

MYANMAR HUMAN CAPITAL DEVELOPMENT, EMPLOYMENT, AND LABOR MARKETS

Sakiko Tanaka, Christopher Spohr, and Sandra D'Amico

NO. 469

December 2015

**ADB ECONOMICS
WORKING PAPER SERIES**



ADB Economics Working Paper Series

Myanmar Human Capital Development, Employment, and Labor Markets

Sakiko Tanaka, Christopher Spohr,
and Sandra D'Amico

No. 469 | December 2015

Sakiko Tanaka (sakikotanaka@adb.org) is Senior Economist at the Economic Research and Regional Cooperation Department, Asian Development Bank (ADB). Christopher Spohr (cspohr@adb.org) is Principal Social Sector Specialist of Myanmar Resident Mission, ADB; and Sandra D'Amico (sandra@bdlink.com.kh) is Founder and Advisor of BDLINK Cambodia.

This was a background paper for the ADB Myanmar Country Diagnostics Study.

Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
www.adb.org

© 2015 by Asian Development Bank
December 2015
ISSN 2313-6537 (Print), 2313-6545 (e-ISSN)
Publication Stock No. WPS157805-2

The views expressed in this paper are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

Note: In this publication, “\$” refers to US dollars.

The ADB Economics Working Paper Series is a forum for stimulating discussion and eliciting feedback on ongoing and recently completed research and policy studies undertaken by the Asian Development Bank (ADB) staff, consultants, or resource persons. The series deals with key economic and development problems, particularly those facing the Asia and Pacific region; as well as conceptual, analytical, or methodological issues relating to project/program economic analysis, and statistical data and measurement. The series aims to enhance the knowledge on Asia’s development and policy challenges; strengthen analytical rigor and quality of ADB’s country partnership strategies, and its subregional and country operations; and improve the quality and availability of statistical data and development indicators for monitoring development effectiveness.

The ADB Economics Working Paper Series is a quick-disseminating, informal publication whose titles could subsequently be revised for publication as articles in professional journals or chapters in books. The series is maintained by the Economic Research and Regional Cooperation Department.

CONTENTS

TABLES AND FIGURES	iv
ABSTRACT	v
I. INTRODUCTION	1
II. HEALTH	2
A. Health Sector Overview	2
B. Access to Water and Sanitation Improves, but More Rural Progress Needed	8
C. Primary Health Care Service Delivery Needs to be Expanded	8
D. More, Better Healthcare Workers Needed	12
E. Summary Recommendations	13
III. EDUCATION	15
A. Overview of Education Sector Governance and Emerging Reforms	16
B. Key Challenges Facing Education Finance	19
C. Key Challenges in Education Access and Attainment	21
D. Key Challenges in Education Quality and Relevance	33
E. Selected Recommendations	39
IV. EMPLOYMENT AND LABOR MARKETS	43
A. Myanmar's Favorable Demographic Profile for Growth	43
B. Skills Deficits Could Hamper Economic Growth	45
C. Unemployment is Quite Low by Regional Standards	46
D. Opening the Economy Creates Labor Market Challenges and Opportunities	47
E. Reform of Industrial Relations Is Under Way	47
F. Summary Recommendations	49
REFERENCES	53

TABLES AND FIGURES

TABLES

1	Health Indicators in Myanmar and Selected ASEAN Countries, 1995–Latest Year	3
2	Health Human Resources, Selected Fiscal Years, 1990–2011	12
3	Gross Enrollment Rates in Asia	23
4	Net Enrollment Rates by Expenditure Quintile Groups	24
5	Share of 14- to 16-Year Olds Having Completed Primary Education by Expenditure Quintile Groups	24
6	Self-Reported Reasons for Exit from Schooling, for Cohort Born in 1987–1989	29

FIGURES

1	Number of Malaria Cases and Tuberculosis Prevalence Rates, 1995–2012	4
2	Malaria and Tuberculosis Morbidity and Mortality by State and Region, 2012	5
3	Health Expenditure, 2000–2012	6
4	Total Health Expenditure, 2012	7
5	Antenatal Care by Expenditure Quintile Groups, Urban–Rural, 2010	9
6	Antenatal Care and Low Birth Weight by State/Region, 2011	10
7	Births Attended by Health Professionals (Doctors, Nurses, or Midwives) by Expenditure Quintile Group; Urban/Rural, 2010	10
8	Place of Delivery by Expenditure Quintile Groups; Urban/Rural, 2010	11
9	Immunization Coverage and Home Delivery by State and Region, 2011	11
10	Number of Doctors and Nurses per 1,000 Population, Latest Year	12
11	Distribution of Skilled Public Health Workers by States and Regions, 2011	13
12	Public Spending on Education in Asia	19
13	Household Spending on Education	20
14	Highest Educational Attainment by Cohort, Aged 15–60	22
15	Grade Completion Profile and Transition Rates by Group and Gender	27
16	Detailed Enrollment Profile for 2- to 23-Year Olds	30
17	Share of 15- to 64-Year Olds Having Participated in Training	31
18	College Enrollment Rates among 17- to 20-Year Olds	32
19	Average Years of Lagged Enrollment	34
20	Detailed Enrollment Profile for 2- to 23-Year-Old Females	35
21	Pupils per Teacher in Asia	37
22	Growth in the Number of Schools, Teachers, and Students, 1988–2012	37
23	Higher Education Courses by Popularity, Myanmar and Selected Countries	39
24	Myanmar Labor Force Compared with Selected Asian Countries	44
25	Labor Force Participation Rates in Selected Asian Countries	45
26	Wage Comparisons among Japanese Companies across Asia	46
27	Unemployment Rates in ASEAN Countries, 2000–2012	47

ABSTRACT

Improvement in human capital is essential for rapid, sustainable, and inclusive economic growth in Myanmar. Investments in health and education—including technical and vocational education and training—are essential to engineer a productive labor force that can contribute to and benefit from growth opportunities, while equipping the country's young population to participate in the country's dramatic socioeconomic transformation. This paper focuses on developing human capital, with an emphasis on health and education in the context of employment growth and an employment-enabling environment. While awaiting the release of up-to-date data and the outcome of broad ongoing legislative reforms, the paper draws on extensive analysis of available data, including the Integrated Household Living Condition Survey 2009–2010, nationally led assessments, and consultations with the government and a variety of stakeholders to provide a snapshot of important recent developments that are helping to shape the transformation.

Keywords: education, employment, health, Myanmar, technical and vocational education and training (TVET)

JEL Classification: E24, I15, I25, O15

I. INTRODUCTION

The pace of sustainable and inclusive economic growth in Myanmar is determined in part by the quality of its labor force. Investments in health and education—including technical and vocational education and training (TVET)—play an essential part in raising the productivity of a labor force that can create and take advantage of growth opportunities, and help the country’s young population benefit from Myanmar’s dramatic socioeconomic transformation. Growth simulation modeling conducted as part of the Asian Development Bank (ADB) Country Diagnostic Study suggests that strengthened human capital—by improving labor productivity and helping the country climb into higher value-added sectors—could make a leading contribution to accelerated gross domestic product (GDP) growth rates by 2030 (ADB 2014a). Strengthening human capital will also be critical to advancing equity and ensuring that such growth is inclusive.

Unfortunately, half a century of neglect and underinvestment in education and health have stunted human capital development, and as a result undermined Myanmar’s growth potential. However, the opening up of the country has created a renewed emphasis on “soft” infrastructure: in particular on human development, with particular focus on revitalizing health and education, providing better support and protection to workers, and guaranteeing certain inviolable rights to individuals and to groups along with the right of representation.

Human capital development requires a comprehensive and coherent strategy to capture the symbiotic relationship among population health, educational attainment and continuous learning, labor productivity, and growth. The focus of human capital development policies are equity and quality of services, regulation of the labor market, and the development of a productive labor force that can adapt to new economic opportunities. The quality and productivity of labor can be improved through a combination of primary, secondary, and higher education, as well as TVET and the overall improvement of the population’s health. All forms of education and training collectively must provide the hard and soft skills demanded in a modern, rapidly transforming economy. The role of labor market laws and regulations is to promote an investment friendly environment that enables and supports the creation of formal jobs and productive employment opportunities, while also protecting the basic rights of workers.

This paper focuses on developing human capital, in particular the roles of health and education in employment growth and an employment-enabling environment that considers the importance of industrial relations. While awaiting the release of more up-to-date data and the outcome of broad ongoing legislative reforms, the paper draws on extensive analysis of available data, findings from nationally led assessments, and consultations with government officials and other stakeholders to provide a snapshot of key developments as of mid-2014 that are helping to shape Myanmar’s transformation.¹

While each subsection discusses particular issues regarding key indicators, it is important to stress their cross-cutting nature and that human capital development is not a “stand-alone” subject. Human capital development should be considered among the foundations of the country’s long-term

¹ The Myanmar 2014 Census was conducted in March and April, but in-depth reports and the dataset will be released by early 2016. Surveys to be fielded in 2015 (include a labor force survey, demographic and health survey, and poverty and living conditions survey) will also support validation and/or updating of analysis presented herein.

competitiveness, which requires careful coordination of broad-based commitments and actions by ministries and stakeholders.

II. HEALTH

Key health indicators in the Millennium Development Goals have improved in Myanmar over the last 2 decades. Even so, the country continues to suffer some of the worst health conditions in the world. Malaria, tuberculosis, and HIV cause substantial mortality and morbidity. Reported malaria cases are 6 times higher and tuberculosis prevalence 1.3 times higher than the average reported among seven of the 10 countries in the Association of Southeast Asian Nations (ASEAN).² Increasingly, noncommunicable diseases are responsible for a high proportion of deaths as rapid urbanization and socioeconomic changes lead to increasingly unhealthy lifestyles.

To overcome major health service issues and improve the health system, four key areas need to be upgraded by regional and national administrations: funding, infrastructure (including health facilities, water and sanitation facilities), the supply of medical equipment and drugs, and the quantity and quality of health personnel. Across all four areas, strengthening the monitoring and management of the system is important. It is essential to enhance national health accounting and to seek alternative financing mechanisms to make increases in health financing sustainable. Reviews of human resources and facilities at public and private suppliers suggest each state and region needs to plan and implement human resource strategies, rehabilitate facilities and build new ones.³ To improve access and reduce its inequality across regions, income groups, and urban and rural areas, the government also needs to start planning social protection programs and universal health coverage.

A. Health Sector Overview

The National Health Committee, chaired by the Vice President (1) of the Republic of the Union of Myanmar, is an interministerial and policy-making body for health matters.⁴ It provides guidance in implementing health programs and assists in intersectoral collaboration and coordination.⁵

The National Health Policy was developed under the guidance of the National Health Committee in 1993. A long-term National Comprehensive Development Plan–Health Sector (2011–2030) was formulated in response to ongoing changes. The concept framework was prepared in 2012 and the draft plan proposed to the Ministry of National Planning in March 2014. With a goal of “health for all,” the plan outlines seven key programs: strengthening the health system, disease control, public health, curative services, development of traditional medicine, human resources for health development, and promoting health research. Each program lays out important goals and activities.

In the past few years, several documents have been prepared to support the review and reform of the health sector, such as the Health Financial Review for Myanmar in 2012. Health personnel

² Cambodia, Indonesia, the Lao People’s Democratic Republic (Lao PDR), Malaysia, the Philippines, Thailand, and Viet Nam.

³ Human resource and facility audits assess the current status of the health facilities including building and equipment condition, and human resource capacities.

⁴ The Republic of the Union of Myanmar has two vice presidential posts: Vice President (1) and Vice President (2).

⁵ The Ministry of Health has seven departments: Health, Health Planning, Medical Science, Medical Research (Lower Myanmar), Medical Research (Upper Myanmar), Traditional Medicine, and Food and Drug Administration.

assessments were conducted for the preparation in 2013 of the Health Workforce Strategic Plan 2012–2017, along with 60 township health facility audits in 2011 to 2013, and a roadmap of activities for development and implementation of an e-health strategy was formulated in 2013. A Geographic Information Systems mapping of health facilities across the entire country was conducted in March 2014, and an assessment of the health system for universal health coverage was prepared in 2012.

Although annual statistics on public hospitals, health services, population morbidity and mortality are available, comprehensive and disaggregated data on coverage and utilization of health services are not. Vulnerable people such as those living in rural, remote, and border areas, and low-income families in pre-urban areas have limited access to health information and health services (World Health Organization 2008). The health management information system is currently collecting paper-based details from health centers and hospitals on primary health care and patient statistics. With the completion of the Geographic Information System mapping exercise to identify the locations of all health facilities, the Ministry of Health aims to computerize health management information system data collection, using Global Positioning System data for management, utilization, and analysis. This can be further applied to health management information system data collection, possibly including drug distribution and stock management, and its timely analysis.

Health conditions show signs of improvement, but still lag behind neighboring countries.

As can be seen in Table 1, Myanmar has improved in several areas, including life expectancy, and infant and maternal mortality. Yet it still suffers significantly from malaria, tuberculosis, and HIV/AIDS, while noncommunicable diseases such as cancer is on the rise.

Table 1: Health Indicators in Myanmar and Selected ASEAN Countries, 1995–Latest Year

Health Indicators	1995	2000	2005	Latest Year	Average of Seven ASEAN Countries
Life expectancy at birth, female (years)	62.6	64.2	65.6	66.9	74.5
Life expectancy at birth, male (years)	58.3	60.0	61.5	62.8	68.9
Maternal mortality ratio (modeled estimate, per 100,000 live births)	380	300	230	200	168
Mortality rate, infant (per 1,000 live births)	66.9	58.5	50.7	41.1	24.9
Mortality rate, under 5 (per 1,000)	92.0	78.8	66.6	52.3	31.0

ASEAN = Association of Southeast Asian Nations.

Notes: Latest year is 2011 for life expectancy at birth, 2010 for the maternal mortality ratio, and 2012 for child and infant mortality rates. The seven ASEAN countries in the average figure are Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, the Philippines, Thailand, and Viet Nam.

Source: World Bank, World Development Indicators. <http://data.worldbank.org/data-catalog/worlddevelopmentindicators> (accessed March 2014).

Malaria is the leading cause of morbidity and mortality in Myanmar, according to the World Health Organization (WHO), with some 70% of the population living in the 284 out of 325 townships that are malaria-endemic areas (WHO 2008).⁶ Malaria prevalence in 2008 was 10.8 per 1,000 people, down from 24.4 in 1988 (Ministry of Health 2010). However, reported cases are much higher than the

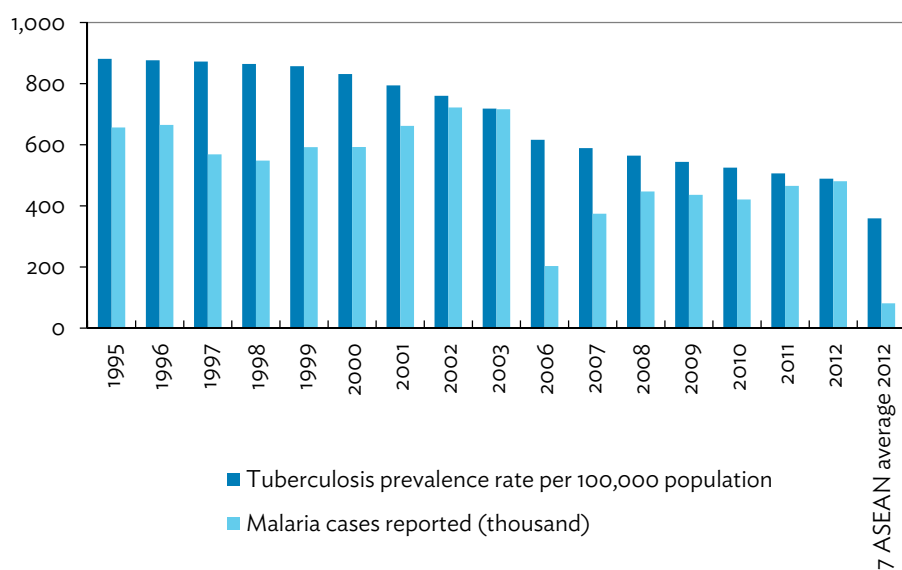
⁶ Morbidity refers to the rate of incidence of a disease in a specific area or population.

average of seven ASEAN countries, in particular along the Thai border (Figure 1). The country also accounted for nearly half of all malaria deaths in Southeast and South Asia, even though Myanmar has only a small fraction of the region's total population (Beyrer and Lee 2008).

High-risk groups include workers in forests, new settlers in forest fringes, farmers in the forest, forest fringes, and uplands, migrant workers, and ethnic communities. Children under 5 years old and pregnant women are also at high risk. *Plasmodium falciparum* malaria accounts for 75% of malaria infection and is now highly resistant to commonly used antimalaria drugs (WHO 2008). *Plasmodium falciparum* malaria with cerebral complications killed 1,093 people (3.9% of total mortality and the second leading cause of mortality in 2008) and an unspecified malaria killed 479 people (1.7% of total mortality).

Tuberculosis is another major health problem. Although Myanmar has achieved global targets of reducing tuberculosis incidence, prevalence rates are still higher than in neighboring countries (Figure 1). Morbidity rates vary across regions and states. Total morbidity was 16,679 cases and total mortality 858 cases, accounting for 3% of overall mortality, making tuberculosis the fourth largest cause of death in Myanmar (Central Statistical Organization 2013). The prevalence of HIV among new tuberculosis cases was 9.9%, according to surveillance conducted at 25 sites in 2012 (Ministry of Health 2013a).⁷ The reported morbidity rates for malaria and tuberculosis vary among regions. High malaria morbidity rates were reported in the northwest (states of Chin and Rakhaine, and region of Sagaing), the northeast (Kachin state), the east (Kayah state), and the south (Tanintharyi region). (Figure 2).

Figure 1: Number of Malaria Cases and Tuberculosis Prevalence Rates, 1995–2012

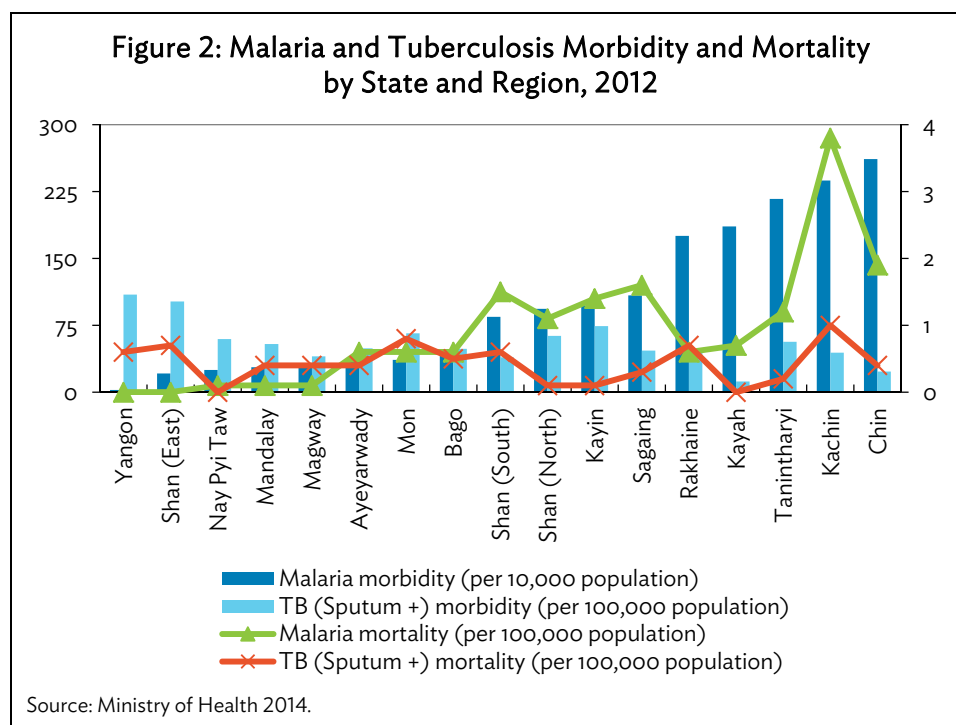


ASEAN = Association of Southeast Asian Nations.

Notes: No data reported for malaria cases in 2004 and 2005. The seven ASEAN countries in the average figure include Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, the Philippines, Thailand, and Viet Nam.

Source: World Bank, World Development Indicators. <http://data.worldbank.org/data-catalog/world-developmentindicators> (accessed April 2014).

⁷ The prevalence of multidrug-resistant tuberculosis was 4.2% among new patients and 10% among previously treated patients, based on a second nationwide survey completed in 2008 (Ministry of Health 2013a).



HIV prevalence is also high. Reported HIV cases increased after 1992, when the first case was reported (WHO 2008). Adult HIV prevalence peaked around 2000–2001 and has declined fairly steadily since. Estimates and projections of HIV indicate that about 238,000 adults and children were living with HIV at the end of 2009 (Ministry of Health 2010). The official cumulative number of deaths due to AIDS as of the end of 2006 was 5,621. Overall prevalence among adults is 0.7%, while prevalence among sex workers and injecting drug users was 33.5% and 42.5%, respectively (WHO 2008).

Noncommunicable diseases are progressively increasing, and affecting poor and rural populations most. The four major noncommunicable diseases are cancer, diabetes mellitus, cardiovascular diseases, and chronic respiratory disorders. Population aging, rapid urbanization, and changing lifestyles are responsible for the epidemiological transition, with major risk factors including tobacco use, high blood pressure, and household air pollution. A study in the capital cities of all states and regions in 2001 found that 14.6% of women aged 18–60 were overweight and 3.8% obese. Among men, 7.2% were overweight and 1.4% obese (WHO 2008). Cancer has become a major public health problem and most cases are found in their late stages due to a lack of public awareness and inadequate early detection programs (WHO 2008). Tobacco use (smoking and chewing nicotine) is common and has likely implications for the development of noncommunicable diseases. A sentinel prevalence study in 2001 reported that 40% of adults use tobacco (Ministry of Health 2002, WHO 2008).

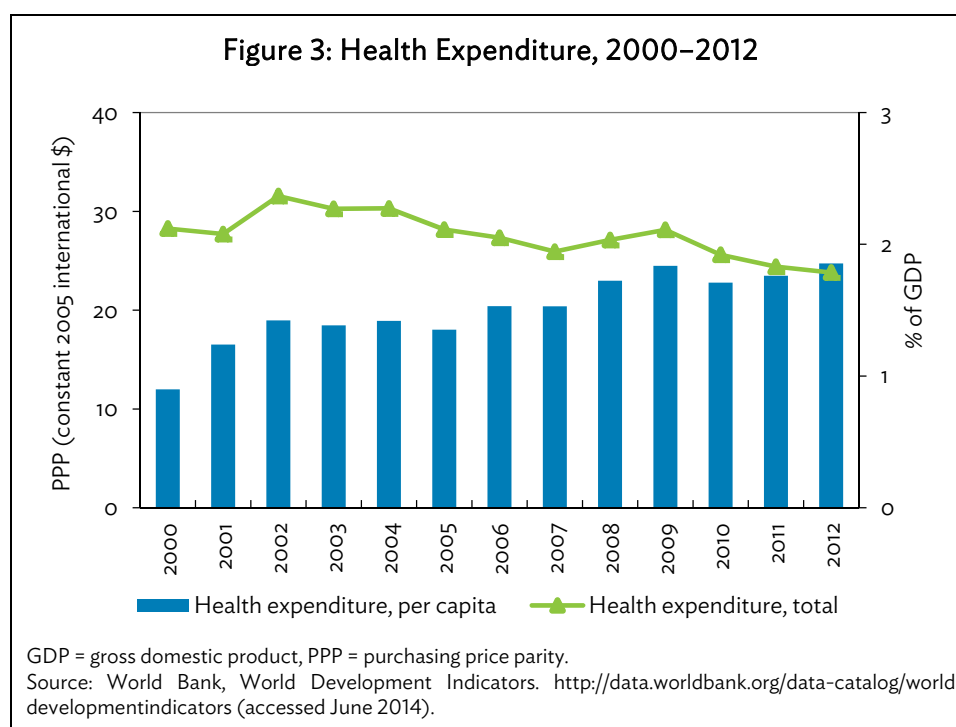
Malnutrition is widespread. The United Nations Children’s Fund (UNICEF) estimated that chronic malnutrition may affect up to a third of children in Myanmar (Beyrer and Lee 2008). The UNICEF Multiple Indicator Cluster Survey 2009–2010 reported 8.6% had low birth weights but the actual rate may be higher as many babies are born at home and not weighed at birth (only 56.3% of infants were weighed at birth, according to the survey). Low birth weight is associated with high neonatal mortality, though there are significant variations by region and state, with Bago, northeast of

Yangon, and the mountainous Kayin state having the highest percentage (11%) of underweight newborns (MNPED and UNICEF 2012).

Children in rural areas appear more likely to be underweight and stunted than children in urban areas, but there is a little difference in their wasting. Almost one-third of rural children were moderately or severely underweight (29.9%) and moderately or severely stunted (31.6 %) based on the Multiple Indicator Cluster Surveys 2009–2010. Prevalence was nearly equal among both sexes. As for regional disparities, children in Rakhine (37.4% moderately or severely underweight and 49.9% severely or moderately stunted) and Chin (30.7% moderately or severely underweight and 58% severely or moderately stunted) are more likely to be undernourished than children in other states (MNPED, MOH, and UNICEF 2011).

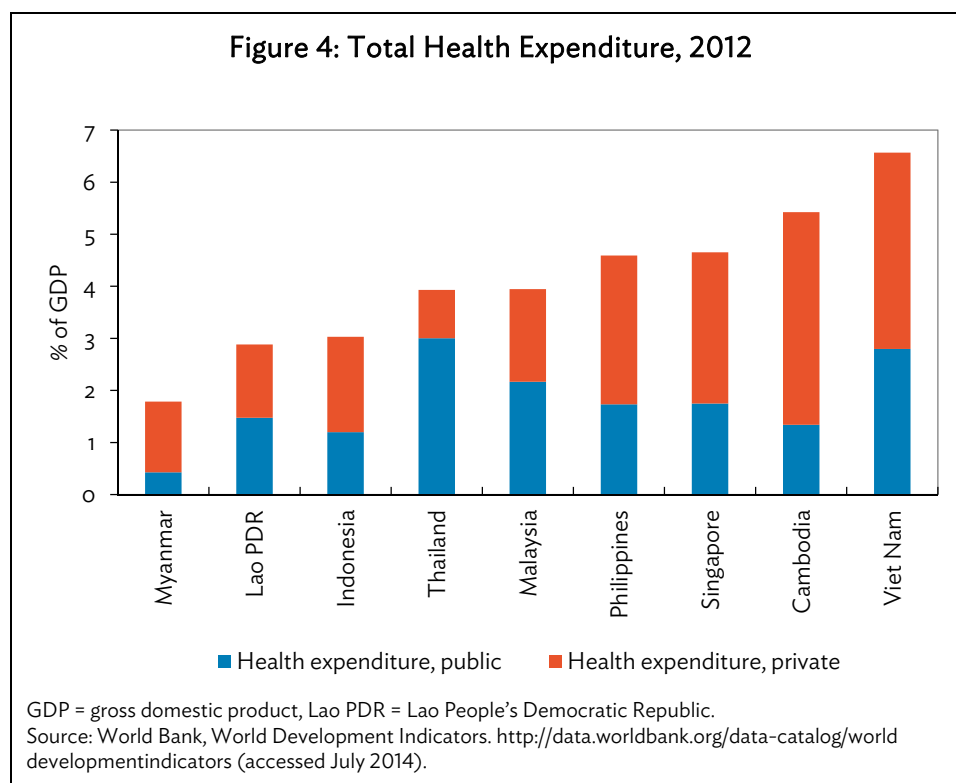
A substantial increase in public spending on health is needed.

The health system has long suffered low public investment, and although total health sector expenditure has increased in absolute terms since 2000 (Figure 3), it accounted for only about 2% of GDP in 2012—the lowest proportion in Southeast Asia (Figure 4). Public spending on health in 2012 was a meager 0.43% of GDP, but has begun to rise rapidly.



Out of the three financing sources—public, private, and external—the private sector has been the major source, accounting for over 80% of total health expenditure (85.3% in 2008, 82.3% in 2009). Private financing is almost exclusively from household out-of-pocket spending. Out-of-pocket spending as percentage of total health expenditure was 71.3% in 2012. It is necessary both to increase public health spending and to support universal coverage. The three biggest categories of public health spending in 2009 were medical goods (44.5%), curative and rehabilitative services (29.5%), and ancillary services, which accounted for 12.5% of public health spending that year (MOH and WHO 2010). While the quality of the national health account has been improved, nonpublic service

providers, including private and civil society, and external funding sources should be reviewed to identify areas for further progress.



At the same time, it should be emphasized that the new government has dramatically ramped up public expenditure on health (as with education), with the health budget estimated to have risen from roughly 0.2% of GDP in fiscal year (FY) 2011 to a projected 1.2% of GDP in FY2015, with some evidence that this has helped lower the burden of out-of-pocket spending (International Monetary Fund 2014).⁸ It will be critical to continue such budgetary increases while building the capacity of the health system.

Health infrastructure urgently needs to be upgraded.

The number of government hospitals increased from 661 in 1990 to 944 in 2013, and rural health centers rose from 1,373 in 1990 to 1,558 in 2011, though there have been no new maternal and child health centers since 348 were recorded in 1990 (Central Statistical Organization 2012). Based on a recommended allocation of one rural health center per 20,000 people, the number nationally needs to almost double to 3,000 (WHO and MOH 2012). The Ministry of Health's mapping has identified where these should be located in relation to population density. Many rural health facilities lack basic equipment and medical supplies (MNPED and UNICEF 2012). The ministry recently began revising its policy, which supports free delivery of essential medicines at station hospitals and other facilities. After a trial period, it will be decided whether or not to supply free essential medicines to rural health facilities (WHO and MOH 2012).

⁸ Fiscal year in Myanmar is from 1 April to 31 March. FY before a calendar year denotes the year in which the fiscal year starts, that is, FY2014 begins on 1 April 2014 and ends on 31 March 2015.

Private service providers are expanding, particularly in Yangon, Mandalay, and other larger cities. In 2010, there were 103 private hospitals, 192 private special clinics, and 2,891 private general clinics. Based on health system assessments in 20 townships, there have been some public–private partnership initiatives for the management of tuberculosis and malaria.

The government, with WHO support, has completed facility audits of 60 townships. But it will require more resources to understand the current supply-side situation, particularly at rural health centers. Completion of audits of both public and private health facilities (including their condition, water and electricity access, human resources, equipment, and medical supplies) is essential for information for decisions on capital investments.

B. Access to Water and Sanitation Improves, but More Rural Progress Needed

Global studies have demonstrated that morbidity and mortality in children decline as water and sanitation improve (Fewtrell et al. 2005). In Myanmar, access to improved water sources was available to 58.9% of households in 1995, 66.9% in 2000, and 85.7% in 2012. That compared to the average of seven ASEAN countries of 68.5%, 74.1%, and 87.1% in those years (World Bank, World Development Indicators). The share of the population with access to sanitation facilities rose from 53.4% in 1995, to 60.6% in 2000, and 77.4% in 2012, whereas, the average of seven ASEAN countries stood at 50.2%, 56.4%, and 71.3% in those years, according to the World Bank’s World Development Indicators.

Despite this progress, a quarter of the population in urban areas still has no access to clean water. Myanmar is one of a few countries in ASEAN where the percentage of the urban population without access to improved water sources has actually increased over the past 2 decades.⁹ Rapid urbanization and rural-to-urban migration may be partly responsible, especially in growing slum areas. Private tube wells, rainwater, and other systems are viable alternative sources of water in a country where, except for Yangon, coverage for piped water is limited. Where piped water is available, the system is in poor condition. Water-related vector borne diseases, mosquito borne diseases such as malaria, dengue, and chikungunya fever, and diseases that result from bacterial contamination from old water systems are common. The incidence of diarrhea among children under 5 years is considerably higher than elsewhere in Southeast Asia and contributes to Myanmar’s high child mortality rate. Lack of adequate and modern sanitation facilities and systems compounds the problem. No conventional central sewerage systems exist and, in most urban areas, effluent and seepage from septic tanks and latrines flows into open rainwater drainage and natural waterways, contributing to health risks.

C. Primary Health Care Service Delivery Needs to be Expanded

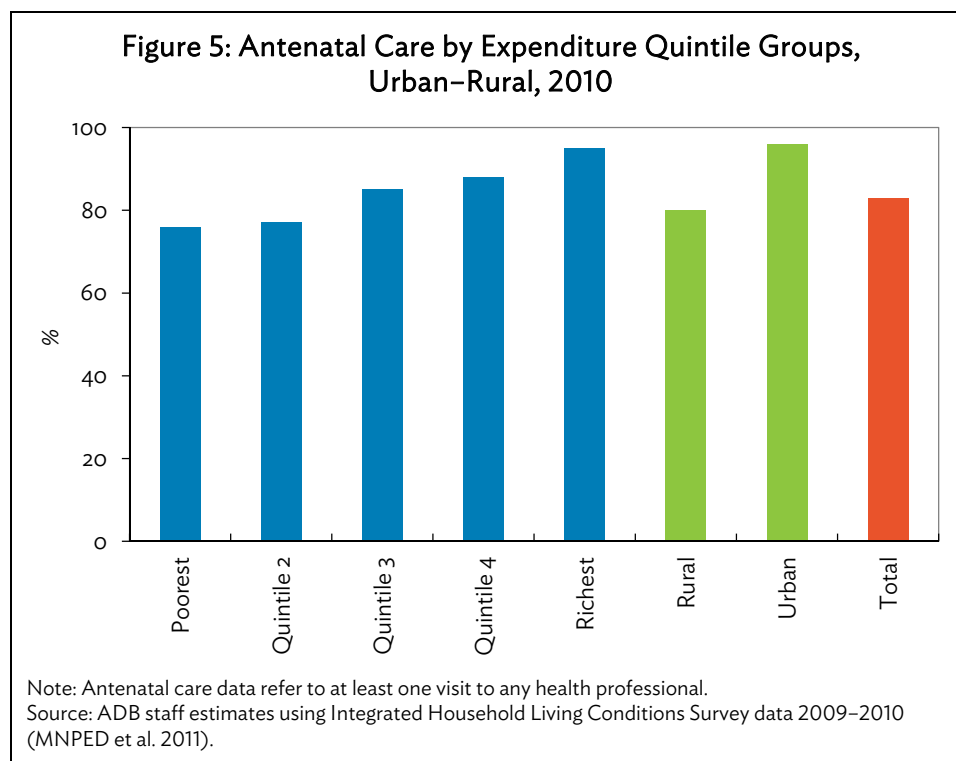
Regional and income disparities in access to health services are significant. According to United Nations Development Programme data, for example, total coverage of antenatal care (at least one visit) increased to 83% by 2010 (MNPED et al. 2011), close to the average of the seven ASEAN countries of 88.7%, but disparities within the country remain large by region, rural and urban

⁹ This has also happened in Indonesia and the Lao PDR (United Nations Economic and Social Commission for Asia and the Pacific 2011).

populations, and between rich and poor.¹⁰ These disparities for antenatal care are shown in Figures 5 and 6. Based on integrated data from the Household Living Condition Survey 2009–2010 (MNPED et al. 2011), it is important to note that the percentage of low birth weight infants is associated with the coverage of antenatal care.¹¹

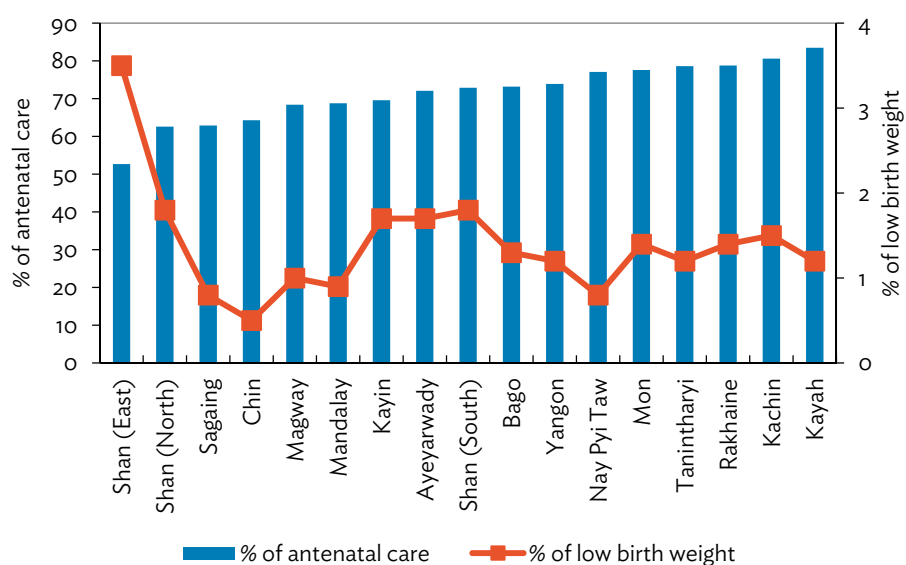
Improving access to quality health care is a focus of the National Health Plan for FY2011 to FY2015, formulated within the health sector national for the 2 decades to 2030. The goal is to address the lack of trained health professionals, well-equipped health facilities, efficient health-care management and clinical supervision, and medical supplies. These shortcomings have contributed to unequal access to health care.

In total, 73% of births were attended by health professionals (doctors, nurses, or midwives). Disparities exist among rich and poor, urban and rural in the percentage of attended births (Figure 7). An average of 77% of births took place at home. Again, disparities exist but in all groups more than half of deliveries were at home (Figure 8). Many deliveries at home were attended by health professionals or an auxiliary midwife. However, home deliveries, even attended by health staff or auxiliary midwives, are associated with lower immunization coverage. The correlation is significant between coverage of Bacillus Calmette-Guérin (the vaccine used to prevent tuberculosis) and the percentage of home deliveries, at 0.009, and hepatitis vaccine coverage and the percentage of home deliveries at 0.01 (Figure 9).

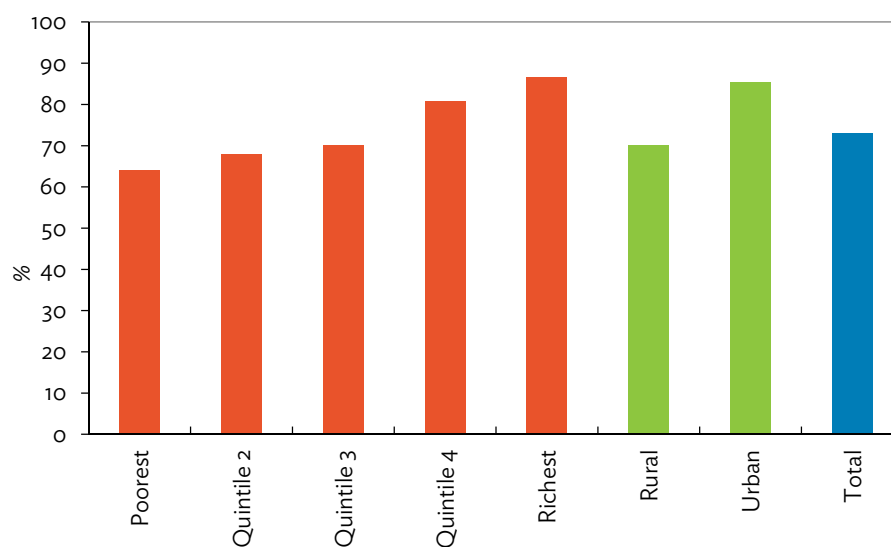


¹⁰ The seven ASEAN countries include Cambodia, Indonesia, the Lao PDR, Malaysia, the Philippines, Thailand, and Viet Nam. Latest available data (2009 data for Thailand; 2010 data for Cambodia, Indonesia, and the Lao PDR; 2011 data for Malaysia, the Philippines, and Viet Nam) were used from the World Bank's World Development Indicators.

¹¹ Pairwise correlation coefficients were used to examine the correlations between the two variables.

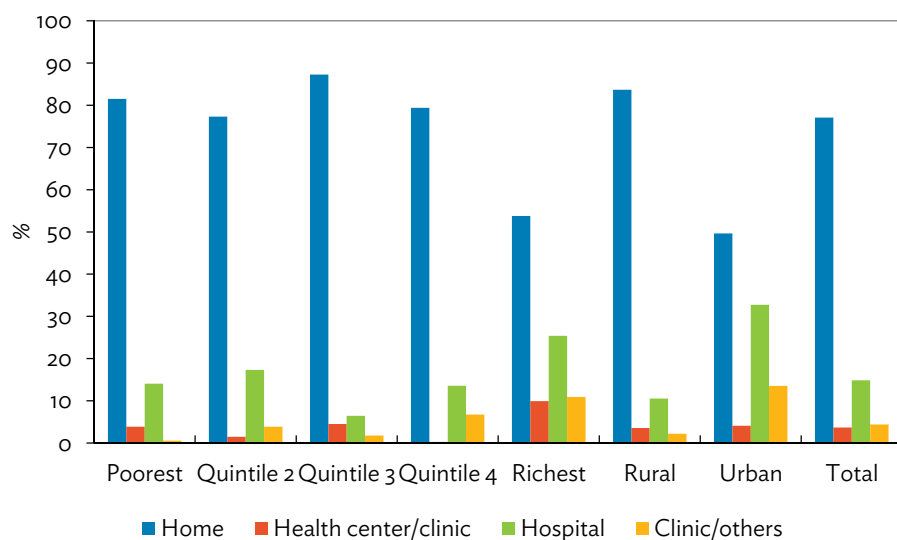
Figure 6: Antenatal Care and Low Birth Weight by State/Region, 2011

Note: Antenatal care data refer to at least one visit to any health professional.
 Source: ADB staff estimates using data from the Ministry of Health (2013a).

Figure 7: Births Attended by Health Professionals (Doctors, Nurses, or Midwives) by Expenditure Quintile Group; Urban/Rural, 2010

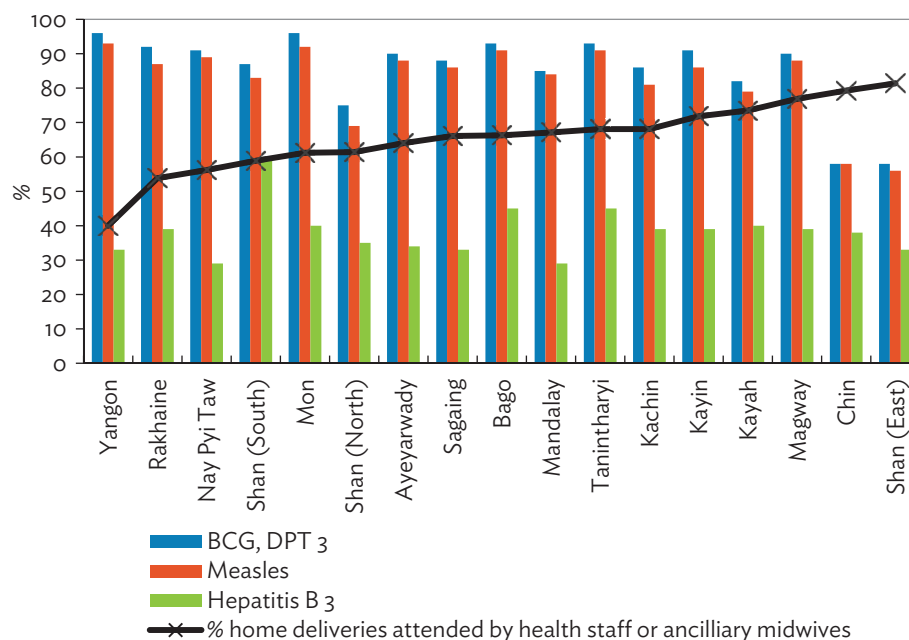
Source: ADB staff estimates using Integrated Household Living Condition Survey data 2009–2010 (MNPED et al. 2011).

Figure 8: Place of Delivery by Expenditure Quintile Groups; Urban/Rural, 2010



Source: ADB staff estimates using Integrated Household Living Condition Survey data 2009–2010 (MNPED et al. 2011).

Figure 9: Immunization Coverage and Home Delivery by State and Region, 2011



BCG = Bacillus Calmette-Guérin, DPT = Diphtheria-Pertussis-Tetanus.

Note: BCG is a vaccine against tuberculosis. DPT is a vaccine against pertussis or whooping cough.

Source: ADB staff estimates using data from the Ministry of Health (2013b).

D. More, Better Healthcare Workers Needed

Table 2 shows how the number of doctors (public and private), nurses, and midwives has increased in the last 2 decades, along with their number per 10,000 people (Ministry of Health 2013a). However, compared to neighboring countries, and as shown in Figure 10, the proportion remains low.

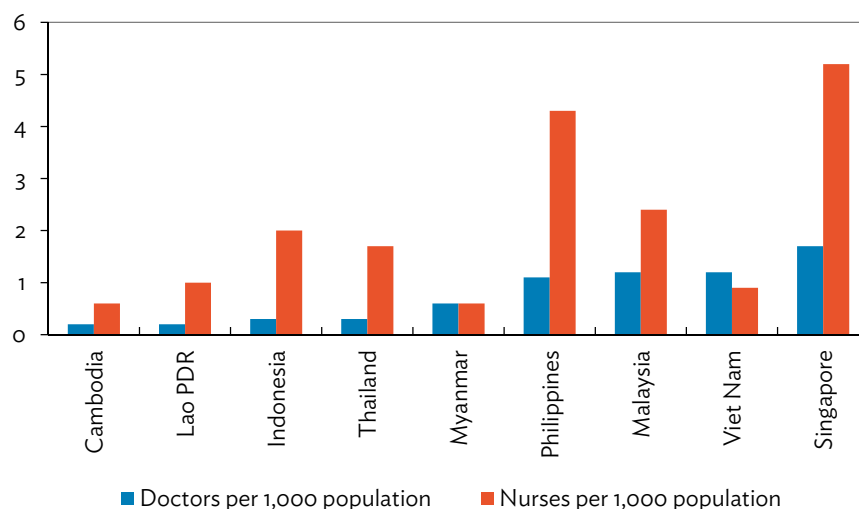
Table 2: Health Human Resources, Selected Fiscal Years, 1990–2011

Health Workers	FY1990 (population 40.78 million)		FY2000 (population 50.13 million)		FY2005 (population 55.4 million)		FY2010 (population 57.78 million)	
	Number of Providers	Providers per 10,000 People	Number of Providers	Providers per 10,000 People	Number of Providers	Providers per 10,000 People	Number of Providers	Providers per 10,000 People
Doctors (public and private)	12,268	3.0	15,467	3.1	18,584	3.4	26,435	4.4
Doctors (public sector)	4,418	1.1	5,421	1.1	6,941	1.3	10,927	1.8
Doctors (private sector)	7,850	1.9	10,046	2.0	11,643	2.1	15,508	2.6
Nurses	8,558	2.1	14,159	2.8	19,776	3.6	25,644	4.3
Midwives	8,334	2.0	11,959	2.4	16,745	3.0	19,556	3.3

FY = fiscal year.

Source: Central Statistical Organization 2013; MNPED and UNICEF 2012; ADB staff estimates using data from the Central Statistical Organization (2012).

Figure 10: Number of Doctors and Nurses per 1,000 Population, Latest Year



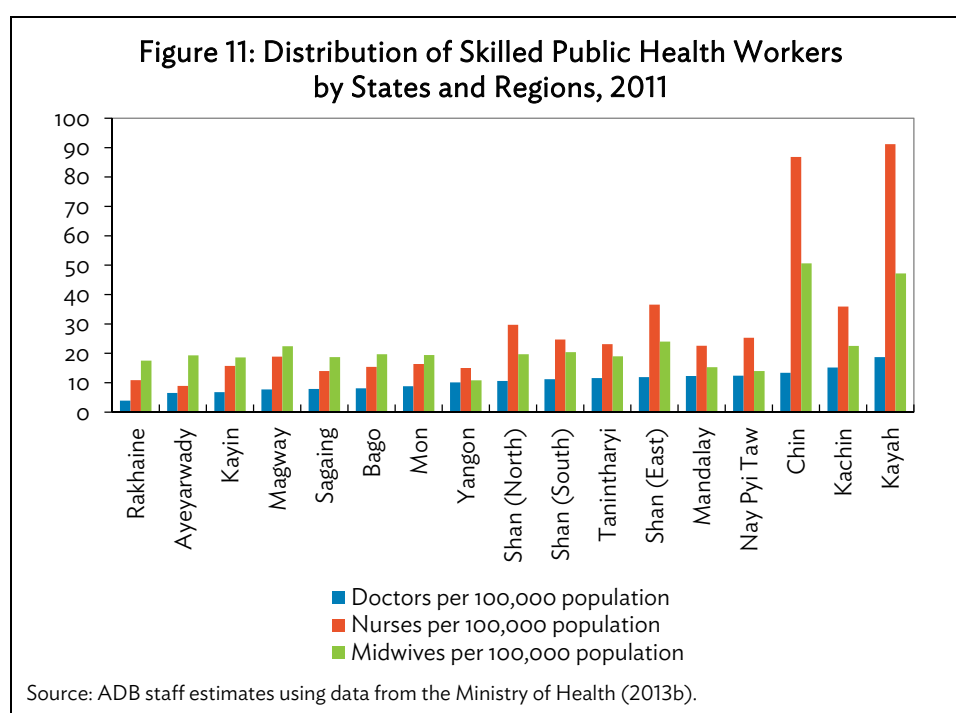
Lao PDR = Lao People's Democratic Republic.

Note: Data for Cambodia for 2010, Indonesia 2011, the Lao PDR 2005, Malaysia 2010, Myanmar 2011, the Philippines 2004, Singapore 2011, Thailand, 2010, and Viet Nam 2008.

Source: Organisation for Economic Co-operation and Development/World Health Organization 2012.

Based on the Ministry of Health's Human Resource Skills Assessments 2012 and Health Workforce Strategic Plan 2012–2017, the number of midwives should be increased to improve short-term maternal and child health outcomes. Refresher courses and supplementary training are essential to improve midwifery skills. In the long run, the number of doctors and nurses should be increased, particularly in rural areas. Adequate budgets must also be provided for operating health facilities and training medical personnel.

While the number of doctors and nurses remains low, great disparities exist among states and regions, as shown in Figure 11. A clear human resource strategy needs to be developed to ensure that resources are available or developed locally. Given vast cultural diversity, regional based human resource plans would arguably be best developed locally amid an overarching nationwide quality control mechanism to ensure health care professionals can meet high standards.



E. Summary Recommendations

Four key areas need to be upgraded by state/regional and national administrations to overcome major health issues and strengthen the national health system: (i) funding, (ii) infrastructure, (iii) supplies of medical equipment and drugs, and (iv) human resources. Strengthening monitoring and management are necessary for the four areas to complement each other. One of the priorities for this is to enhance the national health account and seek public sector financing mechanisms to sustain increases in funding. Based on audits at every public and private health center or hospital, strategies for improving human resources, rehabilitating or building facilities need to be mapped out and implemented carefully in each state and region. Inequalities in access to health care across regions and states, among different income groups and between urban and rural populations, need to be addressed, and well-targeted social protection programs considered.

Health policies based on the Public Health Law of 1972, including minimum standards of care, should be reviewed and updated. One of the priorities in the Myanmar National Health Policy 1993 is to encourage public–private partnerships such as with private companies, nongovernment and faith-based organizations for health service delivery and to put proper licensing and registration in place. Partnerships, particularly with those already working in rural areas, are a potential avenue for strengthening the quality of service provision, training, and facility management and supervision.

Strengthening the health system, including health infrastructure and capacities, financing, and the Health Information Management System (HIMS) is a government priority. The Geographic Information System used to map information on human resources, the condition of health facilities, the population, and health outcomes for all of Myanmar’s health facilities, helps policy makers. Population information from the 2014 census will be updated and should be incorporated into the Geographic Information System mapping. This system, and information and communication technology (ICT) generally should be applied fully to improve HIMS data collection and analysis, as well as medical referrals, the distribution of medical equipment and drugs, and stock management.

Short-term (1–3 years) recommendations:

- (i) Review and update the public health law of 1972 and the health policy of 1993 to ensure the adequacy of regulations, including policy on the minimum standard of services at state and private health centers, and the adequacy of the policy framework to accommodate the Health Sector National Comprehensive Development Plan (2011–2012 to 2030–2031).
- (ii) Review funding sources of foreign and nonpublic service providers (including civil society), assess the feasibility of alternative financing for public services, such as for health insurance and health equity funds, by looking at best practices in other countries, and assess the potential modalities of partnering up public and nonpublic service providers, including for in-service training in private and public health facilities.
- (iii) Complete nationwide health facility audits (both public and private) to measure conditions at health facilities, including equipment, medical supplies, human resources, buildings, and access to water and electricity; and map these with Geographic Information Services, which could be used initially for HIMS data collection, and later on for e-health services and the management of pharmaceuticals stock.
- (iv) Assess the access of poor, remote, and other disadvantaged populations to primary health care, and identify social protections such as conditional cash transfer programs that can contribute to universal coverage of health care.
- (v) Review the geographic distribution of health professionals and examine constraints and retention issues in remote areas, and design incentives to address such issues.
- (vi) Identify potential private and civil society health service providers, facilitate licensing and registration, and later on discuss potential modality of partnership, geographic areas, and type of services for public–private partnerships.

Medium to long term (5–8 years) recommendations:

- (i) Increase public health spending to a minimum of 3% of GDP, based on the review of funding sources of nonpublic providers and the assessment of potential private and nonstate partners. Alternative financing mechanisms such as taxation of products like tobacco or alcohol to support public health financing can be piloted. Based on the results, policies for alternative financing can be developed.

- (ii) Prepare a national plan to expand the number of rural health facilities, and start construction of new rural health centers.
- (iii) Test the public–private partnership approach in one state or region to assess its feasibility. In the pilot phase, prepare a partnership agreement with public and nonstate service providers. Common monitoring indicators and a system for evaluation should be established under the agreement.
- (iv) Review and develop national and regional human resources policies. Conduct bottom-up human resource planning in the regions and develop overarching quality mechanisms covering the whole country.
- (v) Review salaries and benefits of health professionals by type/levels, age, gender, region/states from community health centers to hospitals (by conducting a short survey) to ensure that they have provided adequate incentives to encourage qualified people into professional jobs and to reduce turnover and the tendency to focus only on care for private clinics.
- (vi) Computer-based HIMS data collection and analysis should be activated, together with e-health services. When their feasibility has been established and funds are assured, the data, including those collected through Geographic Information Services, should be shared in an online database that can be updated in real time. The national rollout of e-health and real-time data updating require guidelines and training, both of which should be planned and conducted for health care management and data managers in region/state and national administrations.

III. EDUCATION

As Myanmar undergoes dramatic socioeconomic transformations in the coming years, education—a critical component of human capital development—will be crucial to ensure that the country remains productive and competitive in the global economy, and that all segments of society can participate in development.¹² Years of underinvestment have created challenges in Myanmar’s education sector, and education indicators still lag behind other ASEAN countries. At the same time, Myanmar can tap some important strengths that can lay the roots for forthcoming education reforms.

Myanmar has a strong intellectual heritage (with an emphasis on values of education and learning), a strong history of excellence in education, and high literacy rates compared to ASEAN cohorts. While the reform agenda is daunting, education reforms (including of TVET) that started in 2012 are already demonstrating positive effects. Among these, the government’s launch of a Comprehensive Education Sector Review (CESR), in collaboration with an array of development partners, represents a fundamentally important step in providing a strengthened evidence base for policy reforms and education sector investments.

¹² Between initial and final preparations for the publication of this report, a number of changes have been made and the many aspects and implications of these are emerging. A new National Education Law has been passed and then amended, but more detailed rules and regulations and subsector-specific legislation are still being drafted. With ADB support, the Ministry of Education expects to replicate analysis performed under the CESR using datasets expected to be released by early 2016, though analysis of initial results released from the 2014 census broadly align with the dynamics presented in this report.

A. Overview of Education Sector Governance and Emerging Reforms

Before the drafting of the National Education Law and the emergence of other forthcoming reforms, the 2008 Constitution and particularly the Basic Education Law of 1973 and the University Education Law of 1973 have governed the provision of education. The duties of the state on education are set out in Clauses 22 and 28 of the Constitution, which declares that all citizens have the right to education and shall be given compulsory education. Pending forthcoming reforms, other laws governing the education sector include the Law of Myanmar Board of Examination of 1973, the Education Research Law of 1973, the Technical Agricultural and Vocational Education Law of 1974 (amended in 1989), the Private Education Law of 1984 and 2006, the Child Law of 1993, and the Private School Registration Law of 2011.

The National Education Committee, chaired by the minister of education, is the highest policy-making body for education. The ministry's role is to implement educational programs, set educational policies, plan and administrate public education, and to regulate nongovernment educational institutions. The ministry supervises almost all schools offering basic public education.¹³ Other ministries involved in basic education include the Ministry of Religious Affairs, which manages monastic schools, and the Ministry of Border Affairs (CESR, ADB, and Australian Aid 2013a). Pending forthcoming legislative reforms (including the National Education Law and expected higher education subsector law), higher education is governed by the National Education Committee, with two other policy-making bodies charged with administrative and academic policy for higher education institutions (CESR, ADB, Australian Aid, and UNESCO 2013).

Major education reforms began in 2012.

As a critical foundation for evidence-based reforms, in early 2012 the government announced the first systematic analysis of the entire education sector in 2 decades. It completed the first phase of the CESR in 2013 in collaboration with development partners in education. This resulted in a series of reports in 2013 which provide much-needed data and information on the state of education.¹⁴ The reports included four technical annexes supported by ADB and other development partners and covering secondary education, higher education, TVET, along with a labor market analysis on the demand for higher education and TVET graduates.

Following the completion of in-depth analysis under Phase 2, the CESR will support the government's formulation of a National Education Sector Plan as a unified guide to government and development partner investments through the next 5-year plan period (FY2016–FY2020). The Ministry of Education also initiated a longer-term Education Sector National Comprehensive Development Plan (FY2011–FY2030). This discusses barriers to the development of the education sector, requirements for developing the education sector, current problems and sources of problems in the education sector, as well as future priorities.

¹³ See the Ministry of Education website: <http://www.myanmar-education.edu.mm/dhel-2/education-system-in-myanmar/education-structure/>. This report adopts Myanmar's definition of basic education as consisting of primary and secondary education (now 11 years, pending extension to a 12-year system).

¹⁴ These four technical annexes (cited elsewhere in the text) are posted in relevant sections of the CESR website at <http://www.cesrmm.org/index.php/en/documents/>, and also at <http://www.adb.org/projects/46369-001/documents>

Since mid-2014, a draft overarching National Education Law is under deliberation, with second-tier laws (such as for basic education, higher education, TVET, and so on) at different stages of development.

Primary and secondary school cycles are shorter, with lower entry ages than many regional peers, but reforms are planned.

Primary education in Myanmar normally begins at 5 years old, which is low by regional standards. Primary school consists of grades 1–5, and is followed by 4 years of lower secondary education or “middle school” (grades 6–9), and 2 years of upper secondary education or “high school” (grades 10–11), meaning that primary and secondary education is below the international standard of 12 years.¹⁵ The CESR assessed options for increasing the number of years, and the Ministry of Education plans to reform the structure to add kindergarten (in the international sense) and a third year of high school (moving from a “5-4-2” system to a so-called KG-5-4-3 system) with completion expected by school year 2021/22 (CESR, ADB, and Australian Aid 2013a).¹⁶

Development partners—particularly Japan for primary education and ADB in partnership with Australia (for lower-secondary education and upper-secondary education)—are supporting the Ministry of Education’s curriculum reforms. While Myanmar’s 11-year basic education cycle is just 1 year short of the international standard of 12 years, it is still a year longer than the 10-year cycles of the Philippines and Singapore.¹⁷

Forthcoming TVET reforms will be critical to addressing skill shortages.

Pending the drafting of a new TVET Law, which begun recently, Myanmar has not had a unified definition of TVET.¹⁸ This has contributed to other key TVET subsector management challenges, including those related to TVET’s fragmentation across multiple ministries, and a need to reorient from supply to demand-driven approaches that involve close engagement with industry.

In recent years, the Ministry of Science and Technology has served as the technical lead agency for TVET (and has played a prominent role in TVET analysis within the CESR).¹⁹ Working with other TVET agencies, the ministry has stepped up efforts to strengthen the TVET subsector to supply better practically trained graduates who are more easily able to apply their knowledge and skills in the workplace. Importantly, the ministry has recognized the lack of relevant skills and the inability of graduates from TVET (and from secondary and higher education) to use their knowledge and skills in the workplace as a prime concern of employers, based on evidence from the CESR and other sources.

¹⁵ Some documents refer to Myanmar’s current basic education system as “Kinder Garten to 10th standard.” However, the current kindergarten is merely an academic curriculum rather than a true kindergarten in the international sense. This report therefore uses the international terminology of grades 1–11.

¹⁶ The initial timeline of completion by 2020/2021 was recently slid back by 1 year. Further findings and recommendations are laid out in a forthcoming SES technical annex to CESR Phase 2.

¹⁷ See World Bank’s World Development Indicators. The Philippines has started phasing in a 12-year basic education cycle. In addition to 6 years primary school, secondary school in Singapore is normally 4 years but pupils have the option to take a 5-year integrated program.

¹⁸ In this report, the term TVET follows the most common usage in the international literature, and comprises programs ranging from short-term skills training at various levels through what many countries term “polytechnics,” whereas bachelor’s degree and higher level programs are considered higher education.

¹⁹ At the time of publication, the focal department (the Department of Technical and Vocational Education) is in the process of relocation to the Ministry of Education.

In addition to concerns about TVET quality and relevance, the CESR has helped identify issues related to access and subsector management. For example, many publicly provided TVET programs currently require successful passage of the same matriculation exam (taken at the end of grade 11) used for entry into higher education. This means that instead of providing poor students an opportunity to gain skills, TVET is catering almost solely to well-off students.

The Ministry of Science and Technology provides TVET and higher education programs (such as bachelor degrees and engineering courses) through four types of institutions: (i) government technical high schools, (ii) government technical institutes, (iii) government technical colleges, and (iv) government technological universities. However, roughly a dozen other ministries also offer TVET programs (depending on the precise definition of TVET), and the number of public training institutions totals 459.²⁰ A National Skills Standards Authority has been established to develop competency-based skills standards spanning all major occupations.

Myanmar's TVET subsector, led by the Ministry of Science and Technology and a newly established TVET Task Force, is now in the early stages of major reform. Importantly, the CESR and the task force have engaged multiple ministries and (to some extent) representatives of industry. Among the other priorities identified in the first phase of the CESR are the need to: (i) increase student enrollment and ensure equitable access; (ii) increase the number and quality of teachers; (iii) improve infrastructure and practical training facilities; (iv) strengthen coordination among ministries involved in training; (v) improve quality controls for education; (vi) enhance the relevance of TVET, including formal and nonformal streams to address disadvantaged groups and drop outs; and (vii) improve financing.²¹ Such findings are helping in the preparation of a new TVET Law and development of more comprehensive, clear, and cohesive policies.

Reform in higher education is also under way.

The University Education Law of 1973 (amended in 1998) governs policy for higher education. Consultations with the government indicate that the 13 ministries that oversee higher education institutions²² are striving to move toward complete autonomy for public sector universities, whereby they can charge fees and forge public-private partnerships to create more budget space for financial sustainability.²³ Nonetheless, the government recognizes this will take time and that universities at present have little management experience and capacity to become independent, let alone to source and select international or private partners.

Higher education has traditionally followed a 3-1-2 system (bachelor-post graduate-master's degree). But in the 2011–2012 school year, this was changed to a 4-1-2 system in line with international standards, adding an additional year to attain a bachelor's degree.

²⁰ Other public TVET providers include industrial training centers under the Ministry of Industry, and skills development centers under the Ministry of Labor, Employment, and Social Security. Available data suggest that private provision (including TVET schools and employee training) is very limited, though perhaps increasing. See CESR, ADB, GIZ, and UNESCO 2013.

²¹ See CESR, ADB, GIZ, and UNESCO 2013.

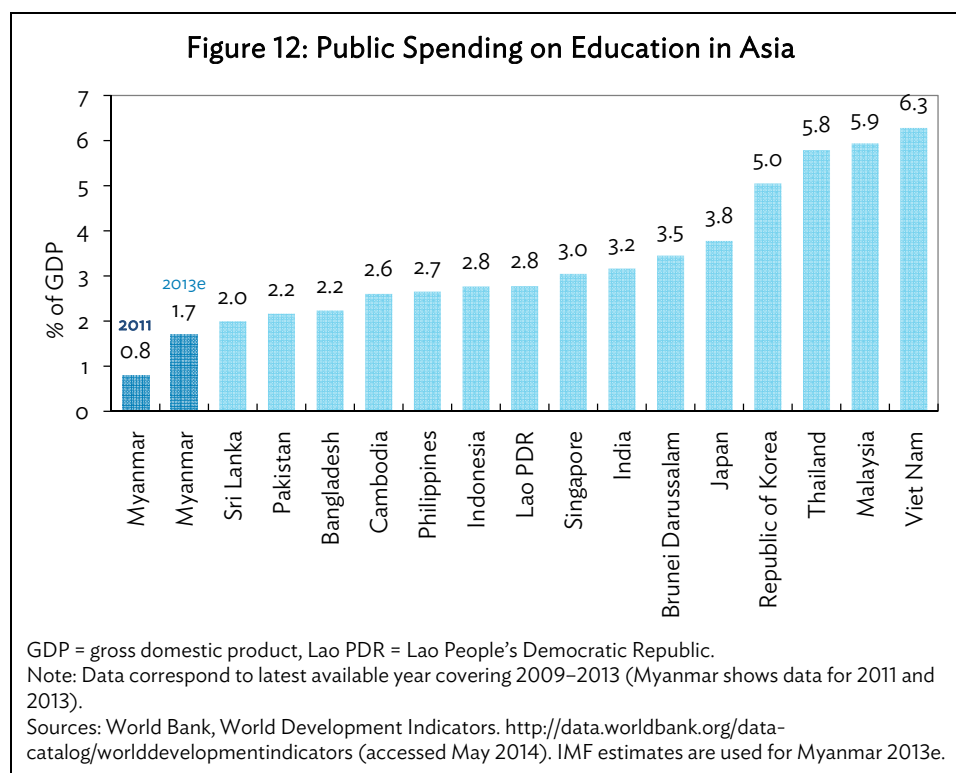
²² A new Higher Education Law is being drafted now and is expected to replace the University Education Law.

²³ Consultations with government in Nay Pyi Taw, March 2014.

B. Key Challenges Facing Education Finance

More public investment is needed.

Myanmar's education system has suffered prolonged underinvestment. Public investment on education was less than 1% of GDP in 2011, the lowest among 16 Asian economies, where average spending was 3.6% (Figure 12).



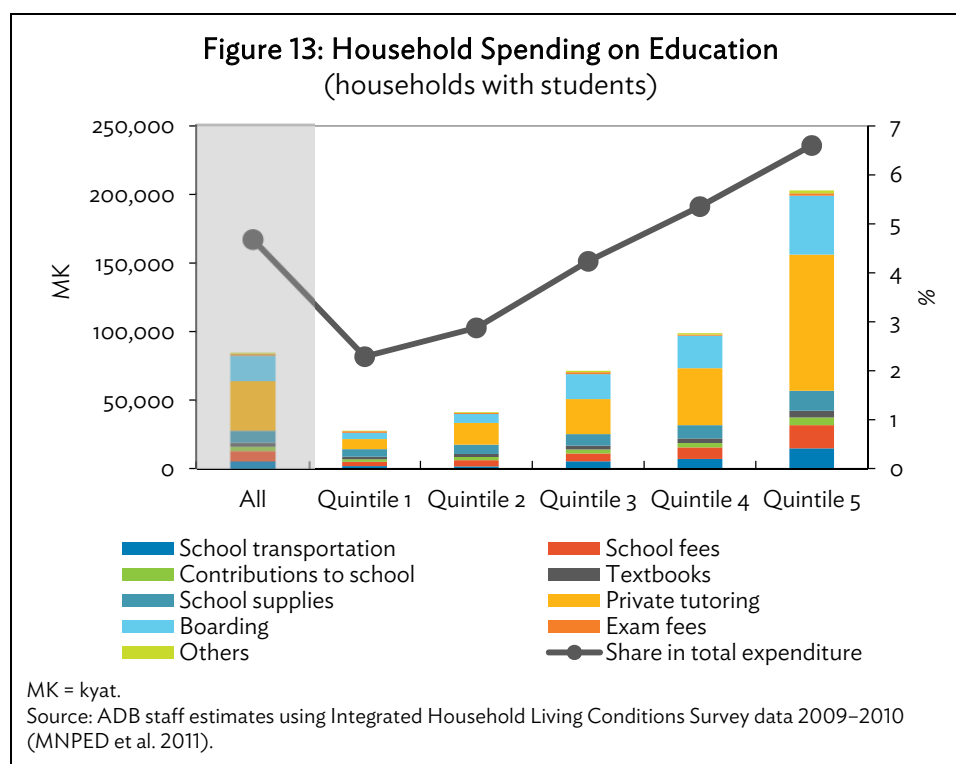
However, it should be emphasized that the “people-centered” approach of the new government has ramped up social sector spending in recent years, albeit from a very low baseline. Between FY2011 and FY2013 alone, the government education expenditure more than tripled in nominal terms (from MK310 billion to MK1.1 trillion), rising from roughly 0.8% to about 2% of GDP, alongside rapidly increases in GDP (World Bank 2014). These increases reflect the growing importance ascribed to education, and confirmed budget figures for FY2014 and FY2015 have shown further increases of more than 20% a year. At the same time, it will be critical to continue to increase public financing on education, particularly in the forthcoming National Education Sector Plan now being formulated for 2016–2020.

Households fund most education.

Low public expenditure on education in recent years has meant that households bear the brunt of costs, and were the source of about 70% of total education spending in Myanmar in 2010 (CESR, World Bank, and Australia 2013). Data from the Household Living Condition Survey 2009–2010 show education accounts for an average of 4.7% of total household cash expenditures in households with at least one child studying. Affluent and urban households spend a larger share of total expenditure on

education, which reflects higher enrollment rates and (at least to some degree) access to better quality education.

A wide variation in household spending in education is seen across expenditure quintiles. Households in the poorest quintile with children in school spent roughly MK27,650 a year on education, or 2.3% of total expenditure (Figure 13). Households in the richest quintile with children in school spent roughly MK203,000, or 6.6% of total expenditure: in nominal terms, the richest quintile spent more than 7 times as much on education as households in the poorest quintile.



In Figure 13, the purple line showing the rising share of household expenditure devoted to education across quintiles indicates that education is a luxury good in Myanmar, in the technical sense that its share in total spending increases with income. The fact that private tutoring is the largest single component of household expenditures in education—particularly in the richest quintile but even among the poor—highlights that costs are closely linked with education quality issues related to curriculum, pedagogy, and student assessment, as is elaborated in subsequent sections.²⁴

Subsectoral dimensions of education resource allocation.

A forthcoming paper reporting on ADB-supported analysis under Phase 2 of the CESR also points to important issues of allocation across subsectors. For example, progress toward universalizing primary education is placing a growing burden on the secondary education subsector, which is where most youths now exit the system. However, this subsector has been particularly under-resourced and has

²⁴ Although the Private Education Law of 1984 and 2006 prohibited public school teachers from collecting fees for after-school tutoring, data indicate that this has not dampened the market for private tutoring.

not received substantial international support. At the same time, the analysis suggests that the household burden of having a child in high school is considerably higher than having a child enrolled in higher education, TVET, or any other subsector: in large part, this reflects the particularly heavy burden of private tutoring fees for students preparing for the matriculation exam taken at the end of high school (CESR, ADB, and Australian Aid 2013a).²⁵

C. Key Challenges in Education Access and Attainment

Snapshot shows modest improvements in educational attainment.

Data from the Household Living Condition Survey 2009–2010 provide a snapshot of society in 2009–2010, while also allowing for a historical overview of trends in education access and completion rates, by looking at educational attainment by age cohort.²⁶ Figure 14 shows the highest educational level completed by respondents by age, and dividing educational attainment into six categories: (i) no or incomplete primary schooling, (ii) primary school, (iii) middle school, (iv) high school, (v) undergraduate diploma, and (vi) bachelor's degree or higher-level university degree. For example, a respondent who entered but dropped out before completing lower-secondary education would appear in the blue band, having only completed primary school. The figure shows the breakdown of educational attainment for 25-year olds and 50-year olds, both as of 2009. The trend across cohorts suggests at least modest improvements. For example, about 36% of the 50-year olds had not even completed primary school and less than 20% had completed middle school or higher, whereas nearly 80% of the 25-year olds had completed at least primary schooling.²⁷

Despite such trends, the large gray and blue sections of Figure 16 also demonstrate that a large majority of the adult population has not even completed middle school (for example, 59% of 25-year olds). This has critical implications for the ability of Myanmar's workforce to participate in economic modernization. As noted further below, Myanmar's TVET subsector is not currently equipped to provide skills training for large numbers of these poorly educated adults. For future generations, improving completion of secondary education is clearly an urgent priority.

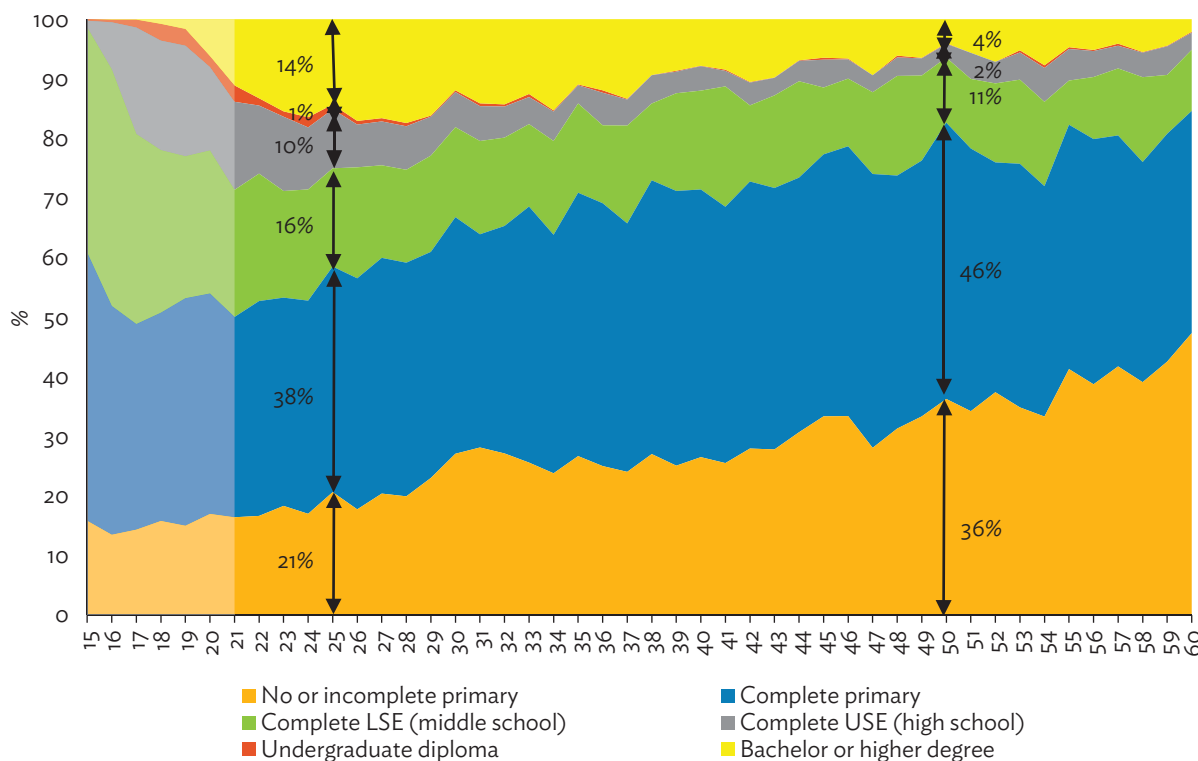
More generally, Figure 16 suggests that access to education has been improving across successive cohorts, yet at a modest pace, and attainment remains low overall. Having looked at educational attainment as a measure of human capital stock in the population aged 15–60, we turn to look in more detail at more recent trends in education access and completion among youths and young adults, as a measure of human capital flow, drawing in particular on a recent ADB assessment of postprimary education and ADB-supported analysis under the CESR.

²⁵ More thorough and disaggregated analysis is being undertaken as part of CESR Phase 2.

²⁶ In addition to ADB staff analysis for the Myanmar Country Diagnostic, this section draws heavily on ADB-supported inputs to Phase 2 of the CESR (forthcoming), as well as ADB 2014c.

²⁷ With further progress in the past few years (although not shown in the figure), roughly half of the young adults in their 20s have completed at least middle school.

Figure 14: Highest Educational Attainment by Cohort, Aged 15–60



LSE = lower-secondary education, USE = upper-secondary education.

Notes: It is unlikely that adults aged 15–21 (lighter shade in the chart) would have indicated that they had attained higher education. The normative age for entry into higher education is 16; however later entry is very common (see also detailed analysis appended to the CESR Phase 1 Technical Annex on Secondary Education). Therefore, low rates of higher education attainment for this age group should not be interpreted as a recent trend.

Source: ADB staff estimates using Integrated Household Living Conditions Survey data 2009–2010 (MNPED et al. 2011).

Primary education access is close to becoming universal, but hard-to-reach groups remain.

Overall, primary education access and completion rates in Myanmar appear to be roughly on par with most Asian neighbors, with a gross enrollment rate (GER) exceeding that in much of the region (Table 3). While higher enrollment rates are generally preferred over lower rates, a very high primary GER—where the primary student population is higher than the primary-age population—indicates significant repetitions and schooling delays among pupils. This is especially telling when coupled with a low GER in secondary school (revisited further below): many students of secondary school age remain enrolled in primary school.

Net enrollment rates (NERs)—which give the percentage of students in a specific age range enrolled in an age-appropriate schooling—also convey limited summary information about access, and they are available for a smaller number of countries than GER estimates. However, NERs provide a comparator to GERs that may indicate the extent of repetition. Using Household Living Condition Survey 2009–2010 data, ADB-supported CESR analysis estimated a primary NER of 87.6% versus a

primary GER of 116.8%, while also showing that both GERs and NERs decline markedly for secondary education, with both sets of discrepancies linked to the fact that many aged 10–13 (in the normative age range for middle school) are stuck in primary school and may never proceed to secondary education.²⁸

Table 3: Gross Enrollment Rates in Asia
(%)

	Primary GER	Primary Completion ^a	Secondary GER
Bangladesh	...	74.5	51.9
Brunei Darussalam	105.1	101.9	111.8
Cambodia	125.6	98.1	...
PRC	113.1	...	81.4
India	112.0	96.5	63.2
Indonesia	118.4	104.5	80.7
Japan	102.8	102.1	102.2
Republic of Korea	105.6	110.5	97.1
Lao PDR	126.0	95.1	45.8
Malaysia	...	...	69.1
Myanmar	116.8	95.0	65.7
Pakistan	92.5	71.9	35.0
Philippines	105.8	91.3	84.8
Sri Lanka	97.4	96.8	102.4
Thailand	90.7	...	78.2
Viet Nam	106.3	101.2	...

... = not available, PRC = People's Republic of China, GER = gross enrollment rate, Lao PDR = Lao People's Democratic Republic.

^a Defined as the number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the total population of the theoretical entrance age to the last grade of primary. The ratio can exceed 100% due to overaged and underaged children who enter primary school late or early and/or repeat grades.

Note: Data correspond to the latest available year covering 2009–2012 (data for Myanmar is 2010).

Source: For Myanmar GER values: ADB staff estimates using Integrated Household Living Conditions Survey data 2009–2010 (MNPED et al. 2011); For other values, World Bank, World Development Indicators <http://data.worldbank.org/data-catalog/worlddevelopmentindicators> (accessed May 2014).

Table 4 disaggregates the household survey sample by expenditure quintile and estimates quintile-specific NERs across Myanmar's basic education system (defined in Myanmar as grades 1–11), based on normative ages at the start of the school year. In addition to the drop-off beyond primary education noted above (and elaborated in the next subsection), it shows sizable discrepancies across expenditure quintiles.

²⁸ See CESR, ADB, and Australian Aid (2013a). This report and a forthcoming technical annex prepared for CESR Phase 2 provide in-depth analysis of access, grade progression, repetition, and dropout rates.

Estimation of completion rates using 14- to 16-year olds in the Household Living Condition Survey dataset (to avoid effects of overage children still in primary school) shows a similar picture (Table 5). Overall, completion of primary education in recent cohorts is relatively high (85.5%). While gaps are only marginal between boys and girls (with the biggest gap in the poorest quintile), completion rates show more marked disparities across expenditure quintiles. CESR analysis (outlined below) suggests that dropouts are principally appearing in the last two grades of primary schooling, and that efforts to expand early childhood care and development could also help reduce dropouts in primary school.²⁹

Table 4: Net Enrollment Rates by Expenditure Quintile Groups
(%)

Level	Basic Education	Primary	Lower Secondary	Upper Secondary
Age group	5–15	5–9	10–13	14–15
Q1	69.9	80.7	33.6	13.7
Q2	77.6	87.4	45.0	18.7
Q3	83.2	91.7	55.1	28.1
Q4	86.6	91.4	62.0	31.2
Q5	91.0	91.3	69.9	47.3
Overall	80.0	87.6	50.7	25.6

Notes: Q = Quintile, Q1 = poorest, Q5 = richest.

Source: ADB staff estimates using Integrated Household Living Conditions Survey data 2009–2010 (MNPED et al. 2011).

Table 5: Share of 14- to 16-Year Olds Having Completed Primary Education
by Expenditure Quintile Groups
(%)

	Children	Boys	Girls
Q1	76.1	77.9	74.5
Q2	83.0	83.2	82.8
Q3	89.6	89.3	89.8
Q4	93.0	94.0	92.0
Q5	95.6	94.4	97.2
Overall	85.5	86.3	84.8

Notes: Q = Quintile, Q1 = poorest, Q5 = richest.

Source: ADB staff estimates using Integrated Household Living Conditions Survey data 2009–2010 (MNPED et al. 2011).

More recent Ministry of Education administrative data suggest that primary enrollments have continued to rise, but do not allow for more in-depth analysis. Taken together, the data suggest primary education has become closer to universal, but that completing this task will require continued efforts targeting the poor and other hard-to-reach groups such as remote rural ethnic communities).

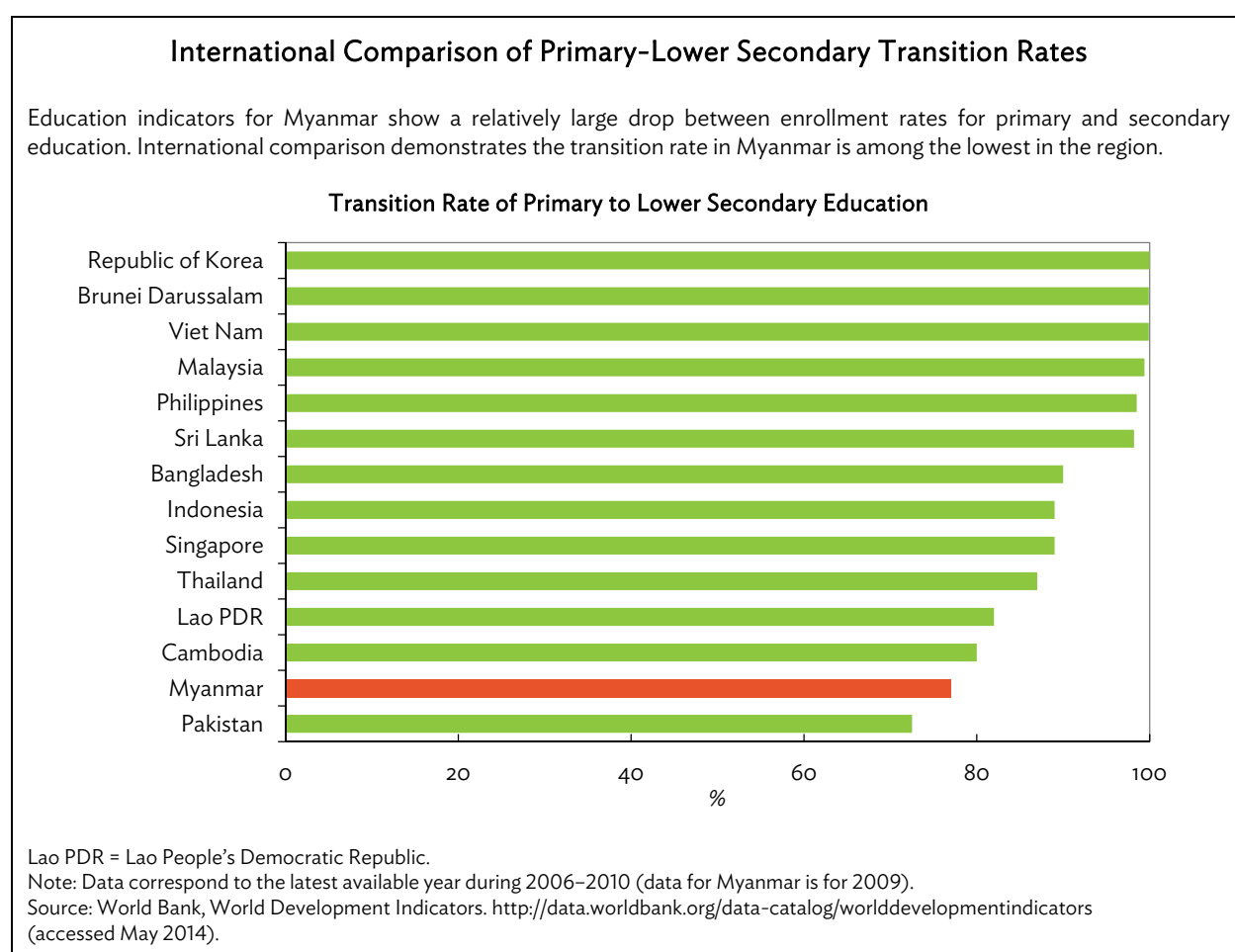
Secondary education is a “brake point” for education access.

With progress toward universalizing primary education in Myanmar, secondary education presents a critical brake point on education access. ADB-supported CESR analysis of Education Management

²⁹ The CESR is also exploring options to expand access to nonformal education and monastic education, though these are outside the focus of this working report.

Information System (EMIS) data suggest that less than 10% of the roughly 1.1 million new entrants to grade 1 annually will go on to complete high school by passing the matriculation exam at the end of grade 11.³⁰ Given that most forms of TVET and higher education require applicants to have completed high school, this leaves the remaining “missing million” of youths who lack access to many forms of employment, further education, or training.

Within the CESR, data from EMIS, the Household Living Condition Survey 2009–2010, and a survey of 786 secondary schools nationwide, gives a clearer understanding of the underlying dynamics. It demonstrates that, as captured in the black trajectory in Figure 15, exit from school is particularly marked at the transition from primary to middle school: while roughly 83% of children in recent cohorts have finished primary school, nearly one in four primary graduates never enter middle school, despite some signs of progress.³¹ The box below shows that transition rates in Myanmar are among the lowest in the region.



³⁰ Ministry of Education data suggest that total enrollment in grades 6–9 grew at an annual average rate of 2.4% during the 2005/2006 to 2012/2013 academic years, but grades 10–11 remained stagnant, rising by a mere 0.3% a year.

³¹ Figures herein report ADB staff analysis (as part of the CESR) of Household Living Condition Survey data for people born in 1987–1989, to ensure that high school completion is not underestimated due to enrollment of overage children. Analysis of more recent cohorts shows a modest rise in middle school access, but cannot assess high school access. The Ministry of Education and ADB have requested access to 2014 Population Census data to allow for analysis using more recent cohorts.

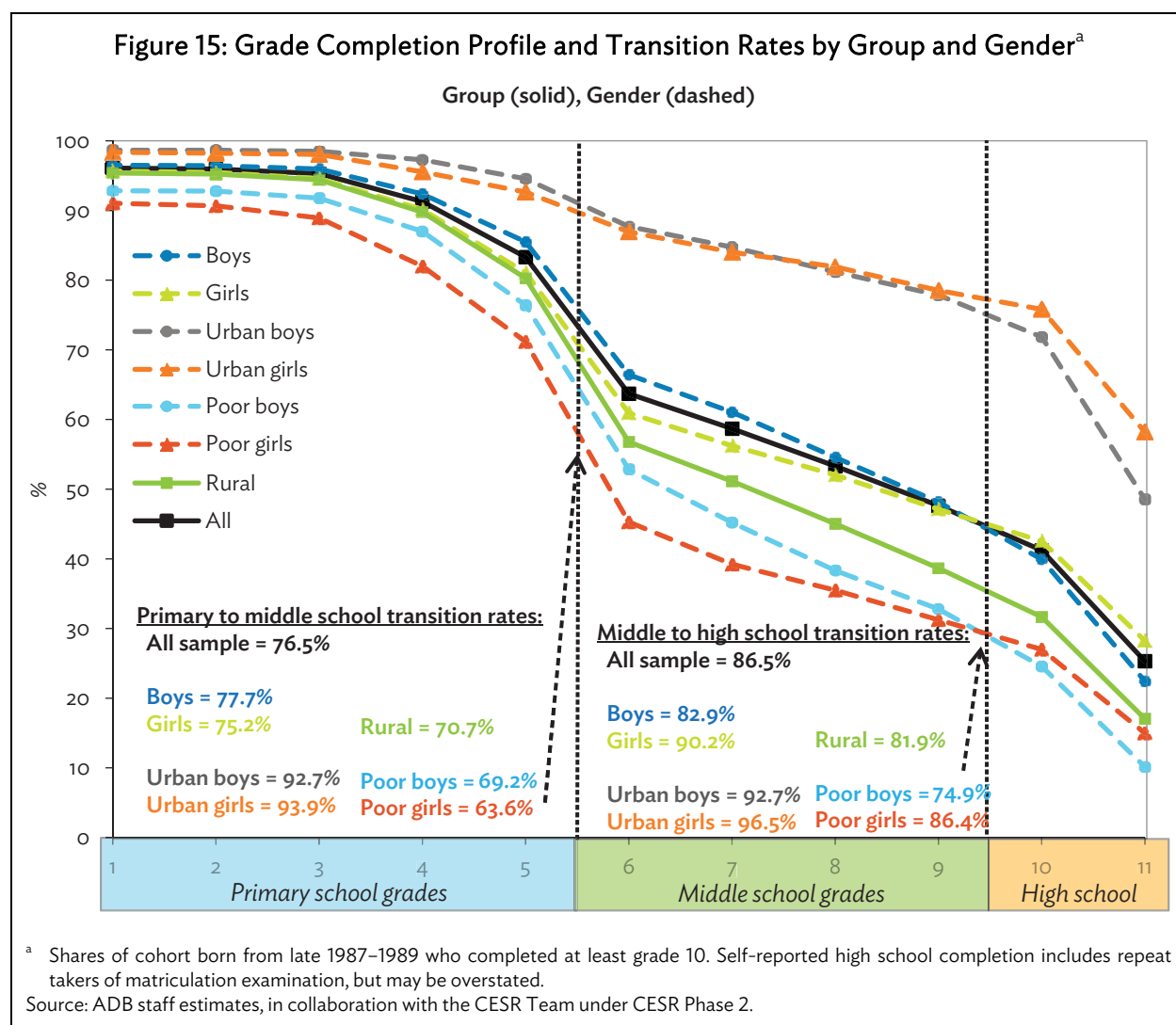
The sharp drop-off from primary to middle school is compounded by dropout within middle school, leaving 40%–48% of children in recent cohorts able to complete middle school (after 9 years of education). EMIS and Household Living Condition Survey data demonstrate that a second sharp drop-off occurs toward the end of high school, with only about one-third of students reaching grade 11 (or roughly 10% of all children) being able to pass the matriculation exam on the first attempt. Including those who retake (often several times) the exam in later years, an upper-bound estimate shows that about 25% of youths eventually pass.³²

Figure 15 also demonstrates that aggregate figures conceal sizable geographic and socioeconomic gaps. Disparities widen markedly in secondary education, especially in middle schools. This acts as the “great divider”: for example comparing rural and urban children, the gap in primary completion rates is just above 13 percentage points (80% versus 94%), but the gap widens to nearly 40 percentage points (78% versus 39%) for completion of middle school. While aggregated figures show strong gender parity overall, girls in poor families, remote rural areas, and some ethnic groups appear particularly disadvantaged. That shows as fewer poor girls transition from primary to middle school, with only 45% of girls in poor households completing even a year of middle school, versus 53% of poor boys in recent years.³³

Analysis also points to sharp disparities across states and regions, with gaps widening in secondary education. Particularly since access to TVET is very limited for those not completing secondary schooling, workforce prospects are particularly bleak for most rural and poor youths (including 69% of girls and 67% of boys in poor households) who are unable to complete middle school, especially given international evidence that a middle school education is often a minimum prerequisite to access formal and/or modern sector employment and participate in opportunities that economic growth brings (Spohr 2003).

³² During school year 2007/2008–school year 2011/2012, there were an average of 504,135 exam takers (of whom 38% were repeat-takers) and 165,263 passers annually, averaging a 32.8% pass rate.

³³ At the same time, conditional on reaching middle school, dropout within middle school and high school education is highest among poor boys.



Why are children failing to enter and complete secondary education?

Finally, ADB-supported CESR analysis points to an array of underlying issues that depress enrollment in secondary education. Many of these mirror issues in neighboring countries, and include: (i) disparities in completion rates and academic preparedness from primary schooling; (ii) demand-side factors such as poverty, financing and opportunity costs, language and other cultural factors, and disabilities; and (iii) supply-side factors such as gaps in school coverage in remote areas and inadequate financial and human resources. However, the analysis also demonstrates the extent to which quality is integrally linked to access in Myanmar. In terms of household expenditure, high school education presents the highest cost burden per student, while private tuition (largely driven by the focus on rote-based learning and exams) is the largest component, comprising roughly 42% of household expenditure on education. Additionally, CESR analysis (Table 6) indicates that although direct costs are the leading reason for failure to complete primary school or to transition to middle school, “lack of interest” is reported as the principal reason for dropout and noncompletion of secondary grades. This suggests (among other factors) key issues with the perceived quality and relevance of secondary education to the labor market and modern society. Such challenges are elaborated in section III.D.

Access to TVET lags behind higher education.

The most binding constraint on widening access to TVET and higher education is simply the fact that fewer than half of youths complete middle school and at most only one quarter finish high school. While the Ministry of Science and Technology recently reintroduced government technical high schools (32 nationwide), public sector TVET provision in Myanmar remains largely focused on advanced, multiyear diploma programs targeted at high school graduates. As noted above, the matriculation exam taken at the end of grade 11 serves a dual role as the basis for graduation from high school and selection for higher education and most TVET institutions. This arguably poses a lose-lose: it places TVET out of reach of most youths, who never complete high school, while virtually all youths able to pass the matriculation exam appear to enter higher education. Meanwhile, private training is expanding but remains limited and targeted at more affluent urban niche markets and skill areas (for example, computer and language training).

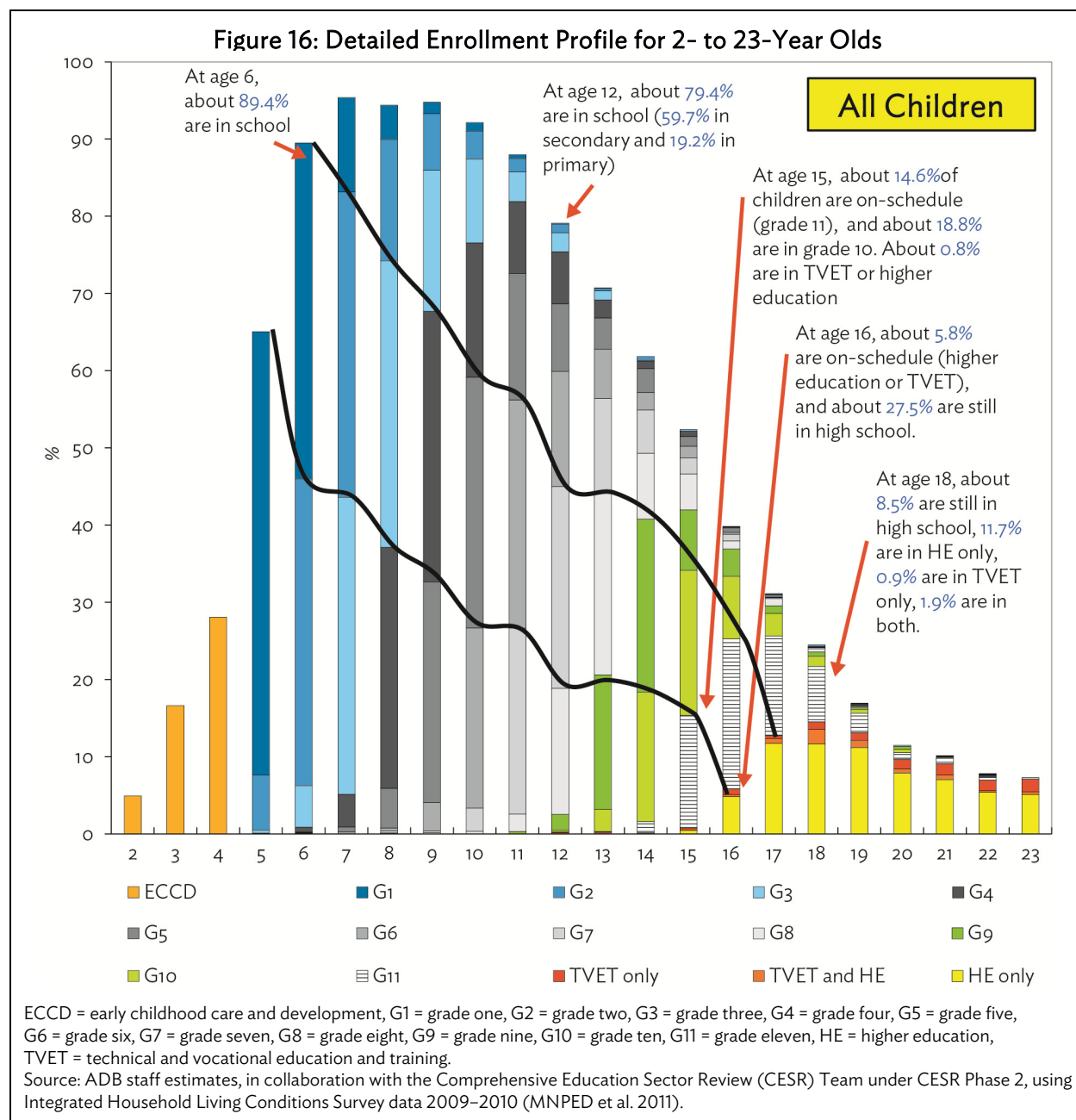
Table 6: Self-Reported Reasons for Exit from Schooling, for Cohort Born in 1987–1989
(%)

	Boys						Girls					
	No primary	Primary dropout	Nontransition to MS	MS dropout	Nontransition to HS	Incomplete or failed HS	No primary	Primary dropout	Nontransition to MS	MS dropout	Nontransition to HS	Incomplete or failed HS
Share of cohort	3.4	10.9	19.0	18.0	7.9	16.6	4.3	14.5	20.1	13.6	4.4	13.6
Cumulative share of cohort	3.4	14.3	33.2	51.3	59.2	75.9	4.3	18.7	38.9	52.4	56.8	70.4
Share of completers not transitioning			22.1		16.3				24.8		9.2	
Reasons for nonentry, dropout or exit:												
Costs not affordable	45.3	38.0	32.5	21.8	28.9	14.8	51.9	44.6	32.6	28.2	20.9	19.3
Personal illness	4.6	1.9	1.9	1.6	0.0	1.8	10.2	2.3	1.7	2.2	1.1	2.5
Lack of interest	30.1	27.6	21.7	33.7	36.4	51.4	22.5	26.0	22.8	32.5	33.2	46.1
Got married/pregnant	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.7	3.5	1.0	2.9	4.1
Care for family	4.0	7.1	7.8	7.4	8.7	4.5	7.6	11.6	14.0	15.0	10.7	9.5
Agricultural work	10.5	15.9	24.3	21.2	15.8	13.0	3.7	7.1	15.5	11.8	17.4	6.7
Other (nonagricultural) work	0.0	6.4	8.4	10.9	8.2	11.2	0.2	6.6	4.1	6.0	8.0	7.9
School too far	2.1	1.6	3.1	1.7	1.7	0.6	1.1	0.4	4.1	2.5	5.7	2.2
No teacher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No school supplies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
No clothing/shoes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bad weather	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other reasons/not reported	3.4	1.5	0.4	1.6	0.3	0.7	2.7	0.7	1.2	1.0	0.0	1.8
<i>Number of observations</i>	<i>121</i>	<i>318</i>	<i>517</i>	<i>493</i>	<i>220</i>	<i>459</i>	<i>132</i>	<i>373</i>	<i>512</i>	<i>392</i>	<i>136</i>	<i>378</i>

HS = high school, MS = middle school.

Source: ADB staff estimates, in collaboration with the Comprehensive Education Sector Review (CESR) Team under CESR Phase 2.

As a result, ADB-supported analysis under the CESR—including detailed enrollment profile analysis shown in Figure 16³⁴—indicates that only roughly 1.7 of 16- to 19-year olds were enrolled in any form of skills training (excluding engineering and other higher education programs), only one-sixth of the share enrolled in university.³⁵ Of those enrolled in training, roughly half are university students taking additional language or computing courses.



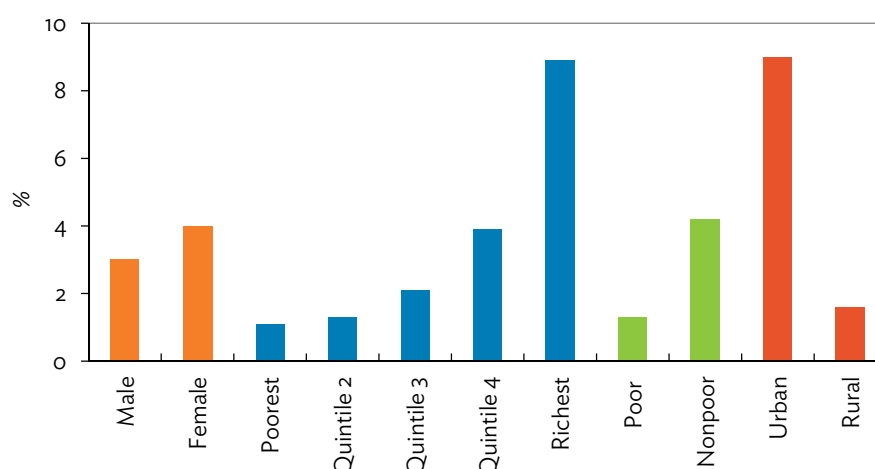
³⁴ The detailed enrollment profile approach is elaborated in the supplementary annex to Paqueo et al. 2013.

³⁵ The figure shows “TVET” based on responses to the Household Living Condition Survey question on “other training”, which would likely exclude some forms of postsecondary TVET, but nonetheless can serve as a loose proxy for TVET access.

In short, the figure (which shows shares of each age cohort enrolled in specific grades and levels of education) suggests that as participation rates drop successively from primary grades (shown in cascading blue segments) to much lower rates in middle school (green segments), high school (purple segments), and higher education (yellow and orange segments), very few of those leaving academic education are accessing any type of training. There is a particular dearth of access to training in foundational skills needed for industry, construction, agriculture, and the like, particularly in poorer areas and among females. For example, in late 2009, 2.4 of 16- to 19-year-old females in urban areas were enrolled in language and 5.7 in computer courses, while at most 0.1 were enrolled in training for primary sectors, industry, or crafts.³⁶

This is also true for TVET participation (using a proxy based on the Household Living Condition Survey 2009–2010) among working-age adults; aged 15–64. Figure 17 shows that opportunities for adults to attain skills needed by the labor market are very limited, with only 3.4 of adults aged 15–64 having ever attended training and access highly skewed toward the rich. Respondents from the richest quintile are 8 times more likely to have attended training than those from the poorest quintile. Similar disparities exist between urban and rural areas, with Yangon having the highest participation rate (10.5) in the survey.

Figure 17: Share of 15- to 64-Year Olds Having Participated in Training



Source: ADB staff estimates using Integrated Household Living Conditions Survey data 2009–2010 (MNPED et al. 2011).

In sum, the available data suggest that TVET does not provide an effective alternative to higher education for the broader population, and access to TVET appears to be particularly limited for poor and rural populations.³⁷ Action is needed urgently to expand TVET access for youths and unskilled laborers (particularly those from disadvantaged groups) and to target the foundational skills necessary to drive growth.

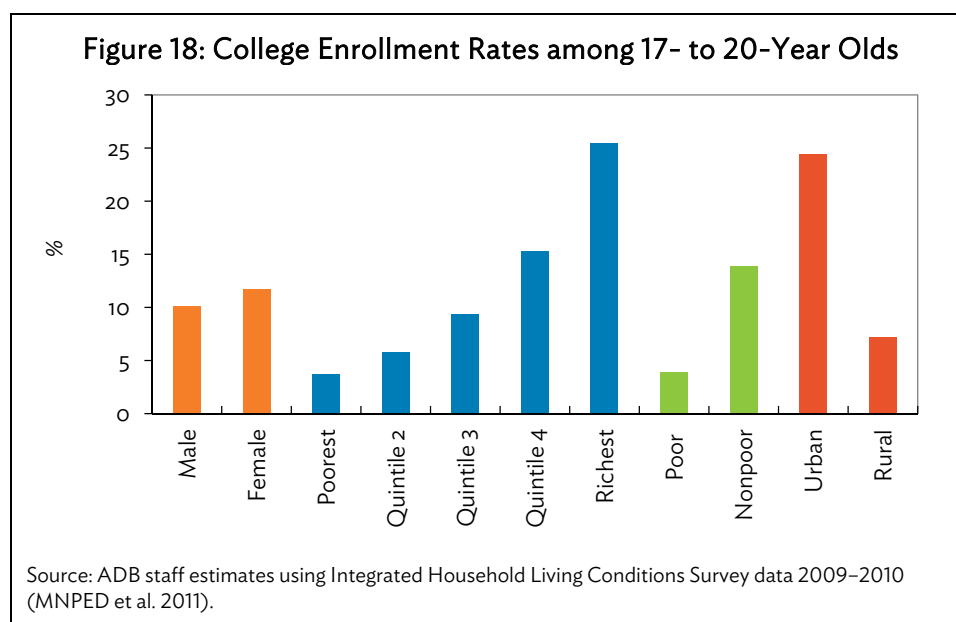
³⁶ Detailed analysis is provided in a forthcoming supplementary annex supported by ADB as an input to CESR Phase 2. See also ADB (2014b).

³⁷ See also CESR, ADB, GIZ, and UNESCO 2013.

Access to higher education is opening up, but unequal and not yet providing skills needed in the labor market.

Following disruptions in earlier years, higher education has expanded steadily in the last decade—rising from 32 institutions and 131,837 undergraduate and higher-level students in the 1997/98 academic year to 163 institutions (under 13 ministries) and 510,891 students in 2011/12. Pending analysis of the 2014 census and upcoming surveys, enrollment rates are likely to have increased at least modestly over the past few years, from GERs presented in the Integrated Household Living Condition Survey 2009–2010 of 19.2 and 10.7.³⁸ This is roughly on par with enrollment rates in many neighboring countries in 2010: for example, above Cambodia (14.1) and the Lao People’s Democratic Republic (Lao PDR) (16.1), roughly on par with India (18.2), but below the PRC (23.3) and Viet Nam (22.4).³⁹ About 60 of students in education are enrolled in distance education programs—likely reflecting a combination of affordability, convenience, and failure to gain admission to regular programs—though graduates from these programs appear to have more limited employment opportunities, perhaps particularly for sought-after positions as state employees. Of an estimated 186,668 students enrolled in regular programs in 2012, 174,771 (94) were undergraduates.

On the surface, access to higher education appears highly unequal across socioeconomic and demographic groups. Figure 18 shows the enrollment rate among 17- to 20-year olds, the ages where enrollment in higher education peaks.⁴⁰ While there is a moderate gender gap (with a higher enrollment rate among females), much larger disparities are evident across socioeconomic groups. Only 3.7 of 17- to 20-year olds in the poorest quintile are enrolled in college, compared with a quarter of their counterparts in the richest quintile.



³⁸ See CESR, ADB, Australia, and UNESCO (2013). GER and NER estimates were generated by ADB-supported CESR analysis using the normative age range of 16–19.

³⁹ World Bank estimates, downloaded from <http://databank.worldbank.org/data>.

⁴⁰ The fact that this peak occurs after the normative age for entry into higher education of 16 reflects several factors, including the fact that many grade 11 students are overage and two-thirds fail the matriculation exam, which means that they need to repeat and pass the exam the following year to pursue higher education.

However, as with TVET, analysis suggests that although direct and indirect costs (transportation and accommodation, for example) pose some obstacles to access, flow-through from secondary education is the overriding constraint underlying these disparities. Namely, while Ministry of Education data do not permit disaggregation by urban and rural areas or socioeconomic status, detailed enrollment profiles analysis for distinct socioeconomic groupings (Figures 16 and 20) confirms that much larger shares of youths from urban and affluent households graduate from high school. Even among lower income groups, most students who pass the matriculation exam appear to enter higher education. Flow-through from secondary education also appears to be a key factor underlying the profemale gender imbalance in higher education, where females outnumber males by a ratio of 1.5:1. Put simply, more females reach grade 11 and females have a higher pass rate on the matriculation exam.⁴¹

In sum, expanding access to higher education *per se* is arguably less of a priority than expanding the pool of potential entrants by increasing high school completion rates while investing in improving quality and management and diversifying higher education programs to better meet shifting labor market demands.

D. Key Challenges in Education Quality and Relevance

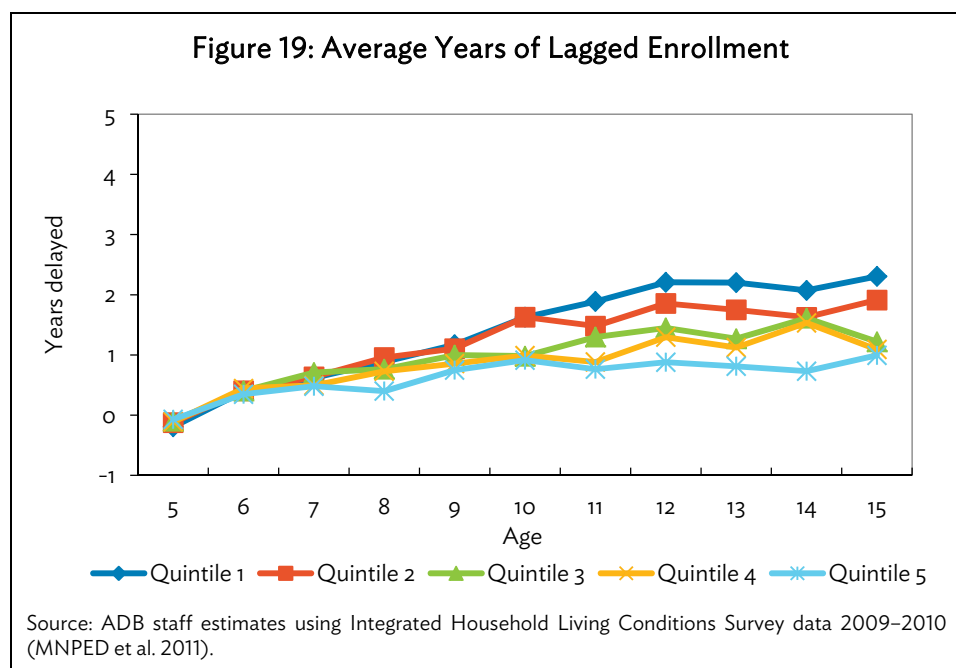
The low quality of basic education is eroding learning outcomes.

Myanmar has limited data on education quality and relevance: one of the few quantitative indicators available is the noted two-thirds failure rate on the matriculation exam, which points to significant quality issues in secondary education. While other evidence is largely anecdotal, the information points to important challenges.

As in other countries, education quality appears to be lowest in poor communities, and compounds access inequities. Poor students appear more likely to drop out or repeat grades. Figure 19, restricted to children enrolled in basic education, shows the average lag between the actual and normative grade increases for older children, with schooling deficits widening rapidly for poorer quintiles from aged 10.⁴² By aged 12, children from the poorest 20 of households who are still in school appear on average at least 2 years behind in their studies, while those from the richest 20 are less than 1 year delayed. This suggests that children from poorer families are more likely to repeat grades, which in turn may reflect the lower quality of education in their communities.

⁴¹ For example, during the academic years from 2007/08 to 2011/12, girls outnumbered boys in grade 11 by a ratio of nearly 1.2:1, while 35% of females and only 30% of males passed the matriculation exam.

⁴² The schooling deficit is calculated as the actual age of the student minus the school age based on the level enrolled. For example, if a student is enrolled in grade 5 then the school age is nine, since pupils are expected to enter grade 5 at 9 years old. A positive value means the student is lagged (delayed) and a negative value indicates that a child is ahead of schedule in terms of grade by age.



The discrepancies depicted above understate actual distinctions, since students from poor households may also be disproportionately more likely to drop out of school (the figure only captures those still in school). ADB-supported analysis of enrollment profiles under the CESR provides a fuller picture. Figure 20 below shows a detailed enrollment profile for girls in poor households, which varies markedly from the profile shown in Figure 15 above (and more dramatically from analysis of children in rich households, not shown herein).⁴³ It demonstrates that among girls (and boys) in poor households, dropouts accelerate after the age of 11. It also shows evidence of a clear linkage between repetition, lagged progress by age, and dropouts, likely reflecting that the poor also face greater challenges in terms of education quality and learning outcomes. By age 15 (the normative age for reaching grade 11), 65 of girls in poor households are out-of-school, while half of those (17) who remain in school are still in middle school or even primary grades. Upper-bound estimates suggest that only roughly 10 of poor boys and 15 of poor girls finish high school, versus 49 and 58 of boys and girls in urban households.

Particularly in SES, quality and access gaps are interlinked.

The CESR has elucidated key issues in secondary education quality and relevance—in particular outdated curriculum, pedagogy, and assessment—and their role in undermining access.⁴⁴ As noted in section III.C, Household Living Condition Survey responses point to “lack of interest” as the lead reason for dropout in secondary education, likely in large part reflecting the combination of outdated curricula (perceived by many parents as irrelevant) and the focus on rote-based instruction and memorization-based examinations.⁴⁵ Quality issues also directly undermine learning outcomes. High failure rates on the matriculation exam and repetition rates in grades 9–11 suggest that many students

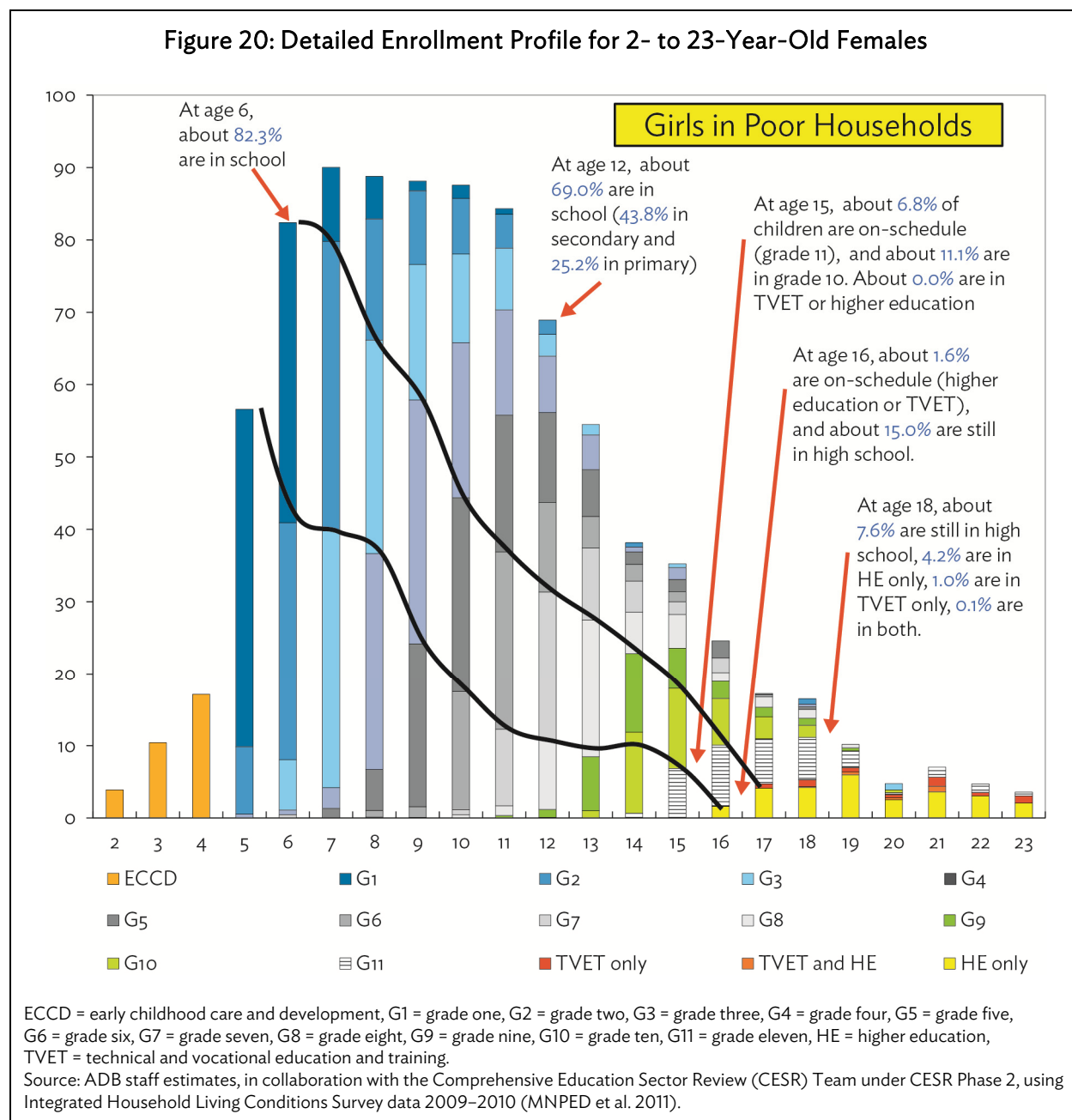
⁴³ Initial detailed enrollment profile analysis is reported in (CESR, ADB, and Australian Aid 2013a).

⁴⁴ This subsection draws heavily on ADB-supported inputs to Phase 2 of the CESR, as well as ADB (2014).

⁴⁵ In a more recent CESR survey (supported by ADB and Australia) of secondary schools nationwide, teachers also identified lack of interest and cost burdens as the lead reasons for student dropout.

fail to master subject content, and that quality issues are most serious in poorer areas, compounding inequities in access.⁴⁶

Figure 20: Detailed Enrollment Profile for 2- to 23-Year-Old Females



In sum, education quality issues appear to undermine middle school and high school access and completion through at least three channels: (i) perceived low quality of the curriculum and irrelevance to the labor market and modern society, (ii) the effects of rote-based pedagogy and

⁴⁶ The detailed enrollment profile analysis above shows that grade repetition is most serious among the poor (pointing to issues of quality and weak learning): among 15-year-old girls in poor households, 35% remain in school, but half of these are still in lower secondary or primary grades.

examinations in driving up household costs of education through the need for private tutoring, and (iii) the likely disincentive from matriculation exam failure at the end of 2 years of high school. At the same time, critiques by many employers and universities point to a more deep-rooted problem that graduates of secondary education—who comprise most of workforce entrants—lack a flexible foundation of knowledge and competencies (including critical thinking, analytical and problem solving capacity, and other soft skills), which leaves them “untrainable.” In a 2014 survey, employers cited human resources—including a lack of mastery of foundational knowledge and hard and soft skills (for example, numerical skills, communication, critical thinking, and teamwork)—as the second most serious barrier to business.⁴⁷

In view of the above, curriculum reform (including modernizing pedagogy and assessment to shift from rote-learning to student-centered classrooms and active learning) is an urgent priority and has key implications for the ability of youths to function in the workplace or to pursue further education.

Myanmar’s ethnic and linguistic diversity also presents a challenge for teaching and learning.

In addition to the official language, called Myanmar language, at least another 115 languages are in use (Ethnologue: Languages of the World 2014). For early grades of primary education, many stakeholders are calling for allowing mother tongue instruction to ensure ethnic children are able to effectively learn the foundations needed for later study, while also promoting equitable access. Meanwhile, evidence suggests that the current practice of teaching upper-secondary math, physics, biology, and chemistry in English poses challenges for both students and teachers, depressing learning outcomes and reinforcing rote-based instruction.⁴⁸

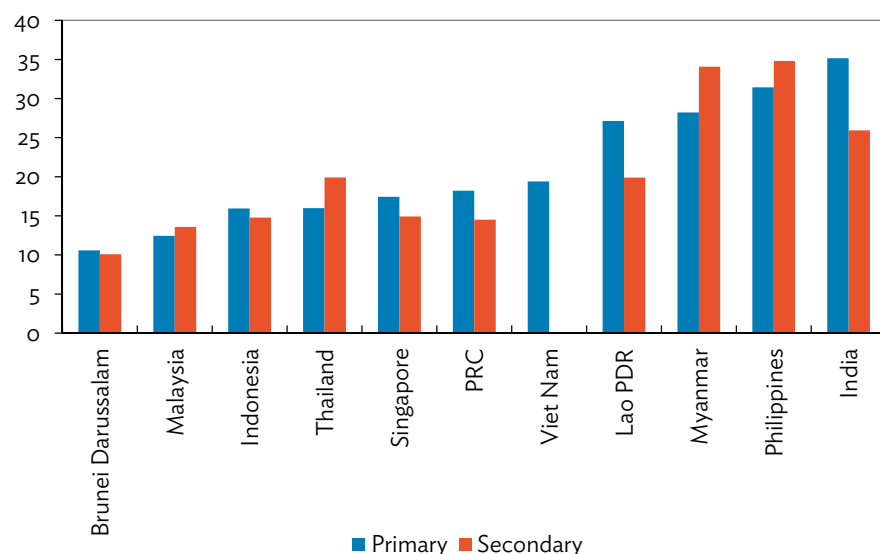
Better investment in teachers and facility infrastructure is required for quality outcomes.

Myanmar has one of the highest pupil–teacher ratios in the region for primary education at 28.2, while the pupil–teacher ratio for secondary education (34.1) is the second highest (just lower than that of the Philippines), as shown in Figure 21. While pupil–teacher ratios are only one factor affecting education quality, lower ratios imply the potential for more attention per student.

A significant effort has been made to hire more teachers and build more schools in recent years. Figure 22 shows that at the primary level the number of teachers has increased at a higher rate than that of students. However, at both lower and upper secondary levels, student numbers have increased faster than teacher numbers. School numbers show a dramatic rise in the number of upper secondary schools, but this is from a low baseline and it should also be noted that these schools generally include all primary and lower secondary grades as well.

⁴⁷ See OECD and UNESCAP (2014). Similar results are found in World Economic Forum (2014).

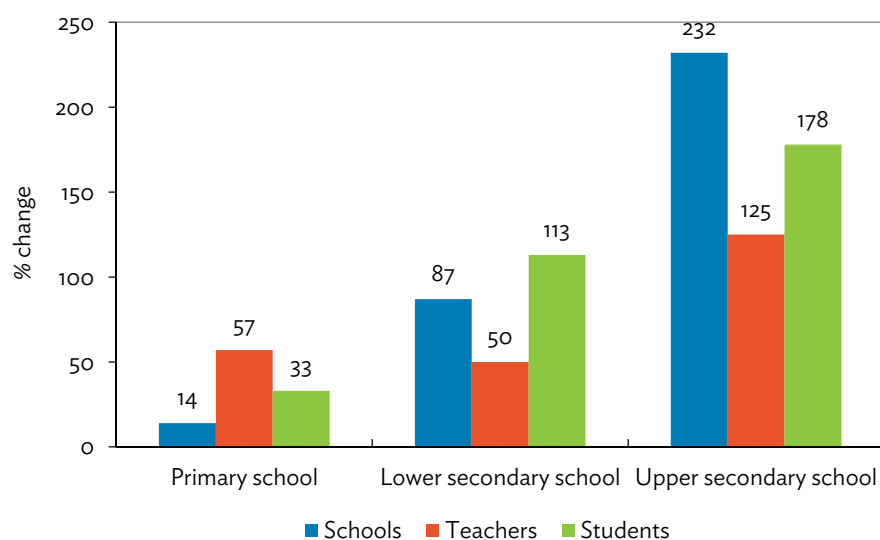
⁴⁸ See CESR, ADB, and Australian Aid (2013a). A survey of SES schools nationwide conducted under the CESR indicates that the majority of teachers and students face challenges in using English in math and science courses in grades 10 and 11, and evidence suggests this exacerbates the emphasis on rote learning.

Figure 21: Pupils per Teacher in Asia

Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Note: Data correspond to latest available year covering 2008–2012 (data for Myanmar is 2010). No bar indicates no data available.

Source: World Bank, World Development Indicators. <http://data.worldbank.org/data-catalog/world-developmentindicators> (accessed May 2014).

Figure 22: Growth in the Number of Schools, Teachers, and Students, 1988–2012

Source: OECD 2013.

More detailed analysis is needed (including assessing disparities by region and local socioeconomic characteristics), but available evidence suggests that it will be important to expand the numbers of qualified teachers, perhaps particularly at lower secondary and upper secondary levels, which will require a combination of (i) enhancing preservice teacher education; (ii) dramatically expanding in-

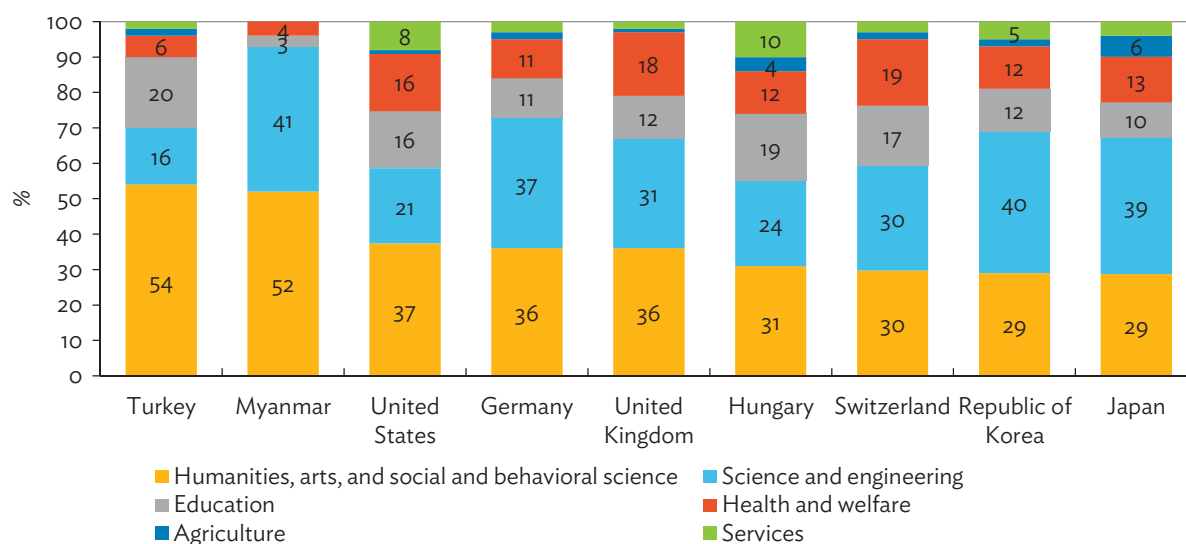
service teacher training and opportunities for continuing professional development; and (iii) strengthening teacher deployment human resource management, including potentially reforming ladder-based promotion (wherein teachers trained for primary education are promoted to lower secondary and then upper secondary levels). These will be particularly important in view of forthcoming reforms, which are expected to add kindergarten as well as grade 12, while also overhauling the curriculum and pedagogy of primary, lower secondary, and upper secondary education.

Higher education quality has declined, and program alignment to emerging needs is weak.

It is generally recognized that higher education in Myanmar has declined from its former position as a leader within Asia. Relatively high student–teacher ratios may be part of the problem: student-to-lecturer ratios are estimated at 43 in Ministry of Education institutions, 74 in Ministry of Science and Technology institutions, and 31 across the higher education system as a whole.⁴⁹ However, findings from the CESR, from other analyses, and from government consultations indicate an array of improvements is needed in areas ranging from infrastructure, learning resources, and laboratories, to teacher training to support a move away from rote instruction and also to upgrade research capacities at least at selected universities.

Additionally, there is a need to better align (and in some cases diversify) higher education programs to meet the needs of Myanmar’s evolving society and economy. Compared to many Organisation for Economic Co-operation and Development countries, higher education enrollment in Myanmar is skewed toward humanities, arts, and social and behavioral science, and to science and engineering (Figure 23). By contrast, in part due to university course offerings, enrollments are very limited in more practical subjects such as education, health and medical sciences, accounting, and entrepreneurial studies, which are likely to be in high demand in the labor market. It is therefore necessary to diversify the curriculum by offering more courses (and perhaps also incentivizing students) in areas urgently needed to support economic development.

⁴⁹ CESR Phase 1 higher education subsector review.

Figure 23: Higher Education Courses by Popularity, Myanmar and Selected Countries

Source: OECD 2013.

E. Selected Recommendations

While awaiting the outcome of sweeping education sector reforms and the completion of the CESR and National Education Sector Plan, this working paper does not attempt to provide comprehensive recommendations. Instead, this section provides selective recommendations that are viewed as particularly important through the lens of strengthening the ability of the education sector (perhaps especially at postprimary levels) to contribute to rapid, sustainable, and inclusive economic growth, including supporting Myanmar's transition into more modern, higher value-added sectors that will require a dynamic workforce. These are grouped into four categories, to align with the discussion in sections III.A–III.D.

Strengthening Education Sector Governance

Reforms and investments should be evidence-based, embedded in well-articulated legislation and policies, and ensure strong coordination among ministries and other stakeholders.

The CESR is playing a critically important role in providing a strengthened evidence base for reform. At the same time, there is a need to ensure continued analysis informs future directions, and it will also be important to enhance management information systems and data platforms through which timely information can be extracted and used for planning and review. Evidence-based approaches should also give particular consideration to equity dimensions.

Given the large number of ministries involved, as well as an increasing role for the private sector (both in delivering education and as a demander of graduates in the workplace), it will be critical

to strengthen coordination mechanisms across ministries and other stakeholders.⁵⁰ Decentralization and expanded autonomy will be important to improve the engagement of communities and potentially allow (for example) TVET and higher education institutions to better respond to emerging demands, however approaches and phasing will need to be carefully considered in order to avoid various challenges encountered in some countries that have abruptly introduced such changes (for example, difficulties in quality control, and the risk that areas and institutions with stronger human and financial resources may benefit from such changes, while others fall further behind).

More broadly, particularly in the case of the postprimary education subsectors (secondary education, TVET, and higher education), there is also a need to reorient education from supply-driven, largely academic approaches to demand-driven approaches that respond to evolving labor market needs. At the same time, it will be important to better mutually align these subsectors, including articulating targeted competencies and ensuring flexible learning pathways between secondary education, TVET, and higher education.

Expanding Education Finance

Continued increases in government financing of education will remain an overarching priority. While the role of the private sector is expected to expand, this will not supplant the role of state financing and public provision. In parallel with increased public resourcing, the government should explore private education provision and innovative financing mechanisms such as public-private partnerships, perhaps particularly in higher education and more advanced forms of TVET (where the case for cost recovery is also strongest). This will require establishing a strong policy framework for private sector involvement in education, which removes excessive regulation but ensures quality control across providers.

Enhancing Access and Attainment

The analysis in section III.C suggests that bolstering secondary education, TVET, and the linkages between them is a particularly urgent priority in order to address the current situation wherein the bulk of youth exit the education system at the secondary level and also have very limited access to basic forms of TVET. The CESR has identified recommendations aimed at addressing various supply- and demand-side constraints, including expansion of secondary education and TVET school networks, a continued expansion of the provision of needs-targeted scholarships, and widening access to an increased array of competency-based modular short courses in urgently demanded skill areas and targeted at the large numbers of youth (particularly from disadvantaged groups) currently unable to complete secondary education, as well as unskilled workers.⁵¹ At the same time, while perhaps less obvious, expanding access will also hinge on critical quality-side reforms: in particular, the need for secondary education curriculum reforms to address perceived low quality as a leading reason for dropout, lower household expenditure burdens (including the high burden of private tutoring fees, driven by rote-based pedagogy and assessment), and ensure improved learning outcomes and completion rates.

⁵⁰ For example, it would be important to ensure strong industry engagement in the TVET subsector (to ensure programs target labor market demands), such as via industry representation in the proposed TVET Council (now under discussion for potential establishment).

⁵¹ Based on CESR Phase 1 recommendations and with financing under the Japan Fund for Poverty Reduction, ADB is assisting the government to develop and pilot test such programs, for possible replication under a larger 2016 program. See ADB (2014b).

In primary education, more targeted approaches are needed to address the needs of the hard-to-reach, particularly to avert dropouts in the later grades of primary school. The planned expansion of needs-targeted scholarships may play a key role in this, alongside other initiatives such as social marketing. Expansion of early childhood care and development (currently largely restricted to affluent groups) could also help promote primary completion.

In higher education, the main impediment to expanding enrollment is the currently low upper secondary completion rates: while reforms of the matriculation exam (including delinking its current dual role as an exam for high school completion and screening into university) is part of the solution, sustained efforts will be needed to dramatically expand secondary education attainment. In parallel, providing targeted financial assistance may also be important to lower cost barriers for disadvantaged youth, while diversifying higher education programs may also help expand higher education demand.

Improving Quality and Relevance

Curricula, pedagogical methods, and assessment need updating.

The Ministry of Education is now developing plans to reform primary and secondary curriculum, which is considered outdated, poorly aligned to Myanmar's new socioeconomic context, and heavily reliant on rote-based instruction and examinations. The need for such reforms is perhaps most apparent in secondary education, which will likely continue in the medium-term to bear the burden of preparing the majority of youth for entrance into the workplace and society.

For basic education (currently grades 1–11), the forthcoming National Education Sector Plan will need to ensure careful costing, planning, and sequencing of interventions, ranging from developing new curricular contents, to printing and distributing new textbooks and retraining teachers to master both the new curricular contents and more modern pedagogical methods. Pedagogical methods and teacher qualifications also need updating and strengthening.⁵² As a third and interlinked pillar of curriculum reform, reforms of student assessment (including the matriculation exam) will also be critical to enable a shift away from rote-based education and to improve students' mastery of analysis, problem solving, creative thinking, and other soft skills needed in the workplace.

As noted above, there is also a need to improve the labor market relevance of TVET and higher education curricula, including by strengthening engagement with industry. Like primary and secondary education, TVET and HES curriculum reforms will require revising curricular contents, but also training teachers to adopt modern pedagogies, and reforming rote-based assessment, and inconsistent policies and standards. Addressing these problems will require careful coordination and sequencing of policy actions to ensure that improving quality and access to education does not benefit urban or rich populations disproportionately.⁵³

⁵² Initial analysis and recommendations for strengthening teaching and other dimensions of SES are reported in CESR, ADB, and Australian Aid (2013a). More detailed recommendations are presented in a forthcoming CESR Phase 2 technical annex. See also Muta (2014).

⁵³ Initial analysis and recommendations are reported in CESR, ADB, GIZ, UNESCO (2013). More detailed recommendations are presented in a forthcoming CESR Phase 2 technical annex.

Broader human resource strengthening will be critical to improving education.

Improving teaching quality will require a combination of: (i) enhancing preservice teacher education; (ii) dramatically expanding in-service teacher training and opportunities for continuing professional development; and (iii) strengthening teacher deployment human resource management, including potentially reforming ladder-based promotion (wherein teachers trained for primary education are promoted to lower secondary and then upper secondary levels). More broadly, successful implementation of forthcoming sector laws, regulations, and investments will require a broader strengthening of human resources for staff at different tiers in the education sector. In addition to teacher training, this includes, among others: (i) effective staff qualification, recruitment, and deployment policies; (ii) related management information systems; (iii) appropriate remuneration and incentive schemes (for example, to attract and retain qualified teachers and education managers to poor and remote areas); and (iv) mechanisms for continuous career development.

Strengthened quality assurance at all levels.

Forthcoming reforms will also need to incorporate the establishment of effective quality assurance mechanisms at all levels of education. Specific approaches, however, will need to be carefully developed for each subsector, in view of distinct challenges and stakeholders involved: for example, (i) in basic education, quality assurance will need to support (rather than restrict) teachers' adoption of modern pedagogy; (ii) in TVET, quality assurance must be linked to new skill standards and competency-based approaches; and (iii) in HES, quality assurance will likely need to be introduced alongside a shift toward increased autonomy of higher education institutions.

Appropriate use of ICT can contribute to broader approaches.

Finally, while ICT is not a panacea, the strategic use of appropriate and cost-effective forms of ICT can contribute as a tool within broader approaches aimed at improving education quality (as well as education management, etc.). Examples include the use of ICT as a tool to support teacher training and continuing professional development, such as by supporting dissemination of new education trends, best practices, and other learning guides for teachers. Particularly in higher education, ICT can also play a role in providing student and faculty to a broader array of materials (for example, e-libraries), just as ICT can have a role in expanding and enhancing distance education. At the same time, international experience suggests the need for a cautious, evidence-driven approach to ICT, wherein consideration of investments in ICT carefully assesses costs (especially recurrent costs) and benefits, and emphasizes contributions to core education sector objectives, sustainability, and equity dimensions. Development of a clear, evidence-based policy on ICT as a tool to support Myanmar education (and taking into account such dimensions) could be an important step prior to undertaking significant investments in ICT in the education sector.⁵⁴

⁵⁴ In late 2013, the Lao PDR, for example, approved a Policy of the Ministry of Education and Sports on Information Communication Technology for the Lao PDR education for grades 1–12, which calls for screening ICT investments on education objectives, sustainability, and equity.

IV. EMPLOYMENT AND LABOR MARKETS

A large youth population is frequently cited as one of Myanmar's major strengths (ADB 2012). The country may benefit from a "demographic dividend" with a large share of the population engaged in productive work and supporting a smaller share of older and non-working people. While its demographic profile is favorable, the country suffers from a number of key deficits in its labor market structure. A large share of workers is underemployed and thus are not able to contribute their full energy to economic output. Moreover, the workforce is relatively under-educated and low-skilled. And finally, the creation of an organized workforce is still in its infancy, with most workers engaged in various types of informal work and with a trade union movement that is only recently reviving after years of the suppression. Labor disruptions due to strikes may pose a concern for foreigners seeking to invest and take advantage of low wages.

There is no doubt that institutional capacity and strong governance are required in the employment and labor sector. The Ministry of Labor Employment and Social Welfare is primarily responsible for labor issues. The ministry aims to:

- (i) maintain industrial peace,
- (ii) provide free employment services,
- (iii) provide skill training,
- (iv) conduct research into labor matters and collect data,
- (v) ensure workers' rights under labor laws,
- (vi) guarantee occupational safety and health,
- (vii) provide for the social security of workers,
- (viii) supervise the smooth and steady flow of goods throughout the country, and
- (ix) participate in international labor affairs.

The Ministry of Social Welfare, Relief and Resettlement oversees vulnerable sectors of society, and the department of welfare, in particular, is a focal point for the National Committee on the Rights of the Child, the Myanmar National Committee for Women's Affairs, and ASEAN matters related to children, youth, women, and social welfare and development.

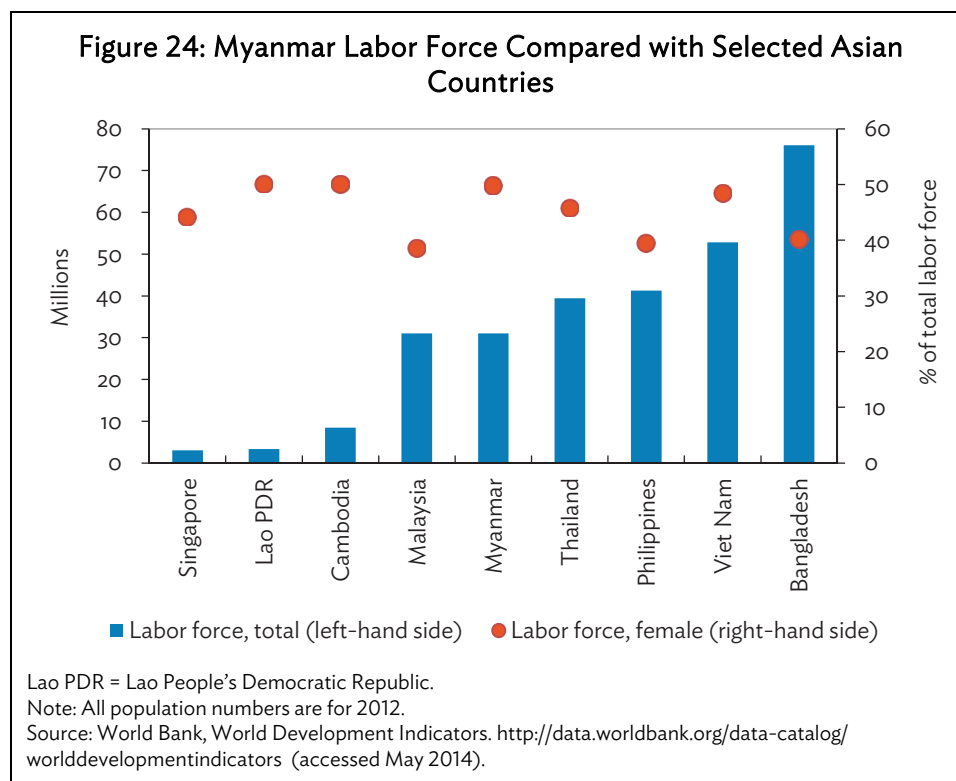
Capacity building of all constituents is critical to building an inclusive, flexible, and well-functioning labor market, while the establishment of effective social security systems, together with the provision of adequate infrastructure and resources for implementation, is essential for a strong cohesive social sector.

A. Myanmar's Favorable Demographic Profile for Growth

The large, youthful population should be conducive to strong economic growth, although birth rates are dropping substantially, which could lead to a potentially rapid transition to an ageing population. The total population is estimated at 61 million and is increasing at an annual rate of about 1.3 (CESR, ADB, and Australian Aid 2013b). The average age in 2010 was 27.8 years, and is forecast to rise to 29.8 in 2015 and 31.7 in 2020. The government was conducting a new population census in 2014.

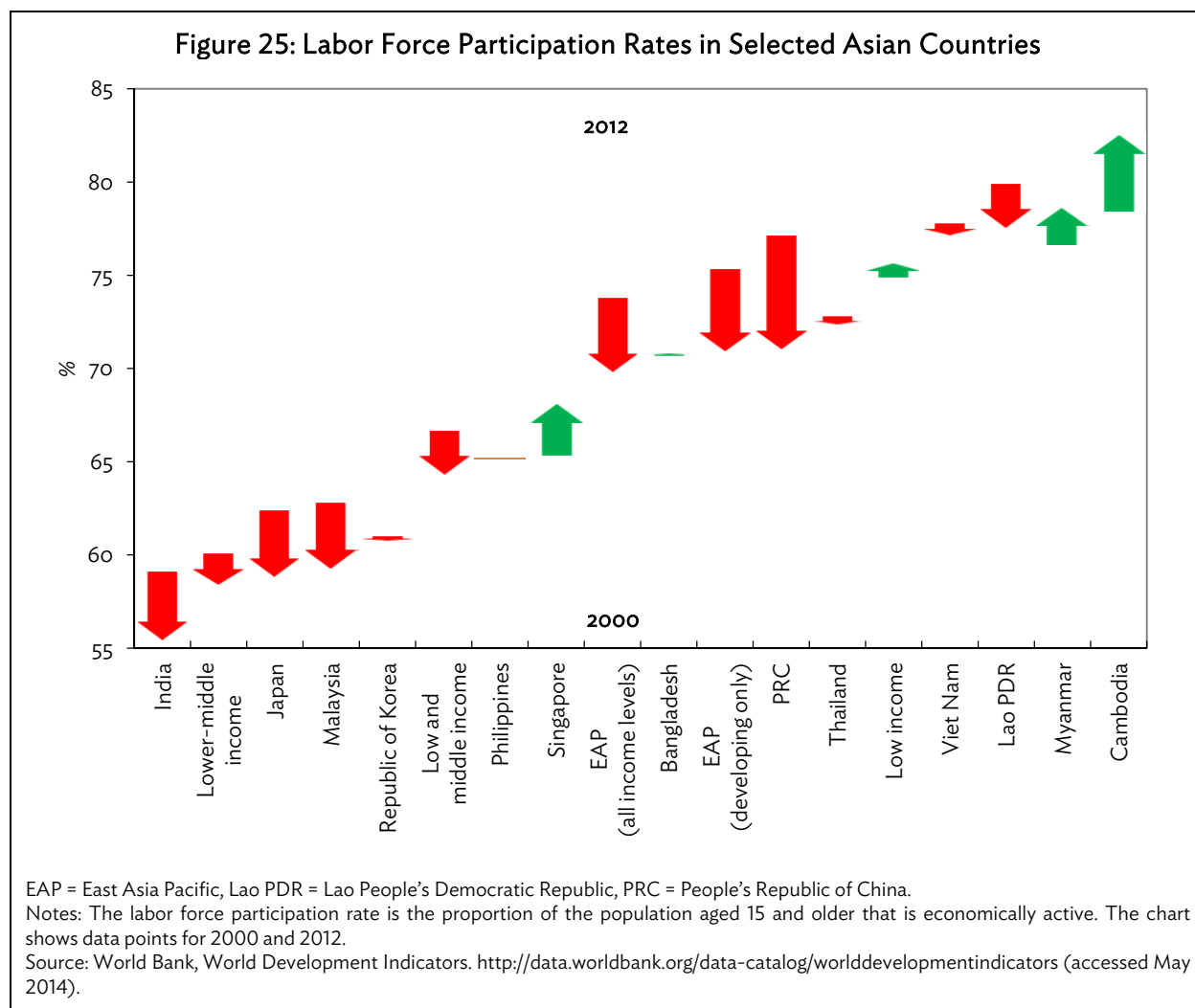
The labor force is about 31 million people, according to the latest World Development Indicators data, although different sources cite numbers up to 32.5 million. The share of the working-age population (15–64) is about 70 of the total, the fifth highest among ASEAN's 10 member

countries. Furthermore, about 40 of the working-age population is between 15 and 29, and women account for almost half of the labor force (Figure 24).



Labor force participation is higher than in other Asian countries.

Myanmar has an almost 80 labor force participation rate, the second highest in Asia after Cambodia. Figure 25 shows labor force participation rates from 2000 to 2012, with 2012 data represented by the tip of the arrowhead. It is interesting to note that the rates for both Myanmar and Cambodia have continued to increase, but have declined in many other countries.



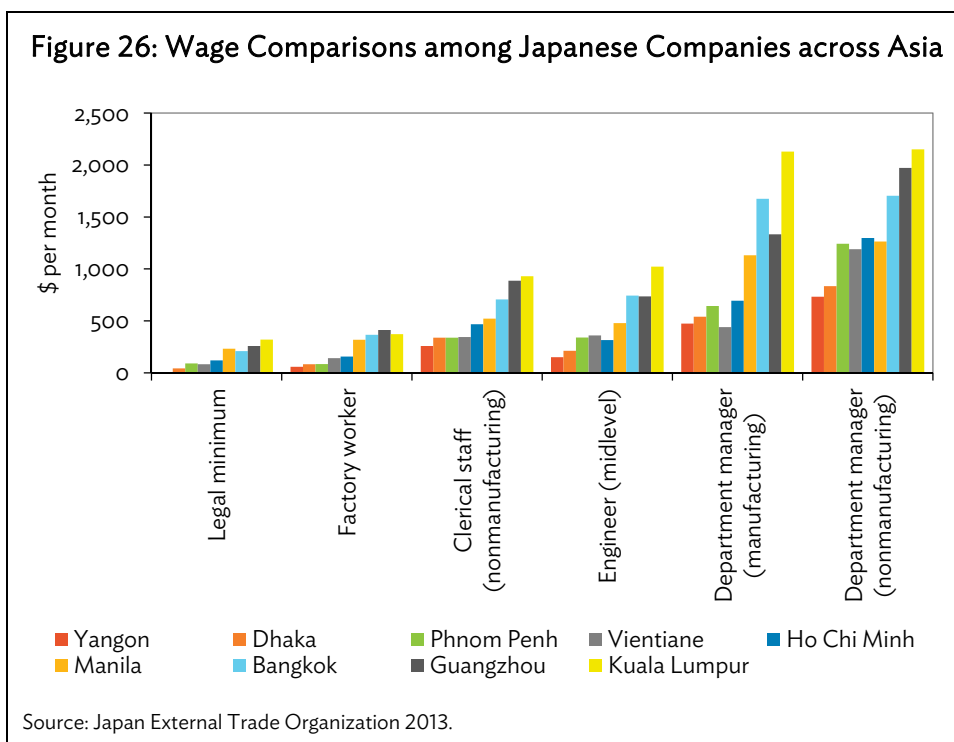
B. Skills Deficits Could Hamper Economic Growth

A key labor market problem is that much of the workforce is unskilled, with low educational attainment. As discussed in section III, there are multiple weaknesses in the educational system. Myanmar is expected to experience significant structural change in which industry will play an increasing role in driving economic growth and job creation. This has implications for skills development and labor force needs. A systematic breakdown of potential changes in employment patterns linked to an economic transformation would be a useful exercise to guide investment in education to better prepare the labor and talent pool for future opportunities.

Wages are low but productivity is critical to competitiveness.

According to a survey by the Japanese External Trade Organization, wages in Myanmar are the lowest in the region (Figure 26). However, employers often say that finding skilled and talented workers is challenging, and attracting the professional diaspora back to the country may be difficult on grounds of these migrant workers' earnings expectations and adjusting to a different standard of living. To achieve sustained high growth, labor productivity needs to be enhanced, which will benefit both labor-

intensive manufacturing and tourism. To this end, wage levels, after accounting for productivity, the supply of the workforce, and other indicators, will need to be carefully monitored.

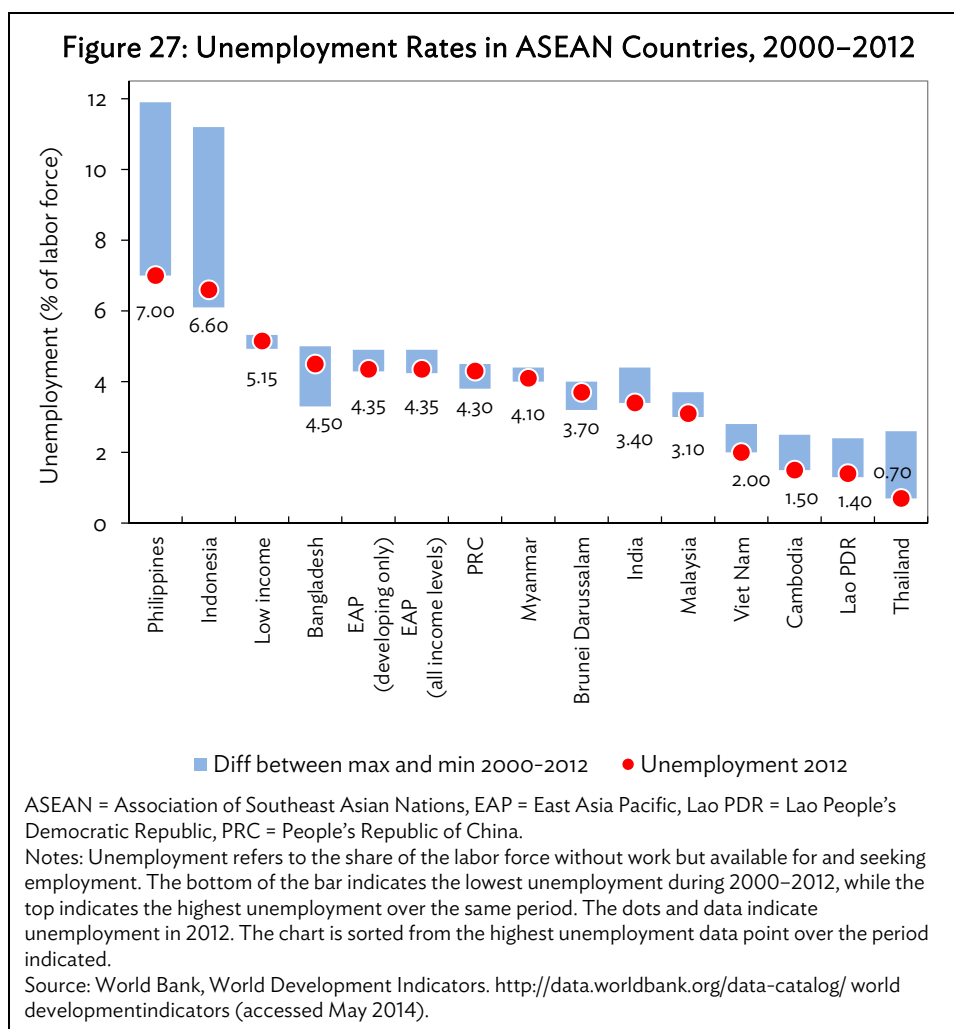


C. Unemployment is Quite Low by Regional Standards

Official data on unemployment are lacking, although there are numerous other data sources. The World Bank's World Development Indicators suggest that unemployment in Myanmar ranks in the middle of ASEAN and neighboring countries, at around 4, higher than Brunei Darussalam, Cambodia, India, the Lao PDR, Malaysia, Thailand, and Viet Nam (Figure 27). The World Bank data also indicate that women have slightly higher unemployment rates (at 5) than men (4); in youth unemployment, however, the differences are more pronounced, with women at 13 and men 10.

But much employment in Myanmar is informal and underemployment substantial.

The nature of work in Myanmar is predominantly informal. Some 41 of the workforce is classified as own-account workers, while 15 are contributing family members and 18 casual workers. Together, 74 of the workforce can be classified as informal (MNPED et al. 2011). While unemployment is low, there is considerable underemployment, with more than a third of the workforce (38) working less than 44 hours per week (41 for women). Underemployment is also on the rise, climbing 3.6 percentage points from 2005 to 2010 (MNPED, Sida, UNICEF, UNDP 2011).



D. Opening the Economy Creates Labor Market Challenges and Opportunities

Myanmar is reforming and opening up in the wake of the establishment the ASEAN Economic Community, with a freer flow of goods, services, and human capital. The government conducted a new census and labor force survey in 2014, which will improve understanding of the labor force, its composition, and skills. There has been little recent study in this area and the available data are scant. The Household Living Condition Survey provides indicators and insights into employment challenges, while the labor market analysis in the CESR Phase 1 looks at the issue from an education perspective rather than in terms of employment sustainability or quality of jobs. Although these reviews provide a good foundation, more comprehensive data will be essential for planning. In this regard, system upgrading is needed, not only in the central ministry, but also throughout Myanmar's 76 decentralized labor exchange offices.

E. Reform of Industrial Relations Is Under Way

Myanmar is implementing a modern system of laws and institutions to manage industrial relations and provide workers with social security and safety nets, a process that started in the second half of 2011. It

has enacted five new labor laws and will amend 11. These new laws and bills cover aspects of the labor code, including trade unions, dispute settlement, social security, unemployment insurance, minimum wages, skills training, and occupational safety and health.

Since the 1950s, Myanmar has observed two of the eight core international labor standard conventions, but violated their provisions in later decades.⁵⁵ The country was barred from technical assistance and attending events organized by the International Labour Organization for a decade beginning in 1999 over the issue of forced labor. Relations were normalized in 2012 and the situation has improved. In December 2013, Myanmar signed the Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, adopted by the International Labour Organization. This will come into force in December 2014.

Labor laws are new and implementation is still incomplete.

Labor laws deserve more attention in the context of promoting equitable and sustainable development, as they help reduce unpredictability in labor relations and promote productivity. Ensuring that labor laws are accessible and equally understood by employers and workers are vital. As an example, an often contentious challenge in this regard in Cambodia is the fact that laws and policies are interpreted differently by different social actors. Such differences can lead to conflict and industrial unrest if improperly managed. It is therefore essential that the government play a role in public awareness of the laws and coordination of various stakeholders in the implementation. Such initiatives can be conducted jointly with unions and employer associations.

Labor law sanctions and penalties should neither deter investors nor infringe on worker rights. It is important for employers and workers to take laws seriously. However, if violations result in sanctions and penalties (such as fines), consideration should be given to comparing them with international best practice so as not to deter investment.

New industrial relations regulations created new challenges

The newness of laws and representative organizations has meant that industrial relations are in transition, with workers resorting to strike action to gain better working conditions. The number of labor disputes brought to the Ministry of Employment, Labor and Social Security, running at 100 a month, has grown rapidly.⁵⁶ The lack of labor courts and a well-functioning labor conciliation and arbitration system puts a considerable burden on the ministry. Industrial relations should improve, however, as the new legislation is better understood and dispute resolution mechanisms are established. Workers and employers could place greater emphasis on resolving differences through bilateral negotiations.

Industrial relations require coordination of government, union, and employer bodies. The formation and development of unions has flourished since the inception of the New Labor Organization law, with their number jumping from about 635 in mid-2013 to over 950 by March 2014. Employer federation numbers provided by the government show 22 basic organizations in five different sectors. Other employer representative bodies include the Myanmar Chamber of Commerce. Discussions with government point to a variety of challenges in dealing with the union movement and

⁵⁵ Covering forced labor, freedom of association, and protecting the right to organization.

⁵⁶ Based on consultations with the Ministry of Labor Employment and Social Welfare in Nay Pyi Taw in March 2014.

coordination among different stakeholders. These include (i) the unguided organization of the union movement, which makes it difficult to manage and engage with; (ii) internal conflict among unions and a lack of clear objectives in some individual unions; and (iii) the lack of institutional capacity to manage and coordinate with all stakeholders; that is, government, employers, and unions. While it will take time to achieve a structured labor and employer movement, it is important that laws and regulations support a structure with which all parties can engage constructively.

Other labor-related initiatives are still not fully in place.

The Social Security Law, enacted in August 2012, introduced new measures based on international practice for invalidity, pensions, survivors' benefit, unemployment insurance, and other benefits for workers in the formal sector. As such, however, the new law benefits only about 2.5 of workers. Given the likelihood of an aging population in the next 2–3 decades, mechanisms to include the informal sector and migrant workers in social security coverage will be an important next step in social security development.

Inadequate wages sparked labor unrest in 2011 and led to the imposition of a temporary minimum wage in some sectors. Setting a structured wage process that is transparent and includes engagement and discussion among employees, employers, and the government is an important next step. These are rightfully covered in the Ministry of Labor, Employment and Social Security Notification No. 64/2013 (Minimum Wages Rules) issued on 12 July 2013. Experience in the region suggests that transparent and structured processes that can evolve and be updated as economies develop and that consider social and economic aspects of business sustainability and worker well-being can help foster constructive industrial relations and engagement and mitigate industrial action. Two years after the Minimum Wages Law of 2013 was enacted, Myanmar has set a national minimum wage of MK3,600 per day effective 1 September 2015.

Occupational safety and health is emerging as a key workplace issue, especially in mining and manufacturing in which poor air quality can lead to respiratory problems. Worker safety is a particularly pressing issue in the construction industry. Building the capacity of regulatory bodies, including an improved labor inspectorate, would help ensure compliance with existing regulations on working conditions. While government regulatory bodies will play an important role in setting general guidelines for the workplace, more privately funded regulatory and inspection bodies or tripartite institutions are needed to address what will be a growing priority on the labor front as the economy develops.⁵⁷

F. Summary Recommendations

Understanding labor and social sector needs

The first step should include an in-depth review of critical issues such as health and safety in industry. Priorities in existing laws include the following:

- (i) **Review of legislation and penalties.** Labor laws and the penalties in the laws should not be too onerous compared to those of other countries in the region so as not to deter investors, but they do have to be sufficiently strong to protect the rights of workers.

⁵⁷ An example from the region of such a tripartite body is the Arbitration Council Foundation in Cambodia, which is a labor dispute settlement system.

- (ii) **Structured wage-setting mechanisms.** Wage legislation is only part of ensuring a structured and cohesive approach to wage setting. It is imperative to have wage setting mechanisms and bodies that are transparent and include all stakeholders—government, unions, and employers—in wage negotiations, which have been employed in setting the minimum wage in 2015. Wage-setting authorities or bodies should be adequately financed and have the right skills to ensure active engagement and the smooth implementation of wage decisions.
- (iii) **Labor inspection.** This is going to be crucial to the development and implementation of labor laws and regulations. Encouraging diversified language use in government inspection agencies will be useful for investors to interact with them, while further resource and capacity building will be needed to ensure that both workers and unions are aware of their responsibilities under the law. As an alternative, or addition, to these agencies, it is important to set up more inspection bodies with greater independence.
- (iv) **Management of migrant workers.** Continued attention to migrant workers is important. This includes sending workers overseas and attracting those with the skills needed to help build a successful economy back home. For migrant workers, important policy areas include skills training, new legislation on recruitment agencies, and linking workers to social security programs when they come on stream.
- (v) **International labor standards.** Myanmar does not have to rush to adopt further international labor standards. Rather, it should rely on international standards and instruments already in use in deliberating national labor priorities and for developing labor legislation and supporting mechanisms. This implies taking a more measured approach to the ratification of standards, rather than adopting them first and then preparing for implementation.

Promoting employment-intensive growth

- (i) **Employment-intensive growth policies.** Job creation must be a central consideration in the development of economic policy.
- (ii) **Investment for labor-intensive industries.** Government should promote domestic and foreign investment for labor-intensive industries, particularly for garments, light manufacturing and assembly, tourism, and some aspects of agroprocessing.
- (iii) **Labor information services.** These can be strengthened with ICT applications. The computer hardware and software for labor market information exchanges should be updated and modernized to allow job seekers up-to-date information on job opportunities and to encourage employers to use the system to post openings.
- (iv) **Dissemination of new labor laws and regulations.** These need to be widely disseminated and sufficiently clear in their language so that employers and workers understand the benefits and mechanisms available to them.
- (v) **Skills and employability of workers.** Weak links between industry and education remain a major weakness of the labor market. Engaging industry early on in skills forecasting is essential to ensure the proactive development of the labor force. With a largely uneducated workforce, apprenticeship programs can be a tool to foster links between industry and education. Apprenticeship programs can be encouraged by including them in labor and skills development policies and making them a requirement for graduation.

Establishing labor standards and dispute resolution mechanisms

Considerable progress has been made on labor standards. With new labor legislation passed, implementing and enforcing the new elements of the “labor code” is now a priority. To ensure its success, greater awareness and capacity is essential among workers and the business community on the laws already in effect and those being developed. Understanding the benefits and mechanisms of these laws would certainly help reduce labor disruption. The need is also urgent for transparent mechanisms to prevent and resolve disputes. These should include establishing labor arbitration centers and strengthening labor courts, which have to be accessible to workers and their legal representatives. Formation of a cadre of judges specializing in labor law is also important, as is an adequate number of trained labor conciliators and arbitrators to help resolve disputes and shorten strikes. Trade unions and businesses should be aware of the role of such personnel and agree to conciliation and arbitration processes should parties fail to reach collective bargaining agreements on contracts or labor disputes.

Expanding the social security system’s coverage

The social security system needs to actively market its importance and value to its “clients” who contribute to the system. Besides the formal sector, it should make a concerted effort to include the informal sector. To this end, the following measures need to be implemented:

- (i) **Awareness building.** The benefits of the new social security system have to be clearly explained to workers and businesses, especially small and medium-sized enterprises. Understanding the benefits will allow for greater buy-in and help ensure that businesses do not seek ways to pay contributions below required amounts.
- (ii) **Expansion of social security coverage.** The government should set targets and seek to increase the coverage of the social security system from its current level of about 2.5 of the workforce to at least 15 by 2020. A first target could be to include all formal sector employees and then to expand social security to rural and informal workers.
- (iii) **Information technology application for better management.** A substantial upgrading of the information technology systems used in managing and tracking social security contributions, benefit entitlements, and payments is needed to ensure the accuracy of these systems.

REFERENCES

- Asian Development Bank (ADB). 2012. *Initial Assessment of Post-Primary Education (PPE) in Myanmar: Discussion Paper*. Manila. <http://www.adb.org/documents/initial-assessment-post-primary-education-ppe-myanmar-discussion-paper>
- . 2014a. *Myanmar: Unlocking the Potential—Country Diagnostic Study*. Manila.
- . 2014b. *Technical Assistance to Myanmar for Skills Development for Inclusive Growth*. Manila.
- . 2014c. *Updated Assessment of Myanmar Post-Primary Education*. Manila.
- Beyrer, C. and T. J. Lee. 2008. Responding to Infectious Diseases in Burma* and Her Border Regions. *Conflict and Health*. <http://www.conflictandhealth.com/>
- Central Statistical Organization. 2012. *Statistical Yearbook 2011*. Nay Pyi Taw.
- . 2013. *Statistical Yearbook 2012*. Nay Pyi Taw.
- Comprehensive Education Sector Review (CESR), ADB, and Australian Aid. 2013a. *Myanmar Comprehensive Education Sector Review Phase 1: Rapid Assessment: Technical Annex on the Secondary Education Subsector*. Yangon. <http://www.adb.org/projects/documents/cesr-p1-rapid-assessment-annex-secondary-education-tacr>
- . 2013b. *Myanmar Comprehensive Education Sector Review Phase 1: Rapid Assessment: Technical Annex on Labor Market Analysis: The Demand for Higher Education and TVET Graduates*. Yangon. <http://www.adb.org/projects/documents/cesr-p1-rapid-assessment-annex-labor-market-analysis-demand-higher-education-tvet-graduates-tacr>
- Comprehensive Education Sector Review (CESR), ADB, Australian Aid, and United Nations Educational, Scientific and Cultural Organization (UNESCO). 2013. *Myanmar Comprehensive Education Sector Review Phase 1: Rapid Assessment: Technical Annex on the Higher Education Subsector*. Yangon. <http://www.adb.org/projects/documents/cesr-p1-rapid-assessment-annex-higher-education-subsector-tacr>
- Comprehensive Education Sector Review (CESR), ADB, GIZ, and UNESCO. 2013. *Myanmar Comprehensive Education Sector Review Phase 1: Rapid Assessment: Technical Annex on TVET Subsector Analysis – Policy, Legislation, Management, and Service Delivery*. Yangon. <http://www.adb.org/projects/documents/cesr-p1-rapid-assessment-annex-tvet-analysis-policy-legislation-management-service-delivery-tacr>
- Comprehensive Education Sector Review (CESR), World Bank, and Australian Aid. 2013. *Myanmar CESR Rapid Assessment of the Financing of the Education Sector in Myanmar*. Bangkok.
- Ethnologue: Languages of the World. 2014. Myanmar. <http://www.ethnologue.com/country/MM>

* ADB recognizes “Burma” as Myanmar.

- Fewtrell, L., R. Kaufmann, D. Kay, W. Enanoria, L. Haller, and J. M. Colford. 2005. Water, Sanitation, and Hygiene Interventions to Reduce Diarrhoea in Less Developed Countries: A systematic Review and Meta-Analysis. *Lancet Infectious Diseases*. 5 (1). pp. 42–52.
- International Monetary Fund (IMF). 2014. *Myanmar: Staff Report for the 2014 Article IV Consultation*. Washington, DC.
- Japan External Trade Organization (JETRO). 2013. *The 23rd Survey of Investment Related Costs in Asia and Oceania (FY 2012 Survey)*. Overseas Research Department, JETRO.
- Ministry of Health (MOH). 2002. *Sentinel prevalence study of tobacco use in Myanmar 2001*. Yangon.
- . 2010. *Myanmar Health Statistics 2010*. Nay Pyi Taw. <http://www.moh.gov.mm/file/Myanmar20Health20Statistics202010.pdf>
- . 2013a. *Health in Myanmar: Health Statistics*. <http://www.moh.gov.mm/file/HEALTH20STATISTICS.pdf>
- . 2013b. *Public Health Statistics 2010–2011*. Nay Pyi Taw.
- . 2014. *Public Health Statistics 2012*. Nay Pyi Taw.
- Ministry of Health (MOH) and World Health Organization (WHO). 2010. *National Health Accounts 2008–2009*. Nay Pyi Taw, Myanmar.
- Ministry of National Planning and Economic Development (MNPED), Ministry of Health (MOH), and United Nations Children’s Fund (UNICEF). 2011. *Myanmar Multiple Indicator Cluster Survey 2009–2010*. Yangon.
- MNPED, Swedish International Development Cooperation Agency (Sida), United Nations Children’s Fund (UNICEF), and United Nations Development Program (UNDP). 2011. *Integrated Household Living Conditions Survey in Myanmar (2009–2010): MDG Data Report*. Yangon.
- MNPED and UNICEF. 2012. *Situation Analysis of Children in Myanmar*. Nay Pyi Taw.
- Muta, H. 2014. *Supply and Demand of New Teachers Based on the Education Cycle Reform*. Yangon.
- Organisation for Economic Co-operation and Development (OECD). 2013. *Multidimensional Review of Myanmar: Volume 1. Initial Assessment*. Paris: OECD Publishing.
- Organisation for Economic Co-operation and Development (OECD) and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). 2014. *Myanmar Business Survey 2014: Survey Results*. Yangon.
- Organisation for Economic Co-operation and Development (OECD)/World Health Organization (WHO). 2012. *Health at a Glance: Asia/Pacific 2012*. <http://dx.doi.org/10.1787/9789264183902-en>

- Paqueo, V., A. Orbeta, T. Castaneda, and C. Spohr. 2013. "After Five Years of Pantawid, What Next?" Policy paper online at <http://www.adb.org/projects/documents/support-social-protection-reform-pantawid-program-policy-brief-tacr>
- Spohr, Chris. 2003. Formal Schooling and Workforce Participation in a Rapidly Developing Economy. *Journal of Development Economics*, Vol. 70/2.
- United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). 2011. *Statistical Yearbook for Asia and the Pacific 2011*. Bangkok.
- World Bank. 2014. Myanmar: Decentralizing Funding to Schools Project. http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2014/04/07/000442464_20140407113344/Rendered/PDF/IPP6960REVISED0Box385175B00PUBLIC0.pdf
- . World Development Indicators. <http://data.worldbank.org/data-catalog/world-developmentindicators>
- World Economic Forum. 2014. *The Global Competitiveness Report 2014–2015*. Geneva.
- World Health Organization (WHO). 2008. *WHO Country Cooperation Strategy 2008–2011*. Myanmar.
- World Health Organization (WHO) and Ministry of Health (MOH). 2012. *Health System Assessment for Universal Health Coverage: Myanmar. Health Workforce Strategic Plan 2012–2017*. Yangon.

Myanmar Human Capital Development, Employment, and Labor Markets

Human capital is one of the core prerequisites for rapid, sustainable, and inclusive economic growth. Investments in health and education—including technical and vocational education and training—will be essential to engineer a productive labor force in Myanmar while ensuring that all population segments can contribute to and benefit from growth. This paper focuses on developing human capital, with a focus on health and education in the context of employment growth and an employment-enabling environment.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to the majority of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

www.adb.org