

# Education, Training and Labor Market Outcomes for Youth in Indonesia

Human Development Department  
East Asia and Pacific Region



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# ■ Table of Contents

|  |           |
|--|-----------|
| <b>Acknowledgments</b>   | <b>iv</b> |
| <b>List of Abbreviations and Acronyms</b>                                    | <b>v</b>  |
| <b>1. Introduction</b>   | <b>6</b>  |
| <b>2. Economic Context: Growth, Transformation and the Demand for Skills</b> | <b>8</b>  |
| <b>3. A Difficult Transition to the Labor Market</b>                         | <b>12</b> |
| 3.1 Unemployment   | 13        |
| 3.2 Job Quality  | 14        |
| <b>4. Senior Secondary Education, Skills and Labor Market Entrance</b>       | <b>19</b> |
| 4.1 Vocational versus General Secondary Education                            | 23        |
| <b>5. Meeting the Demand for Skills</b>                                      | <b>28</b> |
| 5.1 Cognitive Skills   | 29        |
| 5.2 Generic (Noncognitive Skills)  | 29        |
| 5.3 Vocational Skills  | 31        |
| 5.4 Implications for the Education Sector                                    | 31        |
| <b>6. Conclusions and Recommendations</b>                                    | <b>40</b> |
| <b>References</b>  | <b>43</b> |

## List of Boxes

|  |    |
|--|----|
| Box 5-1: Curriculum Trends and Skills Demand in the US                     | 33 |
| Box 5-2: The Role of Entrepreneurship Programs: The International Evidence | 39 |

## List of Figures

|   |    |
|---|----|
| Figure 2-1: GDP per Capita and Share of Agriculture in GDP (1990-2006)  | 8  |
| Figure 2-2: Agriculture as a Share of Employment and GDP (1990-2006)  | 9  |
| Figure 2-3: Share of Salaried Employees with Senior Secondary Education or Higher Qualification by Sector (1994-2007)             | 10 |
| Figure 2-4: Returns to Levels of Education (Relative to Primary Education)(1994-2007)   | 10 |
| Figure 2-5: Transition Rates Between Levels of Education by Generation (2008)   | 11 |
| Figure 3-1: Share of Skilled, Unskilled and Skilled Production Jobs (1994-2007)   | 12 |
| Figure 3-2: Unemployment Rate by Age Groups 15-29 (2007)  | 13 |
| Figure 3-3: Unemployment Rate by Age Group and Urban/Rural Divide (2007)  | 14 |
| Figure 3-4: Unemployment Rate by Age Group and Education Level (2007)   | 14 |
| Figure 3-5: Salary Profile of Youth by Type of Employment and Education (in Rupiah)   | 15 |
| Figure 3-6: Number of New Employees by Age Group, Salaried Jobs and Total Employment (2007)                                       | 15 |
| Figure 3-7: Probability of Transitioning Between Salaried Jobs for Those Who Changed Jobs (By Age Group), 2007                    | 16 |
| Figure 3-8: Share of Labor Force in Salaried Jobs by Age Group and Urban/Rural  | 16 |
| Figure 3-9: Share of Labor Force in Salaried Jobs by Age Group and Education Level  | 17 |
| Figure 3-10: Salary Profiles by Education Achievement (2007)  | 17 |
| Figure 4-1: Skill Premiums and Skilled Workforce in Indonesia   | 20 |
| Figure 4-2: Average Hourly Salary by Worker and Parental Education (2007)   | 20 |
| Figure 4-3: Average PISA Score by Socio-economic Decile (2000-2006)   | 21 |
| Figure 4-4: Employers Opinion of Quality of Employees with Senior Secondary Education (%)   | 22 |
| Figure 4-5: Entry Scores and Ratio of Applicants to Entrants (By Type of Senior Secondary School)                                 | 23 |
| Figure 4-6: Share of SMA and SMK Students by Consumption Quintiles  | 23 |
| Figure 4-7: Unemployment Rate for SMA and SMK Graduates, Age 20-24 (1991-2007)  | 24 |
| Figure 4-8: Unemployment Rate for SMA and SMK Graduates, Total Labor Force (1991-2007)  | 24 |
| Figure 4-9: Relative Wage SMK to SMA Graduates, Age 20-24 (2002-2007)   | 25 |
| Figure 4-10: Out-of-Pocket Costs of Attending Senior Secondary Education (By Stream (SMA/SMK) and Public/Private Facility (2006)) | 26 |
| Figure 5-1: Adjusted Salaries According to Public SMA/SMK Enrollment  | 29 |
| Figure 5-2: Skill Importance and Skill Gaps Identified by Employers   | 30 |
| Figure 5-3: Share of Firms Rating Different Types of Skills as "Very Important" (By Type of Position and by Sector) (2008)"       | 30 |
| Figure 5-4: Share of Workers Who Have Completed Training by Education Level (2003)  | 35 |
| Figure 5-5: Respondents Who Report Attending a Training Course (By Consumption Quintile and Labor Force Status (2006)             | 36 |

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## ■ List of Abbreviations and Acronyms

|         |  |
|---------|--|
| AAA     | Analytic and Advisory Activities                                     |
| BEC-TF  | Basic Education Capacity Trust Fund                                  |
| BLK     | Work Training Center - public nonformal vocational training provider |
| DG-NFIE | Director General of Non Formal and Informal Education                |
| EASHD   | East Asia and Pacific Human Development Sector                       |
| EBTANAS | Former term for National End-of-level Examination                    |
| EYE     | Education for Youth Employment                                       |
| GDP     | Gross Domestic Product   |
| GER     | Gross Enrollment Rate  |
| HDN     | Human Development Network  |
| JSS     | Junior Secondary School  |
| KKNI    | National Qualification Framework                                     |
| KPP     | Para-professional Course   |
| MoMT    | Ministry of Manpower and Transmigration                              |
| MoNE    | Ministry of National Education                                       |
| PISA    | Programme for International Student Assessment                       |
| SMA     | Senior High School   |
| SMK     | Vocational High School   |
| SMU     | General High School  |
| SSS     | Senior Secondary School  |
| TIMSS   | Trends in International Mathematics and Science Study                |
| TVET    | Technical and Vocational Education and Training                      |

## Section 1

# Introduction

**Over the last 15 years, Indonesia has experienced one of the largest expansions in education expenditure and enrollment.** The net enrollment rate at senior secondary level has doubled, and tertiary education enrollment has increased threefold, resulting in the most educated generation in the country's history. At the same time, the increases in educational attainment have been accompanied by an economic transformation away from agriculture and into the manufacturing and service sectors, which account for 75 percent of GDP and 56 percent of total employment.<sup>1</sup> Yet employment in these sectors has not kept up with the increased numbers of educated workers, resulting in high youth unemployment and difficulty in accessing good quality jobs for educated youth. This report, which is part of a series of World Bank reports analyzing job market trends, provides an overview of the transition to work for Indonesian youth, exploring the potential reasons for the observed difficulty and the consequences for the education sector, especially as it relates to senior secondary education and the training system.

**With a growing number of educated workers entering the labor force every year, it is important to evaluate whether the education system is providing graduates with the skills demanded in the labor market, and devise policies that ease entry into the formal labor market for skilled workers.** The education sector clearly plays a big role in the successful school-to-work transition but these mismatches can also arise later in life if economic conditions and market demand change, so a proper training system needs to be in place to meet changing demands in the labor market. Devising policies that minimize labor market mismatches through changes in both the formal education system and the nonformal training system, and the facilitation of entrepreneurship are key priorities for the future.

**What are the reasons for slow job creation in the nonagriculture sectors and the signs of lower education intensity and lower return to education and how will the increases in the educational attainment of the population affect these trends?** To answer these questions, the report starts with an overview of the economic changes and trends in the demand for skills in the Indonesian economy during the last two decades, pointing to a sustained demand for skills in light of the increased importance of the service sector and its skill intensity (Section 2).<sup>2</sup> More importantly, however, there are also signs that, despite these trends in the economy, the

---

1 Agriculture is the most labor intensive sector.

2 In this context, "skill intensity" refers to the percentage of educated workers.



service sector is becoming less skill intensive and returns to education are not increasing,<sup>3</sup> pointing to potential problems with productivity or the capacity of the labor market to absorb educated workers.

**The slow transition of graduates is explored in detail in Section 2, which pays special attention to differences by education levels.** It highlights the difficulties of senior secondary school graduates in accessing good quality jobs and the high unemployment rate that they face upon graduation. Given these worrisome signs of young senior secondary school graduates (considered the lower tier of “skilled” workers) and expected increases in the transition to senior secondary education (which are already rising rapidly), Section 3 focuses on the senior secondary school level. Seeking to shed some light on the question of whether senior secondary education is providing the right skills for its students, the section explores the employment profile of vocational (SMK) vs. general (SMA) graduates and, drawing on a recent survey of employers, argues against a drastic increase in the proportion of vocational students, highlighting instead the need to adjust the skill base of senior secondary school graduates. Based on the findings, Section 4 explores ways to meet the demand for skills through changes in senior secondary school, strengthening of the nonformal training system and providing targeted entrepreneurship programs. Finally, Section 5 provides some overall recommendations going forward.

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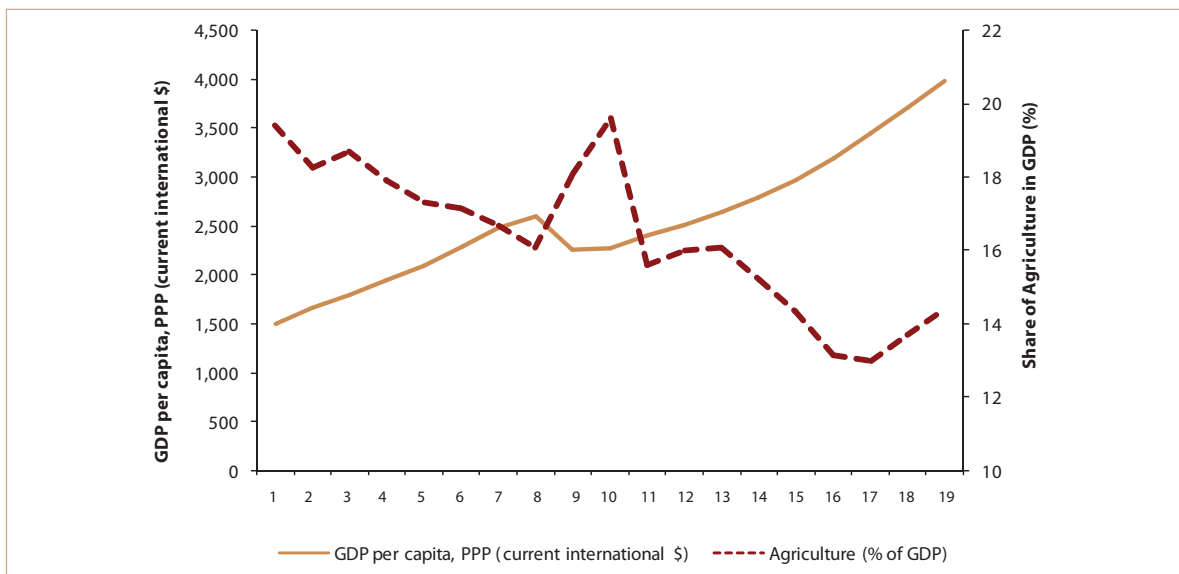
3 In fact, they show a small decrease over the last decade, but it is not statistically significant.

## Section 2

# Economic Context: Growth, Transformation and the Demand for Skills

Over the last two decades Indonesia has experienced fast sustained growth and rapid urbanization, significantly increasing the share of nonagriculture GDP despite an important set-back during the 1997 financial crisis. The 1990s brought about a fast rate of economic growth and rapid decreases in the share of agriculture in GDP. The abrupt interruption of these trends in the 1997-99 period, with a reduction in real GDP of 13 percent in 1998 after the crisis broke out, has been followed by a slow but sustained recovery of economic growth. However, the achievements are impressive—GDP per capita in real terms increased 160 percent during the two decades, and the share of agriculture in GDP decreased from 20 to 13 percent by 2006, although this rose slightly in 2008 (14 percent).

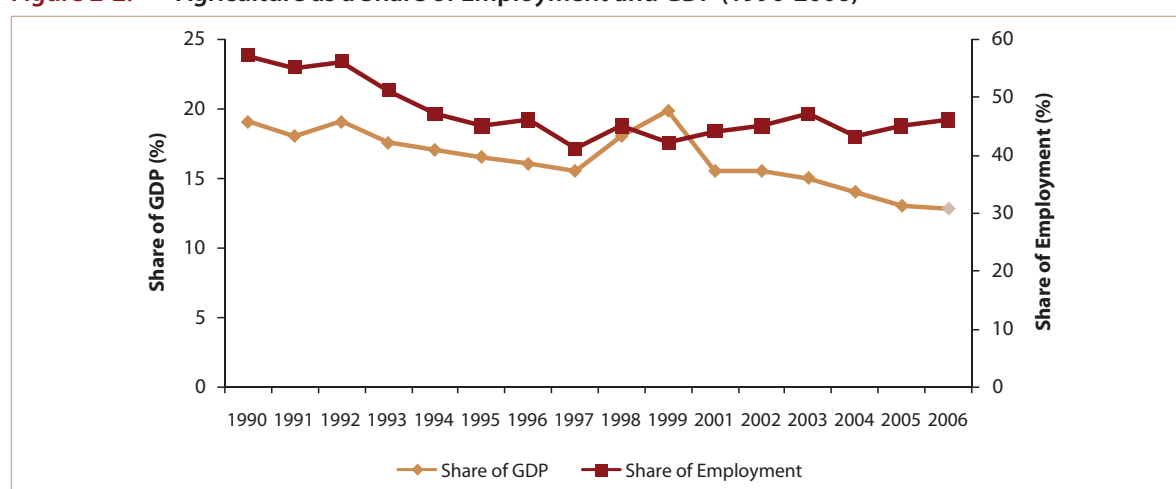
**Figure 2-1: GDP per Capita and Share of Agriculture in GDP (1990-2006)**



Source: World Development Indicators (1990-2008).

**Employment by economic sector followed a similar pattern as the share of GDP, but lower labor intensity in the manufacturing and (especially) the service sector has resulted in slower nonagricultural job creation.** Employment in agriculture decreased significantly, from 56 percent to 44.5 percent of total employment over the period from 1990 to 2006. However, this fall happened mainly during the 1990s, with the trend stalling following the economic crisis in 1997. The crisis forced workers out of the manufacturing and service sectors and resulted in increased agricultural employment, which partly served as a substitute for social safety nets.<sup>4</sup> Since then the share of nonagricultural jobs has remained constant despite a continuing decrease of the participation of agriculture in GDP. There are, however, some positive signs in recent years, with the share of employment in the service sector returning to precrisis levels. In addition, as growth continues and further regional integration increases trade and openness, it is expected that the demand for services and manufacturing will continue to grow (Almeida 2009).

**Figure 2-2: Agriculture as a Share of Employment and GDP (1990-2006)**



Source: World Development Indicators (1990-2006).

**Despite lower labor intensity and slower job creation, the economic shift towards more “education-intensive”<sup>5</sup> sectors (manufacturing and, especially, services) should result in increased demand for educated workers.** The growing importance of the service sector in the economy and the increased sophistication of the manufacturing sector is expected to result in a sustained demand for skilled workers. Almost 70 percent of workers in the service sectors who are employed for wages have completed senior secondary education. The share in manufacturing is lower—40 percent, but it is still double that of agriculture (20 percent) (Figure 2-3). When considering all workers (not only workers employed for wages), the share of educated workers is significantly lower, but the differences among sectors remain (only 7.4 percent of agricultural workers have a senior secondary education compared with 27.3 percent in manufacturing and 41.5 percent in services). So the overall trend should ensure sustained and potentially increasing demand for skills in the economy.

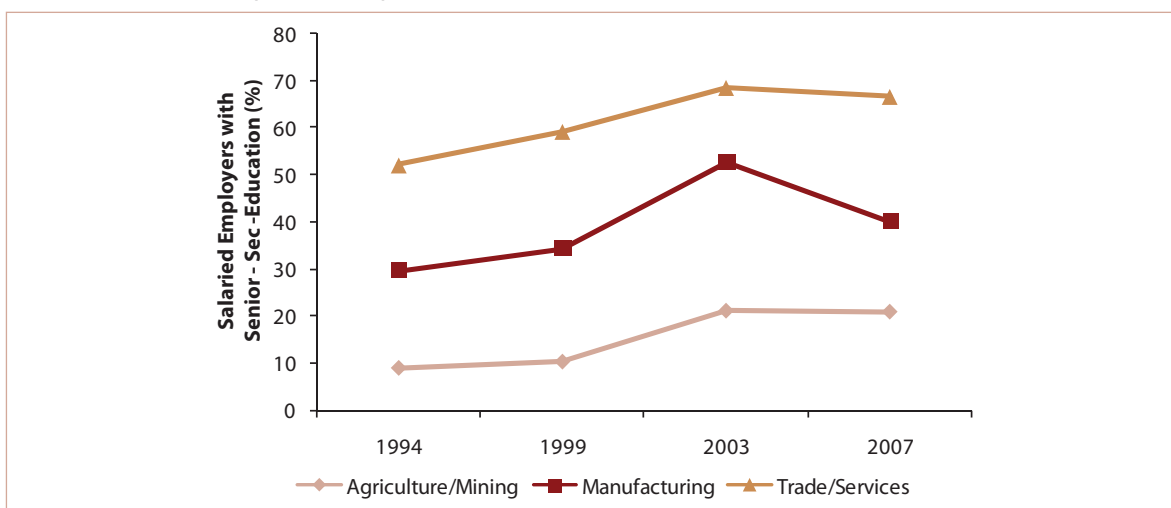
**Trends in recent job creation and growth in the education sector, nevertheless, raise the question of whether the growth in educational attainment will be matched by increased demand in the labor market.** There are worrying signs of lower education intensity in the service and, especially, the manufacturing sector in recent years which, when combined with the growing educational attainment of the population, poses

<sup>4</sup> See Indonesia Jobs Report (2009) for a detailed discussion of employment patterns during the 1990-2008 period.

<sup>5</sup> “Education intensity” in this report refers to the share of workers with senior secondary education or higher qualifications who are employed in the sector.

a question about the absorption capacity of the economy for more educated workers. Enrollment rates have increased at all levels of education and have resulted in a significantly higher educational attainment in the younger generation, with 35 percent of the labor force between 15 and 29 years of age having a senior secondary or higher education qualification in 2007 (compared to 22 percent of 30 to 59 year olds). The slowing pace in the growth in “education intensity” is a worrisome sign that there may be some problems with the absorption capacity of the labor market. The returns to education, which show small declines in recent years, especially for senior secondary graduates, point in the same direction.

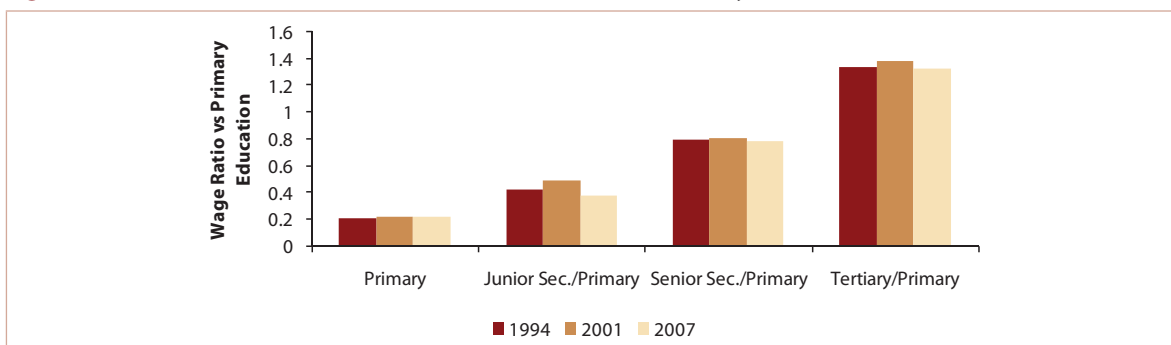
**Figure 2-3: Share of Salaried Employees with Senior Secondary Education or Higher Qualification by Sector (1994-2007)**



Source: Sakernas 1994-2007.

Note: Only includes salaried employees

**Figure 2-4: Returns to Levels of Education (Relative to Primary Education)(1994-2007)**



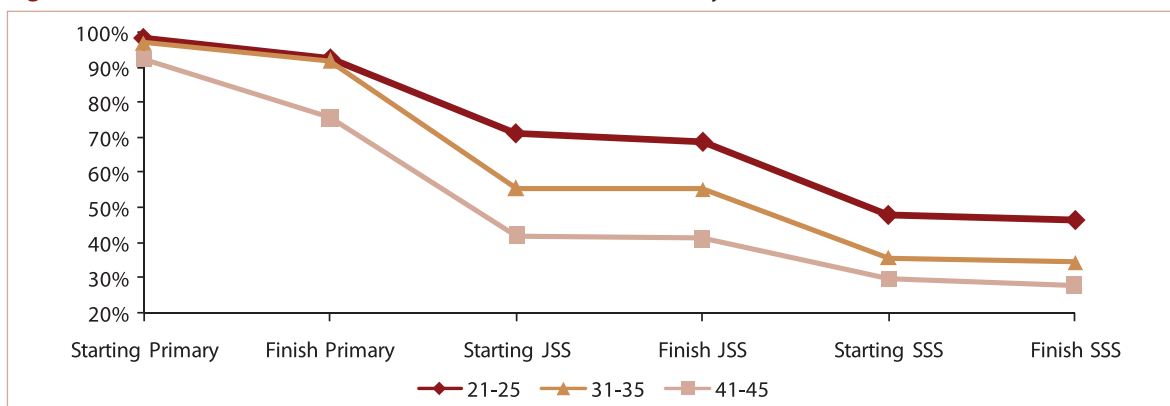
Source: Indonesia Skill Report 2010, Sakernas 1994-2007.

Note: Only includes salaried employees.

**A first step is understanding the school-to-work transition and potential mismatches between labor supply and demand, both in terms of quantity of educated workers and the relevance of their skills.** At the macro-economic level, there is evidence of sustained demand for skilled workers but there are signs that integration of educated workers into the labor market is becoming more difficult and it is clear that the returns to education are not growing. With growing enrollment rates at all levels, near universal primary education and

higher transition rates between education levels, removing the potential constraints for the successful transition to the labor market for educated workers should be a priority. Faster economic growth may be needed to sustain faster job creation but fast economic growth in the nonagricultural sectors has proven insufficient to absorb the new wave of more educated workers. In fact, as pointed out in the Indonesia Jobs Report (World Bank 2009), a key factor for job creation is the productivity of the workers and part of the reason for slow formal job creation is that labor productivity has not kept up with increases in wages. The rapid rise in wages following the economic crisis was an attempt to use the minimum wage as a safety net,<sup>6</sup> a policy that created a sharp, sudden discrepancy in the post-crisis period. The higher educational attainment of the working population was expected to reduce this discrepancy, leading to faster job creation, however, this has not been the case, pointing to the need for increases in labor productivity as a means to improve employability.

**Figure 2-5: Transition Rates Between Levels of Education by Generation (2008)**



Source: Sakernas (2008).

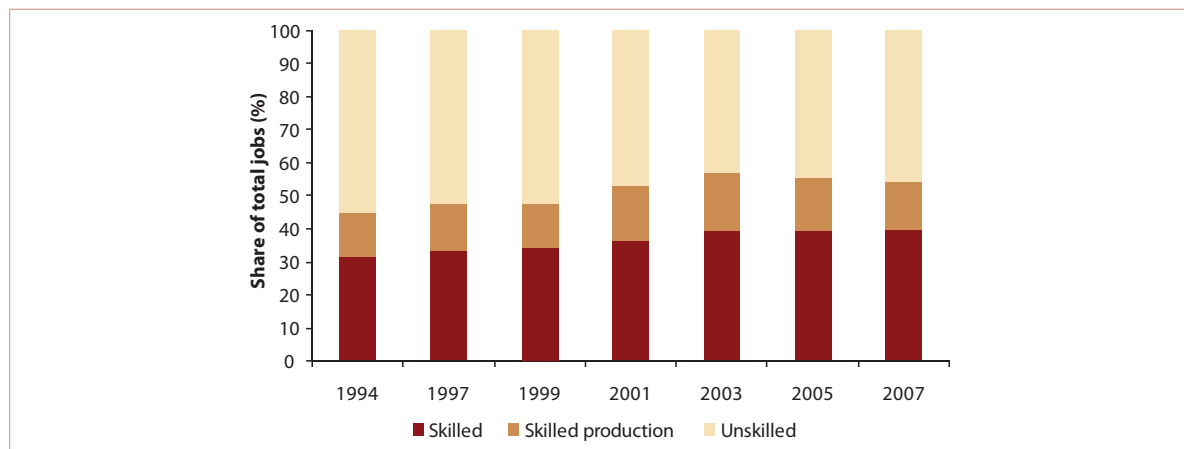
6 Indonesia Jobs Report (2009), Chapter 3, Jobless Growth in Indonesia.

## Section 3

# A Difficult Transition to the Labor Market

**Each year over 3.3 million youths leave the formal education system to enter the labor market.** While they leave at different levels of education, the proportion of those who continue on to finish senior secondary education has been growing. In 2008, the proportion of entrants who have completed senior secondary or higher education (that is those considered “skilled”) surpassed 50 percent, confirming the trend of increased educational attainment in the population. However, the occupational share of skilled jobs has not kept pace with the increase in education. The share of jobs considered “skilled”<sup>7</sup> increased during the 1990s but has remained broadly constant during the last decade, questioning the ability of the labor market to absorb these new graduates at their appropriate education level. This has resulted in over-qualified entrants and a difficult transition into the labor market, especially for senior secondary school graduates who are the least skilled workers. This section presents some trends in their transition along three basic dimensions: (i) unemployment (how many recent graduates in the labor force are unable to find employment; and (ii) the “quality” of the jobs young graduates find.

**Figure 3-1: Share of Skilled, Unskilled and Skilled Production Jobs (1994-2007)**



Source: Source: Sakernas (1994-2007).

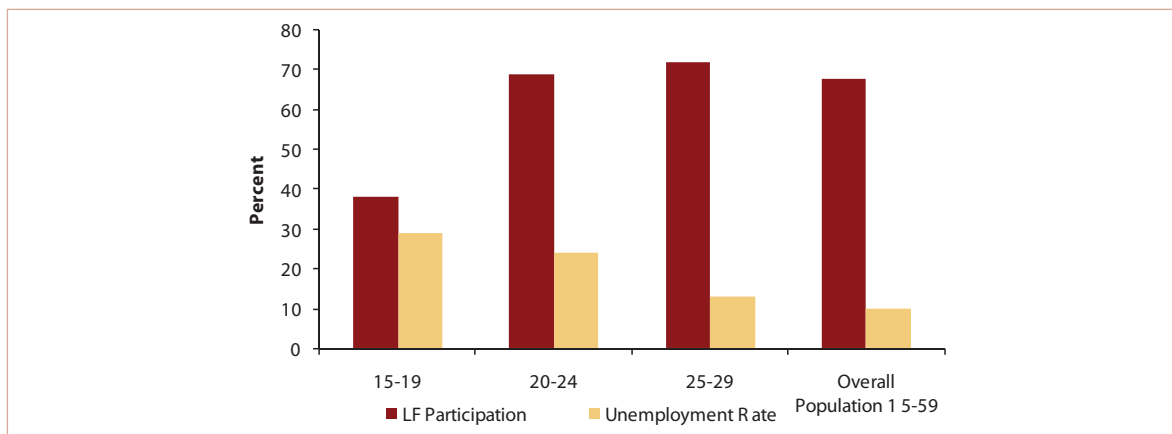
Note: Only includes salaried employees.

<sup>7</sup> Skilled jobs are defined as those usually requiring a senior secondary education or higher qualification, like managerial, professional, skilled production, office/admin and sales positions. Unskilled jobs include manual labor, agricultural laborers, transportation and unskilled production workers.

### 3.1 Unemployment

**In Indonesia, the unemployment rate of youth in the 20 to 24 age group is about two and a half times that of the overall population.** It is a common international trend that youth unemployment is higher than unemployment for older generations, with possible reasons including low overall job creation or labor market inefficiencies. These may be related to institutional factors that affect the demand for new employees, like the minimum wage, cost of hiring/firing and other factors leading to insider/outsider segmentation. But beyond these institutional factors, issues related to the supply of workers may also limit their employability. For example, insufficient or inappropriate skills may also result in a low level of productivity until work experience has been acquired or workers have been retrained, both of which add to the costs of hiring young inexperienced workers. Information asymmetries about the skills of graduates due to large differences in the quality of education, or insufficient methods for assessing the quality of graduates (that is heterogeneity in skills) can also add a cost to the process. High reservation wages may also play a role but that is more likely to be a factor for higher educated youth in search of high quality employment.

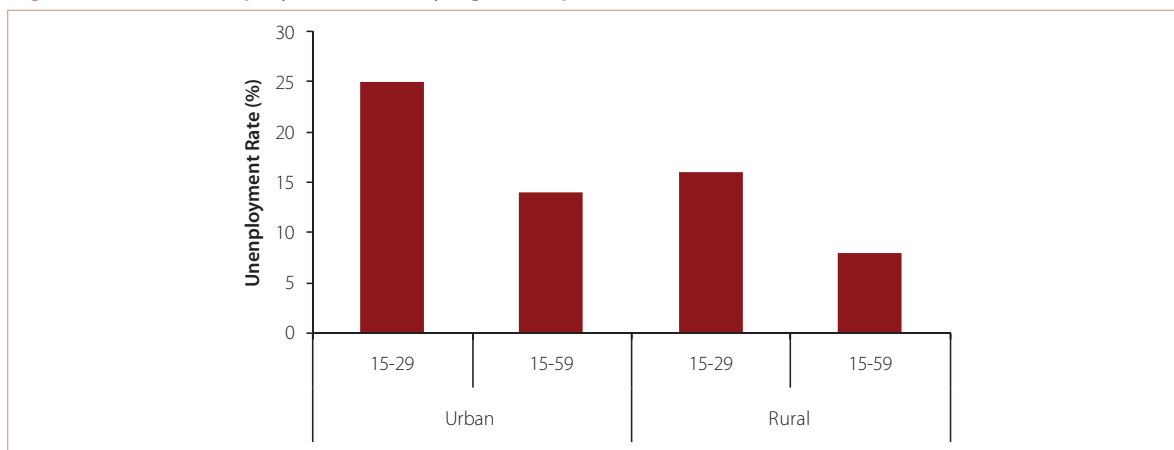
**Figure 3-2: Unemployment Rate by Age Groups 15-29 (2007)**



Source: Sakernas (2007).

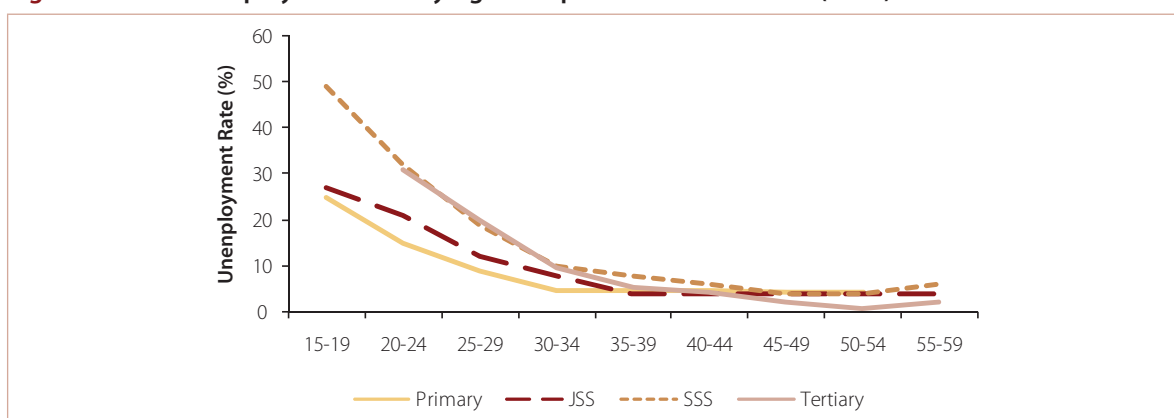
**Youth unemployment is an urban phenomenon which mainly affects educated workers.** Rural areas, with fewer educated workers and greater availability of unskilled jobs have lower unemployment rates; reinforcing the current dichotomy in the types of jobs in urban and rural areas in the country (Figure 3-3). A particularly striking feature of youth unemployment is the high and relatively persistent unemployment rate for more educated youth, especially senior secondary school graduates. Over 40 percent of 15-24 year old who have completed senior secondary school in the labor market are unemployed, and although the rate decreases for older age groups, it does not converge to the country average until the 35-39 year age group.

**Figure 3-3: Unemployment Rate by Age Group and Urban/Rural Divide (2007)**



Source: Sakernas (2007).

**Figure 3-4: Unemployment Rate by Age Group and Education Level (2007)**



Source: Sakernas (2007).

**In a segmented economy with a high level of informality and self-employment and very weak social protection, however, the unemployment rate may be misleading.** On the one hand, the level of unemployment may be underestimated since workers cannot afford to stay unemployed for long and they are forced to accept occasional work, usually in agriculture. On the other hand, however, those who are underemployed as occasional laborers usually keep looking for full-time employment, thus being included in the unemployment statistics. The unemployment rate, thus, may not reflect the true state of employment. The type of job is a second dimension to measure success in the labor market.

## 3.2 Job Quality

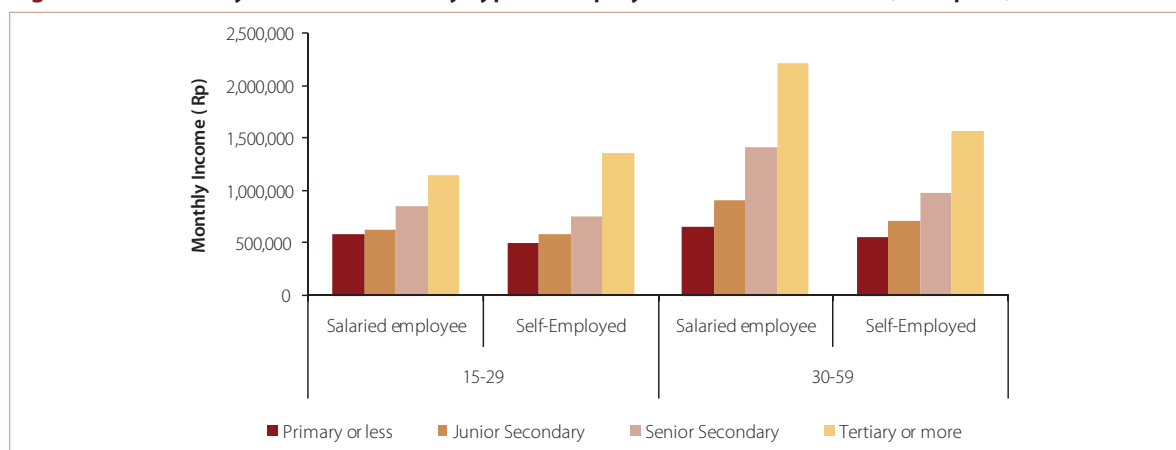
**While job quality is not easy to define, the type of job is a good proxy for quality in most instances.** Formality is generally associated with more job stability, higher income (especially in the long run) and access to other benefits such as pensions and health care. However, there are some caveats to using sector as a proxy. There are many instances in which informal jobs are valid pathways to future beneficial formal salaried jobs or successful self-employment through the acquisition of experience or on-the-job “training”. Some unpaid work



and self-employment may be the result of rational decisions and not lack of alternatives, especially when it leads to a reasonable standard of living and more freedom and other intangible benefits.<sup>8</sup>

**Employment in the informal sector in Indonesia is associated with significantly worse labor market outcomes on average (World Bank 2009).**<sup>9</sup> For most self-employed informal workers, having access to formal paid jobs would lead to much better wages and benefits than self-employment. In other words, in the Indonesian context, informality is the result of necessity, not choice. Thus, the type of job is a good indicator of “quality”, and salaried employees (a proxy for formality) enjoy the highest income and most benefits at any education level.

**Figure 3-5: Salary Profile of Youth by Type of Employment and Education (in Rupiah)**



Source: Sakernas (2007).

**In terms of quality of employment, young workers are more likely to have a salaried job than older generations.** Most new jobs (75 percent) are filled by younger workers, especially salaried jobs (Figure 3-6), but as workers age, the probability of them exiting the formal sector increases (Figure 3-7). Most new formal jobs are then filled by younger workers, while older workers leave the formal sector.

**Figure 3-6: Number of New Employees by Age Group, Salaried Jobs and Total Employment (2007)**

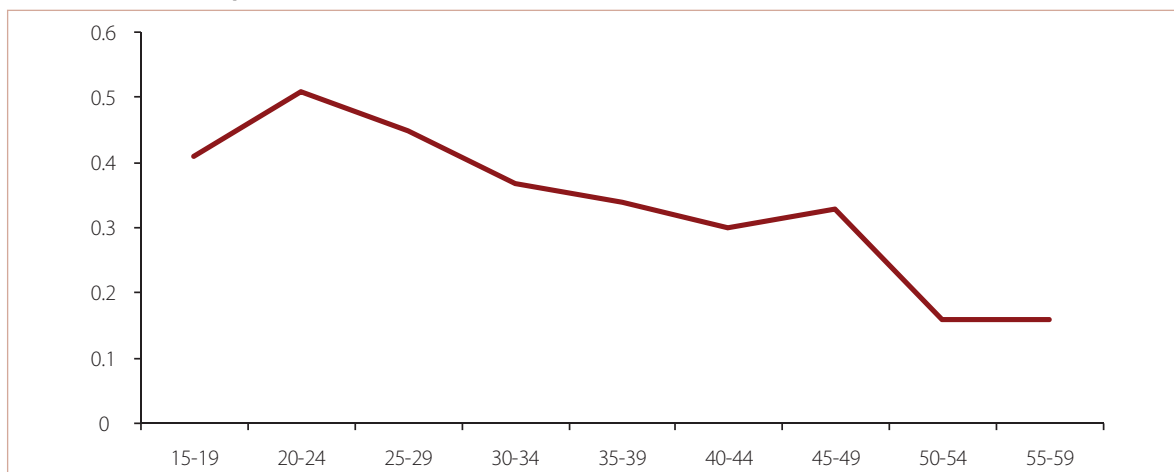


Source: Sakernas (2007).

8 See, for example, Cunningham et al (2008) for examples in Latin America and the Caribbean.

9 Chapter 3 of the Indonesia Jobs Report (2009) explores informality in Indonesia.

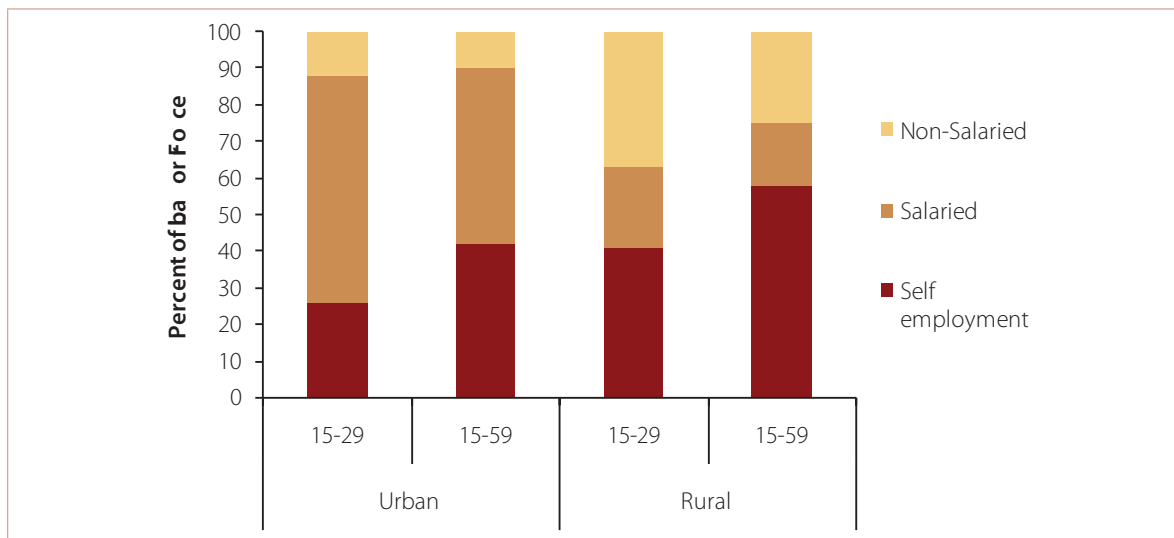
**Figure 3-7: Probability of Transitioning Between Salaried Jobs for Those Who Changed Jobs (By Age Group), 2007**



Source: Sakernas (2007).

**There is a clear dichotomy in the quality of jobs between urban and rural areas: the share of salaried employees is much higher in urban areas, while self-employment is the most common type of employment in rural areas.** About 70 percent of youth in urban areas are employed in salaried jobs, but self-employment is still prevalent (25 percent). Self-employment is higher in older generations. The share of salaried employees in rural areas is extremely low, only 20 percent of youth are employed for wages.

**Figure 3-8: Share of Labor Force in Salaried Jobs by Age Group and Urban/Rural**

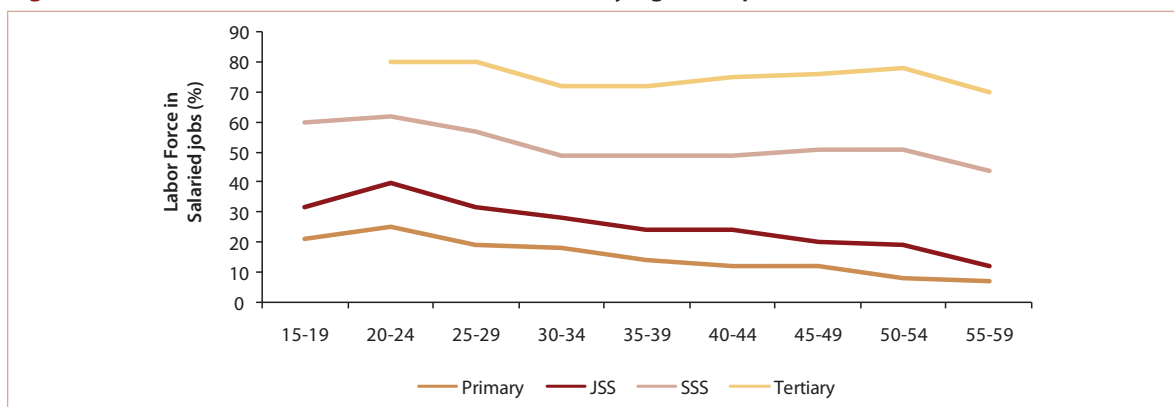


Source: Sakernas (2007).

**In terms of education, there is a clear positive association between education and formality, but access to salaried jobs is difficult for senior secondary school graduates.** Only 60 percent of young senior secondary school graduates in the labor force have a salaried job and the share falls with age. Unlike the case with unemployment patterns, in terms of quality, the outlook for workers with junior secondary school or lower

qualifications is especially bad, with only one-third of junior secondary school graduates in the labor force holding a salaried job. But while senior secondary school graduates fare better, on average only about 50 percent of senior secondary school graduates are salaried employees.

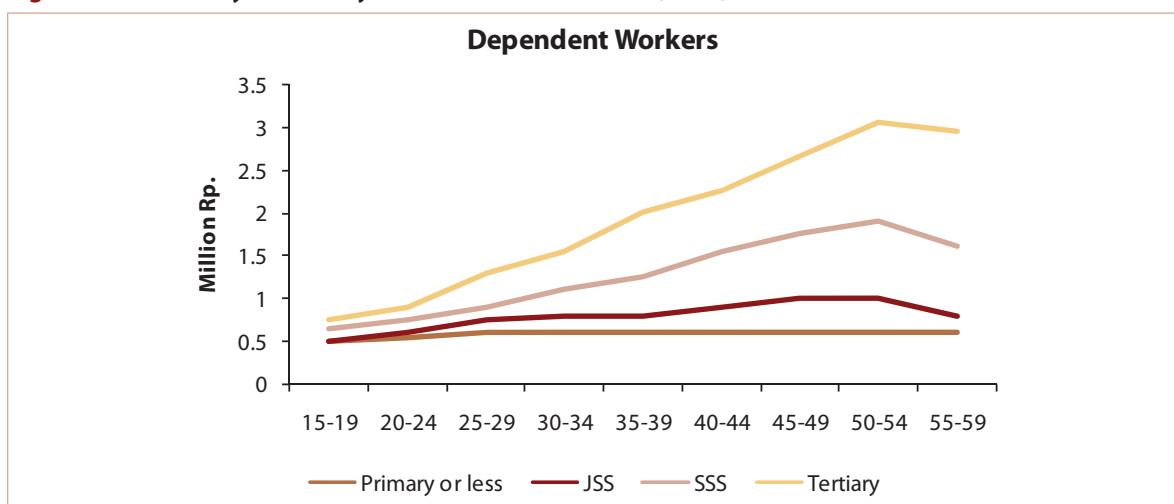
**Figure 3-9: Share of Labor Force in Salaried Jobs by Age Group and Education Level**

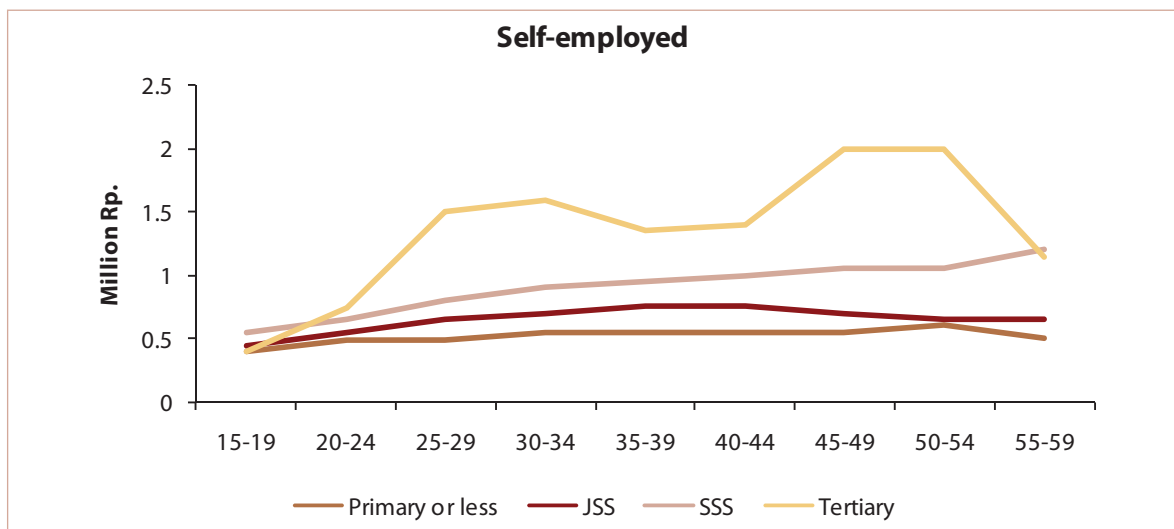


Source: Sakernas (2007).

The salary profiles for different levels of education indicate that education is clearly associated with better labor market outcomes in the long-run, especially for those with formal salaried jobs. Examined by age cohort, the returns for higher education graduates are very large, as the differences in salary by education level increase with age. Senior secondary school graduates also realize significant returns to experience, but they are much lower than higher education graduates, in part because they are much less likely to hold a salaried formal job. It is also clear from Figure 3-10 that the type of job is an important determinant of the salary profile, with higher returns for salaried (“formal”) than self-employed workers for all education levels except for higher education graduates.

**Figure 3-10: Salary Profiles by Education Achievement (2007)**





Source: Sakernas (2007).

**In summary, as one would expect, labor market entry largely depends on the education level of the worker and their geographical locale (urban or rural).** Although unemployment figures show that getting the first job is generally difficult for most youth groups in Indonesia, the quality of employment and the path in subsequent years is largely dependent on the level of education which is, in turn, correlated with socio-economic characteristics. Early school dropouts face a faster transition to work, especially in rural areas with a large supply of unskilled agricultural jobs. These youths enter the labor market mainly through nonsalaried jobs and self-employment and are very unlikely to transition to better quality jobs in the future. Tertiary education graduates face a slow transition into the labor market, but are very likely to obtain a formal salaried job and realize very high returns in the long-term. Judging by their employment and salary path in the medium- and long-term, the slow entry for these graduates is likely to reflect short-term searching costs, more than difficulties in accessing good quality jobs.

**Senior secondary graduates face the greatest difficulty in transitioning to the labor market.** They are considered the lower tier of skilled workers and, although they have high average salaries,<sup>10</sup> senior secondary graduates have the highest and most persistent unemployment and insufficient access to salaried jobs. This is especially worrisome in light of increasing enrollments as the education sector achieves universal enrollment in primary education and expands significantly its transition to secondary education, a stated priority of the Gol. A structural lack of demand for these workers would worsen these outcomes as a larger number of them enter the labor force each year. But there are indications that the demand for skills driven by economic transformation should be sustained, which suggests that the problematic transition to work for so many senior secondary school graduates might lie in the inadequacy of their skills.

<sup>10</sup> As shown in Section 1, controlling for age, gender and parental education, senior secondary education graduates earn close to 80 percent more than primary education graduates.

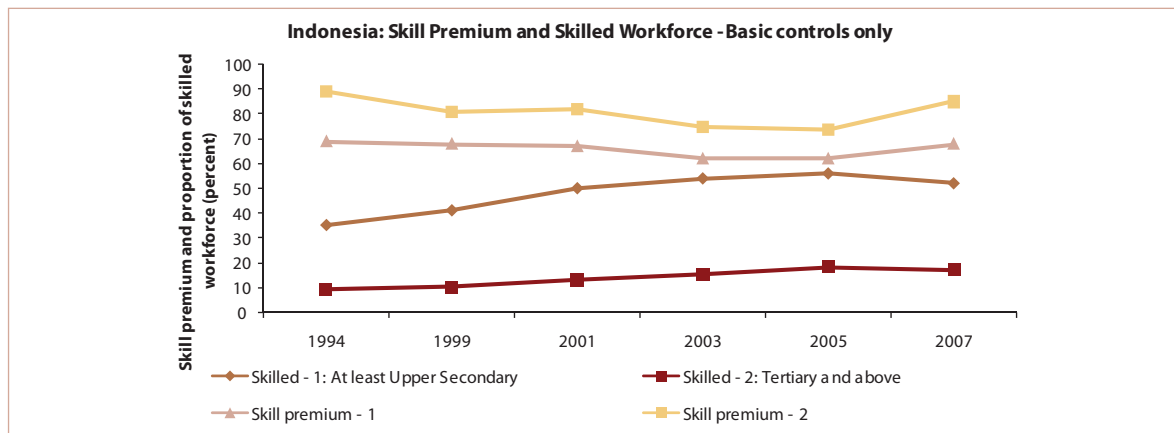
## Section 4

# Senior Secondary Education, Skills and Labor Market Entrance

**One of the main functions of the education system, especially in secondary education and beyond, is to provide graduates with adequate skills to enter the job market.** This should translate into better employment prospects and higher wages, provided the labor market can absorb employees with their skills. The underlying assumptions of this argument, which is used to justify expansion of education systems worldwide, are: (i) sound macro-economic performance; (ii) increases in the level of sophistication of the economy that match expansions in educational attainment; and (iii) labor market conditions that are conducive to the transition by not imposing high barriers to entry of new employees (that is inefficiently high minimum wages or very high cost of hiring and firing). In addition, “more educated” should translate into “more skilled”; that is education should actually provide graduates with skills, especially those demanded in the labor market. Failure in any of these assumptions can result in a mismatch between the supply and demand of educated workers, resulting in high unemployment, high job search times, leading to over qualification or informality as an alternative to the lack of jobs.

**The share of workers employed for wages who have a senior secondary education or higher qualification has increased significantly during the last 15 years (from 35 percent to over 50 percent), but the growth mainly occurred during the 1990s and has remained constant in the last decade.** During this time, the skill premium (salary associated to completing senior secondary education or tertiary and above) has remained relatively constant, indicating that the demand for skilled jobs has kept up with the growth in the supply. The trends are opposite, with small decreases in the returns associated with the increases in the educated workforce, but the small size of the changes in the education premium suggests that the demand for educated workers is largely sustained. In fact, the return seems to have resumed growth in recent years, while this has not been accompanied with a higher share of educated workers in salaried jobs.

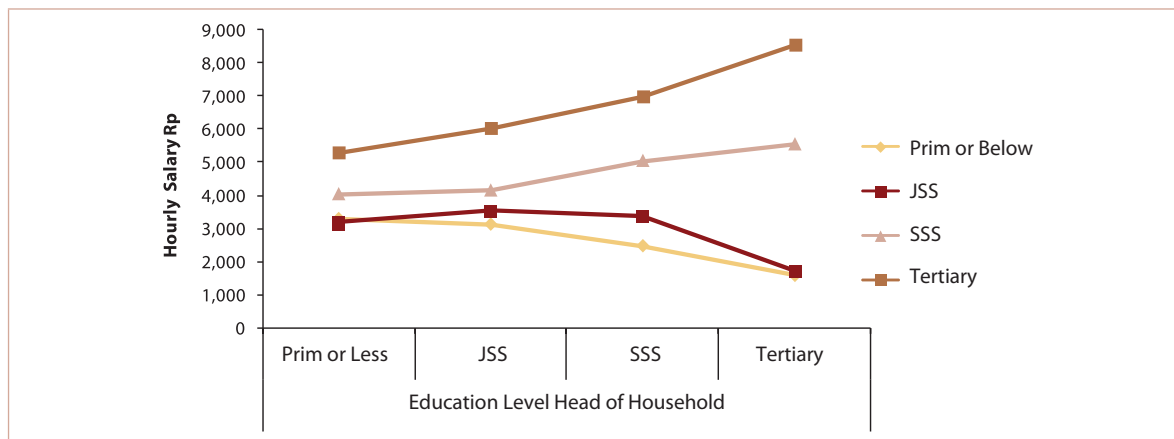
**Figure 4-1: Skill Premiums and Skilled Workforce in Indonesia**



Source: Indonesia Skills Report: Trends in Skill Demands, Gaps and Supply in Indonesia (2010).  
 Note: Only includes salaried employees.

**A lack of mechanisms to access information about the labor market, returns and types of work available may be another reason for difficulties in transition to work for young graduates.** As senior secondary education expands, the new students who progress through the education system are more likely to come from disadvantaged backgrounds and may have less access to job networks or limited information about labor possibilities from peers. In the absence of efficient mechanisms to gain access to this information, this may lead to inequality in labor market outcomes even if all graduates meet the skill requirements of existing jobs. In fact, there are large observed differences in the wages for youth depending on the level of parental education. The returns are significantly higher for students with educated parents. More importantly, for youth with parents with below senior secondary education, the returns to senior secondary education are very small, which can act as a disincentive to continue their studies, threatening the plans for expansion and access to education for low-income students.<sup>11</sup> A possible explanation is the low access to networks and inefficiency of the labor market, but differences in the quality of skills, and hence in productivity, cannot be ruled out.

**Figure 4-2: Average Hourly Salary by Worker and Parental Education (2007)**



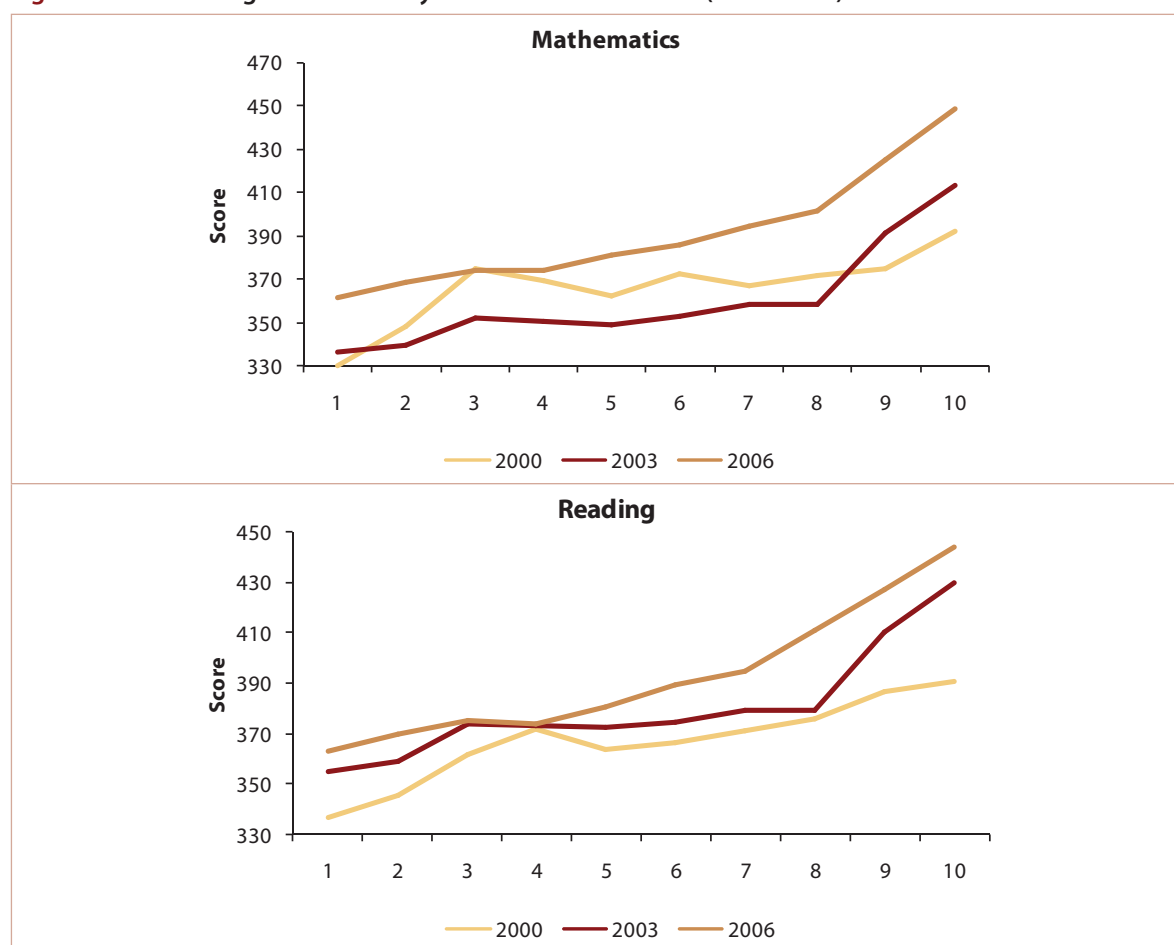
Source: Sakernas (2007). Basic controls only.  
 Note:

11 See Jensen (2010), The (Perceived) Returns to Education and the Demand for Schooling, which shows that students form expectations from their known network.

**The observed differences in returns by parental education may also reflect differences in the quality of the education received by students.** According to PISA, the average cognitive skills in math and language have increased in recent years, but there are vast differences in skills by socio-economic characteristics, which are largely driven by parental education. The skills provided by the education sector are not uniform across schools, or among students within schools, and the differences in learning by socio-economic characteristics are significant and have grown in recent years.

**As the education system has expanded coverage, poorer students are more likely to remain in the education sector, so new entrants into the labor market are more likely to be at the lower end of the socio-economic scale.** This inequality can also cause signaling problems in the labor market, since a high share of educated workers do not have the expected level of skills from their level of education and employers cannot differentiate among them. The inadequacy of the skills can effectively leave an important share of senior secondary graduates out of the market for skilled jobs, which is consistent with the observed pattern amongst these graduates of high unemployment and a relatively low share of salaried jobs.

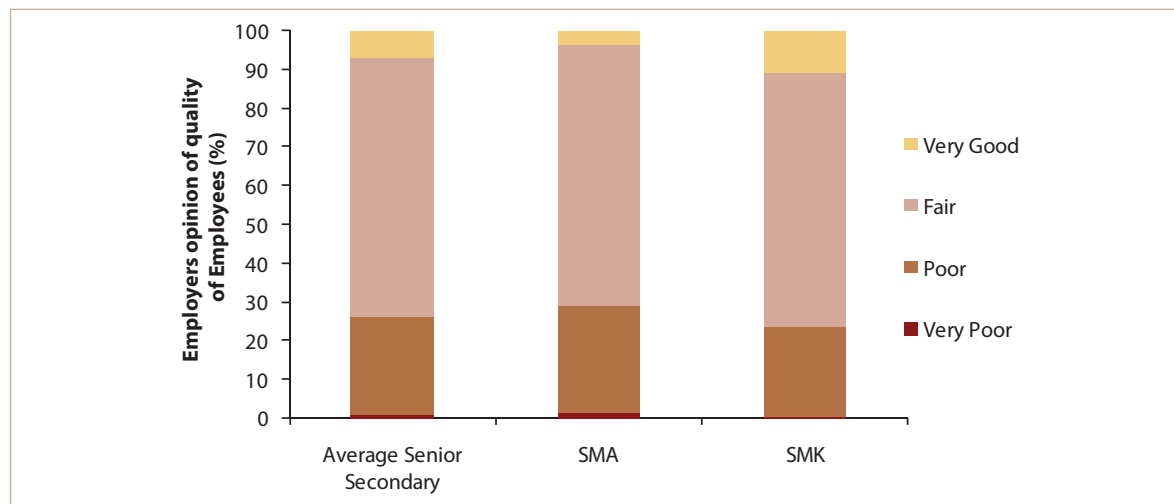
**Figure 4-3: Average PISA Score by Socio-economic Decile (2000-2006)**



Source: PISA 2000, 2003 and 2006 (own calculations).

The results from a recent Employer Skills Survey<sup>12</sup> confirm that the skills of senior secondary graduates do not meet the expectations of employers. A quarter of recent hires with a senior secondary education are considered of poor or very poor quality (Figure 4-4). Only 7 percent of them are considered very good, and most of them are considered “fair”. The percentage of poor quality graduates is similar in both educational streams—academic and vocational—but the percentage of very good graduates is higher for vocational schools. The overall message is that there are some differences by educational stream, but quality seems to be an issue for both.

**Figure 4-4: Employers Opinion of Quality of Employees with Senior Secondary Education (%)**



Source: Indonesia Skills Report, World Bank (2010)

**If the inadequate skills of graduates are preventing them from getting good quality jobs, what types of skills are employers demanding?** Part of the answer may lie in differences between educational streams. While employers are concerned about the quality of graduates from both streams, the types of skills and jobs of graduates vary. Vocational school (SMK) is geared towards more job-specific skills, seeking to equip graduates with the skills necessary for a quick and effective transition to the labor market, whereas the general stream aims to prepare students for further education.<sup>13</sup> We have seen that senior secondary graduates face difficulties in the labor market, but does their different focus result in differential labor market outcomes?

**Many have advocated that a more practical set of skills results in improved employability, leading them to promote vocational education over general education as a means to improve the transition to the labor market.** For example, the Gol stated a goal of reaching a 70 percent share of enrollment in SMK in the 2005-2009 strategy which led to a substantial increase in vocational enrollment. While the numerical target has now been dropped, vocational schooling has gained importance in secondary education, so it is appropriate to evaluate the transition to work of both streams in order to guide future policy.

12 The results of the survey are explored further in *World Bank. 2010. Indonesia Skills Report: Trends in Skills Demand, Gaps and Supply in Indonesia. Jakarta: World Bank*

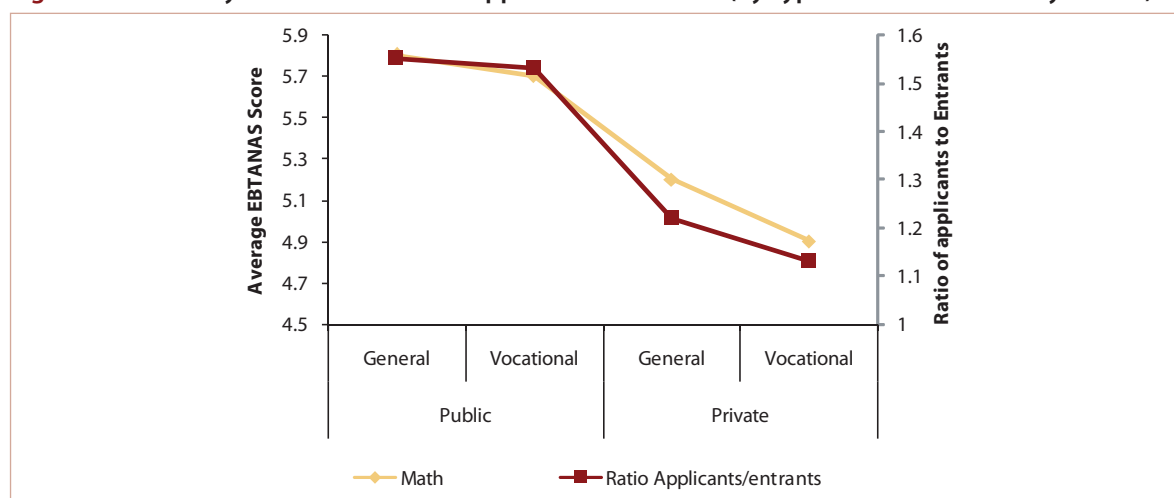
13 The curricula of both tracks are different except for some basic subjects (English and Bahasa Indonesia), and while the general (SMA) stream offers three general majors, the vocational (SMK) stream offers seven majors for specific skills and/or sectors.



## 4.1 Vocational versus General Secondary Education

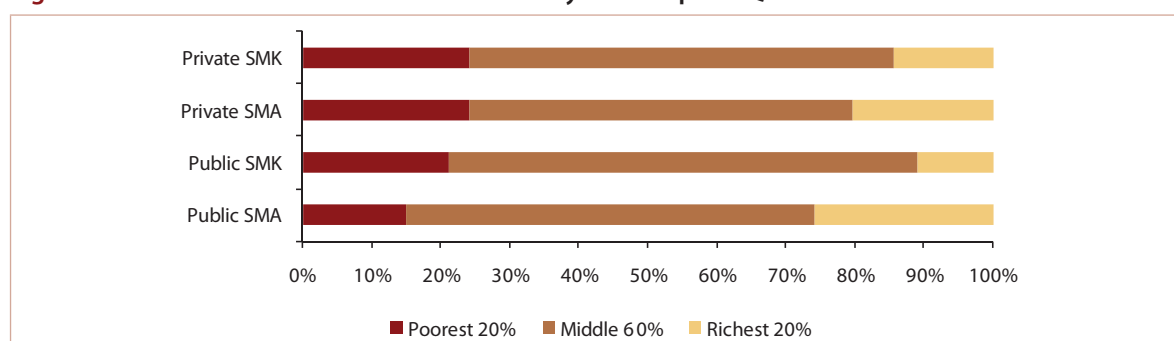
The demographics of the student body of each is different, and arises from explicit differences in preferences for different streams.<sup>14</sup> Students who attend general senior secondary schools have, on average, better entry scores in the JSS exam (EBTANAS) and better socio-economic status than those who attend vocational school. In addition, general schools have a higher ratio of applicants to entrants, which suggests that there is a strong preference for general education in the population, who may resort to vocational school when they are not accepted into general school. Parental education is also a strong determinant of the type of school attended, with a clear inclination of students of college-educated parents to attend general school. Lastly, geographic determinants also matter, as students in rural areas are less likely to attend public general school, even controlling for other socio-economic characteristics. It is important to keep these differences in mind when comparing labor market outcomes, since pre-existing socio-economic status and cognitive skills may also drive the school to work transition.

**Figure 4-5: Entry Scores and Ratio of Applicants to Entrants (By Type of Senior Secondary School)**



Source: MoNE ([www.depdiknas.go.id](http://www.depdiknas.go.id)).

**Figure 4-6: Share of SMA and SMK Students by Consumption Quintiles**



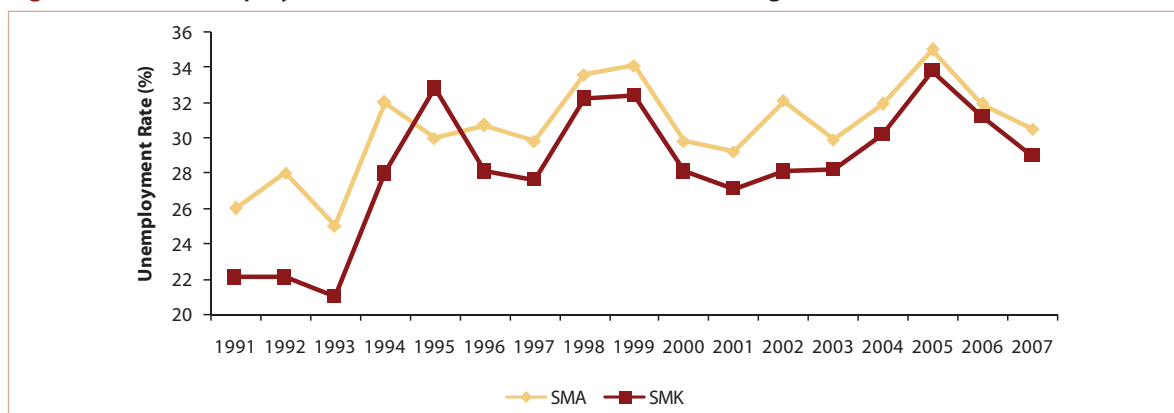
Source: Susenas (2006).

<sup>14</sup> See Newhouse and Suryadarma (2009) for a detailed analysis of the determinants and labor market outcomes by type of vocational school.

**Despite the differences in the skills provided by the two schooling streams, the unemployment rates for recent SMA and SMK graduates with no higher education are high and very similar (30 percent).**

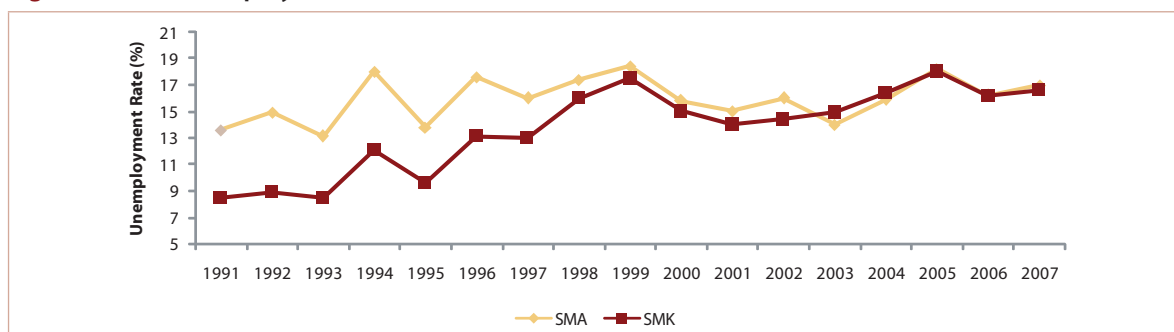
In principle, the SMK stream is geared towards imparting the professional skills necessary for the labor market, while SMA should provide a more general education which serves as the basis for further education. As such, one might expect that if demand for specific skills is high, SMK graduates would be better suited for the labor market in their initial years. However, the unemployment rate of recent SMA and SMK graduates 20-24 years of age is very high (30 percent), with SMK graduates faring only slightly better (Figure 4-7). In the overall population, SMK graduates used to have significantly lower unemployment rates, but it has converged to the level of SMA graduates (Figure 4-8).

**Figure 4-7: Unemployment Rate for SMA and SMK Graduates, Age 20-24 (1991-2007)**



Source: Sakernas (1991-2007)

**Figure 4-8: Unemployment Rate for SMA and SMK Graduates, Total Labor Force (1991-2007)**



Source: Sakernas (1991-2007)

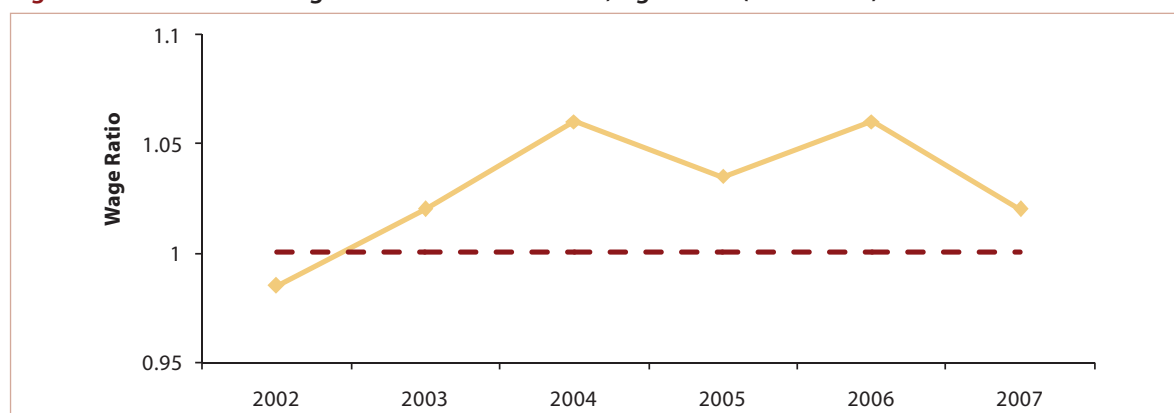
**Even when taking into account the pre-existing differences in the population served by each stream, the employability of graduates is similar and the small difference in unemployment that exists at graduation fades over time.**<sup>15</sup> While recent vocational graduates enjoy a slightly lower unemployment rate than public general graduates, this is partly attributable to differences in college attendance. Recent SMK graduates between 18 and 24 years old have a 7 percentage point lower chance to be unemployed, but this difference is greatly

<sup>15</sup> The regressions include the following controls: Survey year, parental education, place of residence at 12 years old, district of junior secondary graduation, age and its square, number of repeated grades during primary and junior secondary, a dummy for working during primary and junior secondary, a dummy variable for graduated from a public junior secondary school (vs. private), and gender. Estimations by gender are run separately.

reduced at 25 and disappears at 35. An SMK education also seems to benefit females in the short-run, but the difference also disappears over time. It is clear that SMK is no better than SMA at improving the unemployment rate of its graduates, despite explicitly targeting their transition to employment.

**Looking at simple average wages of graduates of both streams who did not continue on to higher education, the positive wage differential for SMK graduates has been reduced in recent years.** Although vocational school graduates have enjoyed higher returns than general school graduates in recent years, the difference had decreased to less than 2 percent in 2007. The indicators are similar if we include the entire population, with an even sharper decline of the wage ratio of vocational to general school graduates in 2007.

**Figure 4-9: Relative Wage SMK to SMA Graduates, Age 20-24 (2002-2007)**



Source: Sakernas 1991-2007.

Note: Includes no controls. Comparison of simple average wages.

**However, when including students who continued to higher education the analysis shows a small positive wage premium for general education.**<sup>16</sup> The transition rate to higher education is higher for general than for vocational school graduates (30 percent compared to 15 percent), which, combined with the very high returns from higher education, results in a higher adjusted salary for SMA graduates. There is also a large wage penalty for vocational school for males, especially those with low ability (as measured by test scores), which has become larger in recent years. According to the same study, when compared to public general school graduates, recent male vocational school graduates earned 43 percent less in 2007. The difference is largely driven by those youth whose parents completed junior secondary education or less, who are more likely to attend vocational school in the first place, but the differences persist after controlling for parental education, ability and socio-economic characteristics.

**Furthermore, the negative wage premium of vocational school for males has worsened in recent years, indicating either a deterioration of the quality of graduates or a lower demand for their skills.** This is especially worrisome in light of the government's goal of expanding vocational school substantially. Female students initially earn a 16.5 percent wage premium upon graduation from SMK. Within three years, their premium decreases to only 3 percent, when it quickly turns into a wage penalty, which grows over time (a 63 percent penalty 25 years after graduation).<sup>17</sup>

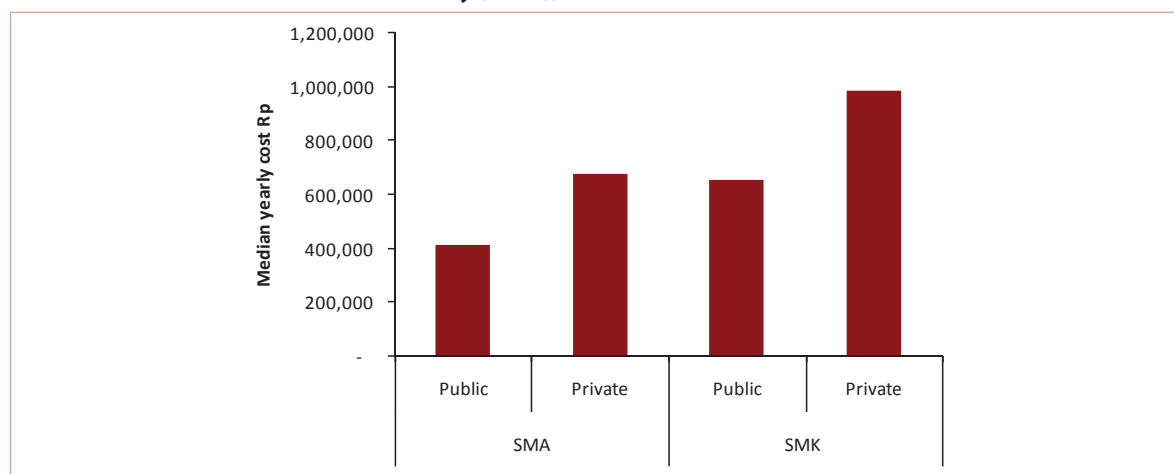
<sup>16</sup> See Newhouse and Suryadarma (2009).

<sup>17</sup> Note this is comparing different cohorts, so the skills learned in SMK/SMA 25 years ago may be very different to those learned today. As a consequence, it is hard to establish a conclusive estimate of these differences.

**When comparing public and private schools, there is a clear positive wage premium for public school graduates for both men and women.** Controlling for selection and socio-economic characteristics, men who graduated from private vocational school earn between 17 and 20 percent less<sup>18</sup> than those who graduated from public vocational school. Public general school graduates also earn substantially more than private general school graduates (between 17 and 28 percent more). The results are similar for women. Since this is true both in SMA and SMK, and most of the expansion in SMK enrollment has happened through private institutions, it is important to evaluate the policy of rapid expansion of vocational schools.

**Since the cost of attendance is higher at private institutions, which in turn have lower returns and serve students from poorer backgrounds, a rapid expansion through private enrollments is likely to be regressive.** The median student in a public SMA spends a little over Rp.400,000 a year (2006) in costs associated with attending school,<sup>19</sup> while a public SMK student spends 60 percent more (Rp.660,000)(Figure 4-10).<sup>20</sup> Private school is also significantly more expensive for SMK students than for SMA students (50 percent). When considering only the poorest quintile of senior secondary students, the amounts are lower but the differences in cost by type of school persist, and are even larger in percentage terms relative to public SMAs. This may also be driving dropout rates of poor students in earlier grades, since the expected return to their education is lower and the cost is higher for these students. Since oversubscription to public schools is part of the reason for these differences, guaranteeing access to quality education for all students should be a priority if the labor market performance of recent graduates is to be improved.

**Figure 4-10: Out-of-Pocket Costs of Attending Senior Secondary Education (By Stream (SMA/SMK) and Public/Private Facility (2006))**



Source: Susenas Education Module (2006).

**A comparison of the labor market outcomes of both streams does not support a drastic guided expansion of vocational school enrollment, suggesting instead that the priorities should be to improve the quality of both streams and pay special attention to equity in access.** The inadequacy of the skills of a large proportion of senior secondary school graduates is reflected in their unemployment rates and the types of jobs that graduates get, and corroborated by the results of the Employer Skills Survey. In terms of types of

18 Depending on the specification of the model. See Newhouse and Suryadarma (2009) for details.

19 These costs include all fees (registration, school, parent organization, student organization, uniforms, books, stationery) and associated costs (transportation, supporting materials, and other costs).

20 We use median costs instead of average costs because there is a large variability in fees which results in some inconsistencies in average costs. The pattern, however, is the same as with median costs.

skills, the vocational stream of secondary school does not seem to be better at providing practical skills than the general track. But what is then the shortage of skills that employers face when hiring senior secondary school graduates? And how can the education sector, both through formal education and through informal training provide these skills? The next section explores these issues in more detail.

## Section 5

# Meeting the Demand for Skills

**Senior secondary education plays a fundamental role in the formation of skills for success in the labor market.** Skill formation is a dynamic process that takes different forms at different stages in life (family interaction, schools, peers, training and work experience), and the types and characteristics of skills in each stage are not always interchangeable.<sup>21</sup> As a consequence, senior secondary education cannot be expected to compensate for earlier grade deficits in certain skills, nor provide skills that are better acquired during the course of the professional life of the person through job-specific training.

**The education sector as a whole, including higher education, however, cannot be solely responsible for providing all the skills necessary for a successful transition to the labor market.** Many jobs require very specific skills that should be the responsibility of firms. Thus, mapping the types of skills that the education sector is supposed to provide and devising a system for the acquisition of complementary skills should be the first step in creating a system for lifelong learning that provides opportunities for skill upgrading for persons of different backgrounds at different stages in life and that is adaptable to changing demands in the labor market.

**Categorizing skills, however, is a difficult task—and measuring them is an even more difficult one.** The literature describing different types of skills is abundant, but there is no consensus on the appropriate categorization of skills.<sup>22</sup> Broad classification as cognitive and noncognitive skills is insufficient for the education sector, as curricula generally cover subsets of these categories that are insufficiently defined through these concepts.

**An appropriate division of skills for the purposes of this paper is to categorize skills according to the appropriate timing of skill acquisition, their breadth, and their transferability.** The resulting categories are: (i) “academic” (cognitive), which are better acquired early in life, provide a broad base of knowledge that is directly related to subject matters (mathematics, language, science) and is completely transferable between jobs;

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21 Heckman and Jacobs (2010), which build up on models outlined in earlier Heckman publications (see bibliography in Heckman and Jacobs).

22 See Stasz (2001) for a discussion on “Assessing skills for work: two perspectives”.

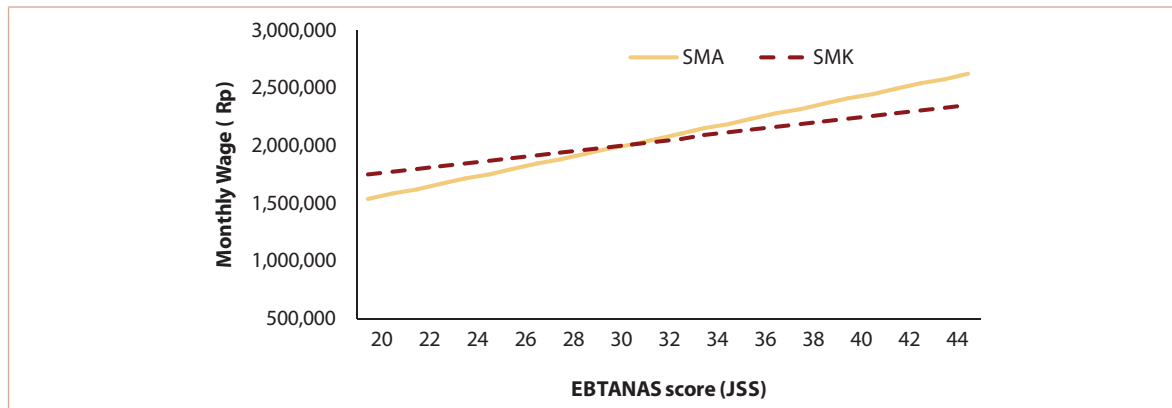
(ii) “generic” or “life” skills,<sup>23</sup> such as problem solving, effective communication or ability to work in teams. These also start early in life, are completely transferable between jobs but are not directly related to subject matter and depend partly on factors sometimes external to the school system; and (iii) technical skills, which are job specific, narrowly defined and could be associated with a subject matter, and could be transferable (computer skills, management) or nontransferable (use of a specific machine or a specific process).

**It is clear that academic skills are, and should be, one of the main objectives of the education sector, however, generic/life skills are in increasing demand in the labor market.** As economies become more sophisticated, the demand for these types of skills grows (including the demand for complex thinking/problem solving and effective communication skills). This has resulted in an adaptation of the curriculum in many countries to reflect these demands, in order to broaden the skill base of education graduates.

## 5.1 Cognitive Skills

**Cognitive skills matter more than education stream for future earnings and better cognitive skills are associated with higher wages—even more so for general stream graduates.** The exit exam in junior secondary school is a good predictor of future earnings, which implies that a strong knowledge base in basic cognitive skills is critical for success in higher levels of education and ultimately in the labor market. Since cognitive skills are usually correlated with socio-economic characteristics and they also affect the future education path (better cognitive skills are more likely to attend the general stream), the inequalities in cognitive skills observed in PISA scores need to be addressed through specific interventions targeting low-performing students and schools in early grades.

**Figure 5-1: Adjusted Salaries According to Public SMA/SMK Enrollment**



Source: IFLS (2000).

## 5.2 Generic (Noncognitive Skills)

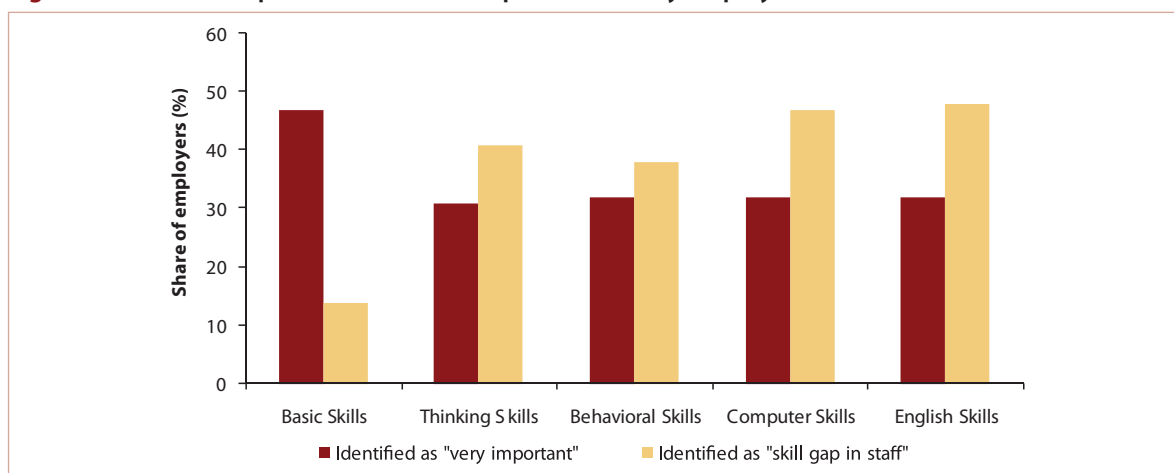
**In line with the observed earnings, employers rate basic mathematics and reading skills as very important, but complain about inadequate generic skills, which may be driving the difficult transition to the labor market.**<sup>24</sup> Core skills are in high demand, especially basic mathematics and reading, thinking and

<sup>23</sup> These are sometimes referred to as “soft skills”.

<sup>24</sup> See the Indonesia Skills Report for a complete diagnostic of the skill deficits and trends in the demand for skills.

behavioral skills, which are the cornerstones of general education. However, few employers consider that their employees have a significant gap in their basic skills. On the other hand, however, 40 percent of employers consider their staff to lack thinking and behavioral skills, which points to the need to strengthen generic/life skills for Indonesian graduates. Vocational skills that are transferable between jobs like computer literacy and English language proficiency are also noted as important gaps in employees' skills (Figure 5-2).

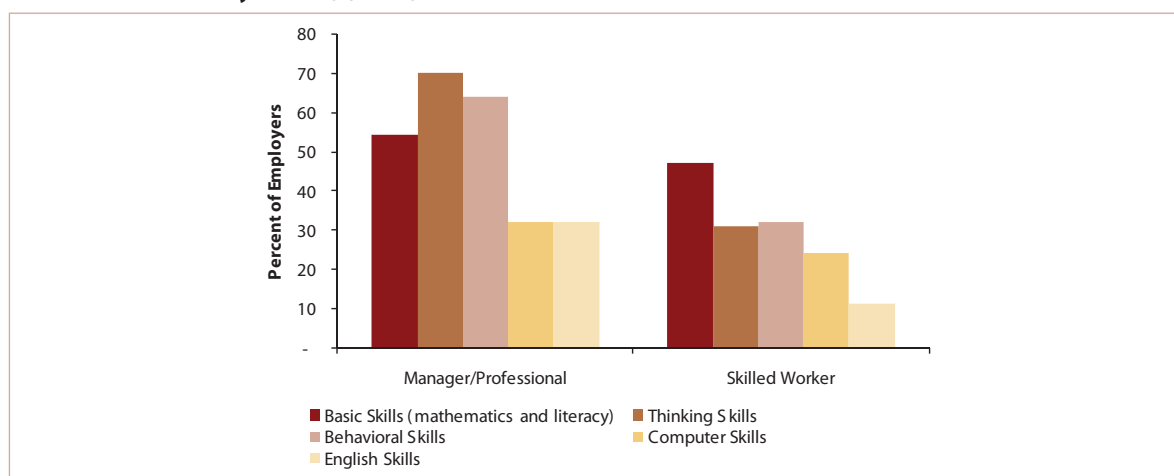
**Figure 5-2: Skill Importance and Skill Gaps Identified by Employers**



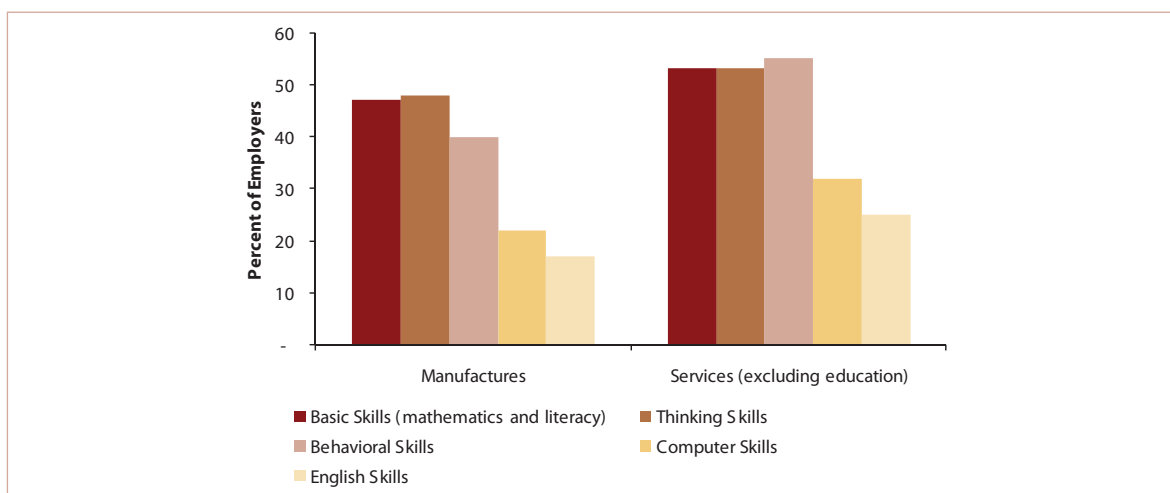
Source: Indonesia Skills Report, World Bank (2010)

**While there are some differences in the types of skills most in demand for different jobs and in different sectors, the demand for generic skills is likely to grow as the service sector expands and jobs become more sophisticated.** According to the Employer Skills Survey, thinking and behavioral skills are the most important skills for managerial and professional jobs. Employers in two key economic sectors—manufacturing and services—ranked generic skills as very important, with behavioral skills ranked as very important by more than half of the surveyed firms in the service sector (Figure 5-3). In order to satisfy the new skill requirements, it seems that employers are demanding better generic skills of their employees (thinking and behavioral) which has important implications for the education sector.

**Figure 5-3: Share of Firms Rating Different Types of Skills as "Very Important (By Type of Position and by Sector) (2008)"**







Source: Indonesia Skills Report, World Bank (2010)

### 5.3 Vocational Skills

**While transferable vocational skills should be part of the vocational school curriculum, the education sector cannot aim to provide all the skills necessary to perform any job in the productive sector.** Private firms should participate in the provision of job-specific skills, both through on-the-job training and through copayment of institution-based training for their employees. It is clear from the employer survey that the productive sector values practical on-the-job training more than theoretical training, which is difficult to adapt as quickly as shifting demands in the market. These difficulties in ensuring the relevance of theoretical training increase with the specificity of the skill and, ultimately, only one particular firm at a time will benefit from the enhanced skills of a trained employee, and should therefore be responsible for either providing that employee's training or financing it.

### 5.4 Implications for the Education Sector

The skills issues described above will have a number of implications for the education sector.

- **Firstly, as the economy continues to grow into nonagricultural sectors, the demand for graduates of senior secondary school and higher education will continue to grow since these sectors are more education-intensive.** As a consequence, improving access to education with a special emphasis on preventing early dropouts should be a priority. However, this is not enough to guarantee that graduates will face a successful transition to the labor market and that the demand for skills will be satisfied. The evidence in this paper suggests the quantity of education is not enough; low cognitive skills affect progression and play a big part in the poor performance of senior secondary school graduates in the labor market.
- **Secondly, cognitive skills affect progression and ultimately labor market outcomes, so there is a clear need to improve the quality of education in earlier grades to strengthen the skill base and improve transition rates to secondary education graduates.**
- **Thirdly, youths are lacking certain skills in high demand in the labor market, namely thinking and behavioral skills.** A wider skill base may require changing the curriculum and the reshuffling the priorities in senior secondary education.
- **Lastly, given the still large proportion of youths who drop out of the system, the rapid economic**

**transformation of the country, and the stock of workers without the proper skills for the demands of the labor market, there is a clear need for an effective training system.** The training system should provide a second chance for dropouts to acquire skills for the job (and help satisfy the demand for skills) and opportunities for all workers to upgrade their skills, with strong participation by the productive sector in the definition and financing of these training courses to ensure relevance and sustainability.

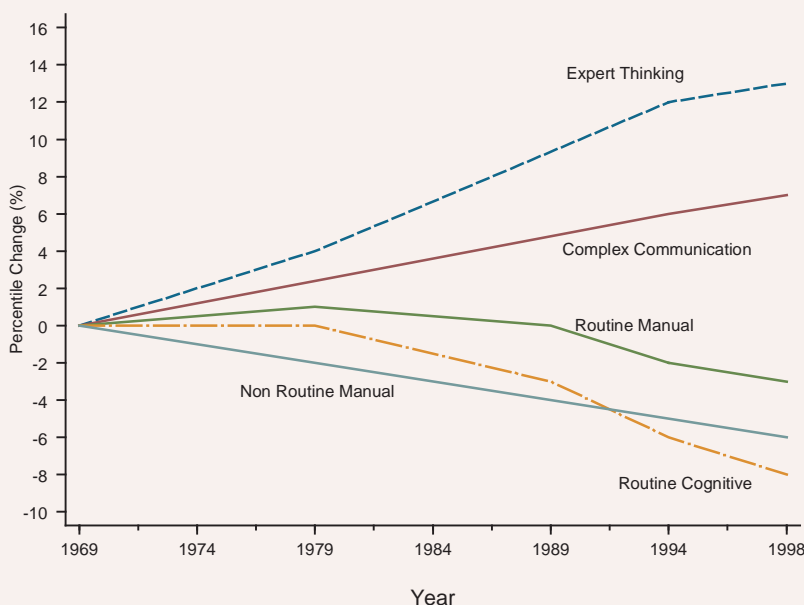
#### 5.4.1 Providing the Right Mix of Skills in Secondary Education

**The evidence in this paper points to the need to broaden the base of both academic and generic skills for graduates, rather than targeting a large expansion in the number of vocational schools.** Labor market outcomes for both streams are similar and practical on-the-job experience is preferred over theoretical vocational skills. While it is not possible to determine the right mix of skills empirically, evidence from labor market outcomes and employer surveys suggest that a stronger base of generic skills is needed. Employers rate basic mathematics, thinking and behavioral skills as the most sought-after skills when looking for new employees. Technical skills are also in high demand, but employers value on-the-job experience (in similar jobs, for example) more than technical training.

**In terms of educational stream, a stronger base of generic skills implies increasing these skills in the curriculum of both the general and the vocational school stream, and potentially shifting vocational training to later stages.** Shifting vocational curricula to later stages of schooling allows students to learn more general content as a foundation for vocational specialization, and to make informed choices of their career pathways with more flexibility. Rapid changes of technologies have led to corresponding changes in demands for skills, which require workers to have more general, and multiple skills to adapt themselves and the ability to update their skills through continuous learning. As a result, the main focus of pre-employment vocational training has shifted from lower secondary level to upper secondary and post-secondary level and many countries have redesigned their vocational school curriculum and programs to provide sector-wide skills, basic competencies for vocational preparation and more academic content in general education (Adams 2007).

**Box 5-1: Curriculum Trends and Skills Demand in the US**

As the demand for skills in the labor market has been changing, there has been matching changes in the school curricula. A study by Levy and Murnane (2004) showed that the expert thinking and complex communication in the curricula has increased between 1969 and 1996, while the manual components (both routine and non routine) have decreased.



Source: Levy and Murnane (2004).

**In addition to broadening the generic skill base for all senior secondary school graduates, there is a need to reform the vocational stream.** This should focus on transferable vocational skills (management, computer, entrepreneurship), and increasing on-the-job and practical training by strengthening the links with the productive sector and opening to more flexible systems of delivery. As the economy develops into more technology-based industries (both in the manufacturing and service sectors), the base of transferable practical skills needed to adapt to changing demands will broaden.

**While school-based delivery systems for vocational education with rigid curricula offer the possibility of providing a broader skill base, the shifting needs of the labor market require additional, alternative and more flexible ways of delivery to improve the adaptability of the labor force.** These include more specialized vocational training institutes (and institutions) and work-based training programs. Vocational training institutes can provide occupation-specific skills development opportunities in an efficient and flexible way, they tend to be private, raising concerns about access for the poor. While vocational training institutes might offer a level of specialization that allows them to adapt to the specific needs of certain professions, industries or sectors, access to the poor might be limited by their geographical distribution and the fees.

**Ensuring the relevance of the curriculum and the successful integration into the labor market of its graduates requires stronger, enforceable quality standards, and an integrated and flexible system that allows students to continue on to further education.** It is also crucial to establish coordination mechanisms among schools, vocational training institutes, and especially private firms in terms of curriculum development, implementation, and cost sharing. In a decentralized country like Indonesia, it is important to establish systematic coordination mechanisms between central government ministries, central and local governments, and between governments, industry, and VET providers.

**Table 5-1: Advantages and Disadvantages of Different Modalities of VET Delivery**

|             | School-based VET   | Institution-based VET  | Workplace-based VET  |
|-------------|--|--|--|
| <b>Pros</b> | <ol style="list-style-type: none"> <li>1. Tends to be more effective for providing basic/core competencies.</li> <li>2. It can incorporate general vocational training in the curriculum, such as computer/English or entrepreneurship.</li> </ol> | <ol style="list-style-type: none"> <li>1. Is a more flexible and efficient provider of job-specific skills.</li> <li>2. Might be better integrated with industry as facilities are more specialized.</li> </ol>  | <ol style="list-style-type: none"> <li>1. More valued by employers, as it is more effective at providing relevant skills.</li> <li>2. VET will be more demand-driven. It is more effective at keeping up with changing technology and demands for skills.</li> </ol>   |
| <b>Cons</b> | <ol style="list-style-type: none"> <li>1. High cost of facilities and equipment.</li> <li>2. Needs strong links with private sector, otherwise might be more supply-driven or dominated by the concerns of schools.</li> </ol>                     | <ol style="list-style-type: none"> <li>1. If VET institutes have weak institutional links with industry, VET might be more supply-driven or dominated by the concerns of training institutes.</li> <li>2. Short duration of training courses cannot deliver basic/core skills or theory-oriented vocational education.</li> <li>3. May not be accessible to youth from poor families and regions.</li> </ol> | <ol style="list-style-type: none"> <li>1. Most firms, SMEs, in developing countries do not have capacity sufficient enough to provide job-specific in-house training. Larger firms are more likely to provide training.</li> <li>2. Better-off students tend to have a higher chance of getting training opportunities.</li> </ol> |

Source: World Bank staff elaboration, based on Adams (2007) and Sung-Joon Paik (2008).

**Involving the productive sector, however, is no easy task as employers tend to be selective in their hiring, even if only for apprenticeships and other on-the-job training programs.**<sup>25</sup> In informal job settings, as is the case in Indonesia, firms may face fewer incentives to train workers, as it is easy for them to leave their jobs and use their learned skills elsewhere. In general, larger firms are more willing to train workers, but this training tends to benefit the best prepared youths, leaving the most needed out of the system. An integrated system of training that ensures that there are opportunities for skills upgrading and that responds to market demands and provides the right incentives for participation in the productive sector is, therefore, a necessary complement for the system of skills formation, especially in a country as diverse as Indonesia.

## 5.4.2 Nonformal Vocational Education: Training

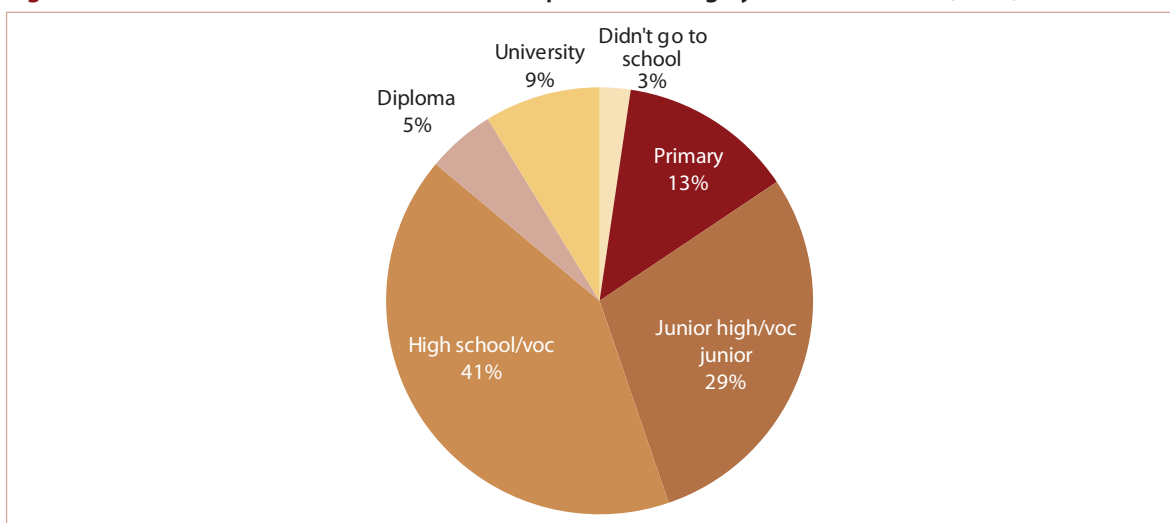
**A strong system of nonformal vocational training should serve two purposes: provide tangible skills to unskilled workers (dropouts) and meet the increasing demand for sector/industry-specific training for individuals with completed formal education.** The effectiveness of the system, however, depends on the provision of quality training, the crucial connection with the productive sector and, ideally, some form of interaction with the formal education sector that allows dropouts to return to the path of formal education upon completing basic competencies. Although the absence of standards and certification means little is known about the quality of the training system in Indonesia, this section provides some data on the demand for training and the type of student who is undertaking training, in order to answer the most basic question: what is the status of the training system in Indonesia regarding its two basic objectives? Is it effective at reaching school dropouts who seek a second opportunity to access better jobs, or is it mainly serving educated workers in need of further skills?

<sup>25</sup> See Adams (2007) for an overview, Acemoglu and Pische (1998) and Acemoglu and Pische (1999) for theoretical approaches, and Aedo and Nunez (2001) for an overview of the regional experiences in Latin America, among others.

**The data shows that the demand for nonformal vocational services is high and is not limited to school dropouts, including also senior secondary school students and graduates.** According to Ministry of National Education (MoNE) statistics, the system is large, with 13,446 vocational institutions and 1,348,565 students in 2007, mainly in Java.<sup>26</sup> Almost 70 percent of students in the nonformal education sector are simultaneously enrolled in formal education (many in vocational schools). Only 16 percent of the students enrolled in courses in nonformal education do so while working. Overall, half of participants in training courses have completed at least senior secondary education, and 9 percent have higher education degrees.

**The current nonformal training sector does not reach enough school dropouts, serving instead as a complement to formal education through the provision of specific skills.** In addition, the fact that vocational school students feel the need to enroll in these training courses may suggest that there is a risk that nonformal courses could be serving as substitutes for the skills that the formal vocational secondary school stream is expected to provide.

**Figure 5-4: Share of Workers Who Have Completed Training by Education Level (2003)**



Source: Susenas 2003. Based on Alisjahbana (2008).

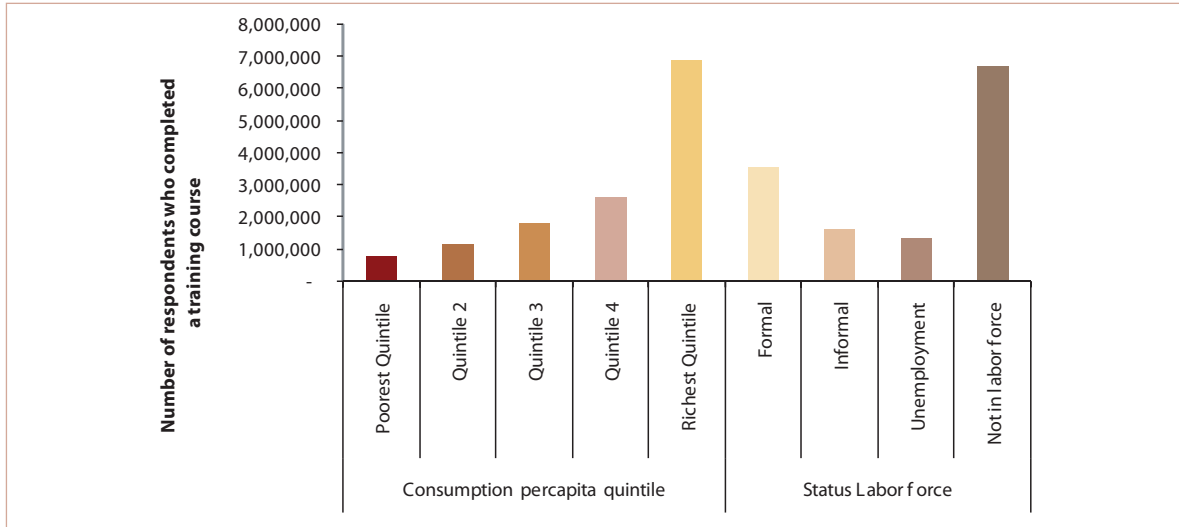
**Training courses currently attract richer students rather than school dropouts, with only 5 percent of training taken by youth in the poorest consumption quintile.** It is also more likely to attract workers in formal jobs than informal jobs or the unemployed, but it has a large number of takers outside the labor force. While there are important variations in these numbers depending on the types of courses taken (for example, the rich are more likely to take computer or English courses, while the poor are more likely to take sewing courses), this points to the need to evaluate access to these courses, and the role they seek to play in providing skills to the general population.

**Since the provision of nonformal education is mainly private and providers rely mainly on student fees for their budget, what drives this target population?** The fees vary by type of training, but the up-front cost may be too high to attract low-income unemployed youth and the lack of quality assurance mechanisms (like standards or certification) and insufficient linkages with the productive sector may make the investment

<sup>26</sup> Sixty-six percent of all institutions are located in Java, along with 63 percent of the registered students. Across regions, East Java has 20 percent of the training providers, followed by West Java (14 percent), Central Java (13 percent), and DKI Jakarta (12 percent).

too risky. The government is starting to develop standards for priority training and there are some initiatives from local governments to subsidize poor households, but the system is still not developed to effectively target unemployed workers in need of basic skills.

**Figure 5-5: Respondents Who Report Attending a Training Course (By Consumption Quintile and Labor Force Status (2006)**



Source: Susenas 2003.

**Standards for different training courses and providers are not developed and the quality assurance systems are not yet in place.** Resources devoted to training are still inadequate and the coordination between agencies is limited. Accreditation depends on the National Accreditation Board for nonformal education, but the lack of defined standards and the limited resources of the accreditation board are severe limitations for the development of an accreditation system. Similarly, certification of students is done by the institution, rarely providing national certificates, with the exception of household help programs.

**In addition, despite the existence of a formal accreditation system, the requirements are lax and evaluation and enforcement once the institute has been approved for operation are nonexistent.** As a consequence, little is known about the state of these private centers or the quality of their training courses. High growth in the sector, which is effectively deregulated and determined by market demand, is likely to overwhelm existing quality assurance mechanisms. Ensuring high-quality provision and guaranteeing access for the poor are significant and fundamental challenges if the system is to be developed further and to provide the necessary skills for success in the labor market.

**The few public centers (*Balai Latihan Kerja - BLK*) lack facilities and have outdated equipment which compromises the relevance of their training.**<sup>27</sup> Their attempt to shift to demand-driven training and a competency-based curriculum, and to improve linkages with the productive sector, has been thwarted by the lack of resources after decentralization and the lack of an integrated training system. BLKs,<sup>28</sup> were originally intended to service the growing manufacturing sector in the 1970s and 1980s and initially targeted poorer applicants who had only graduated from primary school or dropped out of secondary school. Since decentralization they

27 Nonformal education institutions in Indonesia are supervised both by the Ministry of National Education and the Ministry of Manpower.

28 Also referred to as BLKI, KLIK, UPTP and UTDP.

have come under the jurisdiction of district governments, resulting in uneven funding and dilapidated facilities. In 2006, there were 162 BLKs in 32 provinces, only nine of which are operated by the central government, the remainder coming under the jurisdiction of regional or local governments. Many programs offered by public training providers are also offered by private training centers.

**Table 5-2: Mapping of BLKs Condition (2006)**

| Condition | Western Indonesia<br>(102 BLKs) | Central Indonesia<br>(52 BLKs) | Eastern Indonesia<br>(8 BLKs) | Total<br>(162 BLKs) |
|-----------|---------------------------------|--------------------------------|-------------------------------|---------------------|
| Good      | 16%                             | 4%                             | 0%                            | 11%                 |
| Fair      | 37%                             | 19%                            | 0%                            | 30%                 |
| Poor      | 47%                             | 77%                            | 100%                          | 59%                 |

Source: MoMT (2006).

**It is clear that ensuring good quality for all training courses and providers by establishing standards, accreditation and certification, as well as improving access for the poor should be the priority for the training system.** The few steps that have been taken in that direction, which include plans to develop competency standards in high priority areas and accreditation criteria, are insufficient. There is a need for a comprehensive system that integrates employers, training providers, as well as national and local governments to create competency-based standards, to develop and enforce accreditation rules and diversify funding by partly subsidizing demand and by increasing linkages with the productive sector. Without these changes, it is unlikely that the training system will be effective at providing viable opportunities for school dropouts and an effective and flexible way to upgrade skills.

**A recent program, the *Kursus Para Profesi* (KPP) Program, provides evidence that without proper regulation and enforcement, conditional block grants are rarely effective at instigating changes in training providers.** The KPP Program provided block grants to training providers on a per trainee basis to improve service delivery and ensure access to hard-to-place populations. It was designed to improve quality and access by providing assistance for quality improvements to training centers which were required to meet certain targeting criteria for their students. This program aimed to address youth unemployment using a “3 in 1” approach, creating alternative pathways for employment. On the design, it had important equity considerations, trying to expand access to skill training for disadvantaged populations.<sup>29</sup> As part of the changes incorporated in the KPP program, training providers have to incorporate Life Skills Education in their curriculum. These are in line with the skills identified as most important in the Skills Survey, such as personal skills, social skills, academic skills, and vocational skills, including thinking and social skills, to be pro-active, alert and self aware, while specific skills include academic and vocational skills.

**The KPP program was structured as grants to be disbursed to private training providers on a competitive basis.**<sup>30</sup> The program design called for the following steps in the program implementation. On the equity side of the KPP intervention, the beneficiary population should be disadvantaged youth who have dropped out of

29 Over its two years of existence, the KPP has linked approximately 40,000 youth to domestic and overseas jobs through 214 training providers that teach 45 different types of courses. The total cost was US\$ 12 million, an average cost of US\$ 305 per student (courses are between one and six months in length).

30 The process followed standard procedures for these types of programs, but with a special emphasis on local government: (i) call for proposals; (ii) institutions present proposals, including number of beneficiary students and the type of skills to be taught, to the local Education Agency; (iii) proposals are evaluated by MoNE, (iv) grants are disbursed to the selected institutions; (v) grant recipient institutions recruit and train the trainees; and (vi) grant recipient institutions submit reports.

school, but the rules were hard to verify,<sup>31</sup> including the applicant's employment situation. Once selected, the training institutions received a block grant ranging from US\$ 21,000 to US\$ 42,000 (differences came for different costs per student based on the type and length of training they are getting), which despite some guidelines on how to spend it, was up to the institution to manage.

**The experience shows that while there is some evidence of positive outcomes for participants, changing the behavior of training centers through block grants is very difficult.** Since participation was not random, nor did it follow any quantifiable rules, controlling for selection bias in the assessment was impossible. As a consequence, the evidence of the benefits for participants relies on simple comparisons of wages, which show some positive signs among participants, especially those who moved to foreign countries. In terms of employment, most find jobs after three or four months, but since most had previous work experience, it is difficult to disentangle the effect of participating in the training from the probability of employment.

**The block grant was an insufficient incentive to change targeting mechanisms of the training providers, as the population served by KPP was similar to the overall population who previously received training.** Despite rules for selecting school dropouts, 77 percent of training in nonhousehold help programs was done by youths who completed senior secondary school. The proportion is lower for household help programs, with 80 percent of trainees having completed less than senior secondary school. The gender composition looks similar, with more women participating in training than men (100 percent when looking at household help training).

**The effect on the quality of the training is also unclear, as there is no evidence of major changes in the spending patterns of institutions.** Institutions state that they used most of the grant amount to cover personnel and operational costs, reporting some increases in the number of teachers. The quality of services appears to increase only slightly according to surveys, but this information did not include any quantitative measures, only perceptions. The program's required targeting rules were not followed by a majority of institutions, and there is no evidence of major changes in their operations. Some students were charged even though the block grant was intended to cover the student's tuition costs. There is only limited information about how institutions spent the block grant, with some indication that they spent it evenly across the same expenditure categories they had previously.

**It is evident from the KPP experience that block grants by themselves are unlikely to incentivize training providers to improve quality or change targeting mechanisms.** The goal of increasing access for the poor, therefore, needs to be accompanied by demand-side interventions or stronger enforcement of targeting rules linked to block grants, which are more easily enforced if accreditation systems are in place. Similarly, block grants are unlikely to produce big quality improvements if they are not linked to competency-based standards and incentives for accreditation. A comprehensive quality control system is, therefore, essential to improve the equity and the relevance of the current training system in Indonesia.

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31 The selection of participants had to meet the following criteria: (i) 18-35 years old; (ii) school dropout, but with a minimum education level of a junior secondary graduate (including Paket B); (iii) unemployed; (iv) enthusiasm to learn to work demonstrated by a letter of intent; (v) residency in the area in which the program is administered; and (vi) active students are not eligible to participate in the program.



**Box 5-2: The Role of Entrepreneurship Programs: The International Evidence**

Entrepreneurship programs have been promoted in different countries to improve the employment prospects of youth. However, despite the importance of self-employment in reducing youth unemployment in the developing world, there is little evidence on what type of policies may improve the productivity of such endeavors. In a recent study, Betcherman (2007) has compiled a world-wide inventory of the interventions that are designed to integrate young people into the labor market, including interventions that support youth entrepreneurship. This Youth Employment Inventory (YEI) is based on available documentation of current and past youth employment programs and includes evidence from 289 studies of interventions from 84 countries in all regions of the world. The YEI includes programs designed to facilitate the transition of young people into the labor market, with a focus on disadvantaged young people.

The overall finding from a wide range of countries is that these programs lead to positive outcomes although, due to the small sample size, it is hard to draw universal conclusions from this finding. In addition, once cost-effectiveness is taken into account along with labor market impacts, fewer than half of the programs in the inventory could be judged as successful. As the interventions to support youth employment tend to be different, the YEI classifies them into nine categories, one of which, “improving chances for young entrepreneurs” (which represents 11 percent of the sample) deals with self entrepreneurship. The young entrepreneurship interventions provided assistance, either financial, technical, and/or training, to youth who are starting their own business.

Some key elements for the success of these programs appear to be:

- Market-oriented training: Skills training needs to be aligned with the demands of clients and of the market place.
- Business Development Services: Providing Business Development Services, including mentorship, to support the entire business planning, execution, management and growth cycle.
- Market linkages: Young people are linked to business opportunities through different mechanisms including a youth portal, and youth connect phone line.
- Access to finance: Young entrepreneurs are provided access to startup and growth capital to launch and grow their businesses.

## Section 6

# Conclusions and Recommendations

**This report has explored the transition of youth into the labor market, and the implications for the formal education and the training sector, highlighting the generally slow transition to the labor market and the difficulty for educated workers to access good quality jobs, especially senior secondary school graduates.** Even though macro-economic trends would suggest that the demand for skills in Indonesia is sustained, the employment trends for educated workers are lagging economic growth in nonagricultural sectors which tend to be more education intensive. The evidence points to the role of skills in this slow transition, with a poor base of cognitive skills, especially for low-income students, and the poor quality of a high proportion of senior secondary school graduates as reported by employers. In short, despite the higher schooling achievement of younger generations, it is not clear that senior secondary school graduates are entering the labor market with the skills necessary to find good quality jobs.

**Judging by the trends towards more technology-based industries and a service-oriented economy, there is a need to meet the demand by employers for skilled workers with a stronger base of soft skills.** In addition, employers underscore the importance of practical skills, especially those learned on the job, so a more flexible approach that combines a stronger adaptable skill base with more practical and on-the-job training is likely to be more effective at improving the employability of young graduates. The conclusions from this report provide some guidance for the direction of future reforms, as well as pointing out areas where further work is crucial at this stage of Indonesia's economic and institutional development.

The following recommendations are made as a means of improving the future direction of Indonesia's general and vocational education system:

- **Focus on preventing early dropouts and improve the quality of basic education:** School dropouts only have access to poor quality jobs, initially as unpaid workers and eventually as self-employed workers. Their salary profile is flat throughout their working lives, remaining near the minimum wage. They are much more likely to be employed in the agricultural sector and unlikely to have access to formal jobs in the future. In addition, the existing training system is of limited effectiveness in providing a second chance for these students, so preventing them from dropping out is likely to have long-lasting effects.

- **Improve cognitive skills of students before they reach senior secondary education and ensure an adequate supply of senior secondary schools in the desired stream:** Although further work is needed to adequately assess the reasons for early dropouts, there is some evidence that returns to education are falling and that they are largely dependent on parental education, which may drive early dropouts by poor students who regard senior secondary education as having uncertain returns given their socio-economic situation. An additional constraint seems to be that cognitive skills and socio-economic characteristics are highly correlated with the senior secondary school stream attended, which also has important effects on future earnings.
- **There is a need to take a closer look at the supply and demand for senior secondary education, with a special emphasis on the availability of public senior secondary schools:** Poor students, who also tend to have lower cognitive skills for various reasons, are more likely to attend private vocational schools, partly because public general schools are selective about their students as a result of oversubscription. In turn, these schools are shown to have smaller returns and higher costs, so the expected return of senior secondary education for poor students is likely to be significantly smaller than the average returns observed in the data. Consequently, there is a need to ensure that the system does not effectively result in a sorting of poorer students into private vocational schools of uncertain quality and economic return and richer students into the public general stream.
- **Do not plan supply-driven expansions of vocational school, but focus on broadening the skill base and improving quality:** While the correct mix of general and vocational education is hard to determine empirically, there is significant evidence to argue against a large supply-driven expansion of vocational schools. The evidence points instead to the need to provide a broader set of skills for secondary education students, either through postponing vocational education or by including more generic skills in the vocational stream, as well as ensuring a better quality of education in both streams. There is evidence of the need to strengthen basic skills and competencies for secondary school graduates, mostly through improvements in education quality and partly through shifting vocational education to a later stage.
- **Explore alternative modes of delivering vocational education, increasing practical training and linkages with the private sector:** Convincing the productive sector to participate in these programs might prove a difficult task, but the effectiveness of this type of education increases dramatically when it is linked effectively with the productive sector. On equity grounds, particular attention should be paid to compensating for the tendency of firms to choose the best students to participate in these programs. The observed inequalities in learning outcomes by socioeconomic characteristics suggest that active targeting mechanisms (in the form of explicit rules or subsidies, for example) are needed to guarantee access to these programs for poorer students.
- **Improve the capacity of the nonformal training system to compensate the lack of skills, as well as provide a viable way to train unskilled workers and retrain and upgrade skills for educated workers:** The current system is not reaching enough dropouts, focusing disproportionately on richer youth and senior secondary graduates. There is a need to improve access to training for the poor. Defining the public role in regulation, provision and/or financing and improving the coordination of institutions involved in training (Ministry of National Education, Ministry of Manpower) and accreditation agency certification is a first step, but different modalities of financing and subsidies through providers, trainees or firms can be explored to increase the participation rates of lower-income unemployed youth in training programs.
- **Strengthen quality assurance mechanisms through the establishment of competency-based standards and a clear and enforceable accreditation mechanism.** As the KPP experience shows,

in the absence of quality assurance mechanisms and effective supervision tools, block grants have some limitations as a means to elicit changes in the training providers that lead to improved quality of instruction. The Gol is initiating the establishment of competency-based curricula and national certification, but more resources and stronger coordination are needed to accelerate these reforms.

- ***Entrepreneurship programs may be a viable way to assist youth to improve earnings prospects, but they are not substitutes for providing adequate and relevant skills for the labor market:*** Furthermore, the constraints to successful entrepreneurship are many and interventions need to be carefully designed to address binding constraints in the country context. The existing international evidence on the effectiveness of entrepreneurship programs emphasizes the importance of determining the exact constraints that entrepreneurs face in order to design policies that are appropriate to the country context, so more analysis should be carried out to understand the characteristics of entrepreneurs and their particular needs in Indonesia. Entrepreneurship training, however, is only a step, and it is not a substitute for the provision of effective skills for the labor market, which entrepreneurs also need for success. Thus, entrepreneurship training is not a substitute, but a complement to a strong cognitive and generic base of skills for success in the labor market, and in itself it is unlikely to create successful enterprises and have a significant impact on the quality of jobs for youth.

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