traditional university studies and many will seek skills that lead more quickly and directly to better jobs.

## Policy Direction One:

***Government policy should facilitate further expansion of the TE sector while improving quality and relevance at every level. Policies should not just expand enrollment, but should create conditions that promote a greater range of high quality providers, degree options, and affordability levels.***

### Finding Two

**Students from families in the bottom 40 percent of the income distribution represent only 10 percent of TE enrollment.**

75 percent of TE students are from families in the upper two income quintiles. Many high school graduates from families in the lowest three income quintiles can neither earn a spot at a public university nor afford one at a private institution. Government scholarships are scarce—they cover only five percent of enrollment—and are given only to the most academically gifted needy students. No financial assistance is available for the vast majority of TE aspirants. Thus, although Law 12/2012 includes a provision that mandates that 20 percent of TE enrollees be students from disadvantaged backgrounds, the government's *Bidik Misi* scholarship program is not, in its current form, able to help large numbers of poor students attend and complete TE degrees.

Commitment to raising enrollment levels among poorer students will require policies that more comprehensively assess the financial needs of aspiring students and provide a range of tools and options to help them attend TEs. This begins with the prioritization of financial need over academic merit and the acknowledgement that helping the most academically capable among the poor is not a sufficient ambition for policy.

## Policy Direction Two:

***The government should adopt a comprehensive financial aid policy that supports its goals for equity (i.e., increasing the enrollment and graduation rates of students from disadvantaged backgrounds). The new system should offer assistance to all financially needy TE students and provide the basis for increasing enrollment among students from the bottom two income quintiles.***

### Finding Three

**Quality and relevance need to increase throughout the system, and the definition and understanding of these terms must change and broaden as this happens.**

Quality and relevance are perennial concern in TE. Students, parents, employers, policymakers, and TE professors, instructors, and administrators want the education provided to be high quality. They also want it to be relevant and to provide knowledge and skills that will allow students to succeed as graduates, especially in their work lives.

Concern for quality needs to be operationalized with an awareness that no valid and reliable objective measures of quality currently exist. Quality must be gauged by proxies. This is a challenge, but it is one that many TE systems have met successfully.

The main policy question with respect quality and relevance is: what is meant by these terms? Increasingly, the answer is based on the value that the education can add to any given student's skills, knowledge, and capabilities. Schools add value by carefully defining their target student population and then meticulously satisfying its needs. Schools that

do this well are said to be fit for their purpose, and “fitness-for-purpose” is the preferred definition of quality and relevance for modern TE systems.

The concept of “value” in tertiary education is emerging as a concept closely linked to “fitness-for-purpose.” Value is usually defined in terms of institutional performance on key indicators comparable across institutions. The main indicators of value are dropout and completion rates, time-to-degree, labor market success of graduates (time-to-first-job and salary), and total degree cost. Regardless of the discipline or program area, TEI performance can be compared using these criteria.

Defining quality as the highest levels of academic rigor is now obsolete as a policy tool. Rigor is important throughout the system, but academic rigor is usually strongly associated with selectivity of students. Selectivity is appropriate for elite and flagship institutions, but is not a feature of TE systems that should be generalized. Among its many drawbacks, defining quality as academic rigor tends to favor the upper echelons of the socio-economic strata, especially those in which people can afford high quality basic education.

Most high school graduates and TE aspirants will not benefit from institutional selectivity. Nonetheless, families and future students still often define success as acceptance to and graduation from a traditional university. High-quality university education is an important part of the Indonesian TE system, but it does not provide the best opportunities for the average high school graduate. Non-university programs with study and degree options that are more closely linked to better employment should be considered “high-quality” if they increase an individual’s job and career prospects. Excellence and “fitness-for-purpose” at all levels—from universities to community college—should underpin a new understanding of quality and relevance.

### Policy Direction Three:

***“Fitness-for-purpose”—a TEI’s ability to respond to the needs of its students—should strongly complement or replace academic rigor as the main definition of quality in TE. Quality and relevance should be promoted in a wider range of disciplines and subjects aimed at the ability levels and aspirations of the typical high school graduate, not the most academically gifted one. Community colleges, short degree programs, and studies related to graduates’ near-term success in job markets should get preference for government financing and other policies that facilitate their creation.***

#### Finding Four

**Greater autonomy should be provided throughout the financing and regulatory framework.**

Public TEIs are treated like government agencies rather than educational institutions. Faculty and staff are civil servants whose career advancement is based on their length of service rather than on their effectiveness as teachers and researchers. Budgets are inflexibly set at micro-levels with essentially no regard for the purposes to be achieved and no flexibility to respond to changing circumstances. Private TEIs have somewhat greater freedom but also face autonomy constraints as a result of the public financing that they receive. Lack of autonomy for use of resources, academic policy, and staff management prevents TEIs from offering

high-quality learning opportunities for students. Resource savings generated by improved frameworks can and should be used to promote equity through student financial assistance.

## Policy Direction Four:

***TEIs can only respond to student demand and need if they have the abilities and incentives to make key decisions for themselves. The most important among these decisions regards the autonomous but accountable use of resources. Providing greater autonomy for institutions is a necessary step to promoting the needed responsiveness within the TE system.***

### Finding Five

**Students and policymakers lack information about the TE system.**

TE students fare well in job markets, but many are swayed by anecdotes of graduate unemployment or the perceived security of a public-sector job. To make better decisions about whether and what to study, they require more high-quality information. Information on financial aid availability and options, labor market returns to skills, and returns to education for holders of different types of degrees will help to promote good decision-making.

Knowing the likely future labor market value of the degree is only one area in which an aspiring student requires knowledge. To make wise decisions, an aspiring student will also seek to learn about a given institution's quality, through such measures as dropout and completion rates, time-to-degree, labor market success of graduates (time-to-first-job and salary), and total degree cost. Aspiring students will also want to know whether prospective programs are accredited as well as the outcomes of any quality assurance processes.

In addition, policymakers need more information to understand the characteristics of the system and the impact and effectiveness of policies. Currently, the quality of information on enrollment, student characteristics, progression and time to degree, how students pay for school, and employment outcomes is suboptimal. Empirical studies of the impact of policies would be desirable but are impossible to conduct using existing data.

## Policy Direction Five:

***Improve vastly the quality of information and data on the TE system and disseminate it (especially to aspiring students) to promote informed decision-making***

A range of policy responses exist for each of these themes. Most would not require significant new investments of public money if the vast potential efficiency savings of current spending could be optimized. The goal of this paper is to expound on these five themes and indicate the types of further analysis that could lead to the development of sound policy options for each. Taken together, these policy directions could form the basis of a new, sound, and comprehensive approach to TE policy in Indonesia.

It is critical to emphasize that time horizons for systemic change in tertiary education are long—usually measured in decades. Simultaneous progress is needed on multiple fronts, and often it takes time for all required inputs to be in place. For instance, the Government may wish to make progress in the non-university sector, and should rightfully put time and effort into doing so. However, it must develop the sector at a rate that is compatible with the development of a critical mass of human resources for instruction. Failure to recognize or plan for this element may imperil any progress. The scale and pace of reforms should be such that progress on all five policy directions proceeds in relative harmony.

# The Analytical Framework for this Report

The World Bank, through the Core Higher Education Group (COREHEG), uses a ten point analytical framework for TE system analysis. The ten points are stated as policy “to dos,” and each point is meant to highlight one of ten key policy actions that lead to strong and effective TE systems. Effective systems are those that promote economic growth and prosperity, are equitable and offer something for everyone, and provide high-quality and relevant education at all TEIs (not just at the flagship institutions).

Although the points are succinct statements, their formulation is the product of long accumulation of experience by Bank staff in promoting TE system reform. The advice embodied in the ten points is directly relevant to Indonesia’s TE system; it aids both the diagnosis of problems and the selection of the best policy directions to be considered and pursued.

The World Bank’s East Asia Human Development flagship report, “Putting Higher Education to Work: Skills and Research for Growth in East Asia” looks at the specific challenges for higher education in the region. The report identifies five main “disconnects” that keep TE in the region from reaching its potential. These disconnects can be thought of as the major deficiencies that TE policy should seek to attenuate or eliminate.

COREHEG Policy “To Dos”	“Putting Higher Education to Work” Disconnects
1. Make TE and training more equitable and affordable.	Disconnect 1: Between TEIs and employers
2. Diversify options while levelling the playing field.	
3. Improve Secondary Education	Disconnect 2: Between TE and earlier education
4. Embrace competition (at national and global level)	
5. Assure that institutions maintain high quality	Disconnect 3: Between TEIs and companies (as research users)
6. Target public resources toward programs with high social returns	
7. Expand institutional autonomy in exchange for accountability	Disconnect 4: Between TEIs and other TEIs and training providers
8. Increase the efficiency of institutions and the system as a whole	
9. Use innovative approaches to bolster retention and graduation rates	Disconnect 5: Between TEIs and research institutions
10. Give students the information they need to make good decisions	

This report will draw on the analytical frameworks from both of these important sources to present the proposed policy directions for Indonesia. While the diagnosis and policy directions may be grouped into some broad categories, their effects are felt in many parts of the system.

The full underlying analysis which is the basis for this report’s recommendations can be found in COREHEG’s analytical materials (available at [www.worldbank.org/education/tertiaryeducation](http://www.worldbank.org/education/tertiaryeducation)) and in the Flagship Report (citation). Readers who wish to delve more deeply into these issues are encouraged to consult these works.

The scope of this policy note does not include extensive presentation of detailed diagnosis for each issue. Rather, it seeks to focus on key empirical findings as they relate the most pressing policy changes to be made. The Paper seeks to connect its basic findings about TE to the future policy agenda.

# Introduction

Each year, more than four million children are born in Indonesia. Given the right opportunities, practically all of them would be capable of finishing high school and going on to complete some type of TE degree. If these degrees were from relevant, high-quality programs, these graduates would likely begin their forty-plus years in the labor market well equipped to find and excel at interesting and challenging work. A range of benefits would accrue to them as individuals. They could expect higher incomes, less unemployment, and advantages for taking care of the health and education of their children throughout their lifetimes.

Indonesia as a whole would benefit as well. Its skilled workforce would help sustain high levels of productivity, which would, in turn, contribute to economic growth that could propel it toward high-income status. As the ranks of the highly-educated grew, there would be fewer people without TE degrees to compete for the dwindling number of unskilled and low-skilled employment opportunities. As a result, wages for these positions would be higher than they might be if overall aggregate education levels remained low.

Greater TE attainment and relevance could produce benefits beyond those related to income and wages. For example, Indonesia could see better qualified teachers at every level, which would improve the quality of K-12 education. In addition, stronger teaching might increase the number of domestically-trained PhDs and advanced researchers, making it easier to access and use the world's rapidly growing stock of knowledge (especially that of the scientific and/or technological variety). The more capable workforce would improve the investment climate by maintaining higher levels of productivity and derive greater benefits from the technologies and knowledge that accompany investment. These benefits could be substantial and would be likely to outweigh associated costs.

Is this a utopian vision or an achievable future for Indonesia? The experience of other countries suggests that it is the latter. Japan, Korea, and Finland all built world-class education systems in a single generation. Singapore and China (particularly Shanghai) have accomplished the same feat more recently. In these countries, attendance and degree attainment at some types of TEIs changed quickly from a rarity to the norm. The path to this future is a viable option for Indonesia, and great progress is possible with sustained implementation of sound policies.

Priorities for policies that could bring about such a future would include:

- (i) a view that TE is a good option for most (if not all) high school graduates, and the provision of relevant, affordable opportunities for all;
- (ii) financial aid policies that provide meaningful financial assistance to TE students and aspirants from less wealthy families;
- (iii) a conception of TE quality and relevance broad enough to encompass excellence on a variety of levels (from the nation's leading universities to its most humble academies and community colleges);
- (iv) financial and regulatory frameworks that give TEIs greater autonomy (while maintaining the levels of accountability necessary to ensure excellent educational results) and encourage them to improve dramatically through the creativity and dynamism that characterize all strong educational institutions; and
- (v) comprehensive and reliable information on the TE system for current students, aspirants, employers, and policymakers.

Getting to an optimal system will not be easy. In recent years, Indonesia's experience with TE reform has vacillated from cutting-edge innovation and experimentation to significant policy reversals effected by the repeal of key legislation. The notion that only publicly-provided TE can be affordable has persisted even

in the context of regressive public spending that leaves most Indonesian students unable to enroll in TEIs. Rules about resource use make it difficult for institutions, professors, and students to raise performance to internationally competitive levels.

However, none of these obstacles is insurmountable. Change begins with an understanding of how and why policy should evolve.

It is critical to emphasize that time horizons for systemic change in tertiary education are long—usually measured in decades. Simultaneous progress is needed on multiple fronts, and often it takes time for all required inputs to be in place. The scale and pace of reforms should be such that progress on all five policy directions proceeds in relative harmony.

**Chapter 1** of this report looks at the value of TE as an investment for individuals and for the Indonesian economy as a whole.

**Chapter 2** looks at who aspires to attend TEIs and who enrolls, arguing that further expansion of high-quality TE options will be required to meet rising demand.

**Chapter 3** shows that the TE system over-enrolls students from rich families and under-enrolls students from poor families and suggests policies to improve this situation.

**Chapter 4** examines how focusing on academic ability defines too narrowly what it means to provide “high-quality” TE.

**Chapter 5** argues that making the system more responsive to student needs will require the government to transfer the power to make decisions (along with increased accountability for decisions made) to TEIs.

**Chapter 6** looks at the pressing need for improved information about the system, both for aspiring students and for policymakers.





*Policy should seek to create opportunities for high school graduates to invest in their skills through some form of Tertiary Education.*

## Chapter 1

# Tertiary Education in Indonesia is a Good Investment for Individuals and for the Economy

The link between education, skills, and economic growth is well established in the economics literature and supported by vast amounts of empirical data. These general linkages hold true for TE in Indonesia as well.

The theoretical framework through which education forms skills and promotes growth has been articulated in various ways. Porter (1990) identifies four stages of economic transformation: (i) factor-driven; (ii) investment-driven; (iii) efficiency-driven; and (iv) innovation-driven. Factor-driven economies are less dependent on skills as the value of the factors of production does not require significant value-addition. As investment increases, however, the economy increasingly requires more advanced human capital to complement physical investments, identify and implement efficiency gains, and finally transfer, devise, and adapt new technologies for innovation. The increasing demand for highly skilled workers in the private sector suggests that Indonesia is dynamic in the investment and efficiency stages. Failure to obtain sufficient human capital has real potential to stall progress toward economic transformation.

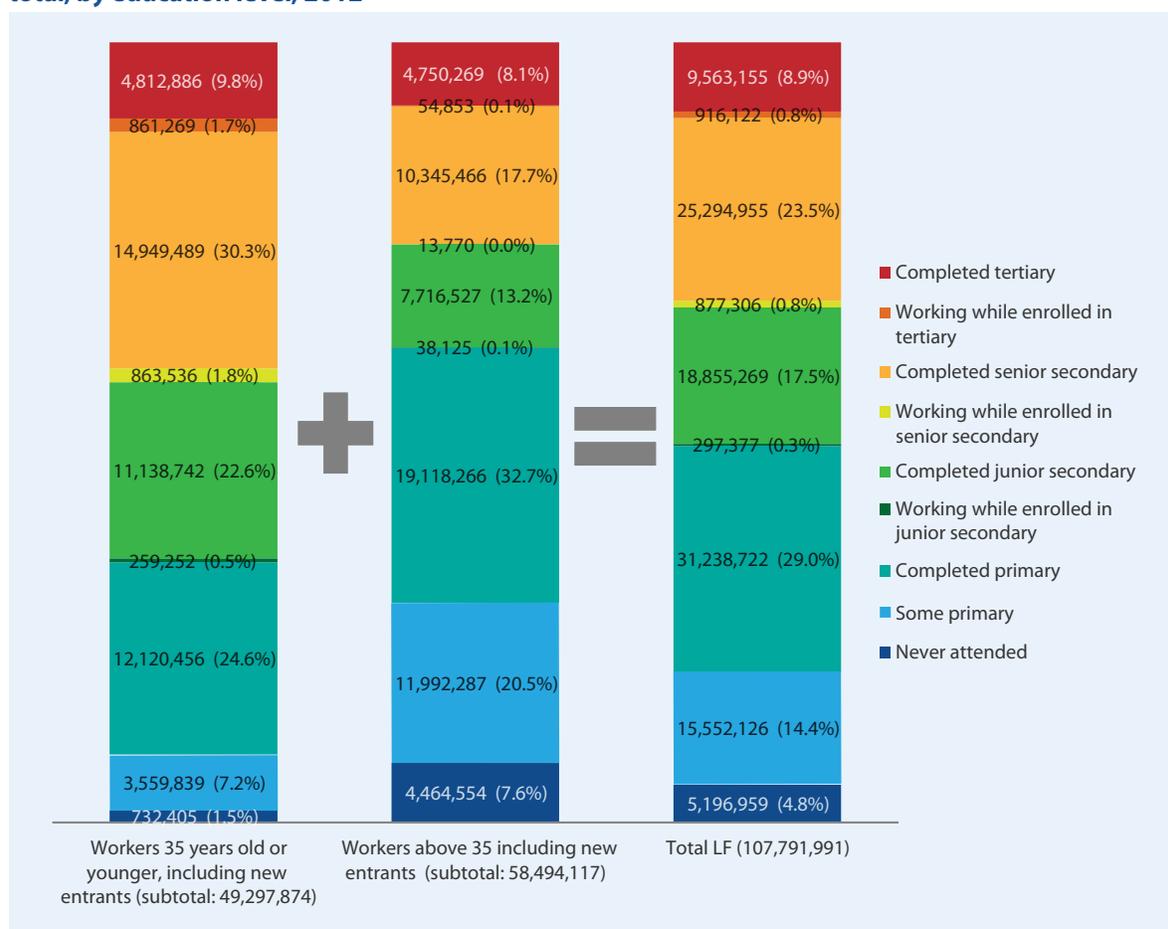
Evidence from developing countries shows both the value of TE and the value of the skills acquired through it. Kane and Rouse (1993) summarize the results of a natural experiment (based in part on proximity to a suitable TEI) demonstrating that each additional year of TE is associated with a nine percent increase in annual average earnings. Card (1993) uses a similar methodology to find a 7.3 percent increase in annual average earnings per additional year of TE. Both of these results are fully consistent with the overall empirical finding from comprehensive US data sets that each additional year of TE is associated with an increase in annual average earnings of approximately 10 percent.

Evidence from the OECD's Programme for the International Assessment of Adult Competencies (PIAAC) strongly suggests that the skills acquired in education, not merely the attainment, are the source of increased earnings. Hanushek et al. (2013) identify an 18 percent increase in annual average earnings per standard deviation increase in numeracy.

Finally, a recent and comprehensive study of the economic impact of TE in low- and middle-income countries reviewed five dimensions of benefits from TE: (i) on individual earnings; (ii) on economic growth; (iii) on productivity; (iv) on technological transfer; (v) on capabilities; and (vi) on institutions. Evidence from 99 rigorous empirical studies of developing countries shows consistent, strong evidence for TE's impact on individual earnings and further consistent evidence for its impact on growth, institutions, and capabilities.

The evidence from Indonesia is aligned with these general findings. In particular, a review of labor market trends shows that, despite large increases in the supply of TE graduates in the workforce, demand for graduates remains robust. In fact, demand by private employers for TE graduates has grown faster than supply in the past decade, despite a near doubling of the annual number of graduates. Wages have not remained quite as steady in the public sector (especially for teachers), but, overall, the returns to a TE degree are positive and higher than those associated with any other level of educational attainment. This suggests that returns outweigh costs, and expansion should continue until this is no longer the case.

**Exhibit 1. Labor force composition (headcount and percentage): workers below and above age and total, by education level, 2012**



Source: SAKERNAS, Indonesia

Exhibit 1 shows a picture of the younger segment of the labor force (workers of and under age 35) having much more TE but close to the same salaries and returns. To the extent that graduates obtain high-quality relevant skills in TE that raise their productivity, their wages should further rise, allowing for greater enrollment before a leveling equilibrium of costs and returns. So analysis of supply and coverage of TE should be the first policy issue, but quality and relevance should be of equal concern to policymakers.

In fact, a recent World Bank report commissioned by AusAid (“Indonesia’s Higher Education System: How Responsive Is It to the Labor Market”, August 2013) had several major findings regarding labor market outcomes for TE graduates:

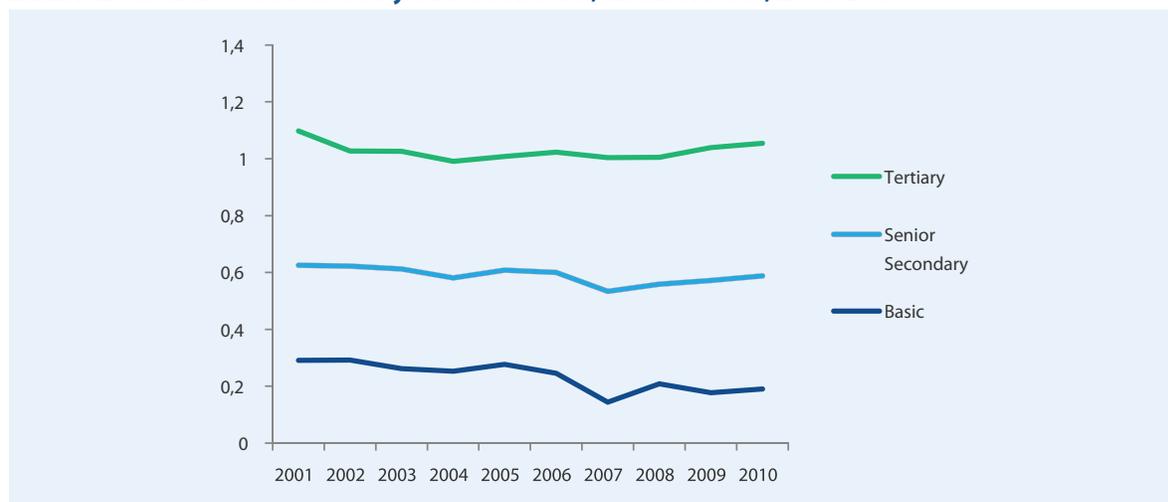
Facts and Numbers:	<ul style="list-style-type: none"> <li>• The number of workers with at least some TE has doubled in the past ten years;</li> <li>• In 2000 about 5 million workers had at least some TE; by 2010 more than 10 million did;</li> </ul>
Labor force participation:	<ul style="list-style-type: none"> <li>• Tertiary graduates have higher labor force participation compared to all other levels of educational attainment;</li> </ul>
Skills match:	<ul style="list-style-type: none"> <li>• TE grads are generally finding jobs compatible with their skills and have the better working conditions than workers with lower levels of education;</li> </ul>
Supply and demand:	<ul style="list-style-type: none"> <li>• Growth of jobs for workers with tertiary education is 21 percent compared to overall job growth of eight percent;</li> </ul>
Returns to TE:	<ul style="list-style-type: none"> <li>• Returns to TE is twice as high as that of senior secondary graduates; and several times higher than that of basic education degree holders<sup>2</sup>;</li> <li>• Returns to higher-level skills continue to be in high demand by private firms. Managers, leaders, and key technical personnel remain in demand and command premia on salaries and working conditions;</li> <li>• Teacher policies initially created some rent-seeking, but subsequent policy changes have led to fewer high-paying teaching jobs and more low-paying contract job in teaching, with corresponding lower salaries and returns;</li> </ul>
Labor force composition:	<ul style="list-style-type: none"> <li>• The segment of the LF under age 35 has accounted for most of the increase in supply of graduates; returns to this segment are trending downward slightly but still remain significantly above return to all other levels of education;</li> </ul>
Public vs. private sector jobs:	<ul style="list-style-type: none"> <li>• Returns to private sector employment for TE graduates continue to increase despite increases in supply of graduates seeking these jobs;</li> <li>• Erstwhile policies setting high salaries for teachers have attracted many TE grads to seek public sector employment (please see BOX 6).</li> </ul>

These findings suggest that aspiring students correctly perceive the future value of TE in the labor market. The aggregate nature of the data does not support the supposition of threshold effect for the quality of education. That is, we do not find evidence that poor quality of higher education is leading to higher unemployment, lower wages, or other negative outcomes for those who attend tertiary.

It is important to emphasize that this finding does not imply that anything called TE will create a benefit. It is quite likely that, currently, demand for increased skills is running ahead of supply. Even when students are gaining only marginal improvements to their skills sets in mediocre or poor TEIs, these improved skills sets appear to have value to employers.

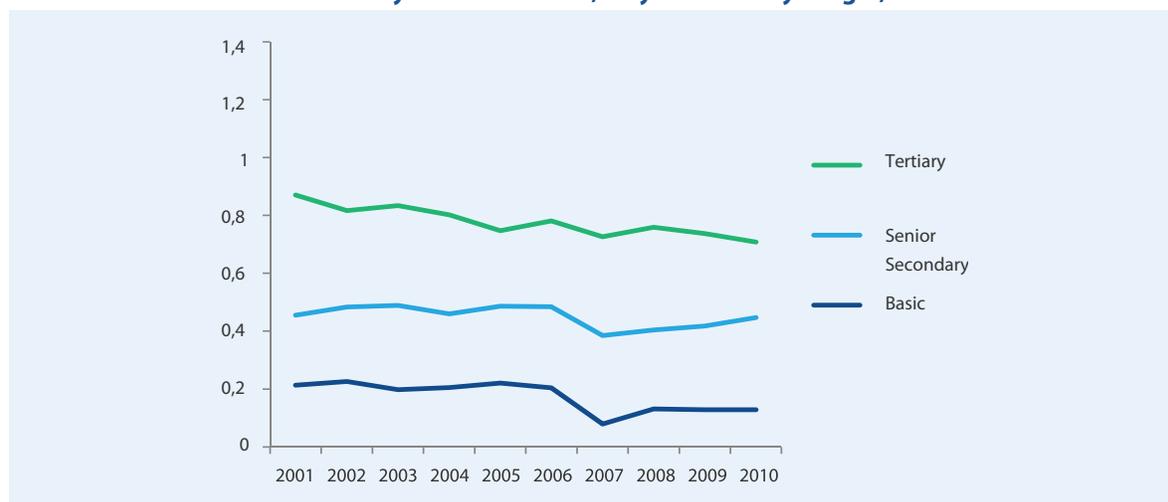
2 The returns to education are presented as the additional wage relative to what a primary education graduate (or less) makes: in 2010, a tertiary graduate made slightly more than 100% more than a basic education grad, return to graduates is roughly 1.1. A senior secondary graduate made 60% more, therefore return to senior secondary graduates is roughly 0.6. Junior secondary increases your wage by about 20 percent, thus 0.2. The general regression controls for age and gender.

**Exhibit 2. Returns to education by education level, all labor force, 2001-2010**



Source: Cerdan-Infantes, 2013. Data from SAKERNAS, Indonesia

**Exhibit 3. Returns to education by education level, 35 years old or younger, 2001-2010**



Source: Cerdan-Infantes, 2013. Data from SAKERNAS, Indonesia

But this does not mean they will continue to be valuable. As supply of workers with TE increases, pressure for more and better skills will increase if wages are to keep from dropping. This means that TE policy must address cannot rest on a “quantity” approach to increasing TE coverage.

This means that TE policy must seek now to implement the full set of policies that raise coverage, equity, quality, relevance, and efficiency. Policy must seek to do this as reasonably rapidly as possible so that benefits may appear before the labor market becomes saturated with the supply of workers at today’s skill levels and today’s degree of relevance.

Policies that improve quality and relevance take time to develop and implement. Results can take years to appear. The government is well served to move quickly to improve quality and relevance to avoid a future drop in returns and a stalling of the efficiency and productivity gains associated with greater skills.

To achieve this, policy should seek to create opportunities for most high school graduates to invest in their skills via some form of TE. The remainder of this paper discusses the five key policy directions that are most likely to promote this outcome.



*Indonesia achieved near universal coverage in primary school in 2009 and continues to increase the number of students finishing basic education. Both high school graduation rates and tertiary enrollment rates are likely continue to rise.*

## Chapter 2

# Demand for Tertiary Education Will Continue to Grow as High School Graduation Rates Increase

This chapter and the next one examine who is likely to seek to enter TE, and what policy should do to promote help achieve appropriate coverage and equity goals. In doing this, the chapters draw on several principles from the COREHEG and World Bank East Asia policy frameworks for TE:

- Make TE and training more equitable and affordable.
- Diversify options while levelling the playing field.
- Improve Secondary Education.
- Embrace competition (at national and global level).
- Disconnect 1: Between TE graduates and employers.
- Disconnect 2: Between earlier education and TE.

These issues frame the analysis and discussion that follows.

Looked at in absolute terms, the increase of enrollment levels by an additional two million students constitutes a major expansion of TE. Looking only at these numbers, one could conclude that the sector has expanded enough and should not expand any further. The purpose of this chapter is to argue an opposing point of view: that the sector can and should continue to expand, but under better policies that promote greater quality and relevance. The nature of the marginal student entering TE has major implications for policy.

As enrollment has gone from roughly 3 million students in 1999 to roughly 5 million students in 2012, most of the growth has been in the “demand absorbing” private institutions—those that receive the least amount of public subsidy. Questions about the quality of the education offered by these institutions are common; some policy observers are rightly concerned about the ability of the system to maintain quality in the face of such large increases in enrollment. They rightly cite the expansion as a reason why the government should more urgently promote policies that can improve quality.

The source of increased demand seems clear: increased numbers of high school graduates. Birth cohorts have remained stable over the past two decades, so TE demand is not the result of demographic factors. It is the result of more students staying in school to receive their high school diplomas. The number of diploma holders has grown slightly faster than the enrollment rate of TE. We impute that of the 2.5 million high school graduates in 2012, roughly 1 million entered TE.

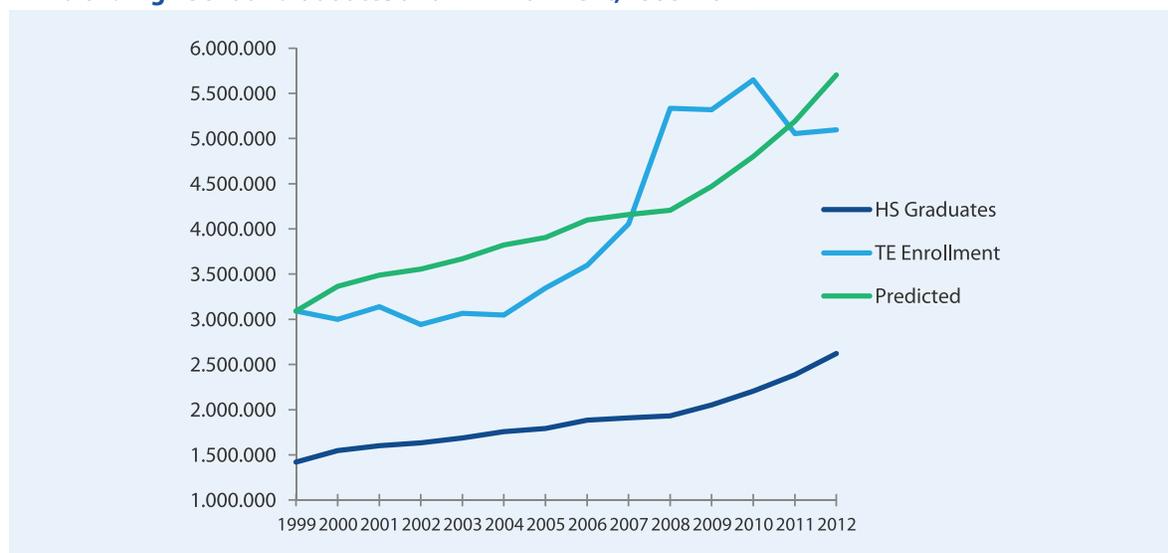
Of course, the government can only assess the adequacy of coverage if it has a clear and meaningful target. What share of high school graduates should continue to tertiary? No objective answer to this question exists, but good international practice is based on two main suppositions:

- The TE system should offer a relevant, cost-effective option to all high school graduates who seek to continue to TE;
- In practice, at least half of high school graduates should continue to TE and at least half of these should complete their degrees.

For many countries, such coverage and graduation rates are the cornerstones of their TE policies. The importance is not the number, but rather the commitment to helping all those who want further invest in their skills to do so well and cost-effectively. Those who stop formal learning at the conclusion of high school generally face a more difficult future than those who continue schooling. A good cornerstone of policy is a reasonable target for coverage which makes the pool of formal learners large and the pool of those who will not go beyond high school smaller.

The data make clear that what may appear at first glance to be a massive expansion is in fact slower growth of tertiary education when compared to increases in high school graduation rates. A smaller share of high school graduates are continuing on to tertiary education in 2012 than did in 1999.

**Exhibit 4. High School Graduates and TE Enrollment, 1999-2012**



Source: Statistik Pendidikan, MOEC, with authors' calculations

Indonesia achieved near universal coverage in primary school several years ago and continues to increase the numbers of students who finish the basic education cycle. Current data show more than 2.5 million students receiving high school diplomas each year. In academic year 2000 to 2001, 1.6 million students graduated from high school.

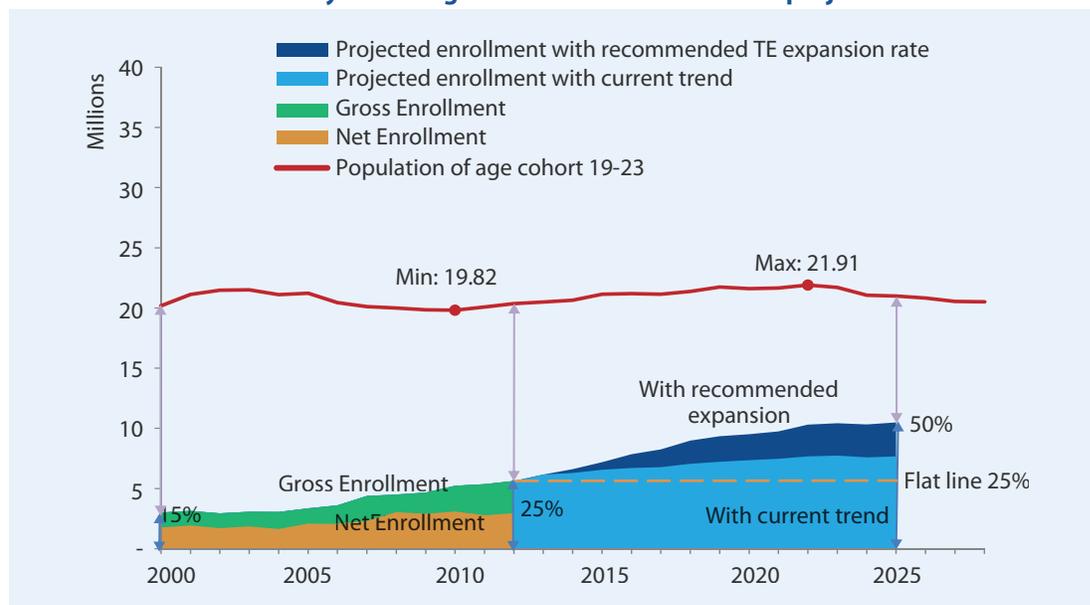
#### Exhibit 5. Compound Annual Growth Rates for Various Indicators, 1999-2012

	Compound Annual Growth Rate
TE Age Group (19-23-year olds)	.07%
TE Enrollment	3.92%
Cohort of High School Graduates	4.82%

Source: Statistik Pendidikan, MOEC, with authors' calculations

Both high school graduations rates and tertiary enrollment rates are likely to continue to rise because of (i) the policy to make schooling mandatory through 12<sup>th</sup> grade; and (ii) the correct perception among high graduates that tertiary studies will improve their earning power. However, point (ii), while currently true, may change as tertiary graduates continue to flood the labor market. The best way to keep returns high is to be sure affordable, relevant options for study exist for the largest range of high school graduates.

#### Exhibit 6. Size of the 19-23 year-old age cohort with historical and projected enrollment data



Sources: Population Data from BPS (Central Bureau of Statistics), Enrollment data from Statistik Pendidikan, MOEC<sup>3</sup>  
Population trend 2012 – 2028 is forecasted by birth and mortality rate

A simple calculation serves to make the dimensions of the challenge clear. With roughly four million students born per year, one expects high school graduation rates to continue to increase until roughly 80 percent of children finish high school. Of these 3.6 million high school graduates, one hopes that 1.8 million would enroll in some form of TE, and at least 900,000 would complete degrees. Currently, enrollment is estimated to be five times larger than the number students who “exit” TE annual (whether through graduation or drop out—these figures are imputed from education levels of new labor market entrants). This means the Government can expect and should seek a future in which tertiary enrollment plateaus at roughly 9 million students. Exhibit 4 shows that this might take place within 10-12 years according to reasonable trends.

3 The SUSENAS (Household Survey) is not fully consistent with data obtained from Statistik Pendidikan MOEC in two aspects: 1. There is smaller Gross Enrollment Rate reflected from SUSENAS Data; 2. The Ratio of Gross Enrollment and Net Enrollment is larger than that of MOEC data. The proportion of students of age cohort 19-23 enrolled in TEs is larger in SUSENAS data.

The largest implication of this trend is the need to broaden and change the types of TE currently offered. Universities will seek to continue to enroll the brightest and most capable learners, but the marginal student will have quite different needs. Indonesia PISA scores show that 80 percent of 15-year-olds score at PISA level 2 or below. PISA average scores, in fact, are close to 1.5 standard deviations below the OECD average. This means the average high school graduate in Indonesia has knowledge and skills that are two- to three grade levels below the average OECD high school graduate.

A high quality, relevant TEI for such a graduate would be characterized by two features: (i) it would provide the student with knowledge and skills that were not acquired in high school; and (ii) it would provide knowledge and skills that concretely increase the employment prospects after studying.

Creating such programs is not easy or even straightforward. It cannot be done primarily by legislation or by fiat, although appropriate legal frameworks are necessary. It is accomplished by creating incentives for providers to do the micro-level work of assessing students' need and responding to these with affordable programs. Currently, the incentives in the Indonesia TE system—with the possible exception of some areas of the private university sector—do not promote these goals. Establishing enrollment targets for the TE age cohort with sub-targets for university and non-university enrollment is worthwhile, but it will not be enough to expand under "business-as-usual" policies. Higher enrollment without better, more relevant degrees may strain graduates' abilities to get a positive return on their investment. Thus, the government would also do well to conduct a geographic analysis of non-university options in order to guide the creation of new community colleges and a labor market analysis of employment trends for new market entrants in order to promote programs related to common occupations for TE graduates. These measures will help to make study options for poorer students more affordable (because high-cost programs are likely to have negative returns) and more relevant.

A key future direction of policy, then, will be to promote a greater range of relevant, high-quality programs, so that, inter alia, labor productivity increases and returns to TE remain robust. It is recognized that Indonesia labor markets are short of workers with qualified generic skills such as communication, computer science, and even writing. However, employees with good technical, leadership and management skills are more difficult to find. Indonesian TE policy should promote this virtuous circle wherein high-quality, relevant programs boost productivity, and therefore wages, and in so doing also continue to attract more students to tertiary studies.

## Policy Direction One:

***Government policy should facilitate further expansion of the TE sector while improving quality and relevance at every level. Policies should not just expand enrollment, but should create conditions that promote a greater range of high quality providers, degree options, and affordability levels.***

### Potential Concrete Steps for Policy:

- Establish a target share of the age cohort enrolled with sub-targets for universities and non-universities according to capacity.
- Conduct a geographic analysis of non-university options to guide the creation of new community colleges.
- Conduct a labor market analysis of trends toward increased formal employment among new labor market entrants; promote programs related to these occupations.

### Box 1. The case of Canada: high percentage of post-secondary graduates indicates an over-education of its youth?

Among OECD countries, Canada has the highest percentage of postsecondary degree holders in both age ranges of 25-64 and 25-34, 48 percent and 56 percent postsecondary graduates respectively. Some question whether the country is over-educating its youth or helping them make a wise investment in their futures. Evidence from Canada suggests that expanding TE and providing broader access to it for high school graduates not only stimulates the economy in a long run, but also brings higher rates of return to education in the short run.

Employment rates and salaries of graduates provide the key positive evidence. Canadian tertiary graduates suffer less unemployment and earn significantly more than high school graduates. Both advantages have remained robust even as Canada has amassed the world's best educated workforce. No evidence can be found to suggest workers are over-educated.

In Canada, public policy and investment from provincial and federal government strongly support high school graduates to pursue postsecondary study in either university programs or non-university programs, namely community colleges, trade certificate training and so on. University programs take students longer to complete than community colleges and other short programs. Shorter, technical and vocational degrees are considered relevant and of high quality; aspirants are encouraged towards these as much or more than university studies. Canada's share of non-university tertiary graduates is among the highest in the OECD.

A report from the C.D. Howe Institute, "The Payoff: Returns to University, College, and Trades Education in Canada, 1980-2005," clearly shows that earning premia for postsecondary graduates are much larger than high school graduates. In 2005, earning premia for Trade certificate holders are 12 percent higher than high school diploma holders; community college graduates earning premia 17 percent higher and bachelor degree holder 45 percent higher than high school graduates. There is also a remarkable trend of increase in earning premia for postsecondary graduates compared to high school graduates from year 1980 to 2005, for instance, bachelor graduates' earning premia raise from 32 percent to 45 percent for male, and 49 percent to 60 percent for female. Likewise, the increase of earning premia showed clear results that having postsecondary degrees, from university and non-university programs, bring higher returns to education.

The evidence shows growth in supply of Canadian postsecondary graduates has been consistent with, but not outpaced, growth in labor market demand for their skills.

#### Percentage earnings premia (compared to high school graduates):

	1980	1985	1990	1995	2000	2005
<b>Male (%)</b>						
Trade	2	3	7	9	10	12
Community College	10	12	16	17	19	17
Bachelor's	32	36	40	43	49	45
<b>Female (%)</b>						
Trade	2	-1	2	1	2	-2
Community College	16	15	19	19	19	19
Bachelor's	49	52	56	58	59	60





*Those who stop learning at the conclusion of high school generally face a more difficult future than those who continue schooling .*

## Chapter 3

# Making Tertiary Education More Equitable

Law 12/2012 states that 20percent of TE students should come from “frontier, outer and disadvantaged areas.” This is a laudable policy goal and an achievable one if sufficient policy attention and effort are dedicated to it. In light of the analysis in Chapter 2, one sees that this will require not only doubling the current number of poor students in the TE system, but maintaining these ratios as the system inevitably expands further.

Many have interpreted Law 12/2012 to mean that one-fifth of enrollees should be students from poor families. While exact definitions are needed, under any definition it represents a preferential option for the aspiring student with both fewer financial resources and lower abilities to succeed in traditional (university-style) academic programs.

Approaching these issues requires first and understanding of the current levels of equity in TE and secondly directions for significantly raising enrollment and retention rates among poor students.

### **How Equitable is Tertiary Education Coverage Currently?**

Information about the socio-economic status of tertiary students comes from the SUSENAS household survey. The data indicate grossly disproportional representation of students from families in the highest two consumption quintiles. In 2012 over 75.7percent of students were from Q4&Q5 households. Only 10percent of total enrollment is students from the bottom 40percent of consumption level.

### Exhibit 7. Gross Tertiary Enrollment by Quintile, 2012

Quintile	% of age cohort enrolled <sup>4</sup>	Share of enrollment <sup>5</sup>	2012 enrollment head count
Q1	4.23%	3.3%	172,040
Q2	8.80%	6.9%	358,402
Q3	18.07%	14.1%	735,779
Q4	31.42%	24.5%	1,279,257
Q5	65.68%	51.2%	2,673,956
Total		100.0%	5,219,434

Source: MOEC, Indonesia

### Exhibit 8. Gross Enrollment of Q4-Q5 versus Q1-Q3, 2012

Year	Q4&Q5	Q1-Q3	Total
2000	2,676,378	467,456	3,143,834
2012	3,953,214	1,266,220	5,219,434
Share (2000)	85.1%	14.9%	100%
Share (2012)	75.7%	24.3%	100%

Source: MOEC, Indonesia

A comparison of data from 2000 and 2012 shows an encouraging trend in which the Q1-Q3 share has increased almost 10 percentage points from its initially low baseline. This pattern of inequitable enrollment is unfortunately quite typical of lower-income countries with maturing and expanding TE systems. Prior to expansion, TE is traditionally the exclusive domain of those from wealthy families. Poorer students are less likely to get or complete decent basic education, more likely to leave school to work, and less likely to have resources to pay for TE. When private higher education begins to absorb pent up demand for TE, new enrollees usually come from families with the means to pay: those in Q4 & Q5.

Barriers to equity are significant. So long as university remains the dominant mode of tertiary attendance (compared to non-university), poorer students will face a double obstacle to attendance. First, they will be less likely to score highly on academically-focused entrance exams, due to the generally poorer quality secondary schools they attend, along with other disadvantages of lower SES. Second, they will be less able to enroll and pay for school even if they can gain admission. Finally, they are at high risk for drop out.

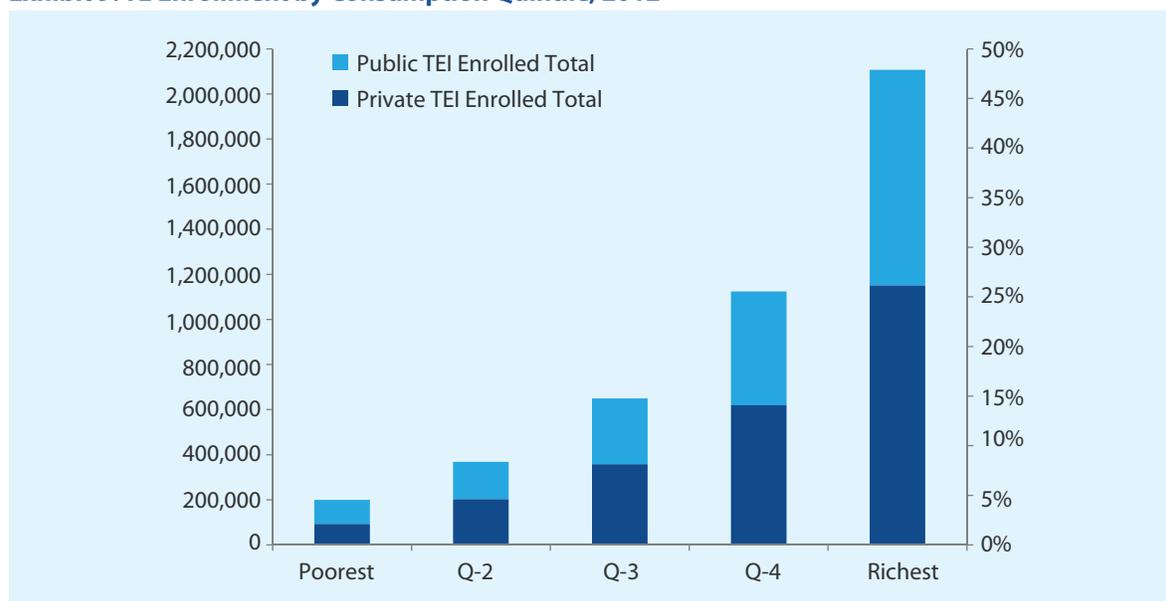
Students from Q1-Q3 also face non-monetary obstacles to enrolling or finishing TE. In addition to the reasons listed above, these students are more likely to live in rural areas, belong to a linguistic or ethnic minority groups. A recent survey found that while the vast majority of high school students (88percent) aspire to attend tertiary, only those in the highest consumption quintiles feel reasonably financially capable to do so. Those in poorest two quintiles almost universally claim financial difficulty.

Specific policies are needed to attenuate these disadvantages. A comprehensive and well-constructed financial aid system—which may include, inter alia, generous student loans, systems to identify students with academic potential in secondary schools, and systems to identify disadvantaged students in universities—can effectively reduce these equity gaps. Indeed, many economically dynamic lower and middle income countries have attacked the problem of inequity with significant investments in student financial aid. In Latin American alone Chile, Brazil, and Colombia have invested the equivalent of billions of dollars to promote equity, often with impressive results. Indonesia would be well-served to follow these examples. Box 2 describes the main models used by comparator countries to balance institutional finances and student financial assistance.

4 The numbers in this column represent student enrollment coming from certain quintile as percentage of a particular population, in this case, age cohort of 19-23. For instance, 1.57% in Quintile 1 by definition: 1.57 % of all population of age cohort 19-23 is enrolled in TEs.

5 The numbers in this column represent student enrollment coming from certain quintile as percentage of total TE students enrolled. For instance, 1.99% in Quintile 1 by definition: 1.99% of all students enrolled in TEs are coming from Quintile 1.

**Exhibit 9. TE Enrollment by Consumption Quintile, 2012**



Source: SUSENAS, Indonesia

## What Types of Financial Assistance Are Available?

As typical of many TE systems, Indonesia over the years has acquired a host of very small scholarship programs from various origins and with various purposes. These micro-size programs generally emphasize a combination of academic merit and financial need, and may have other special criteria as well. In 2010, MOEC initiated the *Bidik Misi*<sup>6</sup> scholarship program in order to reach more needy students. While this new effort is laudable, by 2013 Bidik Misi only provided 140,000 students with full scholarships.

Taken together the various source of programs, financial aid cover about six percent of enrollment. If we consider the Bidik Misi scholarships with respect to the enrollment of Q1-Q3 students, we find they are a more respectable 15percent enrolled students. We can safely assume that most students in the Q1-Q3 will have difficulty paying for school, so this amount on financial aid leaves 5 out of six poor students without assistance. By contrast, financial aid programs in other countries—increasing including developing countries—often serve more than 50 percent of all enrolled students. It is increasingly common to find 30 to 40 percent (or more) of the public TE budget spent on student financial assistance.

**Exhibit 10. Number of enrolled students by consumption quintile and degree type**

	Q1	Q2	Q3	Q4	Q5	Total
Population of 19-23	4,332,826	4,097,356	3,903,905	3,646,149	4,140,082	20,120,318
D4, S1 and above	118,784	234,059	408,434	808,086	1,971,952	3,541,315
D3	16,347	31,857	62,612	117,274	250,342	478,432
D1 and D2	4,194	20,582	31,686	23,374	49,722	129,558
Total enrollment headcount	139,325	286,498	502,732	948,734	2,272,016	4,149,305

Source: Core SUSENAS, March Round 2013

6 Please refer to Annex for specific selection criteria and the amount of scholarships available per student in each public TEI.

The Bidik Misi program covers the full costs of tuition and a stipend. Like other government scholarship programs, it mainly targets students at public universities. In 2012, the DGHE added a very small portion (2,000 new entrants in 2012, and additional 8,000 new entrants in 2013) of scholarships for students who enter private TEIs. By each university's size and prestige, the number of scholarship recipients varies.

Each year, the DGHE allocates the amount of Bidik Misi Scholarships to each university who had applied and qualifies for this program. Bidik Misi scholarships have the same standard for every university, despite the fact that each university has different tuition changes. Therefore, if Bidik Misi cannot fully subsidize all tuition for students in certain TEIs, the institution will have to pay to meet the gap to make sure students benefit from full tuition deduction.

In addition, the effectiveness of the Bidik Misi program is likely hampered by the reported problems with poor targeting of recipients and frequent late payment of the scholarships themselves. Financial Aid is in place for the purpose to increase graduation rates, shorten duration to complete a certain tertiary degree, and eventually lead to better employment outcomes. These are the empirical positive impacts of Financial Aid. However, impacts on Bidik Misi's should be undertaken at the first available opportunity to testify its positivity and effectiveness.

As mentioned earlier, numerous partial scholarships are thought to be provided through other scholarship programs, such as the Bantuan Belajar Mahasiswa (BBM) program and the Peningkatan Prestasi Akademik (PPA) program. No reliable information is available on the quality of targeting of these scholarships, the extent to which poor students may receive more than one, or their effectiveness in promoting attendance and graduation by recipients.

Four main issues emerge with the scholarships: (i) criteria that accurately group students into appropriate types of scholarships; (ii) the clarity and feasibility of the criteria themselves; (iii) panel/team who determines the selection process; (iv) the public awareness of the existence and options of scholarships addressing students' financial needs. The scholarship programs seem to be designed to help the bright and academically talented among the poor who, despite all obstacles, score well on the university admissions test and gain a place in public universities. The program seems to have neither the resources nor the ambition to either (i) assist those financially-needy students who are in TE to pay for studies and graduate; or (ii) make it possible for the poor student on the margin to enroll.

The 2012 Law on Higher Education includes a provision which mandates that 20 percent of enrollment in higher education institutions be students from poor economic backgrounds. This ought to provide an impetus to replace or complement the scholarship-based system with a more comprehensive financial aid system. However, the Law 12/2012 does not define exactly what is meant by the term "poor economic background," leaving this to be defined when the law is implemented.

Moving to a comprehensive financial aid system would require several key changes from the one-size-fits-all policy of scholarships. The move toward a comprehensive financial aid policy would be characterized by six elements:

1. The removal of academic merit as key selection criteria for aid allocation. The mixing of merit and need criteria in financial aid tends to favor students from the higher ranges of whatever socio-economic stratum is eligible for aid. It also undercuts a main tenet of TE policy: that any accredited TE program has value for some learners. Merit-based aid tends to emphasize that the most rigorous academic programs have the most value. Need-based systems tend to reinforce the idea that all TE should add value for students regardless of their academic capabilities at enrollment.
2. Financial need must be accurately and reliably measured. Many countries find it challenging to gauge the level of student need, but it is impossible to optimize aid allocations and their effects on enrollment and graduation rates without doing so. Improved targeting of existing scholarships begins with finding accurate and reliable ways to measure need.
3. Multiple financial aid instruments are usually most effective. Grants and loans are the two best known instruments, but tuition discounts, income-contingent loans (graduate taxes) and even

human capital equity investments are in the modern financial aid toolbox. Regardless, it is imperative that the government disseminate information about all available scholarships to secondary school students.

4. Engagement of TEIs in the aid process can leverage resources and prevent “tuition inflation.” Furthermore, the government should strive to provide adequate scholarship management support for TEIs.
5. The goal of aid policy should be to maximize equitable enrollment and graduation within a given budget constraint. This budget constraint can be expanded by reallocating some resources, like those that finance professors at private TEIs, to the creation of portable financial assistance for students. Moreover, the financial aid budget should be set as a fixed share of total TE spending rather than as a fixed number.
6. Students must receive their scholarship benefits on time if scholarship funding is to have a meaningful impact on their ability to afford TE.

Additional features of a comprehensive financial aid system include:

1. Reliable ways of gauging student family income and student need
2. The amounts of financial assistance needed to promote enrollment, retention, and graduation among poor students
3. Whether to cover students in private as well as public institutions
4. Whether to provide equal assistance for short tertiary degree and university degrees
5. Whether to be solely need-based or whether to reward need/merit combinations (as the current scholarship programs do)
6. Whether to seek to maximize the number of students assisted under a given budget/slash resource envelope or whether to create a “right” to scholarships and loans among all enrolled tertiary students
7. Whether to mandate TE institutions to accept students as a condition of operating or to pay institutions on a *per capita* basis for enrolling poor students
8. How to keep increases in aid financing from translating into higher tuition costs

The path toward a comprehensive financial aid policy begins with intensive collection of data on student financial need and the effectiveness of existing instruments. Empirical research should investigate how effective the Bidik Misi is in providing access to and completion of TE among recipients, and how well it is targeted to the neediest students. It would be advantageous for the Government to seek to understand the impact of the Bidik Misi scholarship in detail. Such an understanding would be an important initial step to a more comprehensive student financial assistance strategy.

## Policy Direction Two:

***The government should adopt a comprehensive financial aid policy that supports its goals for equity (i.e., increasing the enrollment and graduation rates of students from disadvantaged backgrounds). The new system should offer assistance to all financially needy TE students and provide the basis for increasing enrollment among students from the bottom two income quintiles.***

Some research entities had taken the initiatives to study and understand the effectiveness of public scholarships – Bidik Misi. For instance, the Department of Economics at Padjadjaran University had released a report in January 2013 on a case study of the effectiveness of Bidik Misi in West Java, Indonesia. The report used two sets of data from Indonesia Family Life Survey and the National Socioeconomic Survey (SUSENAS) to conduct the analysis and draw conclusions. Both sets of data revealed weaknesses of Bidik Misi. Despite

the good intention and incentives Bidik Misi provides for students who are in financial needs, the main issue with this public scholarship is the lack of coverage on students with severe socioeconomic difficulty to seek for TE. With a quota of 30,000 seats for Bidik Misi Scholarship in 2012, 2,400 are available for poor students in West Java Province. Back in 2010, the coverage of poor students are even less, with 23percent of students who benefit from Bidik Misi are from non-poor families. One of the main reasons for this lack of access to scholarship is due to the inability for low socioeconomic students to pass the national entrance exam or fulfill the minimum academic requirement to attend public universities. The report therefore provoked two policy stimulation programs to complement the Bidik Misi: Private Tutoring Voucher and Conditional Cash Transfer (Fahmi et al., 2013).

**Potential Concrete Steps for Policy:**

- Create a system to assess financial need and examine options for reliably establishing family income.
- Move from fixed budget for scholarships to fixed share of TE funding for student assistance.
- Replace the financing of professors at private TEIs with portable financial assistance to students.

**Box 2. Chile's move toward a comprehensive TE student financial aid system**

As in Indonesia, civil society in Chile considers TE-especially university education-to be an essential service. Aspiring students and families expect the government to ensure access and affordability. Until recently, Chile's TE finance system resembled Indonesia's in many respects: (i) wealthier and academically-gifted students preferentially received aid, with little regard to their absolute need; (ii) poor students were less able to gain access to public universities, forcing those least able to pay to enroll in private universities; (iii) financial aid was a historical collection of scholarships with no clear policy goals.

In 2012, the Government proposed a sweeping set of reforms to student financial aid. New resources, totaling in the billions of US dollar equivalents, were channeled to financial aid. Most importantly, however, the system was overhauled to become a comprehensive one to promote student attendance and completion of TE. The proposed reform sought improvements, inter alia, in the systems (i) governance; (ii) affordability of loans; (iii) maximum borrowing amounts (tuition reference rate); (iv) and the harmonization of the grant and loans systems.

The table below provides an indication of the types of issues that required coordination in order for Chile to move to a comprehensive financial aid program. Indonesia may or may not share some or all of these issues. It could, however, benefit from an assessment of the ways in which Chile improved the cost effective of its publicly-provide financial aid while raising graduation rates and equity in TE.

ISSUE	Issue/Problem	Proposed Solution
<b>Governance</b>	A two-tiered student loan system that provided substantial subsidies for less-needy university students while making non-university students pay near-market interest rates for loans.	Introduce a single, unified system of student loans and grants (instead of the current two, parallel systems of loans for CRUCH and non-CRUCH institutions, and instead of the many scholarship programs).
	A historical proliferation of loan and grant programs administered by different agencies under different rules.	Have a single agency administer the system of TE student financial aid.
	Inability to control rent-seeking by private banks who originated and managed student loans but did not share in the risk of non-payment.	Substitute banks in loan origination.
	Persistently high default rates on student loans and lack of a culture of repayment.	Use the tax system (Internal Tax Service) to monitor salaries and set and collect repayments
<b>Financial terms of the loans</b>	Graduates taking on too much debt and therefore unable to pay back their loans.	Introduce income contingency so that students pay no more than 10 percent of their income above the minimum salary.
	Insufficient time to repay loans	Employed graduates would make monthly repayments for up to 20 years, or until their balances are fully discharged, whichever comes first.
	Insufficient time to find a job (3 months) before loan repayment starts	Repayment would start no later than 18 months after departure from the TEI, regardless of whether the student drops out or graduates. This allows students up to a year to transfer to another degree program.
	Loans not available to middle-class but needy students.	Make students from deciles 1 to 9 eligible for loan funds.

**Table on Chile’s proposed solutions and issue/problem continued:**

ISSUE	Issue/Problem	Proposed Solution
<b>Tuition reference rate system</b>	TEIs have no incentives to provide good value or high performance for students. They actually make more money if students drop out.	Reform the tuition reference rate (arancel de referencia) system so that annual tuition, time-to-degree, dropout rates, and employment outcomes, determine how much the state is willing to invest in degrees and institutions.
	The need to give prior to certain high-need and socially-desirable degree programs, such as nursing , science, math, and engineering	Open the door for the Government to give additional support to degrees that may be especially important despite their relatively low salaries.
	TEI have an incentive to raise tuition when the Government provides loans and grants	Any loan scheme should not seek to subsidize the gap between the tuition reference rate and actual tuition (“brecha”): it is the primary tool to modify behavior of student borrowers, and its magnitude is the mechanism expected to enforce efficiency in the system. TEIs should be forced to share the cost of the “brecha” via institutional grants or other forms of aid.
<b>Harmonization of the grants and loan systems</b>	Grants and loans not coordinated or used to maximize enrollment, retention and graduation.	Maintenance grants for Q1-Q3 students to defray the immediate costs associated with being in school. Moreover, it is proposed that each Q1 student be given a grant equal to 50 percent of the tuition reference rate for the programs he or she is attending. Q2 students would be given grants equal to 30 percent of tuition and Q3 students would get grants equal to 15 percent.
<b>Entrance Exams and equity – Merit versus need.</b>	PSU score thresholds for eligibility to some existing scholarship programs to be lowered for students from the two lowest quintiles.	Attention is to be paid to the fact that relying on college entrance exam scores is problematic on the grounds of equity, given that results on merit tests are typically correlated with wealth.



*A good cornerstone of policy is a reasonable target for coverage which makes the pool of formal learners large and the pool of those who will not go beyond high school smaller*

## Chapter 4

# Broadening the Definition of Quality and Relevance while Raising these across the System

Quality and relevance are perennial concern in TE. Students, parents, employers, policymakers, and the vast majority of professors/instructors and TEI administrators all want the education provided to be high quality. They also want it to be relevant and to provide knowledge and skills that will allow students to succeed as graduates, especially in their work lives.

Concern for quality needs to be operationalized with an awareness that no valid and reliable objective measures of quality currently exist. Many different opinions and impressions can be heard about what quality and relevance mean, but getting any type of objective, comparable measure is extremely difficult and inherently imprecise. For this reason, quality and relevance must be gauged by proxies.

The first policy question with respect quality and relevance is: what do we mean by these terms? Increasingly, the answer is based on the value that the education can add to any given student's skills, knowledge, and capabilities. Schools add value by carefully defining their target student population and their needs and meticulously setting about satisfying these. Schools that do this well are said to be fit for their purpose, and "fitness-for-purpose" is the preferred definition of quality and relevance for modern TE systems. Policy Direction Three is framed with this in mind: "Fitness-for-purpose"—a TEI's ability to respond to the needs of its students—should strongly complement or replace academic rigor as the main definition of quality in TE. Quality and relevance should be promoted in a wider range of disciplines and subjects aimed at the ability levels and aspirations of the typical high school graduate, not the most academically gifted one. Community

colleges, short degree programs, and studies related to graduates' near-term success in job markets should get preference for government financing and other policies that facilitate their creation.”

Defining quality as the highest levels of academic rigor is now obsolete as a policy tool for countries with strong and dynamic TE policies. These leading countries recognize that rigor is important throughout the system but academic rigor is usually strongly associated with selectivity of students. Selectivity is appropriate for elite and flagship institutions, but is not a feature of TE systems that should be generalized. Among its many drawbacks, defining quality as academic rigor tends to favor the upper echelons of the socio-economic strata, especially those who can afford high quality basic education.

Some initiatives are underway to construct internationally-comparable tests to measure the value-added of TE. The diversity of learning goals that inherent in TE prevents the development of tests for all but a narrow range of abilities that TE often seeks to improve: written expression, reasoning ability, and a few other generic cognitive capabilities. The College Learning Assessment in the United States is the best-known of these initiatives. It seeks to directly gauge whether and to what extent attending college increases knowledge and cognitive abilities. The OECD's AHELO and PIACC programs have sought to devise comparable tests and performance, but neither focuses principally on value-added through TE.

Given this situation, the main proxy for relevance is the labor market success of the graduate; a degree is deemed to be relevant to the extent that it leads to good employment outcomes for the degree holder. Many factors influence employment outcomes, so this proxy gives partial information only. But the information it provides is useful.

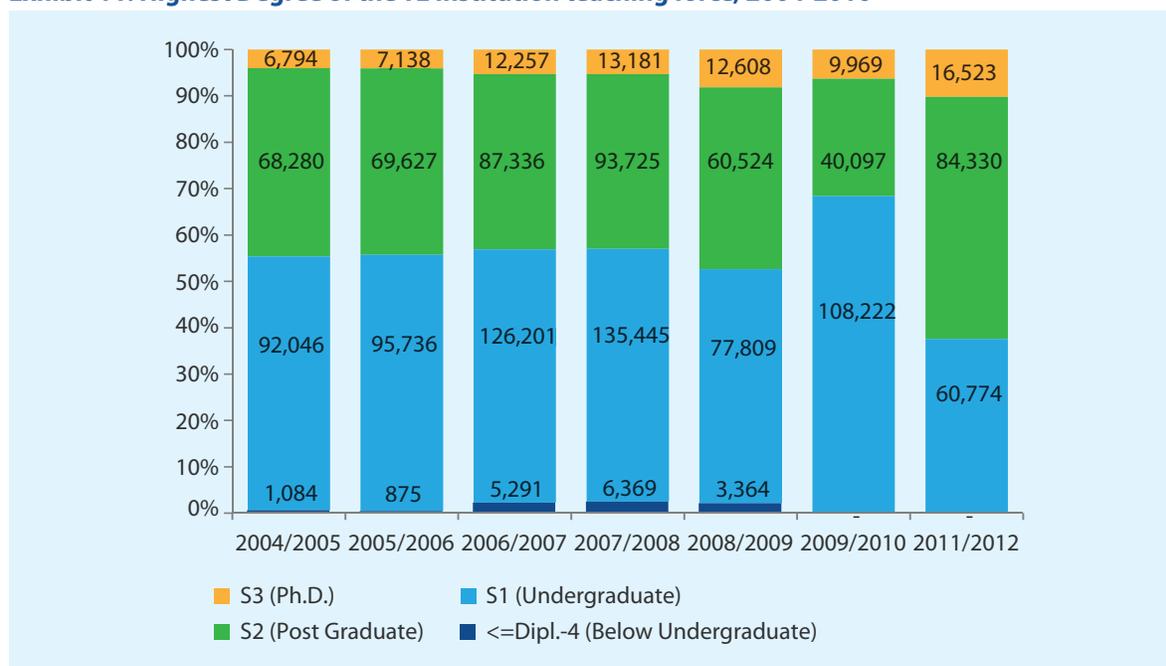
The main proxies for quality are measures such as faculty qualifications, research productivity and impact (measured by number of publications and number of citations) and the outcomes of quality assurance processes. Along with surveys of perception, these proxies form the basis of international and national rankings. Vigorous debate about these proxies has shown how they tend to favor research institutions, wealthy institutions, and selective institution. They also potentially confound spending or resource availability with educational value-added.

The proxies for quality mentioned above are more relevant to the university subsector than to the non-university subsector. Because the non-university sector more often relies on practitioners as instructors, faculty qualifications are seen as less germane to quality. Greater reliance is put on labor market outcomes to indicate both quality and relevance of non-university education.

Chapter 1 discuss labor market outcome for tertiary graduates and provides evidence of the positive returns to this investment. In Indonesia, the main available indicators to estimate TE quality are:

- (i) The credentials and productivity of the teaching force gauged in terms of highest degree obtained and amounts and influence of published research;
- (ii) The outcomes of accreditation processes;
- (iii) The selectivity of the institutions as measured by entrance test scores.

**Exhibit 11. Highest Degree of the TE Institution teaching force, 2004-2010<sup>7</sup>**



Source: Statistik Pendidikan MOEC, Indonesia

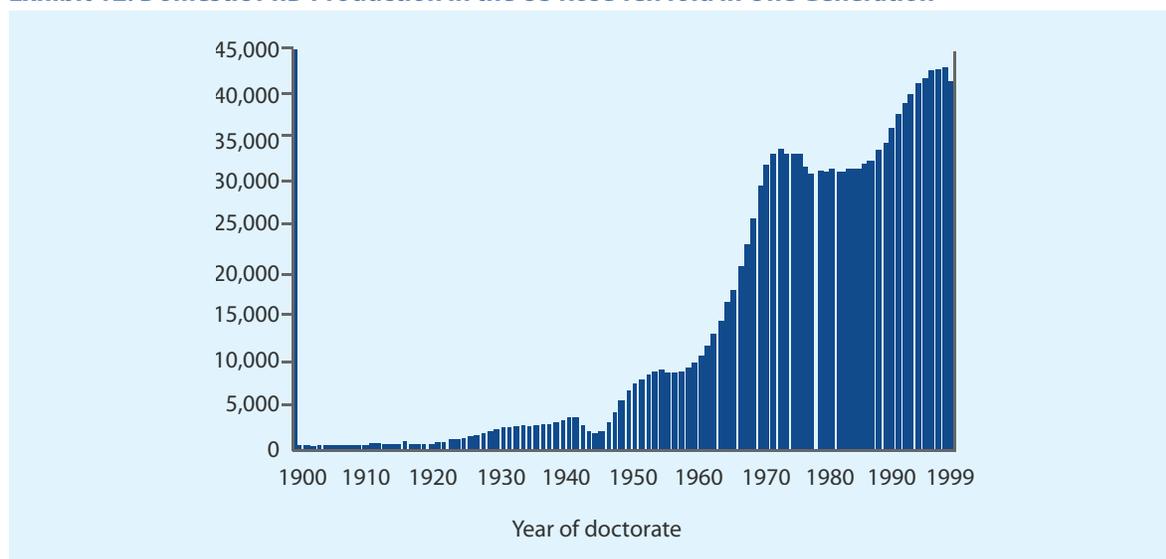
Exhibit 12 provides the best-available estimates of credentials of the teaching force. The significant year-to-year fluctuation per category indicate overall poor data quality and major methodological shortcomings in data collection; these data must be considered in that light. Nonetheless, they point to a lack of a critical mass of qualified professors is a serious problem in Indonesia. Only about 1 in 10 teachers in TE has a PhD. More than one-third of teaching force has a Bachelor’s degree or less. It is difficult to produce high quality TE when the teaching force does not have the required credentials. The low incidence of advanced degrees among faculty will make accreditation both harder and less effective. Standards will need to be lowered to compensate for less capable faculty and the ability to place a meaningful floor on acceptable quality becomes strained.

One of the most effective ways to improve TE quality is to increase the quantity and quality of advanced degree holders. As especially PhDs compete for academic positions, students benefit from better quality instructors. Many countries whose TE systems are maturing will not manage to equal mature TE systems when holding a PhD becomes a de facto pre-requisite for employment in a university.

Indonesia’s domestic PhD and Master’s degree production is too small to provide the amounts of human capital needed for an increased critical mass of qualified instructors and professors in TE. Domestically, annual graduation of Master’s and PhD programs seems to have grown steadily. Data for the latest available year show 1,765 PhDs and indicate that 500 new PhDs from 2006 to 2010 are trained domestically. By contrast, Brazil, with a smaller population, surpassed the milestone of 10,000 domestically-trained PhD several years ago. The United States invested heavily in PhD production as it transformed its economy in the late 1950’s and 1960’s. These efforts have helped both countries move from efficiency-driven economic production toward innovation driven production. Reaching a critical mass will require a similar effort by Indonesia.

<sup>7</sup> Data present the numbers of full-time lecturers only and for both private and public institutions

## Exhibit 12. Domestic PhD Production in the US Rose Ten fold in One Generation



Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Eamed Doctorates and Doctores Records File (1920-99); U.S. Office of Education annual reports

From year 1996-2011, Indonesia published 16,139 scientific papers, or about 1,000 papers per year. These numbers makes Indonesia ranks 11th within the region, but the 63rd in publications globally (Elsevier, 2013). MOEC data show the average researcher producing 0.4 publications per year; researchers at internationally-competitive research universities will publish at several times this average. The lack of autonomy for budgetary and human resources policy discussed in Chapter 5 is thought to create a strong disincentive for faculty to publish. DGHE policies have sought to encourage publication, but have done so with measures that do not seem to be particularly effective. Pressure to “publish or perish” is often most effective when TEI have high autonomy over hiring and career advancement of faculty. This creates a need for each individual faculty member to build and maintain a publications record as a means of convincing colleagues of his or her professional competence. These impressions then usually directly affect the persons career advancement and success. Most other types of incentives become formulaic and seldom effectively promote quality.

## The Role of Accreditation in Quality Assurance

Another potential drawback of program accreditation is that it treats all programs as equally worthwhile and seeks only to determine whether or not they constitute quality in their chosen domain. Many countries have solved this problem by simplifying their legal structures for degrees. Such policies effectively ensure that no more than two types of first tertiary degrees are offered: a longer and a shorter degree. Indonesia would be well-served to consider such a simplification. It would involve eliminating D1 and D3 degrees so as to raise the “brand value” of D2 and D4 degrees with sharper distinctions.

The accreditation system centered on the National Accreditation Board (BAN-PT in its Bahasa acronym) is considered—along with faculty credentials and productivity—to be a main proponent of improved quality. BAN-PT was established in 1994 as an independent body appointed by and reporting to the Minister of Education. BAN-PT reviews and accredits mostly degree programs, including Bachelor’s, Master’s, and PhD programs. It also conducted institutional accreditation in 2007-08 but a high failure rate forced BAN-PT to suspend this and review its instruments. Institutional accreditation was then reinstated in 2011.

The accreditation review process involves self-evaluation by the program using standardized questionnaires, desk review and evaluation of these by BAN-PT assessors. In theory, site visits are done but in practice very few site visits had been conducted due to budget constraints. The process concludes with a review of the

revised evaluation report by the BAN-PT Council as the basis of the accreditation decision. Accredited programs receive recommendations for development and improvement. Programs that are denied accreditation are subject to a closure by DGHE. By Law, accreditation is compulsory and accreditation will become a license to open a study program. Unaccredited programs are not allowed to produce certificate for their graduates and their graduates will not be recognized by DGHE.

Accreditation of a study program is valid for 5 years, and needs to be renewed at the end of its validity. There are around 4,000 TE institutions and 16,770 study programs in Indonesia. As of December 2012, 9,638 study programs had been accredited and 7,132 were in need of accreditation. BAN-PT's annual budget (over which it has no control, as noted in the World Bank's QA paper) only allows it to accredit 2,200 study programs per year.

### Exhibit 13. The accreditation results (programs) from BAN-PT and DGHE as of year 2012

# of study program	Public TEI			# of study program	Private TEI			Total # Public & Private study programs	Accredited study program	%
	Valid	Expired	Not yet accredited		Valid	Expired	Not yet accredited			
4721	2879	639	1203	12049	6759	1253	4037	16770	9638	57.47

Source: BAN-PT & DGHE

Many countries initiating formal accreditation processes in TE concentrate on program accreditation. For countries with new and inexperienced accreditation agencies, the stakes are lower when one can fail to accredit a single program and leave the bulk of any given institution in place. Institutional accreditation is higher stakes because institutions that fail to win accreditation are often candidates for forced closure. Forcing the closure of a TE institution is complicated and difficult, and tests the institutional capacity of the entity charged with the responsibility.

Program accreditation may achieve some of the same ends while avoiding major conflicts, but often it creates much more work and is less effective at promoting quality. Institutional issues, such as whether “funding follows priorities” can be much more consequential for quality than reviews of the content of programs. By emphasizing program accreditation countries often create a large and expensive system with real but limited value. Program accreditation may be able to identify the programs that fall most egregiously short of required standards, but they often lack the impact that comes with labeling a whole institution as substandard. Institutional accreditations generally offer a better and more effective way to promote quality and relevance. Thus, money spent by BAN-PT on program accreditation might have a more pronounced impact if it were used for institutional accreditation or other purposes.

The government has progressed in strengthening its accreditation system. Higher Education Law 12/2012 regulated that all TEIs have to receive valid accreditation by 2015. New ministerial regulations are still under debate on the specifics of establishing an independent accreditation body, which focuses on accrediting study programs only. TEI accreditation will become BAN-PT's only responsibility, and the government should consider creating a separate accreditation system for non-university TEIs.

This move in the direction of institutional accreditation could potentially advance an important goal for Indonesia TE: to use “generic” and cross-cutting measures of quality and relevance that gauge institutional performance. This would balance and partially replace program accreditation, which by nature is concerned with the adequacy of the given content of a given program.

Institutional accreditation is often built around key generic and cross-cutting issues such as:

- Has the TEI defined its educational mandate and its target population?
- Does the TEI allocate resources in a way that supports its stated goals?
- Does the TEI measure student progress toward degree and labor market success?
- Does the TEI have a system in place to identify and redress obstacles to good performance?
- Is there evidence that the TEI takes systematic actions to improve quality?
- How do the TEI's graduation rate and time-to-degree measures compare to other TEIs' in a valid peer group?

Such a focus on the value and purpose of institutional mandates might be useful for more than guiding the creation of new (mostly non-university) programs. It could also serve to guide other improvements, such as the potential consolidation of private universities, where warranted and desirable. It could also encourage the development of "niche" and liberal arts style universities. All of these actions would contribute to a greater diversity in the definition of quality and relevance. They would diminish the prevalence of a single model under which all TEIs conduct research and aspire to be "world class."

Building a quality assurance system around these types of issues would allow the government to use a single process to promote quality across a set of TEIs with very diverse goals and purposes. It stands to greatly reduce the work load—be doing less program-by-program review of content—while creating more and better information for students and TEI leaders.

### Policy Direction Three:

***"Fitness-for-purpose"—a TEI's ability to respond to the needs of its students—should strongly complement or replace academic rigor as the main definition of quality in TE. Quality and relevance should be promoted in a wider range of disciplines and subjects aimed at the ability levels and aspirations of the typical high school graduate, not the most academically gifted one. Community colleges, short degree programs, and studies related to graduates' near-term success in job markets should get preference for government financing and other policies that facilitate their creation.***

#### Potential Concrete Steps for Policy:

- Eliminate D1 and D3 degrees to strengthen the value of D2 degrees and distinguish them from certificate-based technical education.
- Consider the creation of an accreditation system separate from BAN-PT for the non-university TE system.

### Box 3. Defining Quality and Relevance as “Value”: The US’s Proposed Aid-linked College Ranking System

The effectiveness of US Federal financial aid was hampered by perennial difficulties stemming from poor quality schools. A small group of schools accounted had the highest dropout rates, worst employment outcomes, and highest default rates among graduate borrowers from federal student loan programs. Rather than attempt to discern the individual quality and relevance of each program, the US Department of Education has proposed a ranking system to identify “value.”

The system measures each school against its peer group on the key performance indicators below. More importantly, it ties continued access to federal financial aid programs—lifeblood for all TEIs in the US—to acceptable performance levels. The ranking system has met with ferocious resistance from the TEIs, who in the past have never been held accountable under a system like this one.

#### New College Ratings before 2015.

Before the 2015 school year, the Department of Education will develop a new ratings system to help students compare the value offered by colleges and encourage colleges to improve. These ratings will compare colleges with similar missions and identify colleges that do the most to help students from disadvantaged backgrounds as well as colleges that are improving their performance. The results will be published on the College Scorecard. The Department will develop these ratings through public hearings around the country to gather the input of students and parents, state leaders, college presidents, and others with ideas on how to publish excellent ratings that put a fundamental premium on measuring value and ensure that access for those with economic or other disadvantages are encouraged, not discouraged. The ratings will be based upon such measures as:

- Access, such as percentage of students receiving Pell grants;
- Affordability, such as average tuition, scholarships, and loan debt; and
- Outcomes, such as graduation and transfer rates, graduate earnings, and advanced degrees of college graduates.

#### Base Student Aid on College Value by 2018.

Over the next four years, the Department of Education will refine these measurements, while colleges have an opportunity to improve their performance and ratings. The Administration will seek legislation using this new rating system to transform the way federal aid is awarded to colleges once the ratings are well developed. Students attending high-performing colleges could receive larger Pell Grants and more affordable student loans.





*In many countries, coverage and graduation rates are the cornerstone of TE policies. Importance lies in the commitment to help all those who want to further invest in their skills to do so well and cost-effectively.*

## Chapter 5

# Institutional Autonomy is Needed for Tertiary Education Institutions to Be Responsive to Student Demands

Autonomy is a fundamental component of both the COREHEG framework and the East Asia Human Development flagship report. The value of autonomy is that—when conceded in tandem with proper incentives and in a competitive environment—it facilitates continuous efforts by TEIs to meet the reasonable demands and needs of students. When autonomy is low, student needs and demands often go unmet.

Students have the biggest stake in the investment in their own human capital. While they can never be perfect judges of their future wellbeing, they are arguably the best judges of it. They therefore mostly seek programs, degrees and education that is best for them, especially when they have good information. The most successful policy environments create the incentives for TEI to monitor what students seek, and, within reasonable limits, respond by providing it. When this system is properly structured, the most effective TEI grow in enrollment, resources, and reputation while the least effective are shunned by students. Governments then can play a “stewardship” role for the system as a whole and are not required to engage in time consuming and ineffective micro-management of TEIs.

The COREHEG and East Asia HD Flagship frameworks both recommend expanding TEI autonomy in exchange for accountability and as a means for increasing the efficiency of both TEIs and the TE system as a whole. The latter outlines multiple disconnects that could be corrected if TEIs were empowered to make appropriate strategic decisions and adjustments for themselves, and strongly recommends the “stewardship” role for governments.

In recent years, the Indonesian primary and secondary education system has undergone several governance reforms intended to promote local (i.e., district and provincial) and community involvement in school decisions. Access to education has improved (especially for children from lower-income families) as control of schools has become less centralized. However, similar reforms have not occurred at the TE level; government control of the TE system is still rigidly centralized. The country's 100 public TEIs are managed by national ministries (primarily the MOEC and the Ministry of Religious Affairs, or MORA), which control their internal governance, staffing, academic programming, tuition, budget, and all other major functions and activities. There have been some attempts to expand the autonomy of TEIs (especially universities), but inconsistency in public policies has prevented these initiatives from having a major impact on *de facto* TEI governance. The lack of meaningful autonomy represents a significant challenge for Indonesian TEIs, which must work within domestic regulatory frameworks that constrain operational flexibility while seeking to make progress and compete on the international level. This section of the paper examines the extent to which public TEIs in Indonesia have autonomy with respect to organization, staffing, academics, and finances.<sup>8</sup>

TEIs in Indonesia would benefit from greater freedom to make their own decisions in at least four areas:

- How they are organized;
- How they are staffed;
- What they teach and how they teach it;
- How they use resources.

## Organizational Autonomy

Indonesian TEIs can be grouped into three broad categories based on different governing mechanisms: public TEIs, private TEIs, and autonomous state-owned legal universities (PTN-BHs/BHMNs). Public TEIs' by-laws, which govern all decision-making processes and academic and administrative structures, are approved by decrees from the DGHE and signed by the Minister of Education and Culture. (In contrast, private TEIs' by-laws are approved by the Chief Executives of the private foundations that fund them, while PTN-BHs' by-laws are approved by government regulations produced by inter-Ministry decisions and signed by the President of Indonesia.) Once the by-laws for a public TEI have been approved via MOEC statute, it has very little latitude to make decisions or structural changes. All proposed modifications to the by-laws require MOEC re-approval.

Moreover, the MOEC has a great deal of control over public TEIs' institutional leadership and management teams. Following Government Regulation 66/2010, public TEIs are governed by four major entities.

- **The Rector (or Director or Chairperson)**, as the chief executive of a TEI, is responsible for the overall management of the institution. The person in this position is usually supported by three or four deputies.
- **The Senate** oversees the management of academic affairs. It is the main determinant in the governance process and is chaired by the Rector.
- **The Oversight Unit** oversees the management of non-academic affairs (with an emphasis on financial affairs).
- **The Advisory Board** advises TEI management on non-academic matter.

The Senate is responsible for identifying and screening Rector/Director/Chairperson candidates, but the Minister of Education and Culture controls 35 percent of the voting rights for determining who will ultimately fill the Rector/Director/Chairperson position. This control becomes especially relevant when the Minister has a political interest in the outcome of the election. Even once the Rector/Director/Chairperson

<sup>8</sup> This chapter draws heavily upon the research and insights of Moeliodihardjo and Basaruddin (2013). Their "Autonomy and governance in higher education" provides a wealth of valuable information about TEI autonomy in Indonesia.

has been elected, he or she reports to the Minister and is subject to dismissal by the Minister. Although it should be noted that the Minister has never actually dismissed a Rector/Director/Chairperson, it is clear that the Minister wields tremendous power over the selection and work of the people in this position within public TEIs.

The Senate is, in theory, the governing entity with the most power. However, because it is chaired by a TEI's Rector/Director/Chairperson (who is so closely influenced by the Minister of the MOEC), it has a limited ability to make independent decisions on behalf of the institution. Furthermore, governance bodies like the Oversight Unit and the Advisory Board (and even the Boards of Trustees at PTN-BHs) do not have nearly enough external representation to ensure that TEIs are accountable to stakeholders and the public.

Because of these limitations on organizational autonomy, it is virtually impossible for public TEIs to make appropriate strategic decisions for themselves. If executive leaders and bodies like Senates were empowered to control university affairs to a greater extent, they would be able to create policies and administrative structures that were more conducive to institutional progress.

Such policies might allow them, for example, to quickly respond to new demands emerging study areas in fast-moving fields such as ICT. Or they might allow an institution to set institutional goals for quality that could be backed up by alignment of other institutional resources. The ability of Indonesian TEIs to match the agility of their peers in other parts of the world is directly affected by their ability to govern themselves.

## Staffing Autonomy

Public TEIs in Indonesia have very little latitude in making staffing decisions. All teaching and administrative staff are considered civil servants, so hiring and firing are handled by the State Civil Service Agency (BKN) rather than by the TEIs themselves. Such centralized control of human resources leads to a rigidity that is not at all conducive to academic freedom or institutional autonomy. For example, newly-recruited teachers are granted lifetime tenure after a maximum of two years at a TEI and face long, bureaucratic processes if they wish to move from one TEI to another. (Within this context, it is worth noting that MOEC Decree 84/2013 demonstrates the government's intention to impose stricter control over all TEI recruitment processes. However, at the same time, the Indonesian parliament is now debating a bill that would give TEIs more control over lecturer recruitment by hiring them to contracts that allow for more mobility.) Staff appointments tend to be based more on seniority and loyalty than on merit, and promotions generally occur automatically after employees have fulfilled specific administrative requirements. Termination is extremely rare, even for staff members whose performance is poor. In fact, TEI leaders do not even have full authority to adjust salaries and incentives in response to employees' performance. Instead, remuneration (like promotion) follows civil service regulations and is based largely on administrative criteria.

Any fully-functional TEI must have the ability to recruit and hire the faculty and staff members that it desires. Successful TEIs around the world are empowered to pay salaries commensurate with employees' abilities, dismiss underperforming employees, etc. Indonesia's civil service approach to TEI employment diminishes the quality of teaching and encourages staff members to be more reactive than proactive. Professors and researchers under the civil service system engage in less creative projects and activities and take fewer of the risks that tend to correlate with innovation and progress. Until Indonesian TEIs are allowed to hire the best available person for each position, Indonesian TE students will experience lower-quality educational experiences.

It is hard to overstate the negative effects of the lack of autonomy in staffing decisions. Indonesians who work as lecturers and instructors routinely talk of their frustration with a system that treats the excellent and the very mediocre in exactly the same way. They describe a system where the smartest path forward is to take one's paycheck with as little effort as possible to help students, or where the effort stems from the instructors personal dedication. This stands in stark contrast to many systems worldwide in which professors and instructors face clear rewards and disincentives for performance, and their behavior is significantly influenced by these.

## Academic Autonomy

Public TEIs have very limited autonomy with respect to academics. By setting TEIs' budgets and detailing appropriate activities and indicators, the MOEC ensures that there is close alignment between TEIs' individual strategies and its own strategy. It regulates the programs that TEIs may offer, the durations of these programs, standards for degrees, etc. Indeed, TEIs cannot offer new degree programs or discontinue old ones without the MOEC's permission, and the process for obtaining approval is long and complex enough that it discourages many TEIs from trying to expand their academic offerings. Furthermore, despite numerous reports of irregularities, the DGHE rarely uses its power to close problematic programs.

However, TEIs do have some academic autonomy. For instance, they are entitled to set their own curricula, which they do in consultations with various non-governmental academic and professional organizations. More significantly, they have complete control over the decision to admit or reject individual applicants and the number of applicants to admit to each degree program in a given year. To be sure, though, the government sets some admissions standards. TEI entrants must hold high school diplomas, and the Minister of Education and Culture has recently mandated that at least 50 percent of new students be admitted under the National Admission Scheme. New laws also require that specific percentages of entrant classes come from underprivileged backgrounds and less developed regions of the country.

Fundamentally, then, although the government exercises a fair amount of control over some aspects of TEI academics, it also offers individual institutions some meaningful powers. Still, Indonesian TEIs that inspire to compete with their counterparts in other parts of the world need to have more control over their academic programming so that they can respond to labor market trends by offering students more relevant training. Public TEIs need to be allowed to open and close degree programs as they see fit to avoid stagnation and promote the development of critical skills for the country's future.

## Financial Autonomy

In 2002, Indonesia made a strong, clear commitment to education by passing a constitutional amendment mandating that at least 20 percent of the total government budget be allocated to education. As shown in Exhibit 5.1, the government has succeeded in meeting the demands of this "20 percent rule" since 2009.

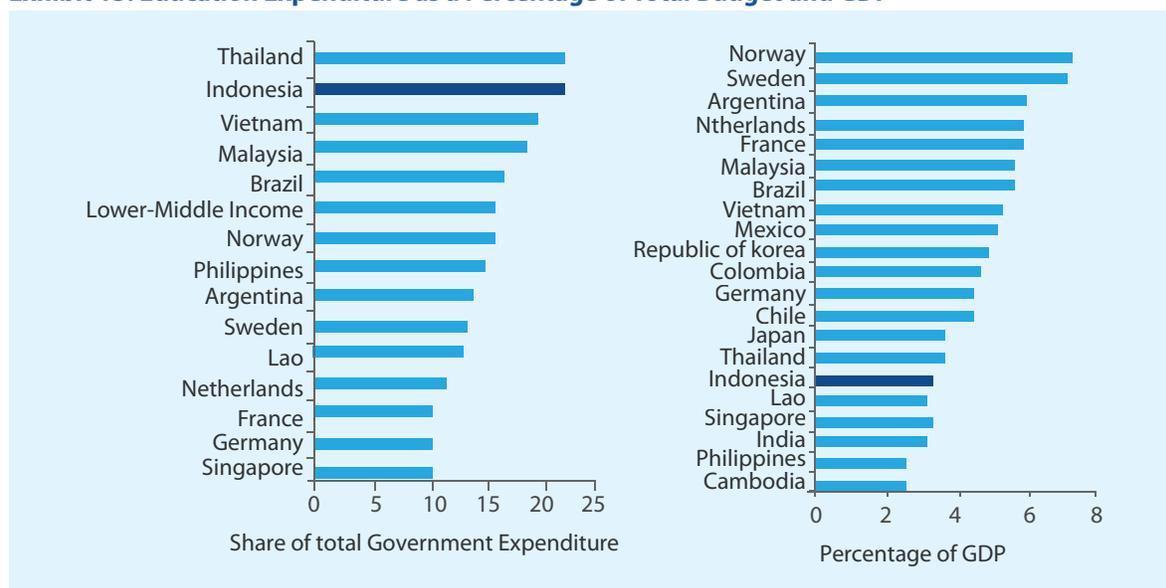
**Exhibit 14. Education Expenditures in Indonesia**

Year	Total Education Expenditure (% of Gov. Budget)	TE Expenditure (% of Total Education Expenditure)	TE Expenditure (% of Gov. Budget)
2007	18.8%	4.9%	0.92%
2008	15.6%	8.5%	1.33%
2009	22.2%	10.7%	2.38%
2010	21.6%	12.1%	2.61%
2011	20.6%	13.4%	2.76%

Source: MOF, Indonesia

However, although Indonesia's education spending is relatively high compared to the country's budget, it is relatively low compared to its GDP (see Exhibit 16). This suggests that Indonesia's funding for education is far lower in an absolute sense than it might initially appear, especially given the number of students in the country.

**Exhibit 15. Education Expenditure as a Percentage of Total Budget and GDP**



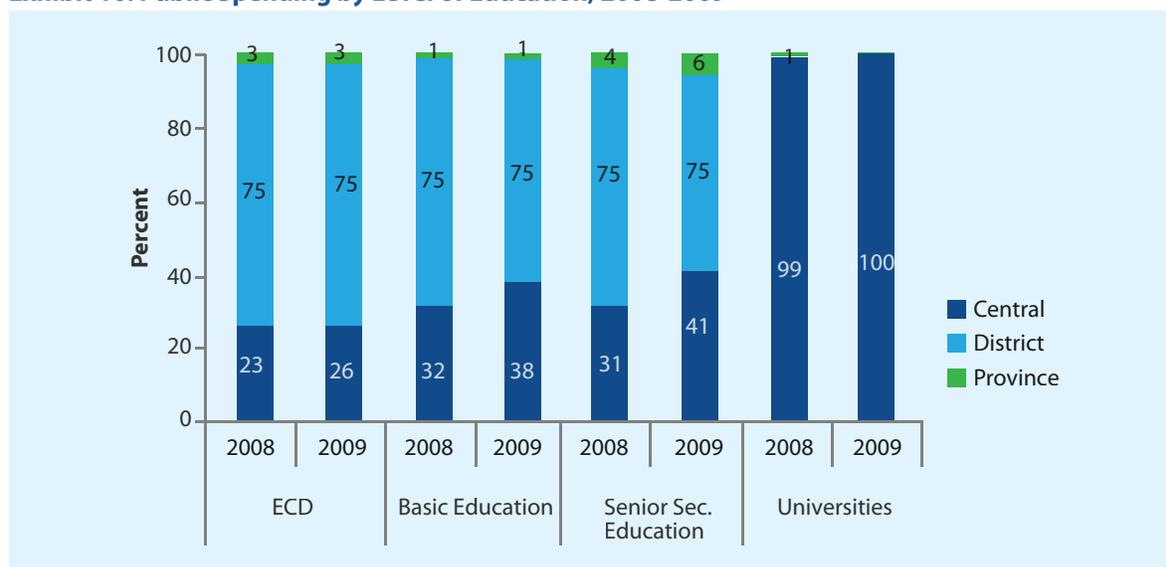
Source: World Bank Public Expenditure Review

The bulk of the financing available to public TEIs comes from government transfers (slightly over 60 percent) and tuition revenue collected from students (slightly under 40 percent). Private TEIs are not required to report much specific financial information to the government, but it is believed that most of their money comes from tuition and the support of private foundations. The central government does not provide a great deal of funding to private TEIs, although it does cover the salaries of professors with civil servant employment states and provides some financial incentives for certified lecturers.

Public TEIs have very little financial autonomy, with all financial decisions overseen by the DGHE and the State Auditor. All government funding (for both public and private TEIs) is rigidly pre-allocated into an annual line-item budget determined by the MOEC. TEIs are not permitted to make adjustments to these budgets, and their short-term nature makes funding long-term programs much more difficult (regardless of the programs' performance).

Moreover, whereas funding for most levels of Indonesian public education comes from multiple levels of the government, universities and other TEIs receive virtually all of their public money from the central (national) government (see Exhibit 5.3). As such, almost all of the public financing that TEIs receive is subject to the strictest regulation and control; they do not have the option of achieving more financial flexibility through the use of district and regional funding streams.

**Exhibit 16. Public Spending by Level of Education, 2008-2009**



Source: Ministry of Finance (via World Bank Public Expenditure Review)

Public TEIs also lack the power to control their acquisition of money through other sources; per Law 17/2003, revenue generated by public TEIs is considered the property of the government and is deposited into the State treasury. Recently, attempts were made to afford TEIs more control over their own tuition rates. However, in 2013, MOEC began regulating tuition again in response to mounting public dissatisfaction about the cost of attending TEIs. Decree 55/2013 and DGHE regulations now provide complex, detailed rules about tuition rates and collection. Once again, then, tuition is considered the property of the central government under Law 17/2003.

When TEIs do receive access to their self-generated revenue eventually, it is allocated into the rigid line-item budget along with other government funding. TEIs are also prohibited from borrowing money and issuing bonds, so they have no way to obtain flexible funding that might be used to achieve a strategic vision different than that of the MOEC. A significant portion of government money remains unspent at the end of each fiscal year, partly as a result of the onerous, bureaucratic procurement process that university management must follow. By law, this unspent money must be returned to the State treasury.

The lack of financial autonomy for public TEIs further restricts their ability to pursue relevant goals and improve the quality of education that they offer. Innovative programs and research are rarely supported by the government's budget, and procedural obstacles limit the impact of the funding that they receive. If TEIs had the power to raise money and use it as their leaders saw fit, they would be in a much stronger position to experiment with new ideas, respond to labor market trends, and compete with TEIs in other countries. It should also be noted that, following the COREHEG framework, increased autonomy would be accompanied by increased accountability. At present, Indonesian TEIs are only financially accountable in the sense that they are required to follow government regulations and financial management practices. If TEIs were granted more financial autonomy, they would have to develop greater capacity to manage their resources and long-term plans to achieve their goals. Such improvements would lead to improved educational experiences and outcomes for TE students.

Overall, then, public TEIs in Indonesia are essentially a part of the government bureaucracy. The only public TEIs with much real autonomy are the PTN-BHs. The country's new Higher Education Law makes it possible for more public TEIs to become PTN-BHs, but this cannot happen without the approval of the MOEC. Unless the MOEC plans to grant PTN-BH status to all public TEIs, it must consider measures to expand their autonomy. Until it does so, the Indonesian TE system will face tremendous challenges as it tries to

offer relevant educations and compete with TE systems in other parts of the world. For this reason, Policy Direction Four suggests that Indonesia “provide greater autonomy for institutions in the use of resources and people.” Box 4 offers a detailed set of recommendations for bringing the country’s financing system in line with international best practices. As a start, the Indonesian government would do well to consider carefully the example offered by New Zealand’s TE Commission and transfer more money via block grants that can be used at TEIs’ individual discretion to consider ways to maximize the flexibility of the proposed unit cost fund system included in Law 12/2012. The operational details of this part of the law could either add to or detract from the important freedom of institutions to use funds with reasonable discretion. More generally, the Government should consider how it might advance the types of recommendations that Singapore University Autonomy, Governance and Funding Steering Committee (UAGFSC) published as goals for increasing autonomy with accountability (see Box 4).

## Policy Direction Four:

***TEIs can only respond to student demand and need if they have the abilities and incentives to make key decisions for themselves. The most important among these decisions regards the autonomous but accountable use of resources. Providing greater autonomy for institutions is a necessary step to promoting the needed responsiveness within the TE system.***

### Potential Concrete Steps for Policy:

- Expand the use of block grants
- Consider Singapore’s example of increased TEI autonomy (see Box 4 on page 48)

### Box 4. Goals for increasing autonomy with accountability

Singapore released its preliminary report for publicly funded universities in January 2005 with four key recommendations that outlined the ideal relationship between the government and higher education.

1. Give public universities greater flexibility in decisions related to internal governance, budget utilizations, tuition fees, and admission requirements in order to pursue their own independent strategies for maximum benefit to their stakeholders.
2. Continue government support for the universities, but foster a greater sense of self-ownership and independence, which will allow for achieving excellence so that university stakeholders—council members, management, faculty, students, and alumni—are encouraged to have a more active role in shaping the future of the universities.
3. Ensure that the universities’ missions continue to align with national strategy by making them accountable for using public funds. The appointment of council members by the ministry of education allows for such monitoring, in addition to a quality assurance framework and a policy and performance agreement between the ministry and the universities.
4. While committed to being the principal source of funds, the government is providing incentives to universities to seek other sources by matching any funds raised privately. The government funding is on a fungible basis to allow universities greater autonomy to maximize value. At the same time, access to universities remains affordable and merit-based with various plans for the financially needy

Source: Maroun, N., Samman, H., Moujaes, C. N., & Abouchakra, R. (2008). How to Succeed at Education Reform: The Case for Saudi Arabia and the Broader GCC Region. [http://www.boozallen.com/media/file/How\\_to\\_Succeed\\_at\\_Education\\_Reform.pdf](http://www.boozallen.com/media/file/How_to_Succeed_at_Education_Reform.pdf)





*Policies that improve quality and relevance take time to develop and implement. The government is well served to move quickly to improve quality and relevance to avoid a future drop in returns and a stalling of the efficiency and productivity gains associated with greater skills.*

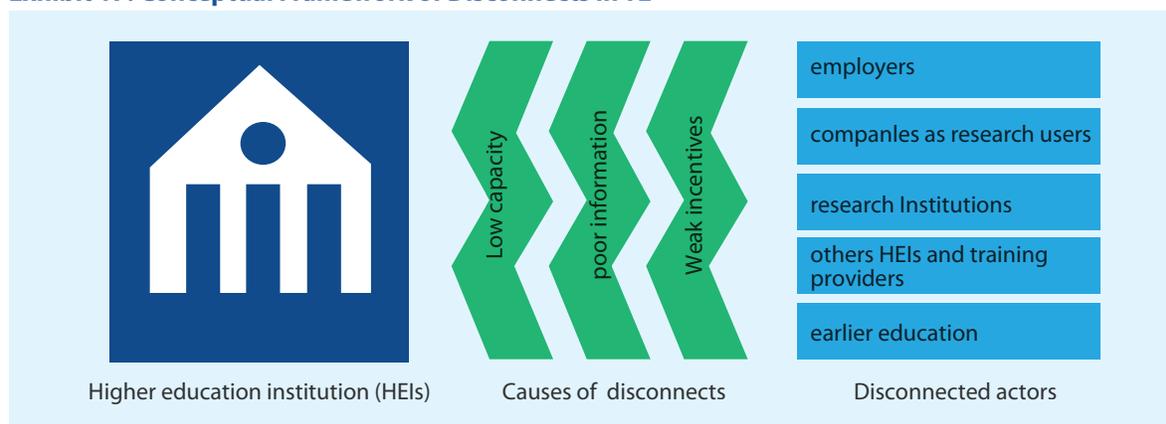
## Chapter 6

# Data and Information

The final point within the COREHEG framework is about giving students the information that they need to make good decisions. Information has great value for aspiring students, and providing it is a key part of helping their investments in themselves pay positive returns. At the same time, information is the lifeblood of good policymaking. The Indonesian TE system involves millions of students and billions of US dollar equivalents of resources; understanding it sufficiently well to make good policy requires time, effort, and skill. When governments invest in information for policy, they too reap strong positive returns.

Obviously, readily-available data about TE outcomes and options are critical to the goals of both students and policymakers. Poor information is among the key causes of disconnects described by the East Asia Human Development flagship report (see Exhibit 18). Thus, high-quality data and information are essential for the Indonesian TE system and all of its stakeholders. In any maturing TE system, policymakers, students, and parents rely on such data and information to make sound choices for the future. However, Indonesia currently lacks reliable basic information about most aspects of its TE system, from enrollment numbers to dropout rates to graduate employment outcomes. Improving data and making information more accessible are critical steps toward bolstering the system's efficacy and efficiency.

## Exhibit 17. Conceptual Framework of Disconnects in TE



Source: World Bank, 2011

Policy Direction Five for Indonesian TE is to “improve vastly the quality of information and data on the TE system and disseminate it (especially to aspiring students) to promote informed decision-making.” This recommendation might be followed in a number of ways. For instance, the government could seek to strengthen legal bases for the provision of information from TEIs. This would allow the MOEC and other ministries to verify institutional compliance with data-gathering regulations and then withhold the transfer of public funds as a penalty for non-compliance. Devising links between accurately-measured institutional characteristics and funding streams would also connect data with money.

Most data about the Indonesian TE system are collected by the MOEC via its Statistics Department and DGHE or by the Central Bureau of Statistics (BPS) via its National Socioeconomic Survey (SUSENAS) and National Labor Force Survey (SAKERNAS). Unfortunately, data sets are frequently inconsistent across sources due to data collection and management methods.

Because the Statistik Pendidikan and the DGHE are housed within the MOEC, they are publicly funded. However, data and information from the two departments are managed separately and come from different sources. Whereas the Statistik Pendidikan receives its data from provincial governments, the DGHE solicits periodic updates from TEIs. The response rate for the Statistik Pendidikan is below 20 percent, and it is unknown how many full-time staff members are responsible for managing and monitoring the department’s data collection process. The MOEC recognizes the inefficiency of this process and has made efforts to merge data collection responsibilities between the Statistik Pendidikan and the DGHE. However, these efforts were made five years ago, and the departments still have not successfully consolidated their data and findings.

The BPS is also publicly funded, but it is managed by statisticians. Until 2001, it conducted the SUSENAS, which tracks a wide range of household socioeconomic information, and SAKERNAS, which deals specifically with labor force information, once per year. From 2002-2010, however, the surveys were conducted twice annually, and they have been conducted on a quarterly basis since 2011. Changes in the frequency with which the surveys are conducted have been accompanied by changes in their geographical coverage, sample size, level of representativeness, questions, and data weighting. SUSENAS and SAKERNAS data in this paper come largely from the 2012 February iteration of the survey, which was disseminated to a roughly representative sample of 71,000 households across the entire country.

It should be noted that only about 100 public TEIs are supervised by the MOEC. Others fall under the authority of other ministries, especially the MORA. For all of the shortcomings associated data from the MOEC, other ministries are far weaker at collecting and processing information from TEIs. As such, MOEC currently supplies the best available TEI statistics and information. Furthermore, it has made multiple attempts to generate more accurate information through municipal- and district-level verification processes. However, staffing limitations, lack of expertise, and political constraints have prevented this potential remedy from improving the data situation in Indonesia.

Understanding a TE system requires accurate information about a variety of factors. For example, it is important to have thorough knowledge of students' socioeconomic backgrounds, dropout rates, and progression and time to degree. It is also important to know how many of each type of TEI exist, what degrees they offer, and how many applicants and enrollees they have. Labor market data are also important to understand. These include average salaries, historical demand trends, forecasts of future skill needs, and degree requirement for specific jobs. A government should also keep careful track of education inputs, including the amounts of public and private funding received by TEIs; the breakdown of TEI spending on salaries, infrastructure, and other operating costs; lecturer and professor credentials; etc. Of course, education outputs—such as research publications, intellectual and technical innovations, patents, and citations—are also important to measure. This sort of information is essential to making sound policy decisions within any TE system.

#### Box 5. Areas of improvements on data and information in Indonesia

- Student characteristics:
  - Enrollment numbers by student SES (total and annual)
  - Enrollment numbers by degree type
  - Enrollment numbers by institution type
  - Dropout rates (overall and by grade)
  - Number of applicants and aspirants
  - Average number of years to complete TE
- Labor market observation:
  - Degree types corresponding to skill levels in the labor market
  - Average salary for and returns to each type of degree
  - Historical patterns of labor market demand
  - Forecasts of future skill/talent shortages by job sector and type
- Education inputs:
  - Public funding and private investment in tertiary education by degree program and institution type
  - TEI spending by category (salary, infrastructure, etc.)
  - Credentials and quality within the TE teaching force
- Education outputs:
  - Research and development by discipline
  - Publications and citations by discipline
  - Patents by discipline

Because of the shortage of high-quality data and information, the analysis of labor market returns and student characteristics in this paper relied heavily on information from the SUSENAS and SAKERNAS. The MOEC has little information about students' socioeconomic statuses and progression through the TE system. The MOEC has been more successful in other areas. It tracks enrollment numbers and basic facts about students' educational attainment. It counts TEIs and categorizes them by type, records the number of degree programs at each institutions, and analyzes the TE teaching force by degree holding. Still, the government needs to facilitate more efficient internal communication among public data management entities and commit more fully to enhancing the quality, scope, and accessibility of national information systems.

TE data and information are useful in understanding the basic, broad characteristics of Indonesian TE, and it has been featured throughout this paper. However, even these data sets must be improved if Indonesia's TE system is to mature. They do not always reflect the latest developments in the system, and they are often difficult to relate to one another. To answer most critical TE questions, it is essential to have a four-dimensional informational framework containing: (i) enrollment statistics, (ii) student characteristics, (iii)

dropout and degree progression rates, and (iv) costs of study to students and families and how they pay. Future iterations of the SUSENAS and SAKERNAS would do well to investigate the family backgrounds of TE students, the amount of time it takes students to complete various TE degrees, the TE graduation rates for students of different backgrounds, the absorption of graduates into the labor market, etc. As this data becomes available, it should be supplemented with analyses and studies that shed light on the causes of drop out versus degree completion, labor market success, successful degree transfer, and different student and graduate experiences by socio-economic status and other characteristics.

The experiences of other developing countries demonstrate that there are numerous benefits associated with strong data and information systems. The consolidation of information about TE (which, when disseminated transparently, helps to keep the general public informed about postsecondary educational options) and the expansion of TE systems are often complementary processes. Colombia, for example, has driven TE maturation partly through the successful management of data and information.

Colombia's 300 TEIs operate over 11,000 degree programs. The combination of sophisticated information systems run by government agencies and digital and print media produced by individual TEIs ensures that students have access to a wealth of information about the TE system and their options within it. The Colombian Ministry of National Education, which is main source of TE information within the country, began systematically gathering information from TEIs in 2002. This information was consolidated into four main information systems (see Exhibit 19) that are updated frequently and accessible through the Ministry's website. Additional information (and other information systems) are available through different web portals. Although no system can ensure perfect data, the scope of Colombia's information collection and dissemination system is an impressive model for other developing countries.

**Exhibit 18. Summarizing four main information subsystems on tertiary education in Colombia**

Information system	Features
<b>The National System on Higher Education Information</b>	<ul style="list-style-type: none"> <li>• Comprehensive; includes data on all TE programs and TEIs on Colombia's Register of Qualified Programs</li> <li>• Collects and organizes information about institutions, programs, faculty and staff, students and their well-being, graduates, research, internationalization, infrastructure, finances, applicants' standardized test scores, tuition and fees, and financial aid and loans</li> </ul>
<b>The Higher Education Institutions Dropout Prevention and Analysis System</b>	<ul style="list-style-type: none"> <li>• Tool for monitoring and analyzing TEI dropout rates</li> <li>• Features statistics about total enrollment and graduation rates.</li> <li>• Integrates information on student characteristics from other data sources to increase depth and usefulness</li> </ul>
<b>The Labor Market Observatory for Education</b>	<ul style="list-style-type: none"> <li>• Focuses on information about TE graduates' average earnings from 2001 to the present</li> <li>• Tracks the percentage of degree holders (by type of degree, discipline, institution, and geographic location) active in the labor market</li> </ul>
<b>The Higher Education Quality Assurance Information system</b>	<ul style="list-style-type: none"> <li>• Records program accreditation status</li> <li>• Allows TEIs to track and fulfill accreditation requirements</li> <li>• Shows updates on institutional characteristics and legal statuses</li> <li>• Provides accreditation information directly to prospective students</li> </ul>

Source: World Bank, 2012

Many of the most pressing problems in Indonesian TE could be solved (or at least ameliorated) by a concerted effort by the government to improve the quality and availability of relevant data and information. Students would be able to make informed decisions about which type of TE they should pursue and understand the financial aid systems and policies relevant to them. The MOEC would have a better understanding of the costs and benefits of TE and the types of people employed by TEs. Finally, TEs would have empirical bases for opening and closing degree programs in response to labor market demands. In recent years, for example, many Indonesians have trained to become teachers because of the high salaries associated with the profession. This has created a pronounced surfeit of teachers, which has forced many to work in lower-paying jobs. However, because this information has not been disseminated widely or used to shape TEI responses to the problem, demand for teacher training programs was at an all-time high in 2013. Collecting better data and using it more effectively would improve such situations dramatically.

## Policy Direction Five:

***Improve vastly the quality of information and data on the TE system and disseminate it (especially to aspiring students) to promote informed decision-making.***

### **Potential Concrete Steps for Policy:**

- Strengthen the legal bases for information provision from TE institutions
- Verify compliance and withhold transfer of public funds for non-compliance
- Devise linkages of funding to accurately-valued institutional characteristics

# Annex

## Policy Directions and Potential Concrete Next Steps

**Finding One:** Increased high school graduation rates are driving increased demand for TE. This trend will continue for years to come and define the type of TE most needed.

**Policy Direction One:** Government policy should facilitate further expansion of the TE sector while improving quality and relevance at every level. Policies should not just expand enrollment, but should create conditions that promote a greater range of high quality providers, degree options, and affordability levels.

**Potential Concrete Steps for Policy:**

- Establish a target share of the age cohort enrolled with sub-targets for universities and non-universities according to capacity.
- Conduct a geographic analysis of non-university options to guide the creation of new community colleges.
- Conduct a labor market analysis of trends toward increased formal employment among new labor market entrants; promote programs related to these occupations.

**Finding Two:** Students from families in the bottom 40 percent of the income distribution represent only 10 percent of TE enrollment.

**Policy Direction Two:** The government should adopt a comprehensive financial aid policy that supports its goals for equity (i.e., increasing the enrollment and graduation rates of students from disadvantaged backgrounds). The new system should offer assistance to all financially needy TE students and provide the basis for increasing enrollment among students from the bottom two income quintiles.

**Potential Concrete Steps for Policy:**

- Create a system to assess financial need and examine options for reliably establishing family income.
- Move from fixed budget for scholarships to fixed share of tertiary education funding for student assistance.
- Replace the financing of professors at private TEIs with portable financial assistance to students.

**Finding Three:** Quality and relevance need to increase throughout the system, but definition and understanding of these terms must change and broaden as this happens.

**Policy Direction Three:** “Fitness-for-purpose”—a TEI’s ability to respond to the needs of its students—should strongly complement or replace academic rigor as the main definition of quality in TE. Quality and relevance should be promoted in a wider range of disciplines and subjects aimed at the ability levels and aspirations of the typical high school graduate, not the most academically gifted one. Community colleges, short degree programs, and studies related to graduates’ near-term success in job markets should get preference for government financing and other policies that facilitate their creation.

**Potential Concrete Steps for Policy:**

- Eliminate D1 and D3 degrees to strengthen the value of D2 degrees and distinguish them from certificate-based technical education.
- Consider the creation of an accreditation system separate from BAN-PT for the non-university tertiary education system.

**Finding Four:** Greater autonomy should be provided throughout the financing and regulatory framework.

**Policy Direction Four:** TEIs can only respond to student demand and need if they have the abilities and incentives to make key decisions for themselves. The most important among these decisions regards the autonomous but accountable use of resources. Providing greater autonomy for institutions is a necessary step to promoting the needed responsiveness within the TE system.

**Potential Concrete Steps for Policy:**

- Expand the use of block grants.
- Consider New Zealand's example of decentralized TE regulation (see Box 4 on page 48).

**Finding Five:** Students and policy-makers lack information about the TE system.

**Policy Direction Five:** Improve vastly the quality of information and data on the TE system and disseminate it (especially to aspiring students) to promote informed decision-making.

**Potential Concrete Steps for Policy:**

- Strengthen the legal bases for information provision from tertiary education institutions.
- Verify compliance and withhold transfer of public funds for non-compliance.
- Devise linkages of funding to accurately-valued institutional characteristics.

## References

- Ali, M., Kos, J., Lietz, P., Nugroho, D. F., Zainu, A., & Emilia, E. (2011). *Quality of Education in Madrasah Main Study*. Ministry of Religious Affairs. Australian Council for Educational Research. Indonesian University of Education.
- Al-Samarrai, S., Arlianti, R., Chang, M.C., De Ree, J., Iskandar, S., Ragatz, A., Shaeffer, S., & Stevenson, R. (2013). *Republic of Indonesia Teacher Reform in Indonesia: The Role of Politics and Evidence-Based Policy Making*. East Asia and Pacific. World Bank, Washington DC.
- Boothby, D., & Drewes, T. (2010). *The Payoff: Returns to University, College and Trades Education in Canada, 1980 to 2005*. C.D. Howe Institute. E-brief. August 24, 2010.
- Maroun, N., Samman, H., Moujaes, C. N., & Abouchakra, R. (2008). *How to Succeed at Education Reform: The Case for Saudi Arabia and the Broader GCC Region*. [http://www.boozallen.com/media/file/How\\_to\\_Succeed\\_at\\_Education\\_Reform.pdf](http://www.boozallen.com/media/file/How_to_Succeed_at_Education_Reform.pdf)
- Carneiro, P., Lokshin, M., Ridao-Cano, C., & Umapathi. N. (2011). *Average and Marginal Returns to Upper Secondary Schooling in Indonesia*. The World Bank Development Research Group & East Asia Pacific Region Social Protection Unit. World Bank, Washington DC.
- Card, D. (1993). *Using Geographic Variation in College Proximity to Estimate the Return to Schooling*. NBER Working Paper No. 4483.
- Cerdan-Infantes, P. (2013). *Is the higher education system responding to the needs of the labor market in Indonesia?* World Bank, Jakarta, Indonesia.
- Chen, D. (2009). *Vocational Schooling, Labor Market Outcomes, and College Entry*. The World Bank East Asia and Pacific Region Human Development Sector Department. World Bank, Washington DC.
- Collins, K., & James, D. (2005). *Carrots and Sticks: The Effect of Recent Spending and Tax Changes on the Incentive to Attend University*. Commentary No. 220, C.D. Howe Institute: Toronto.
- Dasgupta, B., Narayan, A., & Skoufias, E. (2009). *Measuring the Quality of Education and Health Services The Use of Perception Data from Indonesia*. The World Bank Poverty Reduction and Economic Management Network Poverty Reduction Group. World Bank, Washington DC.
- del Granado, F. J. A., Fengler, W., Ragatz, A., & Yavuz, E. (2007). *Investing in Indonesia's Education: Allocation, Equity, and Efficiency of Public Expenditures*. The World Bank Pover Reduction and Economic Management And Human Development of the East Asia and Pacific Region. World Bank, Washington DC.
- Fahmi, M., Maulana, A., & Yusuf, A. A. (2013). *Complementary Policies to Increase Poor People's Access to Higher Education: The Case of West Java, Indonesia*. Working paper in Economics and Development Studies. Department of Economics, Padjadjaran University, Indonesia.
- Gropello, E. D., Kruse, A., & Tandon, P. (2011). *Skills for the Labor Market in Indonesia Trends in Demand, Gaps, and Supply*. World Bank, Washington DC.
- Hanushek, E. A., Schwerdt, G., Wiederhold, S. & Woessmann, L. (2013). *Returns to Skills around the World: Evidence from PIAAC*. (Discussion Paper No. 7850). Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor.
- Jamshidi, L., Arasteh, H., Naveh, E. A., Zeinabadi, H., Rasmussen, P. D. (2012). *Developmental patterns of privatization in higher education: a comparative study*. Higher Education64.6 (Dec 2012): 789-803.
- Joseph, M., & Joseph, B. (2000). *Indonesian students' perceptions of choice criteria in the selection of a tertiary institution: strategic Implications*. The International Journal of Educational Management 14/1 [2000] 40±44. MCB University Press.
- Kane, T, J. & Rouse, C. E. (1993). *Labor Market Returns to Two- and Four-Year Colleges: Is a Credit a Credit and Do Degrees Matter?* NBER Working Paper No. 4268. Issued in January 1993

- Moeliodihardjo, B.Y. (2013). Access and equity in higher education, EFO, The World Bank Office Jakarta
- Moeliodihardjo, B.Y. and Basaruddin, T. (2013). Autonomy and governance in higher education, Education Sector ACDP
- Myriad. (2013). *Improving Access and Equity to Indonesian Higher Education for Candidates from Economically Disadvantaged Backgrounds*.
- OECD. (2014). *Report on Progress in Quality Assurance in Higher Education*. Report from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions.
- Porter, M. E. (1990). *The Competitive Advantage of Nations*. Free Press. ISBN 0-684-84147-9.
- Skof, K. (2010). *Trends in the Trades: Registered Apprenticeship Registrations, Completions and Certification, 1991 to 2007*. Education Matters: Insights on Education, Learning and Training in Canada, 6(6). Statistics Canada: Ottawa.
- Smith, C. (2006). *Licensing and accreditation in Indonesian higher education*. (Working paper)
- Susanti, D. (2011). *Privatisation and marketisation of higher education in Indonesia: the challenge for equal access and academic values*. Higher Education 61.2 (Feb 2011): 209-218.
- Wie, T.K. (2012). *Indonesian universities in transition: catching up and opening up Hill*. Hal. Bulletin of Indonesian economic studies 48.2 (Aug 2012): 229-251.
- World Bank. (2009). *Investing in Indonesia's Education at the District Level an Analysis of Regional Public Expenditure and Financial Management*. World Bank, Jakarta, Indonesia.
- World Bank. (2009). *The Value of Vocational Education High School Type and Labor Market Outcomes in Indonesia David Newhouse Daniel Suryadarma*. The World Bank Human Development Network Social Protection and Labor Division. World Bank, Washington DC.
- World Bank. (2010). *Indonesia Jobs Report Towards Better Jobs and Security for All*. World Bank, Washington DC.
- World Bank. (2010). *Indonesia rising. Policy priorities for 2010 and Beyond Climbing the Education Ladder*. World Bank, Jakarta, Indonesia.
- World Bank. (2010). *Education, Training and Labor Market Outcomes for Youth in Indonesia*. Human Development Department East Asia and Pacific Region. World Bank, Jakarta, Indonesia.
- World Bank. (2010). *Indonesia: Higher Education Financing*. Human Development East Asia and Pacific Region Document. World Bank, Jakarta, Indonesia.
- World Bank. (2010). *Transforming Indonesia's Teaching Force Volume II: From Pre-service Training to Retirement: Producing and Maintaining a High-quality, Efficient, and Motivated Workforce*. Human Development East Asia and Pacific Region. World Bank, Jakarta, Indonesia.
- World Bank. (2011). *Revitalizing Public Training Centers in Indonesia: Challenges and the Way Forward*. Human Development Department East Asia and Pacific Region. World Bank, Jakarta, Indonesia.
- World Bank. (2012). *Implementation of School-Based Management in Indonesia*. Human Development East and Asia Pacific Region. World Bank, Washington DC.
- World Bank. (2012). *Indonesia: Preparing Indonesian Youth for Transition Issues and Policy Agenda for Senior Secondary Education*. Human Development East Asia and Pacific Region. World Bank, Jakarta, Indonesia.
- World Bank. (2012). *Indonesia: Broadening Lifelong Learning Opportunities towards an Integrated Education and Skills Development System in Indonesia*. Human Development East Asia and Pacific Region. World Bank, Jakarta, Indonesia.
- World Bank. (2013). *Spending more or spending better: Improving education financing in Indonesia*. East Asia and Pacific Region. World Bank, Jakarta, Indonesia.
- World Bank. (2013). *Teacher Reform in Indonesia: The Role of Politics and Evidence in Policy Making*. (Conference Edition). World Bank, Jakarta, Indonesia.

As parts of its support for the Indonesian Tertiary Education, DFAT (Department of Foreign Affairs and Trade, previously known as AusAID) through the World Bank has funded studies to support the Directorate General for Higher Education's strategic planning and provide on-demand policy recommendations. The findings, interpretations and conclusions expressed in this publication does not necessarily reflect the views of the Government of Indonesia and the Government of Australia.

**Human Development Sector**  
**World Bank Office Jakarta**  
Indonesia Stock Exchange Building,  
Tower 2, 12th Floor  
Jl. Jenderal Sudirman Kav. 52 – 53  
Phone: (021) 5299 3000,  
Fax: (021) 5299 3111