SECTOR ASSESSMENT (SUMMARY): EDUCATION SECTOR

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. As a middle-income country with the fourth largest higher-education system in the world in terms of the number of institutions and the sixth largest in terms of enrollment, Indonesia faces a distinctive set of challenges and opportunities not shared by smaller or wealthier systems. The huge size of the system allows for a rich level of diversity and necessitates atypical strategies and partnerships. It also makes governance, funding, and quality assurance difficult.

2. Characteristics of higher-education system. Indonesia’s higher-education system is characterized by diversification, scale, private provision, and an atypical governance system. Indonesia’s diversified higher-education system has five types of higher-education institutions; (HEIs) academies, polytechnics, Sekolah Tinggi (Schools of Higher Learning or colleges), institutes, and universities under a general and a religious stream. The general stream has an academic and a vocational sub-stream. The system offers 27,000 study programs at diploma or degree level. The Ministry of Research Technology and Higher Education (MORTHE) oversees the general and the Ministry of Religious Affairs the religious stream. Private providers enroll 73% of HEI students (the average for Asia is 35%) and manage 90% of HEIs (average for Asia: 60%).

### Table 1: Higher-Education System

<table>
<thead>
<tr>
<th>Type</th>
<th>Students (1000s)</th>
<th>Higher-Education Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MORA</td>
<td>MORTE</td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Academies</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Polytechnics</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colleges</td>
<td>65.8</td>
<td>189.7</td>
</tr>
<tr>
<td>Institutes</td>
<td>142.6</td>
<td>53.8</td>
</tr>
<tr>
<td>Universities</td>
<td>183.2</td>
<td>54.1</td>
</tr>
<tr>
<td>Total</td>
<td>391.6</td>
<td>297.5</td>
</tr>
</tbody>
</table>

... = not available, MORA = Ministry of Religious Affairs, MORTE = Ministry of Research, Technology and Higher Education.

*Colleges are called Sekolah Tinggi, which stands for Schools of Higher Learning. They teach up to bachelor’s degrees.

Source: MORTE (micro data); MORA (micro data).

3. Key performance indicators show positive trend. The gross enrollment rate for higher education in Indonesia grew from 14.9% in 2000 to 31.2% in 2018 (compared with 44.12% in Malaysia and 53% in Thailand in 2018). More women are enrolled in higher education (50.2%) than men, with fewer in private HEIs (47%) and more in public HEIs (56%). Women tend to enroll more in health (78%) and education (70%), and less in engineering (31%). The unemployment rate for workers with higher-education credentials dropped by nearly half from 2005 to 2018. Tracer studies suggest that 30%–40% of graduates from “regional” public universities are employed within 6 months of graduation. However, the rate varies widely from university to university depending on location, reputation, and programs of study. Most workers with higher-education credentials end up in jobs that require such degrees. However, the numbers vary significantly by province, by program, and by level of higher education. The average length of study for a bachelor’s degree declined from 6 years in 1998 to 4.5 years in 2008.

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1 This summary is based on: Munger, F, and R. van Dael. 2018. *Assessment of higher education system in Indonesia*. Jakarta. Available on request.

2 Enrollment for middle income countries in 2016 was 34.5%. [World Bank Open Data](accessed 20 June 2018).

3 From 11.64% in November 2005 to 6.13% in February 2018.
a. Problems

4. The need for capital improvements and human resource development. From 2005 to 2017, the number of public universities under MORTHE expanded by 37%, while enrollment expanded by 208%. The rapid expansion of the public university system has not been matched by investments in infrastructure and human resources, and public universities by and large have failed to increase the number and diversity of study programs to keep up with rising enrollments. Many facilities are outdated. Student-to-classroom and student-to-laboratory ratios are too high; public universities need to build more of such facilities and upgrade them to at least minimum standards. In 2017, only 31% of permanent and 18% of nonpermanent lecturers had doctor of philosophy (PhD) degrees. To derive value from capital investments and offer quality programs in post-millennial universities, the proportion of lecturers with PhDs should be higher.

5. Limited access to higher education for poor and those residing outside of Java. Out of Indonesia’s 122 public HEIs, nearly 40% are in Java. Most high-quality public universities are in Java—56% of universities in Java are accredited, compared with just 16% of universities elsewhere. All but one of Indonesia’s top-10 public universities are in Java. While admission to Javanese universities is open to all, less affluent students from other islands cannot afford to attend public universities in Java. Public universities outside Java must be upgraded to support inclusive economic growth and to enable a wider diversity of students to attend good-quality universities.

6. Improving the quality, relevance, and focus of public universities. HEIs operate their own internal quality assurance systems and are subject to external higher-education accreditation through assessments from an independent panel at the program and institution levels. Institutions and programs are rated A, B, C, or unaccredited. More than 63% of HEIs are accredited C. Public HEIs have the highest proportion of A accreditation. As of November 2017, about 70% of the 26,640 HEI programs in Indonesia had been accredited; of those, 14% had an A rating, 53% had a B rating, and 33% were rated C. Indonesia has four public universities among the top 50 ASEAN universities in the 2018 Times Higher Education rankings—two more than in 2017. The number of programs offered in public universities grew from 4,898 in 2014 to 5,226 in 2017 (footnote 3). However, an absence of local coordination and central mandates for particular programs, like teaching hospitals, leads to duplication of programs offered between public and private universities and between Ministry of Religious Affairs and MORTHE providers. As a result, resources are not used efficiently to provide quality education for maximum number of students.

7. Lack of vocational subject teachers with credible certification. Oversight of technical and vocational education and training (TVET) rests with four ministries and engages other stakeholders. Provision of formal TVET is mostly private and dominated by vocational senior secondary schools (SMK) overseen by the Ministry of Education and Culture (MOEC). The MORTHE oversees the education and training of SMK teachers, and the Ministry of Manpower oversees the institutes that certify student and faculty proficiency. Holding the system together at the core is the Indonesian qualification framework (IQF), which defines standards and competences for skills at nine levels. The government policy aimed to increase the proportion of SMKs from 40% to 70% of all senior secondary schools. As a result, SMK education has expanded from 4,429 schools, 1.9 million students, and 136,077 teachers in 2000, to 13,710 schools, 4.9 million students, and 292,212 teachers as of 2017. However, this expansion has not

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5 In 2018, Indonesia will launch a new model for HEI accreditation that is outcome-based rather than input-based.
been backed up by a commensurate investment in infrastructure, equipment, and qualified teachers with practical experience. A recent assessment showed that 90,000 SMK teachers lack the required skill set to perform their jobs. Employability of SMK graduates is still less than expected. Industry complains that the competences of SMK graduates do not meet their needs. The MORTHE and MOEC plan to develop a new model for TVET-teacher education as the first stage of a planned medium-term strategy for educating TVET teachers. In addition to scaling up pre- and in-service training of TVET teachers, the strategy will also increase industry involvement in TVET-teacher training, in line with the IQF.

b. Opportunities in Higher Education

8. Moving Indonesia’s university system toward emerging Asian models. Different university system development models are emerging in Asia, some focusing on internationalization and others on engagement with industry. While none are a perfect fit for Indonesia, the country’s many young universities (established since 2005), whose potential remains largely untapped, could benefit from adopting components of these models. In other Asian countries, young, ambitious universities have had significant impacts on higher education, both as knowledge communicators and knowledge creators. Young and established universities take different paths to becoming world-class institutions in Asia, and Indonesia can learn from these examples to create its own world-class institutions.

9. Investment required to improve higher-education system. Most public regional universities do not have enough lecture halls or teaching laboratories to keep up with ballooning enrollment rates, an expanded number of study programs, and the mandate to improve research output. The government has made it a priority to seek external financing to upgrade regional universities, but this will require a new medium-term higher-education investment plan. Under such a plan, the government should explore new financing opportunities and modalities. This might include exploring private–public partnerships, forging new relationships with international universities, formalizing consortia between public and private HEIs, exploring new cost-sharing models, and collaborating with regional stakeholders.

10. Skills improvement needed. Moving from efficiency-driven growth to innovation-driven growth will require raising labor productivity through better-skilled workers. This in turn will require universities to anticipate market disruptions and opportunities arising from new technologies. The demand for TVET programs aligned with industry standards and the dynamic labor market is likely to increase as Indonesia continues to restructure its economy. In- and pre-service education, along with competency testing for TVET teachers, can be best designed and implemented through partnerships with industry and collaboration between HEIs. The medium-term strategy to educate TVET teachers will ensure that this collaborative approach is institutionalized.

2. Government’s Sector Strategy

11. Driving factors of higher-education strategy. The increasing number of youth enrolling in senior secondary education and concerns about Indonesia’s overall economic competitiveness are the main factors driving the need for a new higher-education strategy. The overall policy agenda for higher education, as described in the National Medium-Term Development Plan (RPJMN), 2015–2019, calls for improving: (i) higher-education teaching and learning, particularly

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7 The Global Competitiveness Index, 2018 ranks Indonesia’s (i) labor market efficiency at 3.9 out of 7 and 96th out of 140 countries; (ii) technological readiness at 3.9 and 80th; and (iii) innovation at 4.0 and 31st. Indonesia’s overall competitiveness, ranked as 36th, is lower than Malaysia, Singapore, or Thailand. World Economic Forum. 2017. The Global Competitiveness Report 2017–2018. Geneve.
in science and technology, (ii) human resources through higher education, (iii) the relevance of research to industry and national development priorities, and (iv) the capacity for innovation. The strategy is aligned with Law 12 on Higher Education, 2012 and Ministerial Decree MOEC on student tuition fees in public universities, 2013, which regulate autonomy and student tuitions for public universities. The MORTHE’s strategy includes increasing enrollment in public universities, merging inefficient private universities, providing scholarships for disadvantaged students, supporting projects, and increasing the number of autonomous public universities.

12. **Indonesia’s long-standing commitment to technical and vocational education and training in higher education.** More than one million students are enrolled in higher-education TVET programs in Indonesia. Polytechnics enroll more than 45,000 students and grew from 47 in 2002 to 190 in 2018—a 300% increase—while enrollment in polytechnics grew by 425% over the same period. The RPJMN, 2015–2019 emphasizes the practicality of TVET and highlights the importance of internships. The plan also emphasizes recognition of prior learning, standardization of competences and skills through the IQF, and incentives for TVET to support regional development. In 2016, the Presidential Instruction 9/2016 on Revitalization of Vocational Education directed all ministries and bodies engaged in the TVET system to cooperate in developing a strategy for revitalizing TVET and upgrading the IQF.

13. **Developing world-class universities.** In addition to improving the general level of higher education in the country, Indonesia also seeks to develop world-class universities. Accommodating those two goals in a mass system with limited resources requires long-term commitment and a tolerance for alternative models for improving higher education. Since 2013, the government has secured foreign loans to upgrade 27 public universities selected through a competitive process by the soundness of their proposals and their readiness to implement large investment projects. Capital improvement projects for public universities outside Java are a priority. The MORTHE requires each university to focus on a single discipline that aligns with local economic needs.

3. **ADB Sector Experience and Assistance Program**

14. The ADB Country Partnership Strategy for Indonesia, 2016–2019 highlights the critical role of vocational and tertiary education in providing the skilled human capital needed to support Indonesia’s economic growth. ADB is supporting the Government of Indonesia in higher education through the ongoing Polytechnics Education Development Project, which has shown that close collaboration between a polytechnic and local industry can yield good results. The Analytical and Capacity Development Partnership produced between 2010 and 2017 more than 200 knowledge products on all levels of education, with several reports addressing specific challenges for tertiary education. ADB has in its recent reports stressed the importance of higher education for equitable economic growth and of responding to emerging technologies. Together with other development partners, ADB is supporting the government to prepare background and policy papers focusing on higher education and skills development for the RPJMN, 2020–2024.

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9 As of 2018, 14 out of 63 public universities in Indonesia were autonomous.
Problem Tree for Higher Education in Indonesia

**Effects**
- Lack or shortage of advanced skills and knowledge of the workforce
- Growing skills mismatch
- Low productivity of the workforce
- Income inequality
- Increasing unemployment and underemployment

**Core Problem**
Higher education system not equipped to prepare the graduates with essential skills and knowledge to meet the current and future needs of the labor market.

**Causes**
- Insufficient capital (human and physical) improvement to keep up with rising demand for higher education.
- Access to quality education in regions and for disadvantaged are more challenging.
- Quality and relevance of higher education cannot keep up with demands.
- Quality of vocational education teachers is poor and absence of a TVET teacher training model that meets the increasing demand.

- Shortage of permanent lecturers with appropriate qualifications, particularly in public universities, and lack of teachers with higher degree level i.e., PhD
- HEI teachers lack industry experience and have inadequate practical skills for technical subjects.
- Lack of teaching learning facilities and inadequate and outdated equipment, classrooms, lecture halls, and laboratories.
- Many HEIs especially those that are not located in prime areas do not have "A" accreditation.
- Difficulty of admission to public universities and difficulty of the national entrance test.
- Poor living conditions.
- Limited investment in research.
- Industry linkages are insufficient.
- Education frameworks (such as the IQF and accreditation mechanisms) are not yielding the results as expected.

HEI = higher-education institutions, IQF = Indonesian Qualifications Framework, PhD = Doctor of Philosophy, SMK = Sekolah Menengah Kejuruan (senior secondary vocational education schools), TVET = technical and vocational education and training.