



# Bridging the Development Gap

ASEAN Equitable Development Monitor 2014



# **Bridging the Development Gap:** ASEAN Equitable Development Monitor 2014

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## ABBREVIATIONS

AEC	ASEAN Economic Community
AFEED	ASEAN Framework for Equitable Economic Development
ASEAN	Association of South East Asian Nations
CPI	Consumer Price Indices
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
IEA	International Energy Agency
MDG(s)	Millennium Development Goal(s)
OECD	Organization for Economic Cooperation and Development
ORS	Oral Rehydration Salts
PPP	Purchasing Power Parity
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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## EXECUTIVE SUMMARY

Since the Asian Financial Crisis in the late 1990s and through the Global Financial Crisis of the last decade, commendable progress has been made by the member states of the Association of South East Asian Nations (ASEAN) in improving economic and human development outcomes both within each country and across countries. Since 1997, the economies of the poorest countries in the ASEAN—Cambodia, Lao PDR, Myanmar and Viet Nam—have generally grown faster than the richer economies, which has reduced gaps in per capita incomes. Overall, child mortality rates have been cut by two-thirds across the ASEAN. And significant reductions have occurred even in some of the poorer member countries such as Cambodia and Lao PDR. Net primary school enrolment rates have risen in most countries, but particularly in the poorest ones, meaning that the gap between the countries with the lowest and highest rates has been reduced from 26 percentage points in 1998 to about eight percentage points in 2012. Finally, more than seven in ten Cambodians and Laotians now have access to clean water, compared to less than four in ten in 1998. The gap in living standards across the ASEAN community is being bridged, albeit gradually.

However, this report—*The ASEAN Equitable Development Monitor* (henceforth referred to as The Monitor)—also shows that much remains to be done to ensure that the poorest members of the ASEAN community—within countries and across countries—are not left behind as the countries of the ASEAN integrate further. In both policies and development outcomes, differences across the countries of the ASEAN remain large. For instance, while the World Bank Group's *Doing Business 2014* report judged Singapore to be the easiest country in the world to do business, Myanmar was judged to be the sixth most difficult country in the world. Differences in access to financial services—98 percent of Singaporeans have a bank account, compared to just four percent of Cambodians—imply large gaps in the extent to which citizens can save earnings and protect themselves from economic shocks. And large differences still persist in education and health outcomes. While net secondary enrolment rates in Indonesia and Thailand are close to 80 percent, they are about half that level in Cambodia and Lao PDR. A baby born in Lao PDR is still more than twenty times as likely to die in his or her first month of life than one born in Singapore. And, even within countries, socioeconomic status and location are the biggest determinants of the quality of medical care available to mothers and children. In the Philippines, for instance, only 26 percent of deliveries by mothers from the poorest wealth quintile are attended to by a skilled medical professional, compared to 94 percent of deliveries for the richest fifth.

In this context, the Monitor is designed to facilitate further discussion on policies and programs that can promote inclusive growth within ASEAN member countries and across the ASEAN community. It presents a number of indicators that are intended to provide a summary of development outcomes across and within the ten ASEAN countries and over time. On this basis, the Monitor is intended to help policymakers in ASEAN member states to identify areas of concerns and prioritize national and regional interventions.

The Monitor tracks indicators across two broad sets of development outcomes and policies: (i) *Economic Development* and (ii) *Human Development*. Each is described below in greater detail.

*Economic Development* indicators cover four aspects:

**Economic Growth and Macroeconomic Stability:** Over the past 15 years, faster growth in the poorest countries of the ASEAN has enabled limited convergence in living standards. However, gaps across member countries remain large. The average income in the richest ASEAN member state is more than 45 times that of the poorest, even adjusting for differences in purchasing power. Countries' macroeconomic policies have also generally been sound, stabilizing fiscal positions, limiting inflationary pressures, and managing external debt sustainably. Finally, most ASEAN economies have increased their integration with the global economy since the late-1990s, particularly the lower-income countries and Singapore.

**Enterprise Development:** Data available on the performance of individual enterprises indicate that, during the period covered by individual surveys, firms in Indonesia, Lao PDR, Myanmar, and Viet Nam were generally successful in growing their workforces. In Viet Nam, firms were especially successful during the surveyed period (2006–09) at achieving labor force growth. However, firm performance in Myanmar lags, with the ability of firms to participate in international markets an area of particular concern.

**Business Regulation and Facilitation:** ASEAN member states have generally eased regulations on private businesses. Particularly noteworthy is the progress made by Cambodia and Lao PDR. Nonetheless, the ease of doing business varies substantially across ASEAN economies. In Cambodia, Lao PDR, and Myanmar, for instance, it still remains very cumbersome to start, operate, expand, or close a business through official channels. Singapore, on the other hand, outperforms all other high-income economies in its ease of doing business.

**Access to Finance:** Gaps in access to finance remain large across the ASEAN. Whereas the average proportion of the population holding an account at a financial institution is 17 percent in the four poorest countries of the ASEAN, it is 57 percent in the middle- and high-income countries of the ASEAN. Disparities exist in the ability to save earnings as well, with Singaporeans and Thais more likely to have saved money compared to people in Cambodia and Viet Nam.

*Human Development* indicators cover four areas:

**Education:** Substantial progress has been made over the past 15 years in closing gaps in educational enrolment and attainment across the ASEAN, especially at the primary level. Nonetheless, significant gaps still remain across countries at higher levels of education as well as in the quality of education. Up to 60 percent of children in some countries do not attend secondary school. In the relevant age groups, a higher proportion of youth attend university and other tertiary institutions in Thailand than attend secondary school in Lao PDR. And quality deficiencies in many ASEAN countries mean that their youth enter adulthood still being unable to read or write.

**Health:** Health outcomes have also registered impressive improvements in most countries. Nevertheless, gains have been slow to reach poorer families and those in rural areas, even where there has been overall progress. Within Lao PDR, which has the highest rate of infant mortality in the ASEAN, a child afflicted with diarrhea in a poor household is half as likely as a child in a rich household to get adequate and timely treatment. In many low- and middle-income ASEAN countries, poor women in rural areas also generally have limited access to skilled birth attendants.

**Nutrition:** Progress achieved by ASEAN member states in improving child nutrition indicators—which are a key determinant of performance later in life—has been mixed. Reductions in the proportion of babies born with low birth weight have been modest in many countries and while rates of stunting and of underweight children have generally declined, the prevalence of wasting generally has not. Poorer children in many countries are overwhelmingly more likely to suffer from malnutrition and thus are less likely to enjoy healthy and productive lives.

**Water, Sanitation, and Electricity:** Access to improved water and sanitation facilities has substantially improved across the ASEAN over the past two decades, although persistent between- and within-country disparities remain in sanitation. Large disparities also persist in access to electricity and the use of solid fuels, particularly between rural and urban areas in Cambodia and Lao PDR.

Despite the utility of these indicators in providing a summary snapshot of the development gap among the member states of ASEAN as a guide for policy priorities, they are imperfect. Apart from their obvious limitation that they leave out significant facets of development, there is also the issue of measurement. Data coverage for many indicators

is often far from complete, with many countries missing some time periods and some countries not covered at all. Moreover, the quality of the data is also variable across countries and time. For instance, in the absence of comprehensive systems of life event registration, the formulation of indicators such as infant mortality necessitates extrapolations that are susceptible to various statistical biases and other errors. Where these imperfections exist, this report makes note of them, both to calibrate the interpretation of the indicator and to underscore the priority that ASEAN member states need to place on improving the quality and availability of data on development outcomes and their determinants.

# Introduction

## Equitable Development in the ASEAN

2015 will mark the creation of the ASEAN Economic Community (AEC) and with it a new freedom for goods, services, capital, and skills to move across the borders and seas that separate ASEAN's ten member states. These changes will undoubtedly enhance the economic opportunities available to those with the skills, capital, or market position to benefit, but the effects that the AEC will have on the poorest members of the ASEAN community are less clear.

In recognition of the importance of ensuring that all ASEAN community members benefit equitably from the AEC, in 2011 the ASEAN member states established the ASEAN Framework for Equitable Economic Development (AFEED). The Framework commits the ten member states to working together to promote a narrowing of development gaps within and between member states; to improve access to opportunities for human development, social welfare and justice; and to increase participation in the process of ASEAN integration and community building (ASEAN [2011]).

## Progress in Achieving Equitable Development in the ASEAN

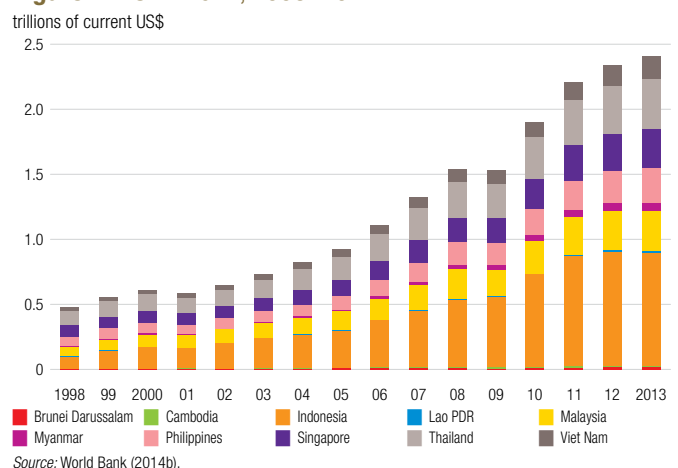
While much work remains to be done, few regional economic groupings can lay claim to the scale of transformation that the ASEAN has achieved over the past two decades. Brought to its knees by the 1997 Asian Financial Crisis, the sustained economic growth achieved by the community has far surpassed the most optimistic projections. Whereas in 1998, the size of the ASEAN economy fell below half a trillion U.S. dollars, it now stands at US\$2.4 trillion (Figure 1).

The rapid economic growth attained by the ASEAN has benefitted not just its poorest countries, but particularly its poorest citizens. According to estimates recently published by the World Bank to provide for more accurate comparisons across time and countries,

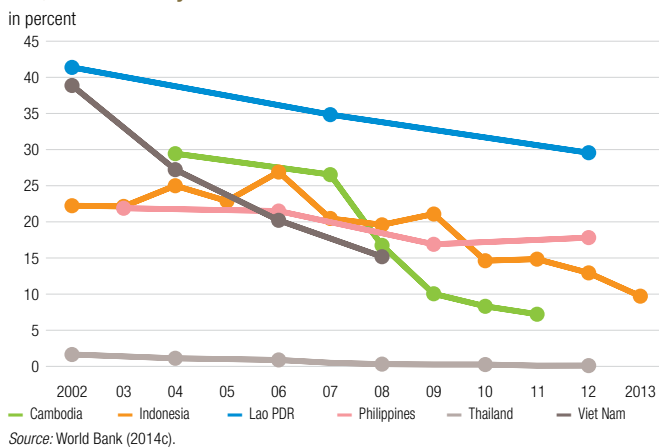
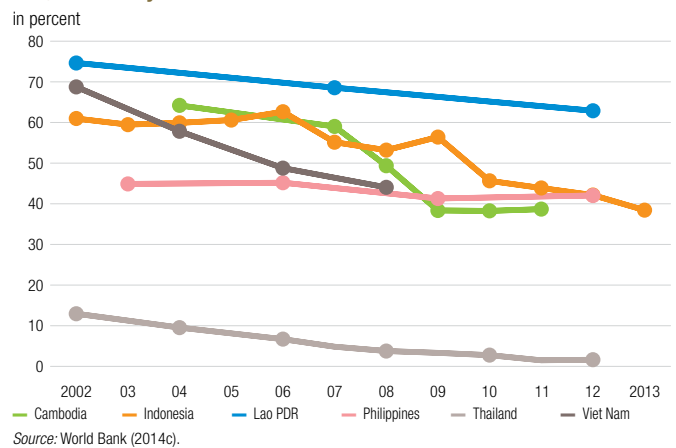
as of 2002, 39 percent of the population of Viet Nam eked out a living on less than US\$1.25 per day (World Bank [2014b]), while 69 percent lived on less than US\$2 per day. By 2008, these proportions had been reduced to 15 and 44 percent, respectively. Poverty in Cambodia, one of the poorest countries in the ASEAN, has also fallen dramatically over a short time period, with a 23 percentage point reduction in the proportion of the population living on less than US\$1.25 per day recorded between 2004 and 2011. Reductions in poverty have been also observed in all six ASEAN member states for which comparable poverty estimates are available (Figure 2 and Figure 3).

Despite the progress achieved over the past decade, large differences in poverty levels continue to persist across the ASEAN. As of 2012, Lao PDR has the highest incidence of poverty in the ASEAN, with 30 percent of the population subsisting on less than US\$1.25 per day and 62 percent of the population subsisting on less than US\$2 per day. In Thailand, which has the lowest incidence of poverty of any of the six ASEAN countries for which data are available, only 0.1 percent of the population subsists on less than \$1.25 per day and 12 percent subsists on less than \$2 per day.

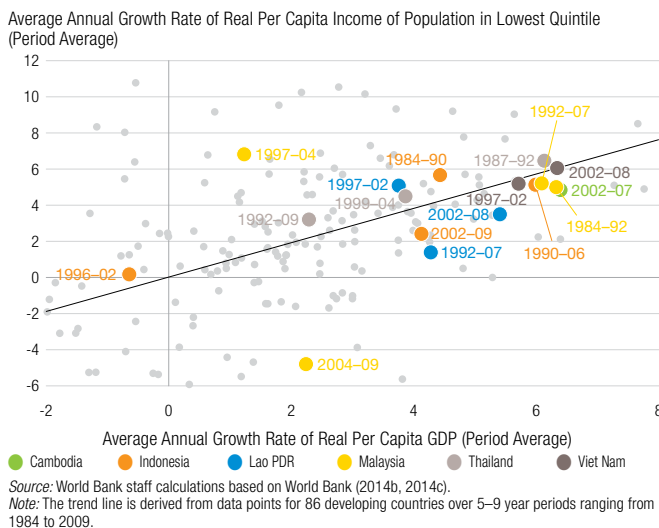
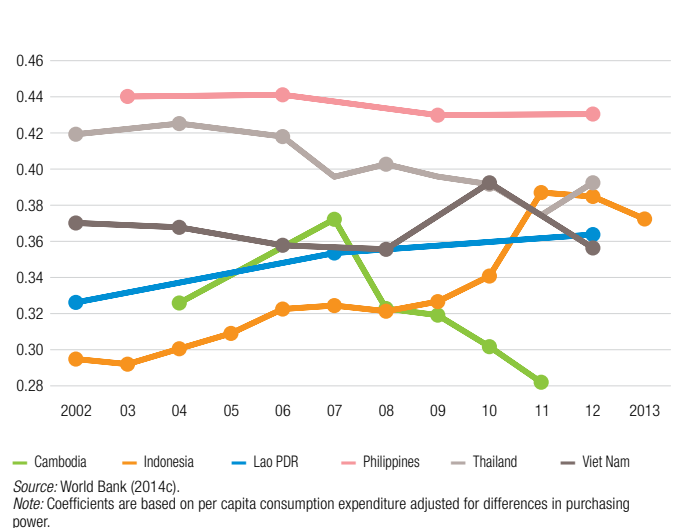
**Figure 1: ASEAN GDP, 1998–2014**





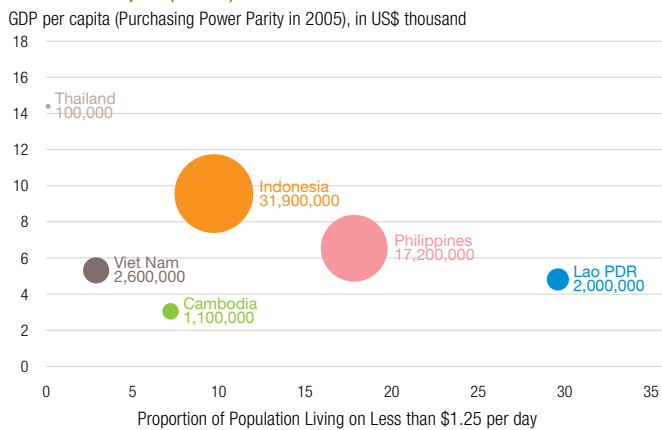
**Figure 2: Proportion of Population Living on Less than US\$1.25 Per Day****Figure 3: Proportion of Population Living on Less than US\$2 Per Day**

As is the case elsewhere in the world, the substantial reductions in poverty observed in the ASEAN have been strongly correlated with rapid economic growth (Figure 4).<sup>1</sup> However, growth does not always mean that there is also more equality in incomes or expenditures. One way to look at this question is to examine the evolution of the Gini coefficient for expenditures (or incomes) over time. In Cambodia, the Gini coefficient in 2011 (0.28) was lower than in 2004 (0.33), implying that economic growth over the period went along with greater equality in the distribution of incomes and spending (Figure 5). Economic growth in Thailand also appears to have had the same effect over the past decade. However, the opposite has been the case in Indonesia and Lao PDR, with the distribution of income and spending becoming relatively more skewed.

**Figure 4: Relationship between National Income Growth and Income Growth of the Poorest Quintile****Figure 5: Gini Coefficients in Selected ASEAN Countries, 2002–12**

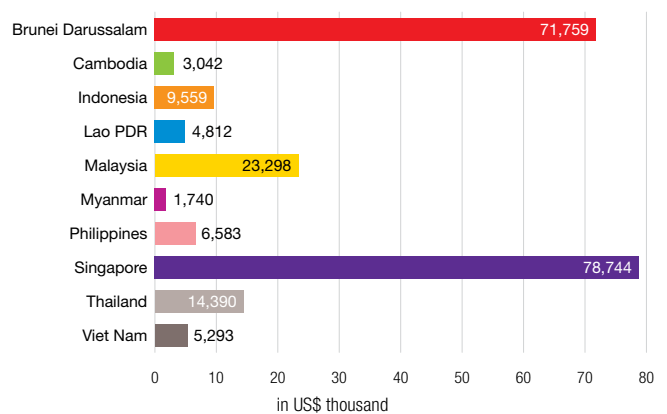
The persistently high levels of inequality in Indonesia and the Philippines underscore the relatively small extent to which economic growth in these countries has, over recent years, benefited the poor. In particular, rates of poverty reduction in Indonesia and the Philippines have been slower than those recorded in Cambodia or Viet Nam. As of 2012, the incidences of both US\$1.25 and US\$2 poverty in Indonesia and the Philippines were higher than in Cambodia and Viet Nam. As a result, the poor in the ASEAN are now increasingly concentrated in middle-income

1 In the case of Thailand, the income of the poor increased more than the national average income between 1992 and 1999 and 1999 and 2004. This was also the case in Indonesia between 1984 and 1990. On the other hand, the income growth of the poor was lower than the national average during 1990 and 1996 and 2002 and 2009 in Indonesia. Such differences underscore the importance of not just focusing on increasing economic growth, but on ensuring that economic growth brings with it equitable increases in living standards.

**Figure 6: GDP Per Capita, US\$1.25 Poverty Rate, and Number of Poor People (2012)**

Source: World Bank (2014b).

Note: The data for Cambodia is for 2011. Size of bubbles represent number of people living on less than \$1.25/day.

**Figure 7: Per Capita Incomes in the ASEAN, 2013**

Source: IMF (2014) for Myanmar and World Bank (2014b) for others.

Note: Data is PPP-adjusted GDP per capita in current US\$.

member states (Figure 6). In 2012, approximately 32 million people in Indonesia and 17 million people in the Philippines lived on less than \$1.25 per day.

With the rapid growth and poverty reduction observed among ASEAN's poorer countries, the gaps in living standards across the ASEAN have been narrowing over recent years. Nonetheless, these gaps remain extremely large (Figure 7). Adjusting for purchasing power parity (PPP), the average per capita Gross Domestic Product (GDP) in 2013 of the four poorest countries in the ASEAN was US\$3,722; that of the three middle-income countries was \$10,161; and that of the three richest countries was \$57,934. Even within these broad groupings, there are substantial differences. Incomes among the four poorest ASEAN countries range from US\$1,740 in Myanmar to \$5,293 in Viet Nam; incomes in the middle-income group range from \$6,583 in the Philippines to \$14,390 in Thailand; and incomes in the higher-income group range from \$23,298 in Malaysia to \$78,744 in Singapore.

## Monitoring Equitable Development in the ASEAN

To facilitate the development of policies and programs that increase the extent to which poor members of the ASEAN community are able to benefit from economic growth, the ASEAN Secretariat and the World Bank Group have developed the *ASEAN Equitable Development Monitor*. The Monitor reports the levels and trends of a series of outcome and policy indicators, which may in turn be used to identify areas of concern for individual member states or the ASEAN community and thereby set priorities for action.

Indicators tracked by the Monitor are grouped according to two broad categories: (i) *Economic Development*, which assesses the performance of ASEAN economies in achieving economic growth and macro stability, promoting private enterprise development, easing the business environment, and improving access to financial services; and (ii) *Human Development*, which assesses the extent to which ASEAN member states are ensuring that their citizens are equipped to contribute productively to economic activity and to enjoy improvements in non-monetary dimensions of welfare, such as access to education and health, nutrition, and access to clean water, sanitation and energy.

Indicators tracked by the Monitor have been selected to ensure broad coverage across the ASEAN member states, comparability across time and space, and to collectively present a broad picture of the success of the ASEAN community in achieving a range of development outcomes and policies, which are either intrinsic to equitable

development—such as universal access to basic education, the eradication of malnutrition, and lower infant mortality—or instrumental to it—such as economic growth, macroeconomic stability, greater access to finance, and sound regulatory policies.

# Part I: Economic Development

## Economic Growth and Macroeconomic Stability

A growing economy is fundamental to the improvement of well-being. Notwithstanding recent concerns about increasing levels of inequality worldwide, solid empirical evidence continues to underscore the mantra that ‘growth is good for the poor’. For developing economies, in particular, rates of economic growth are among the most powerful determinants of rates of poverty reduction and of improvements in human development outcomes.

Years of economic progress can be quickly erased, however, by macroeconomic instability, a fact acutely demonstrated by the 1997 Asian Financial Crisis. Sound macroeconomic policy—prudent management of external liabilities, restraint of inflationary pressures, and the holding of precautionary reserves—is critical both to preventing such crises and to stimulating growth by reassuring investors of the economy’s stability.

Integration with regional and global economies is ordinarily a critical element in the pursuit of economic growth and macroeconomic stability. The economic interdependence achieved through integration allows countries to pool resources to tackle crises when they arise, while also fueling increases in living standards through enabling exploitation of gains from trade and transfer of productive technologies.

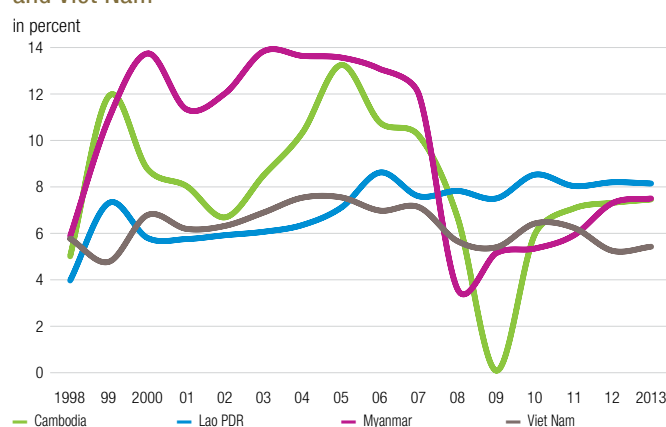
The success of the ASEAN community in promoting economic growth and macroeconomic stability since the Asian Financial Crisis is assessed by examining differences over time and between member states in four groups of indicators: (i) *Economic Growth*, which measures how the intensity of production and living standards are changing over time and in comparison with other countries; (ii) *Fiscal Balances and Debt Sustainability*, which tracks whether ASEAN member states are practicing sustainable budgetary policies and debt management consistent with reducing the risk of financial crises; (iii) *Inflation and Financial Deepening*, which tracks changes in the consumer price index and the money supply; and (iv) *Integration*, which reports ratios of exports to GDP and flows of foreign direct investment (FDI).

### Economic Growth

The ASEAN economy has grown extremely rapidly since the Asian Financial Crisis. Over the 15 years from 1999 to 2013, real GDP growth rates were highest among ASEAN’s four poorest member states—Cambodia, Lao PDR, Myanmar, and Viet Nam (Figure 8). Even though growth in these countries has been adversely affected over the past five years by the Global Financial Crisis, by 2013, growth rates in Cambodia (7.5 percent), Lao PDR (8.1 percent), and Myanmar (7.5 percent) bounced back to levels higher than those of any other ASEAN nation states, fuelling continued economic convergence within the community. However, Viet Nam reported a relatively modest 5.4 percent increase in real GDP in 2013.

The economies of the three ASEAN member states with per capita income levels in the mid-range—Indonesia, the Philippines, and Thailand—have also grown appreciably since 1998, although rates in the Philippines and Thailand have been particularly volatile recently (Figure 9). Growth in Thailand over the past

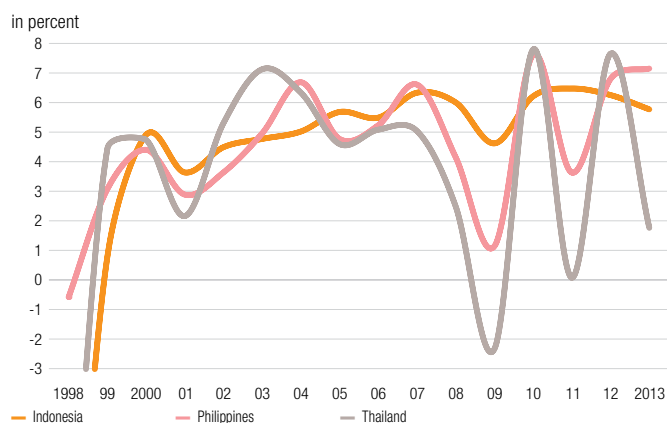
**Figure 8: Real GDP Growth for Cambodia, Lao PDR, Myanmar, and Viet Nam**



Source: World Bank (2014b) and IMF (2014b).  
Note: Growth rates are expressed in constant 2005 U.S. dollars and so account for changes in local prices over time, but not for price differences between countries. Data for Myanmar from 2005 to 2013 is from IMF (2014b).

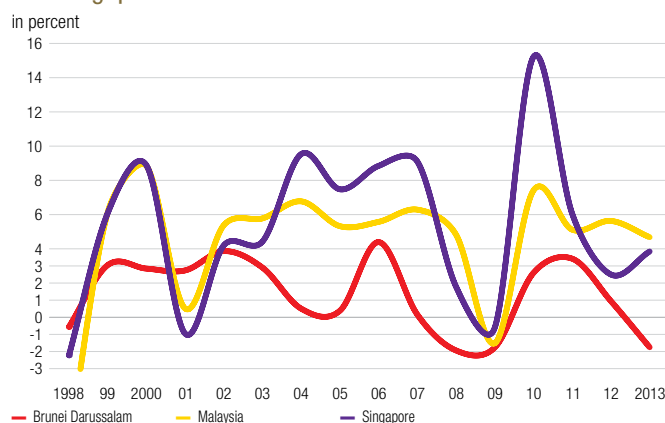
four years was relatively low, averaging 2.9 percent due to the effects of flooding and political instability. Indonesia and the Philippines recorded relatively higher rates of average growth, at 5.9 percent and 5.2 percent over 2009–13. As of 2013, real economic growth in the Philippines had jumped to 7.2 percent.

**Figure 9: Real GDP Growth for Indonesia, Philippines, and Thailand**



Source: World Bank (2014b) and IMF (2014b).  
Note: Growth rates are expressed in constant 2005 U.S. dollars and so account for changes in local prices over time, but not for price differences between countries. Data for Myanmar from 2005 to 2013 is from IMF (2014b).

**Figure 10: Real GDP Growth for Brunei Darussalam, Malaysia, and Singapore**



Source: World Bank (2014b) and IMF (2014b).  
Note: Growth rates are expressed in constant 2005 U.S. dollars and so account for changes in local prices over time, but not for price differences between countries. Data for Myanmar from 2005 to 2013 is from IMF (2014b).

Growth in the three economies of the ASEAN with higher levels of per capita income—Brunei Darussalam, Malaysia, and Singapore—has also been volatile over the past 15 years (Figure 10). Economic growth in Brunei Darussalam was relatively low throughout the period. Malaysia and Singapore, on the other hand, reported strong growth after 1998, steep declines in 2001, and then robust growth again in the lead-up to the Global Financial Crisis, followed by a steep decline. Since 2008, both the Malaysian and Singaporean economies have recovered strongly. In 2013, Malaysia and Singapore reported real economic growth rates of 4.7 percent and 3.9 percent, respectively.

The relatively high rates of economic growth across the ASEAN have translated into substantial increases in standards of living (Table 1). Increases have been especially rapid among the poorest countries of the ASEAN. From 1999 to 2013, real per capita GDP increased 129 percent in Cambodia; 109 percent in Lao PDR; 134 percent in Myanmar; and 104 percent in Viet Nam. Growth in per capita GDP in the middle-income countries of the ASEAN was also respectable. Indonesians had, on average, 72 percent higher real output per capita in 2013 than in 1999, while real output per capita in the Philippines was 52 percent higher and, in Thailand, 61 percent higher. Real per capita GDP in Singapore increased 59 percent between 1999 and 2013 and, in Malaysia, by 53 percent. In Brunei Darussalam, however, real output per capita in 2013 was actually 6 percent lower than in 1999.

**Table 1: Average Annual Growth in Per Capita Incomes**

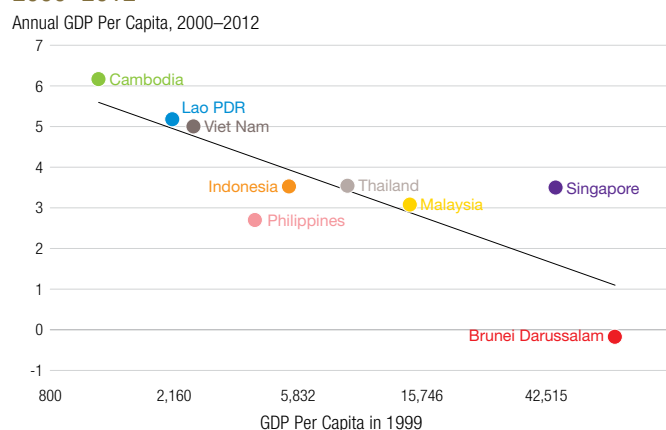
Country	1999–03	2004–08	2009–13	1999–13	2013
Brunei Darussalam	0.8	-1.1	-0.1	-0.4	-3.1
Cambodia	6.6	8.6	3.8	5.7	5.5
Indonesia	2.2	4.2	4.5	3.7	4.5
Lao PDR	4.5	5.6	6.0	5.0	6.2
Malaysia	3.0	3.8	2.5	2.9	3.0
Myanmar	11.3	7.1	4.1	5.8	5.4
Philippines	1.6	3.6	3.5	2.8	5.3
Singapore	3.5	3.9	3.0	3.1	2.2
Thailand	3.6	4.1	2.6	3.2	1.4
Viet Nam	4.8	5.7	4.6	4.9	4.3

Source: IMF (2014b) for Myanmar from 2005 to 2013 and World Bank (2014b) for all others.  
Note: Data represents the geometric mean of annual percentage growth of GDP per capita measured in constant 2005 U.S. dollars.

Over the past 15 years, the high rates of economic growth achieved by Cambodia, Lao PDR, Myanmar, and Viet Nam relative to other member states have narrowed the gap in per capita incomes across the ASEAN (Figure 11). Thus, while per capita incomes in Singapore and Malaysia have, on average, grown faster over the past 15 years than some of the poorer middle-income countries, such as the Philippines, living standards in the poorer ASEAN countries have, on average, gotten closer to living standards in the richer ASEAN countries. In spite of this general

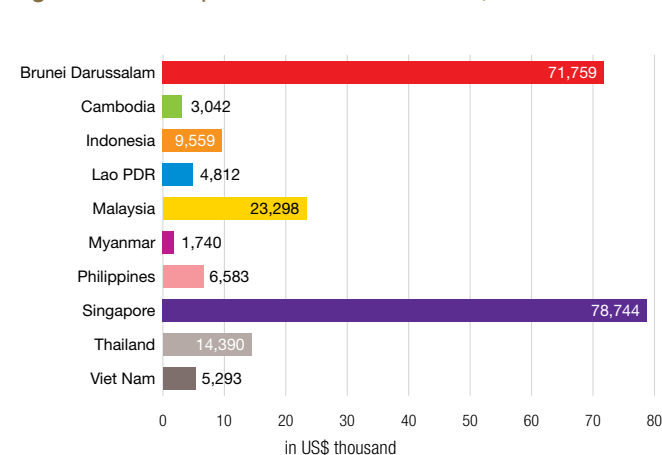
phenomenon of convergence in incomes, however, the gulf in per capita incomes across the ASEAN community remains very large, even when differences in price levels between countries are taken into consideration (Figure 12). As of 2013, citizens of the richest country in the ASEAN, Singapore, earned incomes that, on average, had 45 times higher purchasing power than those earned by citizens of the poorest country in the ASEAN, Myanmar.

**Figure 11: Convergence in Per Capita GDP in the ASEAN, 2000–2012**



Source: IMF (2014b) for Myanmar and World Bank (2014b) for others.  
Note: Data is PPP-adjusted GDP per capita expressed in constant 2011 international dollars.

**Figure 12: Per Capita Incomes in the ASEAN, 2013**

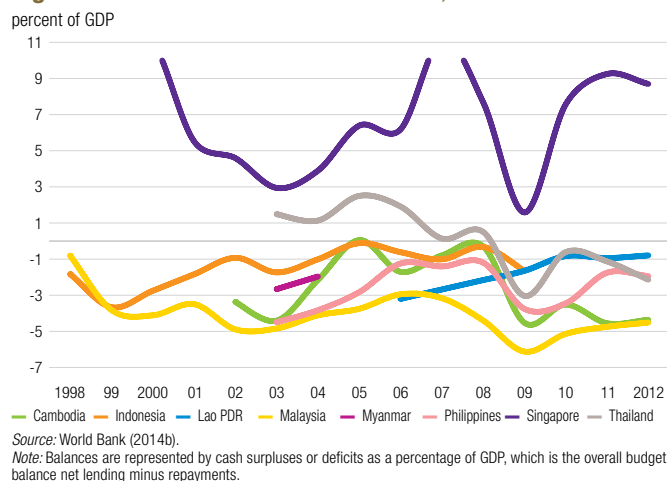


Source: IMF (2014b) for Myanmar and World Bank (2014b) for others.  
Note: Data is PPP-adjusted GDP per capita expressed in current international dollars.

### Fiscal Balances and Debt Management

Of the eight ASEAN countries for which information is available on the overall budget balance, all except Singapore operate structural deficits (Figure 13). With the exception of Malaysia, these deficits have historically been relatively small. Fiscal positions in Cambodia and Thailand have, however, eroded in recent years. Cambodia has gone from operating a surplus in 2005 (0.04 percent) to relatively large deficits in 2011 (-4.56 percent) and 2012 (-4.37 percent). Likewise, Thailand moved from a sizeable surplus in 2005 (2.50 percent) to a deficit in 2012 (-2.15 percent). On the other hand, the fiscal positions of Lao PDR and the Philippines have improved. Lao PDR went from a deficit of -3.21 percent in 2006 to a surplus of 0.80 percent in 2012, while the Philippines reduced its deficit from -4.51 percent in 2003 to -1.95 percent in 2012.

**Figure 13: Fiscal Balances in the ASEAN, 1998–2012**



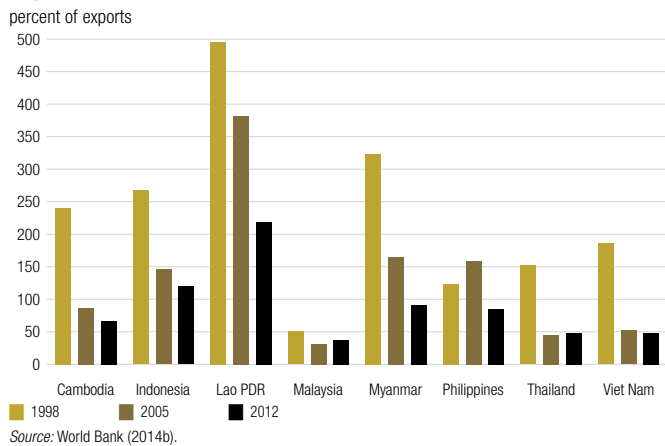
Source: World Bank (2014b).

Note: Balances are represented by cash surpluses or deficits as a percentage of GDP, which is the overall budget balance net lending minus repayments.

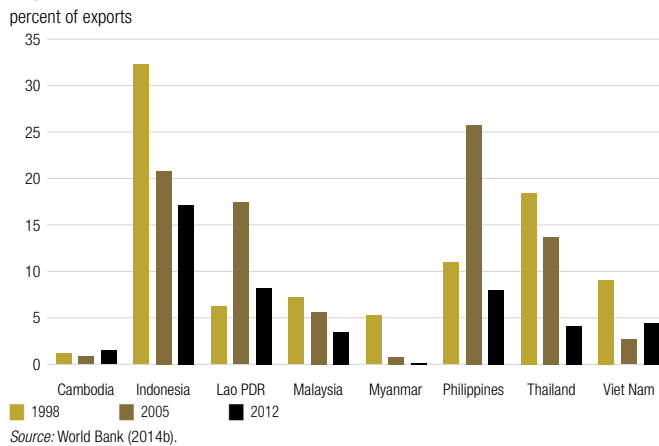
Since the Asian Financial Crisis, the management of external debt stocks and debt servicing has generally improved across the ASEAN (Figure 14 and Figure 15). Particular improvements were reported by Cambodia (which reduced its external stock from 240 percent of exports in 1998 to 66 percent in 2012), Indonesia (from a debt stock of 267 percent of exports in 1998 to 119 percent in 2012 and from servicing costs of 37 percent of exports to 17 percent of exports), Lao PDR (from a debt stock 496 percent of exports in 1998 to 218 percent in 2012), Myanmar (from a debt stock of 323 percent of exports in 1998 to 91 percent in 2011), Thailand (from a debt stock of 152 percent of exports in 1998 to 47 percent in 2012 and servicing costs from 18 percent of exports to 4 percent over the same period), and Viet Nam (external debt fell from 185 percent in 1998 to 48 percent in 2012, while the cost of servicing fell from 9 percent to 2 percent over the same period). Malaysia and the Philippines achieved relatively

minor reductions in their external debt stock, but the respective levels are nonetheless relatively low by regional standards. Currently, the costs of servicing debt are relatively high in Indonesia (17 percent of exports in 2012), Lao PDR (8 percent of exports in 2012), and the Philippines (8 percent of exports in 2012).

**Figure 14: External Debt Stock**



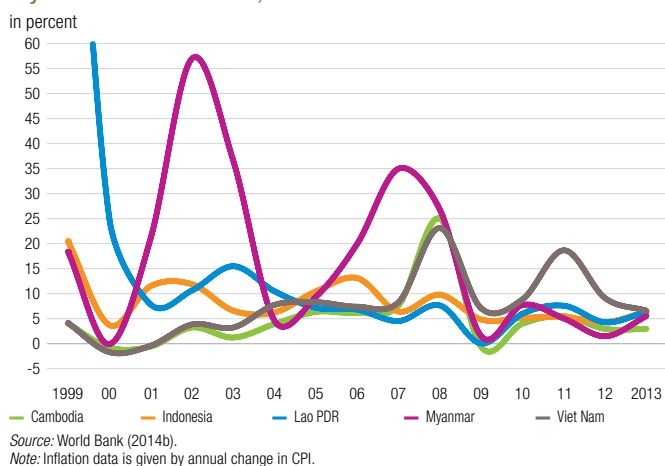
**Figure 15: Total Debt Service**



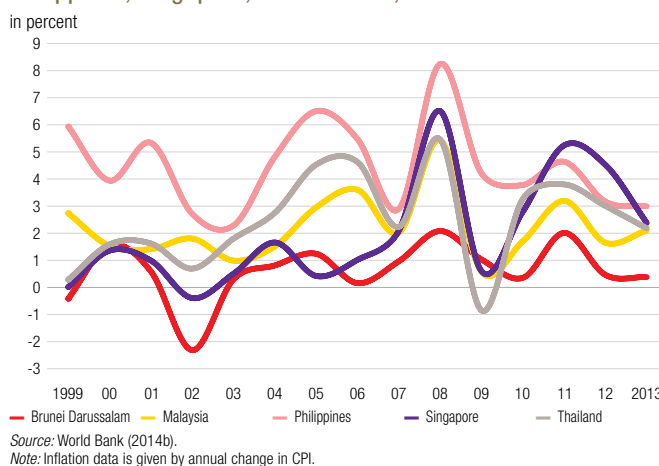
### Inflation and Financial Deepening

The recent economic histories of Cambodia, Indonesia, Lao PDR, Myanmar, and Viet Nam have been marked by periods of high inflation (Figure 16). In 1998, Indonesia, Lao PDR, and Myanmar reported increases in their respective consumer price indices (CPI) of 58 percent, 91 percent, and 51 percent, respectively. Since then, however, Cambodia, Indonesia, Lao PDR, and Myanmar have successfully tamed inflationary pressures, with all reporting CPI increases of less than 7 percent in 2013. Inflationary pressures have been building in Viet Nam, however, with the average annual CPI increase over the 2008–12 period (13.4 percent) being substantially above that observed in the late 1990s and early 2000s.

**Figure 16: Inflation in Cambodia, Indonesia, Lao PDR, Myanmar and Viet Nam, 1999–2013**



**Figure 17: Inflation in Brunei Darussalam, Malaysia, Philippines, Singapore, and Thailand, 1999–2013**

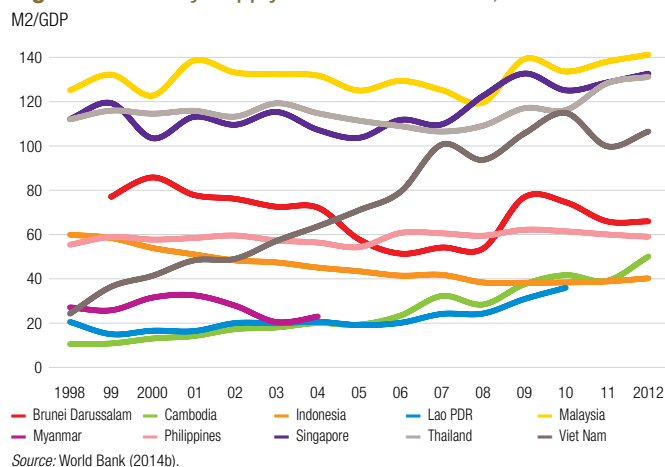


Brunei Darussalam, Malaysia, the Philippines, Singapore, and Thailand all have experienced relatively low inflation rates over the past 15 years (Figure 17). While pressures built with the onset of the Global Financial Crisis in 2008, these have been successfully resolved and, as of 2013, all five countries reported annual CPI increases of 3 percent or less. Overall, the management of wage and price increases has improved substantially across the ASEAN in the past 15 years.



Lower income countries in the ASEAN—principally, Cambodia, Lao PDR, and Viet Nam—have achieved financial deepening over the past 15 years, as measured by the 'near' money supply (M2), which captures savings deposits, money market funds and other time deposits, and thus reflects the development of country financial systems and

**Figure 18: Money Supply in ASEAN Countries, 1998–2012**

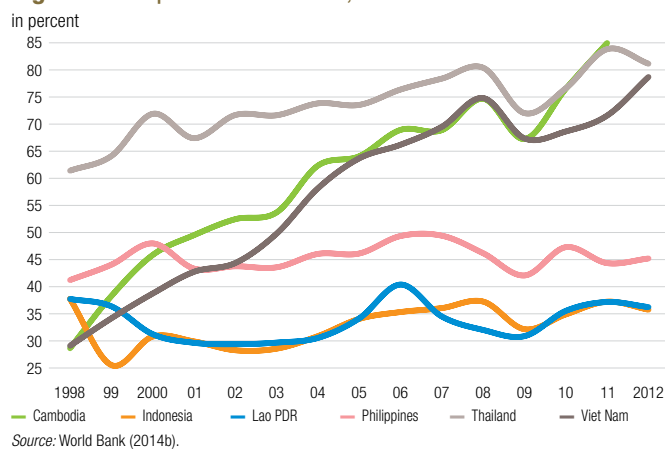


availability of finance. M2 in Cambodia, for instance, grew from just 10 percent of GDP in 1998 to 50 percent by 2012. Financial deepening has been particularly significant in Viet Nam, where M2 increased from 24 percent of GDP in 1998 to 106 percent in 2012, a rate of increase that potentially explains the building inflationary pressures in the Vietnamese economy. Brunei Darussalam, Indonesia, and the Philippines, however, have experienced little or no financial deepening over the period, which implies limited success in increasing financial coverage and sophistication. As of 2012, Malaysia, Singapore, Thailand, and Viet Nam exhibit the broadest money supplies in the ASEAN, with the respective money supplies all exceeding 100 percent of GDP.

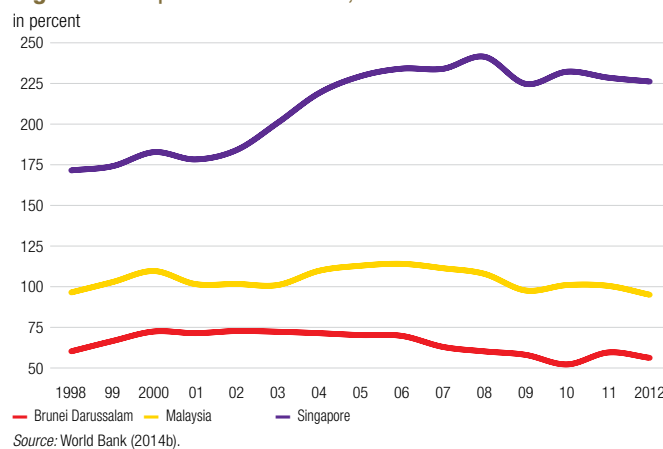
### Integration

Rates of economic integration have historically varied enormously in the ASEAN, with the entrepôt of Singapore standing alongside states that until recent decades, existed in virtual economic isolation. The past 15 years has seen a general integration of the ASEAN with the global economy. Large increases have been achieved by Cambodia and Viet Nam (Figure 19), providing these economies with access to productivity-enhancing technologies and capital which are not available locally. Whereas Cambodia's export-to-GDP ratio stood at just 29 percent in 1998, by 2012, total annual exports had reached 85 percent of GDP. Viet Nam's increase was similar, with exports-to-GDP rising from 29 percent in 1998 to 79 percent in 2012. Singapore, which has established itself as the world's foremost transshipment hub, had integrated even further since 1998, increasing its export-to-GDP ratio to 226 percent by 2012 (Figure 20).

**Figure 19: Export Share of GDP; 1998–2012**



**Figure 20: Export Share of GDP; 1998–2012**

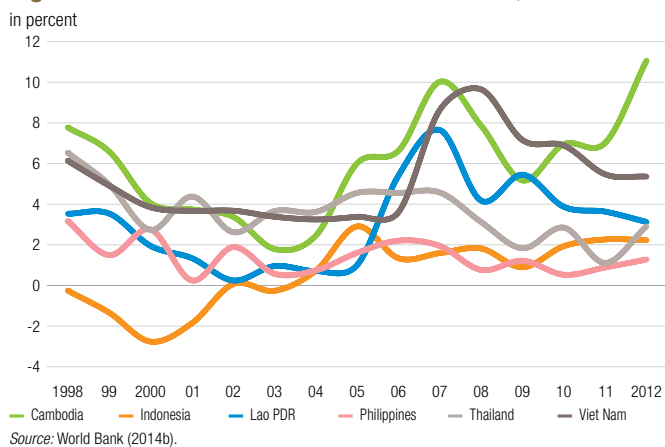


Other ASEAN member states, however, had experienced much less success in integrating with the world economy. Brunei Darussalam, Indonesia, Lao PDR, Malaysia, and the Philippines all experienced virtually no increase in their exports-to-GDP ratio between 1998 and 2012. While Malaysia's level of integration is relatively high, with an export-

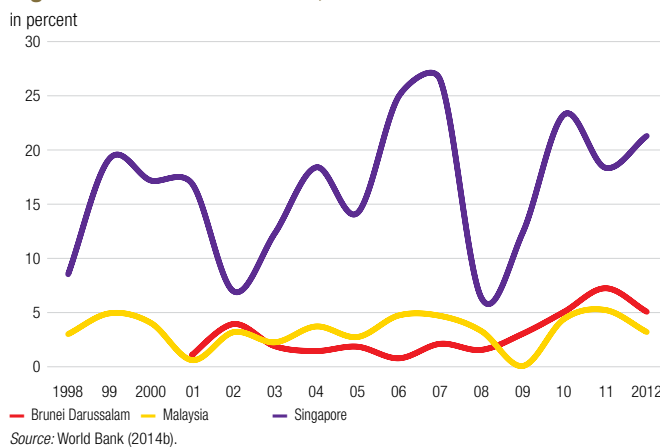
to-GDP ratio of 95 percent, the economies of Brunei Darussalam (56 percent in 2012), Indonesia (36 percent), Lao PDR (36 percent), and the Philippines (45 percent) are all poorly integrated with the world economy.

Increases in inflows of FDI to ASEAN countries have generally not matched those of exports, indicating that deepening integration is being driven mostly by indigenous firms rather than foreign multinationals. Among low- and middle-income countries in the ASEAN, Cambodia and Viet Nam have experienced the most success in attracting foreign direct investment, with FDI-to-GDP ratios of 11 percent and 5 percent respectively as of 2012 (Figure 21). The involvement of foreign investors in the economies of Indonesia, Lao PDR, the Philippines, and Thailand, remains relatively small, however, at 2 percent, 3 percent, 1 percent, and 3 percent respectively. Foreign investment is particularly important to the Singapore economy, with net inflows reaching 21 percent of GDP in 2012 (Figure 22). FDI is appreciably lower in Brunei Darussalam and Malaysia, at 5 percent and 3 percent respectively.

**Figure 21: Net Inflows of FDI as a Share of GDP; 1998–2012**

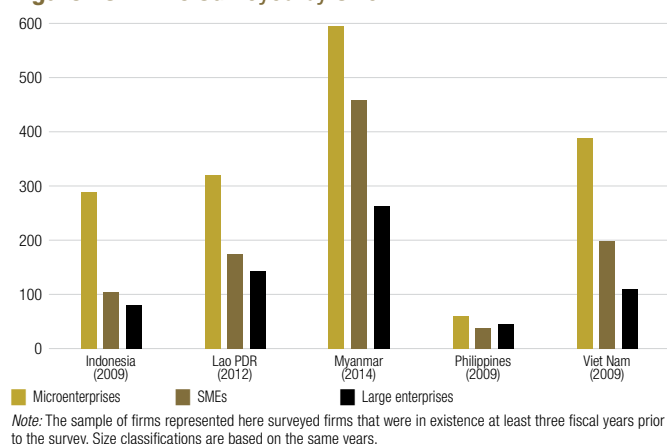


**Figure 22: Net Inflows of FDI; 1998–2012**



## Enterprise Development

**Figure 23: Firms Surveyed by Size**



Increases in economic growth are driven by enhancements within firms. The World Bank Group's Enterprise Surveys are designed to lay the basis for insights into the performance of—and constraints facing—private sector firms by collecting data on employment, sales and productivity from a random sample of firms stratified by size, sector, and location. Enterprise Surveys provide for cross-country comparability of indicators by providing standardized sampling procedures, common definitions of firm size and other enterprise concepts,<sup>2</sup> and harmonized questionnaires.<sup>3</sup> Surveys were administered in Indonesia, the Philippines, and Viet Nam in 2009, and in Lao PDR in 2012, and in Myanmar in 2014, enabling

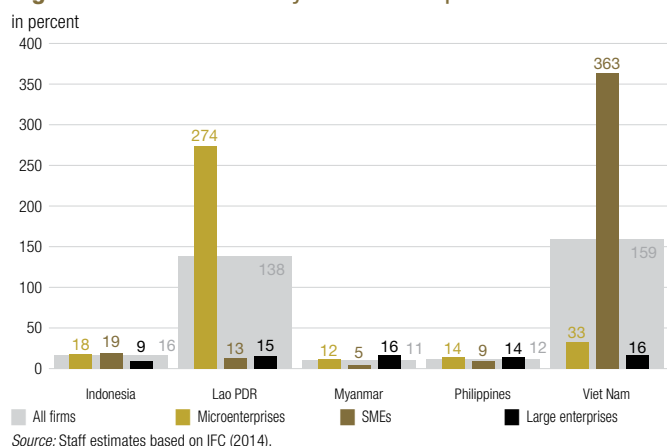
insights into enterprise development processes in these countries (Figure 23), but with the limitation that these insights may not potentially be applicable to periods beyond the years covered by the survey.

Enterprise development in Indonesia, Myanmar, the Philippines, and Viet Nam is assessed through examining differences within and between these countries in the following firm-level indicators: (i) *Sales Growth*, assessed over the three fiscal years prior to the administration of the survey; (ii) *Employment Growth*; the rate of (iii) *Graduation* of micro, small-and-medium sized enterprises into large enterprises of 100 employees or more over the previous three years; and (iv) *Export Orientation*, measured by the share of firms with at least 10 percent of sales in foreign markets.

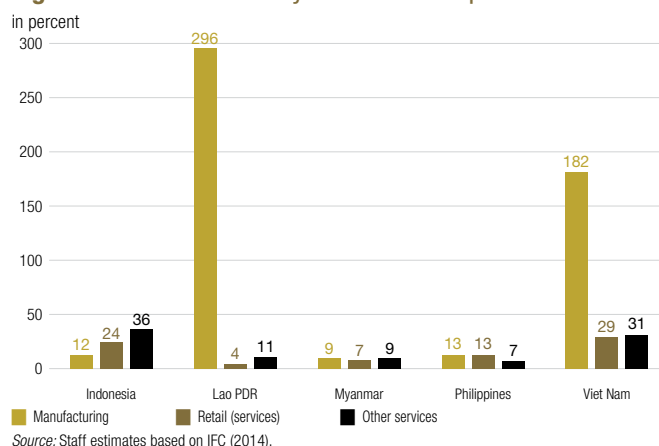
### Sales Growth

Measured by sales volume, enterprises in Viet Nam and Lao PDR grew appreciably faster over the respective time period covered by the individual surveys, as compared to firms in Indonesia, the Philippines, and Myanmar (Figure 24). On average, sales of Vietnamese firms grew more than 150 percent per annum in the three years prior to 2009.

**Figure 24: Sales Growth by Size of Enterprise**



**Figure 25: Sales Growth by Sector of Enterprise**



2 Microenterprises are defined as those consisting of between 5 and 19 employees; small and medium enterprises (SMEs) as those employing between 20 and 99 people, and large enterprises consisting of those employing 100 or more people. See also Kushnir et al. (2010).

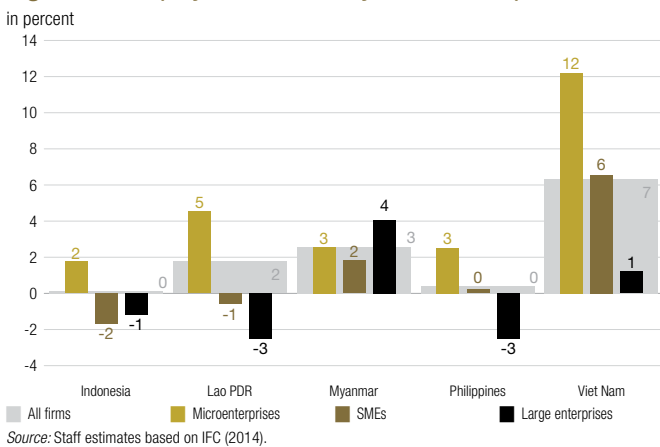
3 Enterprise Surveys do not cover firms that are not registered (i.e., part of the informal sector).

Small and medium enterprises (SMEs) with between 20 and 99 employees grew the fastest, more than tripling sales volume every year on average. Enterprises in Lao PDR reported annual average sales growth in excess of 100 percent in the three years leading up to 2012. Microenterprises achieved especially large growth, more than doubling sales every year. Sales growth among firms in Indonesia, the Philippines, and Myanmar was, on average, at 16 percent, 12 percent, and 11 percent per annum in the three years prior to the survey year (2009, 2009, and 2014, respectively). Firms experiencing rapid sales growth in Lao PDR and Viet Nam were concentrated in manufacturing (Figure 25).

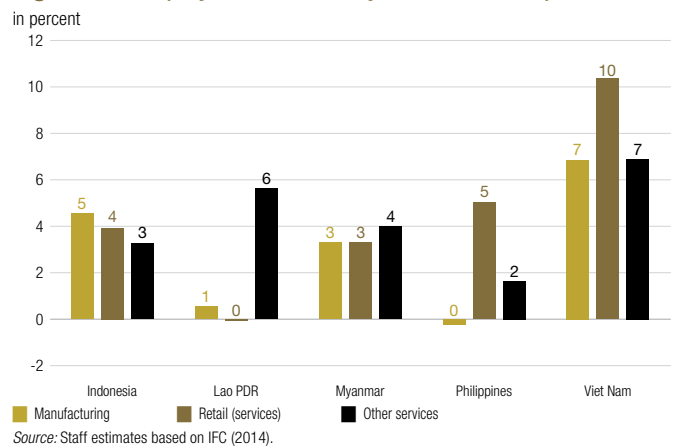
### Employment Growth

Reflecting strong sales growth, firms in Viet Nam grew the largest in employment over the three year period preceding the survey (2006–09), with average rate of increase in workforces of 6.3 percent per annum (Figure 26). Surveyed firms in Lao PDR grew, on average, 1.8 percent per annum over 2009–12. Firms in Myanmar (3.4 percent) expanded relatively rapidly despite the anemic growth in sales over the surveyed period. Employment growth was very weak during the 2006–09 period among firms surveyed in the Philippines and Indonesia, with only 0.4 percent and 0.1 percent annual average growth in workforces.

**Figure 26: Employment Growth by Size of Enterprise**



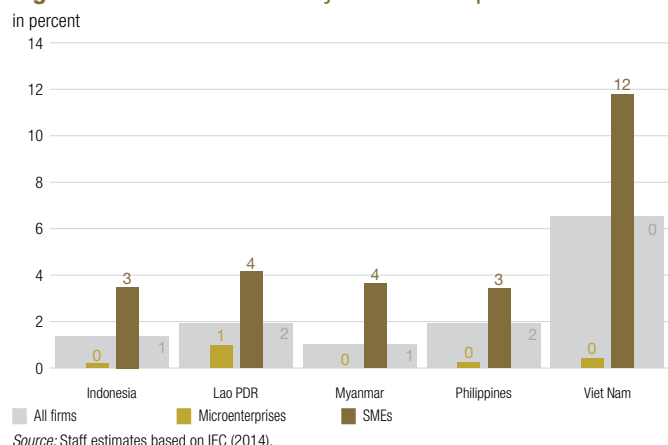
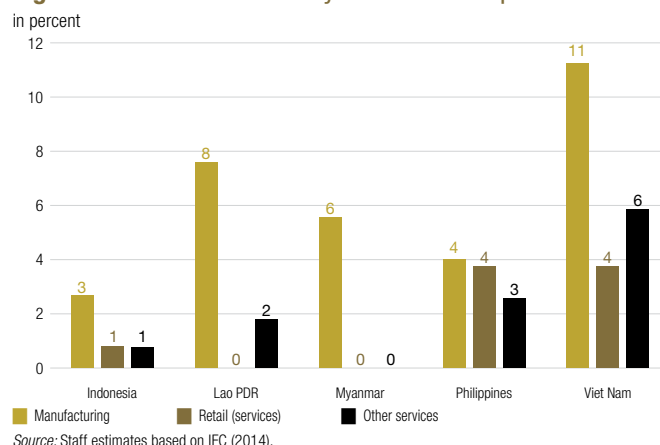
**Figure 27: Employment Growth by Sector of Enterprise**



Within countries, there are large differences in employment creation based on firm characteristics. Specifically, microenterprises (less than 20 employees) were more likely to expand, while large enterprises contracted on average in Indonesia, Lao PDR, and the Philippines. Employment growth was relatively evenly spread across sectors (Figure 27). The retail sector was the predominant contributor to employment growth in Viet Nam, while other services led employment growth in Lao PDR.

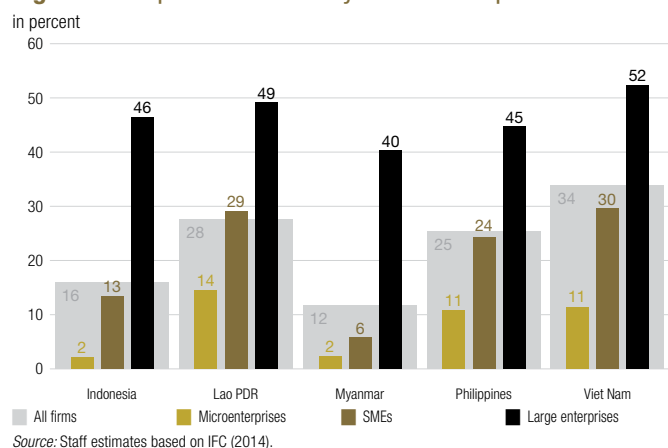
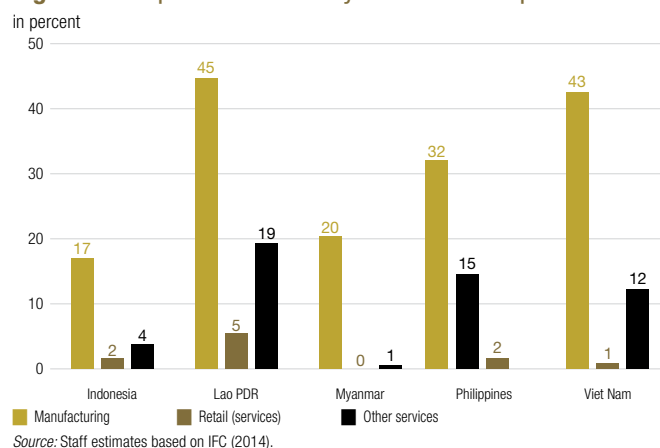
### Graduation

Firms in Viet Nam were the most successful in transitioning to large enterprises (Figure 28). Over 2006–09, 7 percent of micro, small, and medium-sized enterprises graduated into large enterprises employing over 100 workers. Among SMEs specifically, the graduation rate was 12 percent. Graduation rates in Indonesia, Lao PDR, Myanmar, and the Philippines were similar, with between 1 and 2 percent of micro, small, and medium-sized enterprises graduating. Across all five countries, enterprises in the manufacturing section were more likely than firms in other sectors to graduate into large enterprises (Figure 29). 8 percent of manufacturing firms with under 99 employees in Lao PDR and 11 percent in Viet Nam made the transition.

**Figure 28: Graduation Rate by Size of Enterprise****Figure 29: Graduation Rate by Sector of Enterprise**

### Export Orientation

At the time of the respective surveys, Viet Nam had the biggest share of exporting firms, followed by Lao PDR, the Philippines, Indonesia, and Myanmar (Figure 30). Unsurprisingly, manufacturing firms were more likely than service sector firms to export. Lao PDR had the highest share of manufacturing firms exporting, followed by Viet Nam, while Indonesia had the lowest.

**Figure 30: Export Orientation by Size of Enterprise****Figure 31: Export Orientation by Sector of Enterprise**

## Business Regulation and Facilitation

The ability of firms to contribute to economic development can be either facilitated or constrained by business regulation and supporting services. Good regulations establish predictable and inexpensive means for firms to resolve disputes and for investors to recover assets from a failed firm and facilitate business finance by supporting the availability of credit information and protecting investors from misuse of corporate assets. Poor regulations, on the other hand, burden entrepreneurs with significant costs—in both money and time—to start and operate business, expand operations, pay taxes, and import and export goods. The World Bank Group's Doing Business Report provides measures of the quality of business regulations and their effects on domestic small and medium-size companies throughout their life-cycle.

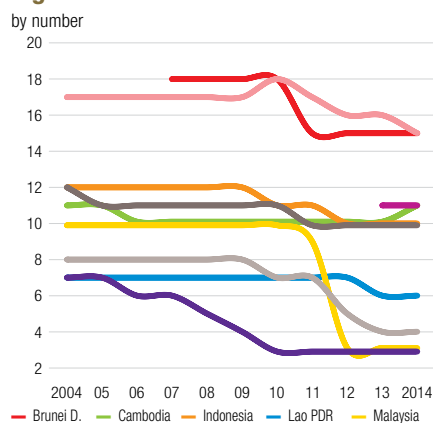
To assess how enabling environments for businesses in the ASEAN have evolved and how they currently compare, the report tracks ten areas of business regulation: (i) *Starting a Business* quantifies procedures required to register a firm and the associated time and cost; (ii) *Construction Permits* gauges the number, time, and cost of procedures for obtaining construction permits; (iii) *Getting Electricity* assesses the number, time, and cost of procedures to obtain an electricity connection for a business; (iv) *Registering Property* reports the number, time and cost of procedures required for an entrepreneur to purchase property; (v) *Getting Credit* quantifies the extent to which laws protect the rights of borrowers and lenders and the coverage of public credit registries and bureaus; (vi) *Protecting Investors* measures legal protections of minority shareholders from the misuse of corporate assets; (vii) *Enforcing Contracts* assesses the complexity, time, and cost of enforcing a commercial sale dispute over the quality of goods; (viii) *Resolving Insolvency* accounts for the average time to close a business and cost of bankruptcy proceedings, as well recovery rates by claimants; (ix) *Paying Taxes* measures the time it takes to prepare, file and pay business taxes; and (x) *Trading Across Borders* reports the complexity, time, and cost of compliance with procedures to clear a standardized cargo of goods for export or import.

### *Starting a Business*

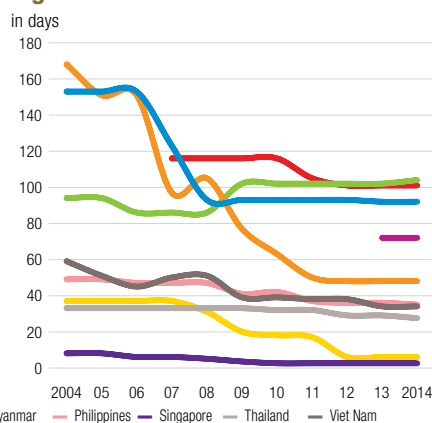
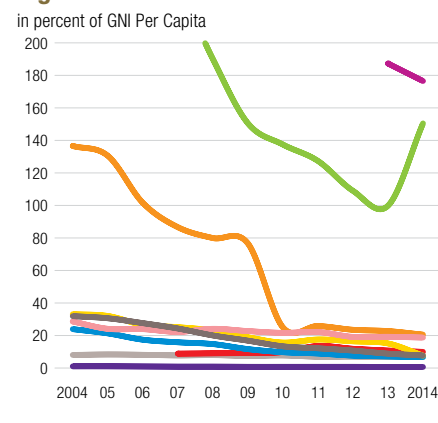
Procedures for registering new businesses—which include submission of documentation, payment of fees, and the depositing of paid-minimum capital—can, if burdensome, dissuade entrepreneurs from entering the formal sector. Since 2003, progress has been made in reducing the complexity, time, and costs of such procedures across the ASEAN. Malaysia, Singapore, and Thailand all substantially reduced the number of procedures required to register a business over the period (Figure 32). Malaysia, for instance, simplified procedures in 2012 by merging company, tax, social security and employment fund registrations at a ‘one-stop shop’. Business registration remains cumbersome, however, in Brunei Darussalam (15 procedures), Cambodia (11), Indonesia (10), Myanmar (11), the Philippines (15), and Viet Nam (10).

The time it takes to register a business (Figure 33) has been reduced substantially between 2004 and 2013 in Indonesia (from 151 to 48 days) and Lao PDR (from 153 to 92 days), but remains high in Brunei Darussalam (101 days) and Cambodia (104 days). In contrast, registration takes only two and a half days in Singapore and six days in Malaysia.

The costs of starting a business (Figure 34) have fallen in Indonesia from an estimated 140 percent of gross national income (GNI) per capita in 2004 to 21 percent in 2013. These reductions primarily came about through the cutting of fees for company deeds, legalization, publication, registration, and licensing in 2010. Cambodia has also reduced registration costs from a staggering 540 percent of GNI per capita in 2003, but increased fees for the approval and stamping of registration documents and for completing incorporation in 2013. At 151 percent in 2013, costs remain second only to Myanmar (177 percent). Costs in all other ASEAN countries fall below 10 percent of GNI per capita.

**Figure 32: Procedures to Start**

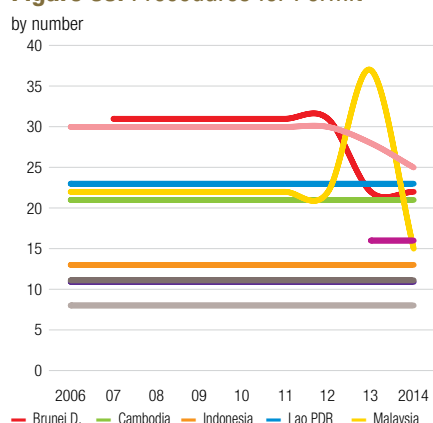
Source: World Bank (2014a).

**Figure 33: Time to Start****Figure 34: Cost to Start**

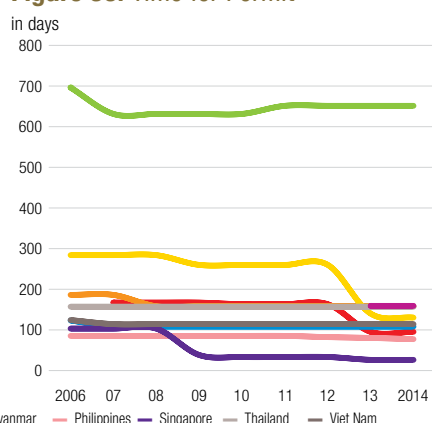
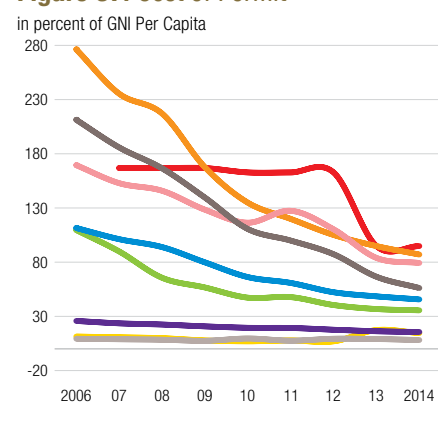
### Construction Permits

Procedures for securing approvals for the construction of commercial and industrial buildings can impose additional costs on the establishment of new firms and the expansion of production by existing firms. Since 2006, the complexity of procedures required to construct buildings in ASEAN countries have not changed substantially (Figure 35). The time necessary to complete such procedures has also remained relatively constant (Figure 36), although Malaysia has managed to simplify and expedite procedures through the establishment of a one-stop center for new buildings. Procedures are most burdensome in Cambodia, where it takes some 652 days to obtain necessary permits through regular channels.

The financial costs of these procedures, however, have fallen across the board (Figure 37). Indonesia, for instance, reduced the estimated costs of procuring permits through official channels from 277 percent of GNI per capita in 2005 to 87 percent in 2013. Likewise, Viet Nam reduced costs from 212 percent to 56 percent over the same period. Costs, however, remain especially high in Myanmar at 567 percent of GNI per capita (not shown).

**Figure 35: Procedures for Permit**

Source: World Bank (2014a).

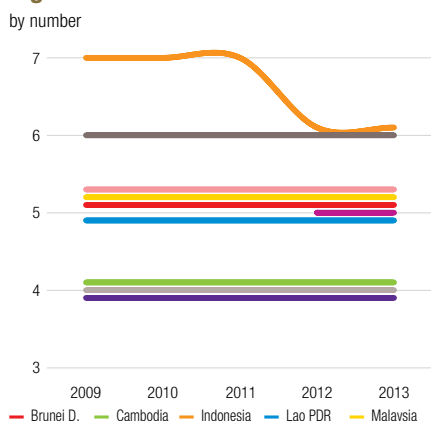
**Figure 36: Time for Permit****Figure 37: Cost of Permit**

### Getting Electricity

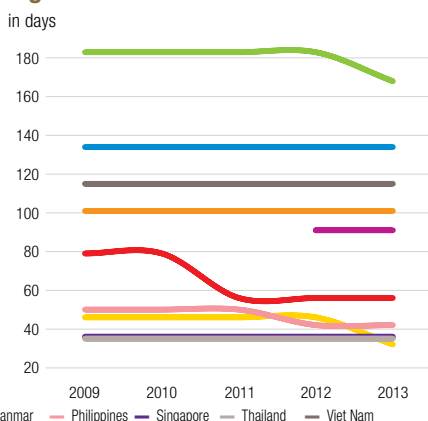
Obtaining an electricity connection remains a barrier to starting and expanding businesses in the ASEAN, particularly in Cambodia, Lao PDR, and Myanmar. Obtaining a connection in Indonesia and Viet Nam requires no less than six procedures (Figure 38), a wait of some 168 days in Cambodia (Figure 39), and a fee equal to over 3,000 percent of GNI per capita in Myanmar (Figure 40).

The time and cost of obtaining a connection is also very high in Lao PDR (a wait of 134 days and fees equal to 1,900 percent of GNI per capita), Indonesia (101 days and 371 percent of GNI per capita), and Viet Nam (115 days and 1,700 percent of GNI per capita). By way of contrast, obtaining a connection takes only 32 days in Malaysia, 36 days in Singapore, and 35 days in Thailand and costs 49 percent, 28 percent, and 67 percent of GNI per capita, respectively.

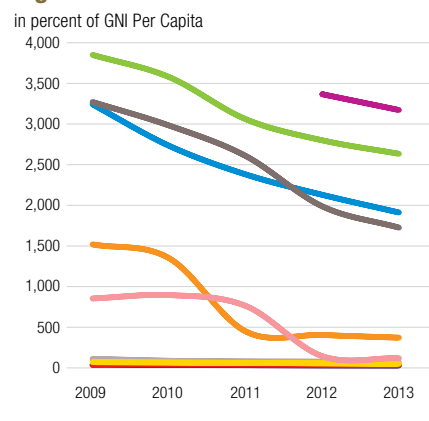
**Figure 38: Procedures to Connect**



**Figure 39: Time to Connect**



**Figure 40: Cost to Connect**



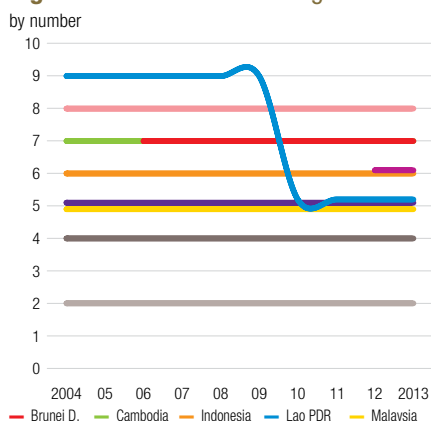
Source: World Bank (2014a).

### Registering Property

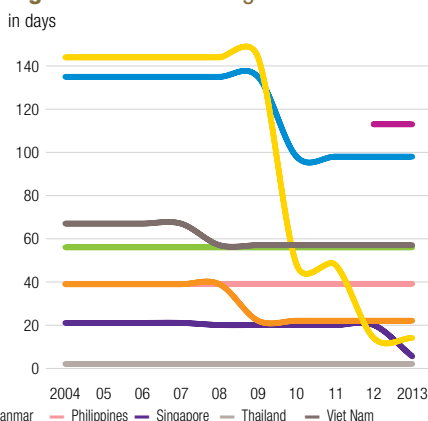
The process of purchasing and registering a business property can be cumbersome, deterring entrepreneurs and diverting firm resources. Procedures for registering property generally have not been simplified at all in ASEAN member states over the past 10 years (Figure 41). The only exception to this is Lao PDR, which moved to a title system in 2010.

While the amount of time required to register property has also remained static in a number of ASEAN countries (Figure 42), Malaysia dramatically reduced wait times from 144 days in 2009 to just 14 days by 2013 through the introduction of online stamping. Indonesia also introduced time limits for standard procedures at the Land Registry, achieving a moderate reduction. Lao PDR achieved a modest reduction (from 135 to 98 days) and Singapore expedited its procedures from 20 to 5½ days by moving to an online system. The costs of registering property have largely remained unchanged (Figure 43), although a notable reduction was achieved in Lao PDR as a result of its move to a title system.

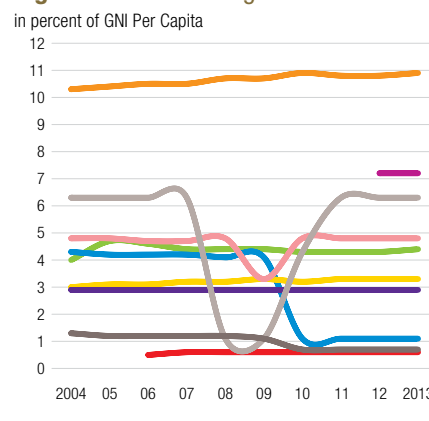
**Figure 41: Procedures to Register**



**Figure 42: Time to Register**



**Figure 43: Cost to Register**



Source: World Bank (2014a).



As of 2013, registering property is most cumbersome in the Philippines and simplest in Thailand; the most time-consuming in Myanmar and fastest in Thailand; the most expensive in Indonesia and cheapest in Brunei Darussalam and Viet Nam.

### Getting Credit

The ease by which firms can access credit through the formal financial sector is, over the medium-term, a function of the strength of credit reporting systems and of the protections provided to investors by collateral and bankruptcy laws. Across the ASEAN, there is wide variation in the strength of credit reporting systems and the effectiveness of collateral and bankruptcy laws in facilitating lending (Table 2).

The legal rights index, which measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders, varies from a low of 4 out of 10 in Myanmar to a perfect 10 in Malaysia and Singapore. Cambodia improved legal rights in 2008 (moving from 0 to 8), when it enacted a new secured transactions law enabling moveable property to be used as collateral and which ensured secured creditors have priority in case the debtor defaults.

The depth of credit index, which measures the appropriateness of rules and practices affecting the coverage, scope and accessibility of credit information available through either a public credit registry or a private credit bureau, varies from 0 in Myanmar to a perfect 6 in Malaysia. There is further wide variation in the coverage of public credit registries and private credit bureaus with information on borrowing histories. There are currently no public registries in Cambodia, Myanmar, the Philippines, Singapore, and Thailand, and non-existent private bureau coverage in Brunei Darussalam, Indonesia, Lao PDR, Myanmar, and Viet Nam. Indonesia and Viet Nam both set up legal frameworks for the establishment of credit bureaus in 2013 and have been successful in increasing public registry coverage from near zero levels in 2004 to approximately 40 percent in 2013 through extending access to historical credit information. Private bureau coverage has also expanded rapidly over the past ten years in Malaysia, Singapore, and Thailand.

### Protecting Investors

The availability of finance for firms is also affected by the extent to which legal systems protect the investments of minority shareholders from misuse of corporate assets. As with credit facilitation, there is wide variation across the ASEAN in the extent to which legal frameworks protect minority shareholders from the misuse of corporate assets by directors for their personal gain (Table 3), ranging from a relative lack of protections in Lao PDR (1.7 out of 10) to robust protections in Malaysia and Singapore (8.7 and 9.3, respectively).

**Table 2: Measures of Credit Facilitation, 2013**

in percent

Country	Legal Rights Index (0–10)	Depth of Credit Info. Index (0–6)	Public Registry Coverage (% of Adults)	Private Bureau Coverage (% of Adults)
Brunei Darussalam	7	4	56	0
Cambodia	8	4	0	21
Indonesia	5	4	41	0
Lao PDR	4	2	2	0
Malaysia	10	6	53	77
Myanmar	4	0	0	0
Philippines	5	5	0	9
Singapore	10	5	0	60
Thailand	5	5	0	49
Viet Nam	8	4	39	0

Source: World Bank (2014a).

**Table 3: Measures of Investor Protection, 2013**

	Investor Protection Index (0–10)
Brunei Darussalam	4.7
Cambodia	5.3
Indonesia	6.0
Lao PDR	1.7
Malaysia	8.7
Myanmar	2.3
Philippines	4.3
Singapore	9.3
Thailand	7.7
Viet Nam	3.3

Source: World Bank (2014a).

Since 2005, Indonesia, Thailand, and Viet Nam have all improved investor protections. Indonesia and Viet Nam have specifically strengthened requirements on the disclosure by directors of information affecting minority investors and director liability; while Thailand has significantly strengthened measures to hold directors accountable.

### Enforcing Contracts

The predictability and efficiency of contract resolution is a critical component to a healthy business environment, yet wide variation persists in the time, complexity, and cost of contract enforcement across the ASEAN (Table 4).

A number of countries have made improvements. The time it takes to resolve a commercial legal dispute was reduced between 2003 and 2013 in Lao PDR (from 571 to 443 days), Malaysia (from 600 to 425 days), the Philippines (from 982 days to 842 days), and Thailand (from 479 to 400 days). Nonetheless, large variation remains. In Singapore, it takes a mere 150 days to resolve a dispute through official channels, compared to over three years in Myanmar.

The complexity of legal enforcement of contracts has remained relatively constant in ASEAN member states over the past ten years. Singapore requires the fewest procedures (21), while Brunei Darussalam has the most (47). The cost of contract enforcement, as a percentage of the claim, also remained relatively constant over the period, preserving high variation across the ASEAN. Thailand is the least expensive place to resolve a contract dispute in the ASEAN, with resolution only costing 15 percent of the claim. Indonesia, meanwhile, is the most expensive, where resolving a claim is estimated to cost a full 39 percent more than the value of the claim, on average.

### Resolving Insolvency

Effective bankruptcy procedures are important to help prevent the premature liquidation of sustainable businesses and, in the event of insolvency, enable the efficient recovery of owed capital. However, little progress has been made over the past ten years in reducing differences across the ASEAN in the strength of bankruptcy procedures (Table 5).

The average time to close an insolvent business varies from under a year in Singapore to 6 years in Cambodia. Lao PDR has no procedure for resolving insolvent businesses.

Reductions in the time it takes to achieve liquidation were achieved in 2011 in Malaysia (from 2.3 to 1.5 years) and in 2013 in the Philippines (from 5.7 in 2.7 years) as a result of the adoption of a new insolvency law. The average cost of bankruptcy proceedings varies from a low of 3 percent of the estate's value to 36 percent in Thailand, with no changes observed over the past ten years.

**Table 4: Efficiency of Contract Enforcement, 2013**

Country	Time (Days)	Procedures (Number)	Cost (% of Claim)
Brunei Darussalam	540	47	37
Cambodia	483	44	103
Indonesia	498	40	139
Lao PDR	443	42	32
Malaysia	425	29	28
Myanmar	1160	45	52
Philippines	842	37	26
Singapore	150	21	26
Thailand	440	36	15
Viet Nam	400	36	29

Source: World Bank (2014a).

**Table 5: Efficiency of Liquidation, 2013**

Country	Time (Years)	Cost (% of Estate)	Recovery Rate (in percent)
Brunei Darussalam	2.5	4	47
Cambodia	6.0	28	8
Indonesia	4.5	18	18
Lao PDR	-	-	0
Malaysia	1.5	10	49
Myanmar	5.0	18	15
Philippines	2.7	22	30
Singapore	0.8	3	89
Thailand	2.7	36	42
Viet Nam	5.0	15	16

Source: World Bank (2014a).

Among the nine ASEAN countries with bankruptcy proceedings, the recovery rate—which measures how much claimants, such as creditors, tax authorities, and employees, can recover from an insolvent firm—varies from a high of 89 cents on the dollar in Singapore to just 8 cents in Cambodia. Over the past ten years, the recovery rate fell in Cambodia (from 12 cents in 2003 to 8 cents in 2013), rose in Indonesia (from 9 cents to 18 cents), rose in Malaysia (from 38 cents to 49 cents), increased sharply in the Philippines (from 4 cents to 30 cents) as a result of the new insolvency law, and decreased slightly in Viet Nam (from 19 cents to 16 cents).

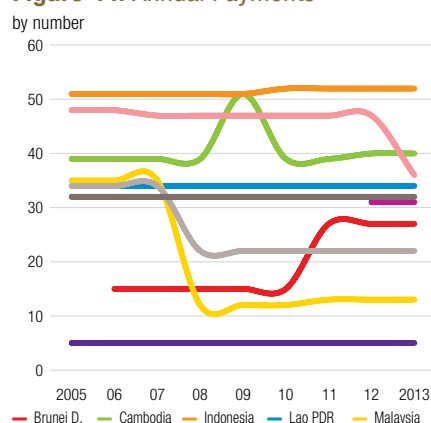
### Paying Taxes

Commercial tax regimes that impose high costs of compliance—in payments and time—can discourage entrepreneurs and firms from entering the formal sector. Relatively little progress has been made over the past ten years in reducing the dispersion in the complexity of tax regimes across the ASEAN. Medium-sized companies in Indonesia, for instance, must make 52 payments per year, compared to just 5 for Singaporean companies (Figure 44). Malaysia simplified its regime in 2007, reducing the number of payments from 35 to 12 and introducing electronic filing procedures. Electronic filing also helped the Philippines simplify procedures in 2013.

The time it takes companies to prepare, file, and pay taxes also varies substantially (Figure 45). In Viet Nam, it takes companies 872 hours per year, on average, to prepare, file, and pay their tax obligations, compared to 82 hours per year for Singaporean firms. Notable reductions in the time burden of corporate tax regimes was achieved in Lao PDR, with consolidation of taxes reducing the average time spent from over 670 hours in 2007 to a little over 360 hours in 2010. The time necessary to file taxes was also cut in Indonesia in 2007, achieving a reduction from 576 to 266 hours.

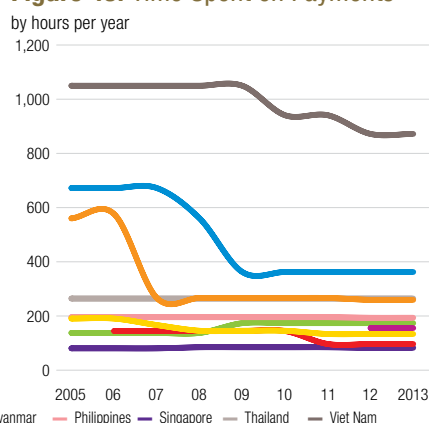
The financial burden of tax regimes (Figure 46) is highest in the Philippines, where tax consumes 45 percent of commercial profit, and Myanmar, where it consumes 49 percent. At the other end of the spectrum, corporate tax consumes just 16 percent of firm profits in Brunei Darussalam and 21 percent in Cambodia. Brunei Darussalam has achieved the most success in cutting the financial burden of taxes through the reduction of the corporate rate from 30 percent in 2008 to 22 percent in 2010, combined with cuts in the profit tax rate and the introduction of a lower tax rate for small businesses.

**Figure 44: Annual Payments**

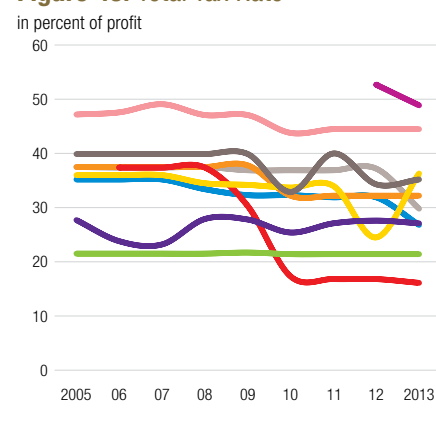


Source: World Bank (2014a).

**Figure 45: Time Spent on Payments**



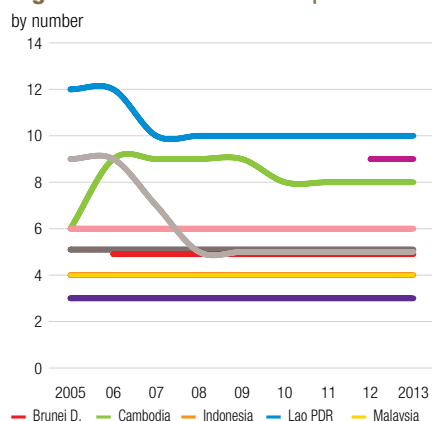
**Figure 46: Total Tax Rate**



### Trading Across Borders

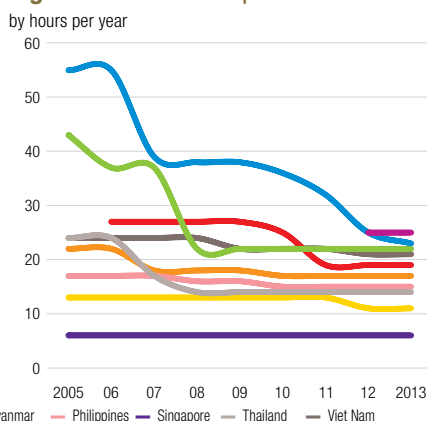
Geographic diversity alone produces large differences in the costs in transporting goods. These differences are further magnified by official procedures. The total number of documents required per shipment to import goods

**Figure 47: Documents to Import**

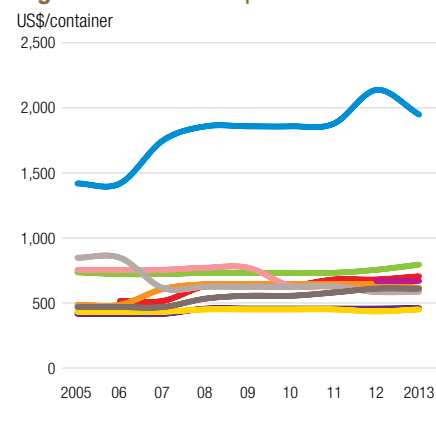


Source: World Bank (2014a).

**Figure 48: Time to Import**



**Figure 49: Cost to Import**

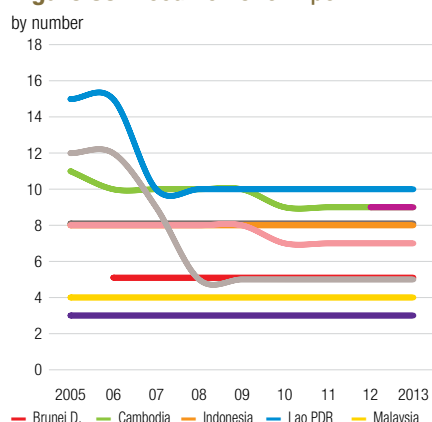


ranges from a low of 3 in Singapore to a high of 10 in Lao PDR (Figure 47).<sup>4</sup> The complexity of import requirements in Lao PDR was reduced by two documents in 2007 and by four documents in Thailand between 2007 and 2008 as a result of the implementation of an e-Customs system. Cambodia, however, required more documents in 2013 than it did in 2005.

The minimum amount of time necessary to comply with all procedures required to import goods also varies (Figure 48), although much less than it did ten years ago. Procedures have become much less time-consuming in Lao PDR (from 55 days in 2005 to 23 days in 2013), Cambodia (43 days to 22 days), and Thailand (24 to 14 days) as a result of the rationalization of inspection procedures and the introduction of provisions for electronic filing. However, there has been no true convergence in costs associated with procedures to import goods (Figure 49).<sup>5</sup> Notable reductions were achieved by the Philippines (from US\$755 per container to \$585) and Thailand (from \$848 to \$595), but costs rose in Brunei Darussalam (\$515 to \$705), Cambodia (\$736 to \$795), Indonesia (\$486 to \$615), Lao PDR (\$1,420 to \$1,950 [not shown]), Malaysia (\$432 to \$450), Singapore (\$416 to \$460), and Viet Nam (\$468 to \$610).

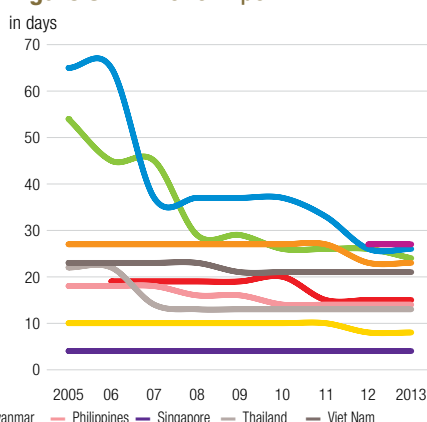
The complexity of export procedures was reduced in Cambodia between 2006 and 2010 (from 11 to 9 documents), Lao PDR in 2007 (from 15 documents to 10), the Philippines in 2010 (from 8 documents to 7), and Thailand between 2006 and 2009 (from 12 to 5 documents). Currently, Lao PDR has the most complex export documents in the ASEAN, while Singapore has the simplest, with just 3 documents required (Figure 50).

**Figure 50: Documents to Export**

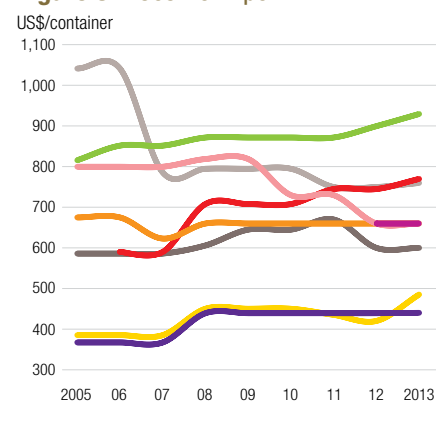


Source: World Bank (2014a).

**Figure 51: Time to Export**



**Figure 52: Cost to Export**



4 These include documents required by government ministries, customs authorities, terminal authorities, health and technical agencies and banks.

5 These include documents, administrative fees for customs clearance and technical control, broker fees, handling charges and inland transport.

Cambodia and Lao PDR also substantially reduced the time burden of complying with customs procedures between 2005 and 2013, from 54 days to 24 days and from 65 days to 26 days, respectively. Singapore has the most efficient procedures, which take only 4 days to complete, while those in Myanmar are the most cumbersome, taking 27 days to complete (Figure 51). Substantial variation remains, however, in the cost of complying with procedures required to export goods (Figure 52). Costs are highest in Lao PDR (\$1,910 per container) and lowest in Singapore (\$440 days per container). Costs were reduced substantially in the Philippines (from \$800 in 2005 to \$660 in 2013) and in Thailand (\$1,042 to \$760) as a result of increased use of electronic customs systems, but rose in many other ASEAN countries.

## Access to Finance

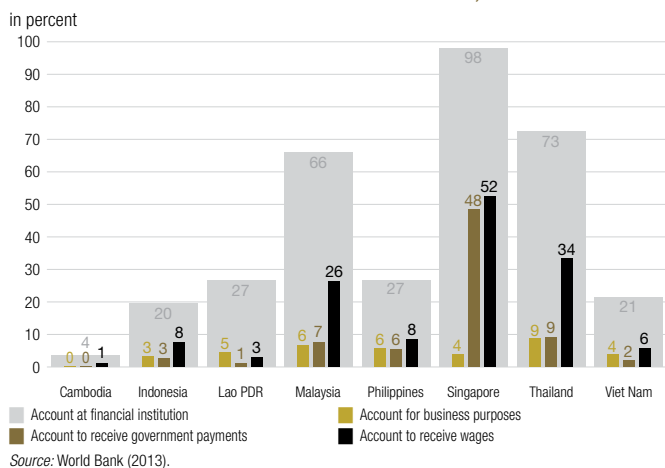
Access to personal finance is critical to enabling the poor to benefit from economic growth.<sup>6</sup> Financial systems provide citizens with the ability to smooth consumption through savings and borrowing, facilitate access to the credit required to exploit business opportunities, and enable the management of risks that might otherwise have devastating effects on household income. Without free and unfettered access to such services, the poor are limited in their ability to exercise entrepreneurship, severely restricted in their opportunities to earn a reliable return on what assets they do hold, and are left exposed to the effects of adverse economic shocks. A failure to provide equitable access to financial services thereby not only constrains the extent to which poor people can participate in economic growth, but also aggravates economic inequalities as some citizens are left less able than others to protect themselves from the unexpected.

To assess progress across the ASEAN in providing inclusive access to financial products and services, indicators are drawn from the 2011 *Global Financial Inclusion* (Global Findex) database (World Bank, 2013). This public database, created by the World Bank’s Development Research Group, is the first broad-based effort to provide consistent cross-country measures of the use of financial products. The report specifically examines the following four indicators: (i) *Financial Accounts*, which measures the proportion of residents that hold an account at a financial institution and what they use that account for; (ii) *Borrowing*, which compares the proportion of residents who obtained a loan in the past year and in the sources of those loans, whether formal or informal; (iii) *Savings*, which compares the extent to which residents of ASEAN countries have had an opportunity to save money in the past year and, if so, which vehicle was used to save money; and (iv) *Insurance*, which gauges ownership of agricultural and health insurance.

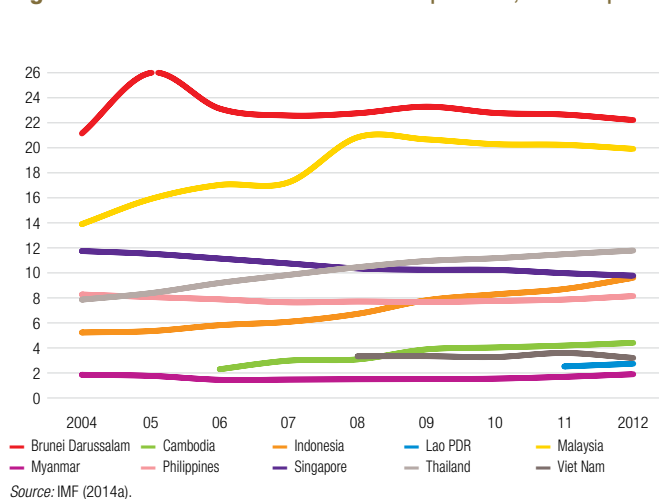
### Financial Accounts

Large variation exists between ASEAN countries in the proportion of the population that hold an account at a financial institution (Figure 53). Singapore is the most financially connected of the eight ASEAN countries surveyed. Financial connectedness is also high in Thailand and Malaysia. Cambodia is the least connected, with only 4 percent of the population possessing an account. Connectedness is also low in Indonesia, Lao PDR, the Philippines, and Viet Nam. Across all surveyed ASEAN countries, urban residents are more likely than their rural counterparts to hold an account, as are residents with higher levels of education and higher levels of income. On the hand, differences in account ownership between genders are relatively small in most ASEAN countries.

**Figure 53: Proportion of Adult Population with Account at Formal Financial Institution and Use Thereof, 2011**



**Figure 54: Commercial Bank Branches per 100,000 People**



6 Demircug-Kunt and Klapper (2012).

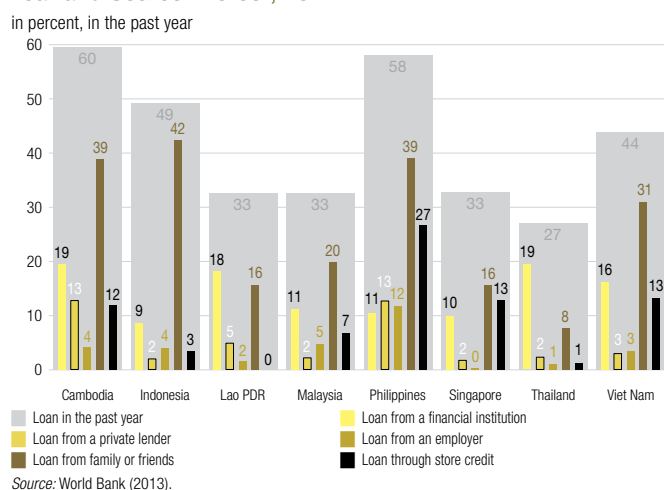
Obtaining an account at a financial institution has been made easier within the ASEAN by increases in the number of commercial bank branches (Figure 54). The number of commercial bank branches grew particularly quickly between 2004 and 2012 in Indonesia (from 5 branches per 100,000 people in 2004 to 10 in 2012), Malaysia (from 14 branches in 2004 to 20 in 2012), and Thailand (from 8 branches in 2004 to 12 in 2012).

### Borrowing

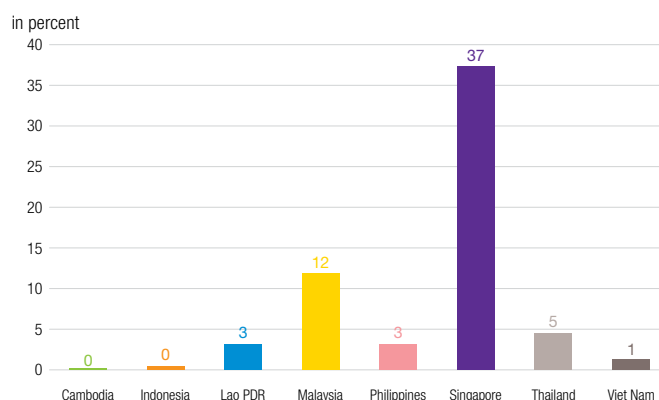
Data on whether sampled respondents took a loan in the past year reveals substantial differences between ASEAN countries in access to finance (Figure 55). Respondents in Cambodia, Indonesia, and the Philippines were relatively more likely to have taken out a loan in the past year compared to respondents in Lao PDR, Malaysia, Singapore, Thailand, and Viet Nam. In Cambodia, Indonesia, the Philippines, and Viet Nam, funds were borrowed predominantly from family or friends. Even in Singapore, more borrowers reported accessing funds from friends and family than through a formal financial institution. Among the eight countries surveyed, only in Thailand did a plurality of borrowing respondents source funds from a financial institution.

Some surprising differences exist in formal borrowing behavior within ASEAN countries. In Cambodia, Indonesia, Lao PDR, Thailand, and Viet Nam, rural residents are more likely than their urban counterparts to borrow from formal financial institutions. In all eight countries except Cambodia and the Philippines, men are more likely than women to borrow from financial institutions. Interestingly, in Cambodia, Thailand, and Viet Nam, less educated individuals are more likely than more educated individuals to borrow from financial institutions. Finally, in Thailand, poorer individuals are more likely than their richer counterparts to borrow from the formal sector. The situation is reversed, however, in Malaysia, the Philippines, and Singapore.

**Figure 55: Proportion of Adult Population with Loan in Past Year and Source Thereof, 2011**



**Figure 56: Proportion of Adult Population with Credit Card**



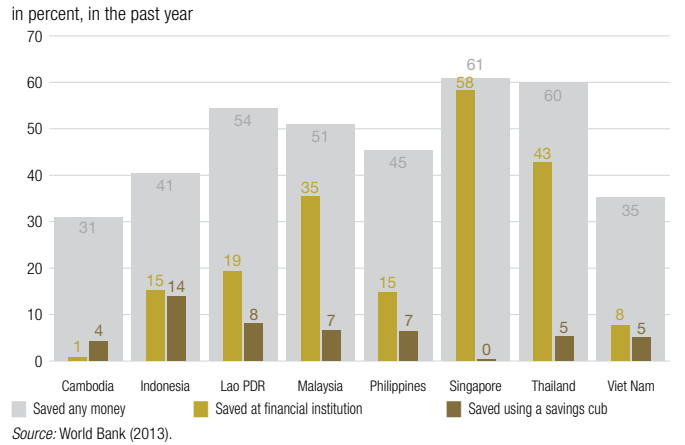
In addition to a means of transacting, credit cards also can represent a source of borrowed funds. Credit card ownership across the eight ASEAN countries for which data is available is highest in Singapore, where 37 percent of the adult population owns at least one credit card. Credit card ownership is relatively low in all other ASEAN countries, however. Even in Malaysia, only 12 percent of the adult population has a card. Credit card ownership among the adult population in the other six countries for which data is available is 5 percent or less.

### Savings

There is wide variation in savings behavior across the ASEAN (Figure 57). Residents of Singapore and Thailand are more likely to have saved money in the past year than those in the other eight ASEAN countries surveyed. In contrast, savers were relatively rare in Cambodia and Viet Nam. Residents of Malaysia, Singapore, and Thailand are more likely to have saved at a financial institution in the past year. In contrast, residents of Cambodia and Viet Nam are the least likely among residents of the eight ASEAN countries surveyed to have saved money at a financial institution in the past year.

Variation in savings behavior within countries is mostly consistent with expectations. In all of the eight surveyed ASEAN countries except Thailand, people living in rural areas are less likely than those in urban areas to have saved money in the past year. Savings behavior is mostly common across genders and, in all of eight surveyed ASEAN countries, more educated and richer individuals are more likely to have saved. Patterns of within country variation in the use of formal savings vehicles are similar. In all eight surveyed ASEAN countries except Thailand, urban residents are more likely than people living in rural areas to have saved money at a formal financial institution. Gender differentials in rates of formal saving are negligible in all countries except Malaysia, where women are 11 percentage points less likely than men to have saved at a formal institution in the past year. More educated and richer individuals are more likely than poorer individuals to have saved at a formal institution.

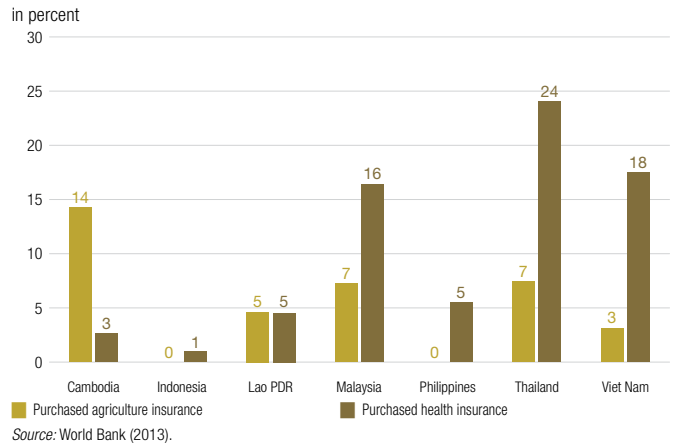
**Figure 57: Proportion of Adult Population with Savings in Past Year and Vehicle Thereof, 2011**



### Insurance

The use of agriculture and health insurance varies but is generally rare across the ASEAN (Figure 58). Cambodia reports the highest use of agricultural insurance in the ASEAN, where 14 percent of those working in farming, fishing or forestry paid for crop, rainfall, or livestock insurance. In contrast, the use of agriculture insurance appears virtually non-existent in Indonesia and the Philippines. Purchases of private health insurance are relatively more common in Malaysia, Thailand, and Viet Nam, where 16 percent, 24 percent, and 18 percent of the adult populations purchased private medical insurance for themselves.

**Figure 58: Proportion of Relevant Population with Insurance, 2011**





# Part II: Human Development

## Education

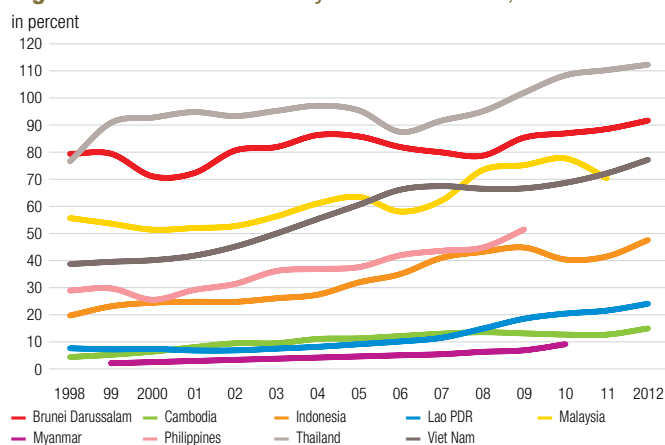
Education outcomes are vital signs of a country's economic well-being. Disparities in educational attainment translate into future disparities in the skills of adult citizens. Differences in education outcomes between countries thus give rise to differences in the sophistication of goods and services that economies can generate which, in turn, contribute to differences in living standards. Inequalities in education outcomes within countries mean that some citizens are less able than others to command productive employment, which can produce substantial inequalities in incomes.

To assess the progress of ASEAN member states in ensuring equitable access to education, the following indicators are tracked: (i) *Pre-Primary Enrolment*, which reports the number of children enrolled in official pre-primary education programs as a percentage of the total number of children of official pre-primary school age; (ii) *Primary School Enrolment and Completion*, the latter of which measures the proportion of students enrolled in first grade which reach fifth grade; (iii) *Literacy* rates for youth, adult, and elderly generations; (iv) *Secondary School Enrolment*; and (v) *Tertiary School Enrolment*, which measures enrolment in post-secondary institutions as a percentage of the total population of the five-year age group that follows the official secondary school leaving age.

### Pre-Primary School Enrolment

Pre-primary education is an important determinant of attainment at latter stages of education and, since 1998, pre-primary enrolment rates have increased in all of the nine ASEAN countries for which data is available (Figure 59). Thailand and Viet Nam achieved particularly significant increases. Thailand's gross pre-primary enrolment rate rose from 77 percent in 1998 to 119 percent in 2013, while Viet Nam's increased from 39 percent in 1998 to 77 percent in 2012. Indonesia's rate also more than doubled over the period.

**Figure 59: Gross Pre-Primary Enrolment Rates, 1998–2012**



Source: World Bank (2014b).

Note: Some values are interpolated.

**Table 6: Pre-Primary Enrolment**

	Level (percent)	Year
Brunei Darussalam	64	2012
Cambodia	14	2012
Indonesia	33	2012
Lao PDR	24	2012
Malaysia	62	2011
Myanmar	9	2010
Philippines	39	2009
Thailand	93	2013
Viet Nam	74	2012

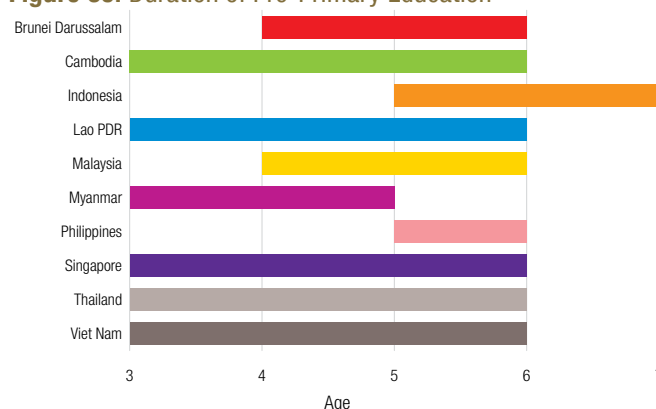
Source: World Bank (2014b).

Despite the improvements made in the past 15 years, there are large differences in enrolment rates across the ASEAN (Table 6). Thailand has the highest level of pre-primary enrolment in the ASEAN, with 93 percent of children in the 3–6 age bracket enrolled in pre-school. Pre-school enrolment rates are, however, very low in Cambodia (14 percent in 2012) and Myanmar (9 percent in 2010).

Pre-primary education policies vary substantially between ASEAN countries (Figure 60). There is also substantial diversity in the volume of investments made in pre-primary education by ASEAN countries. Thailand and Viet Nam invest 14 and 11 percent, respectively, of education expenditure in pre-primary education. This compares

to 2 percent invested by Cambodia, Indonesia, Lao PDR, Malaysia, and the Philippines. Differences in the magnitude of the investments manifest themselves in pre-primary pupil-teacher ratios. In the Philippines (as of 2007), for instance, there were 35 pre-primary school students for every pre-primary teacher. In Brunei Darussalam and Indonesia, however, there are (as of 2012), there are 14 and 15 students respectively for each pre-primary school teacher.

**Figure 60: Duration of Pre-Primary Education**



Source: UNESCO (2014).

### Primary School Enrolment and Completion

Over the past 15 years, the ASEAN member states have made substantial progress towards universal primary enrolment (Figure 61). Net enrolments in Cambodia and Lao PDR increased substantially, although marginally declined in the Philippines between 1998 and 2009. Primary enrolment rates in Indonesia and Viet Nam fluctuated, but relatively little progress appears to have been made in increasing overall enrolment rates in these countries.

Differences in primary enrolment rates across the ASEAN are not as great as for other levels of education, but nonetheless exist (Table 7). The most recent data indicates that Cambodia and Viet Nam have the highest levels of net primary enrolment among those ASEAN countries for which data is available, while the Philippines and Indonesia have the lowest.

Gender gaps in access to primary education are relatively small in the ASEAN, but still exist. In Cambodia, Lao PDR, and Malaysia, female gross enrolment rates are approximately 5 percent lower than for males, indicating that for every 20 boys in primary school, only 19 girls are enrolled.

The relatively narrow gap in enrolment rates belies substantial differences between ASEAN countries in investments in primary school education (Table 8). Malaysia, Thailand, and Viet Nam invest heavily in primary education, which has translated into relatively low pupil-teacher ratios of 13 in Malaysia, 16 in Thailand, and 19 in Viet Nam. On the other hand, Cambodia, Lao PDR, Myanmar, and the Philippines invest proportionately lower amounts in primary school education. As a result, pupil-teach ratios in these countries are substantially higher. There are 46 primary school students for every teacher in Cambodia; 28 in Myanmar; and 31 in the Philippines.

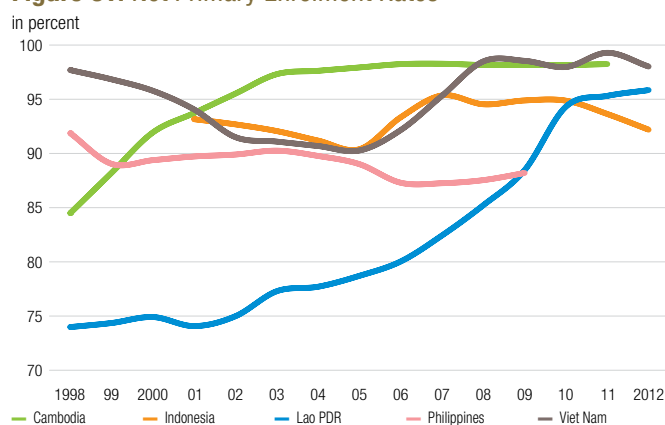
**Table 7: Primary School Enrolment Rates**

Country	Gross		Net	
	Level (%)	Year	Level (%)	Year
Brunei Darussalam	95	2012	92	2012
Cambodia	124	2012	98	2012
Indonesia	109	2012	92	2012
Lao PDR	123	2012	96	2012
Malaysia	101	2005	97	2005
Myanmar	114	2010	-	-
Philippines	108	2009	88	2009
Thailand	95	2012	96	2009
Viet Nam	105	2012	98	2012

Source: World Bank (2014b).

Note: "Gross" enrolment rates cover students of all ages, while "net" rates refer only to those students that fall within the age group for the respective level of education. Gross enrolment ratios in excess of 100 percent are possible if late enrollment, early enrollment, or repetition causes total enrollment to exceed the population of the age group for the respective level of education.

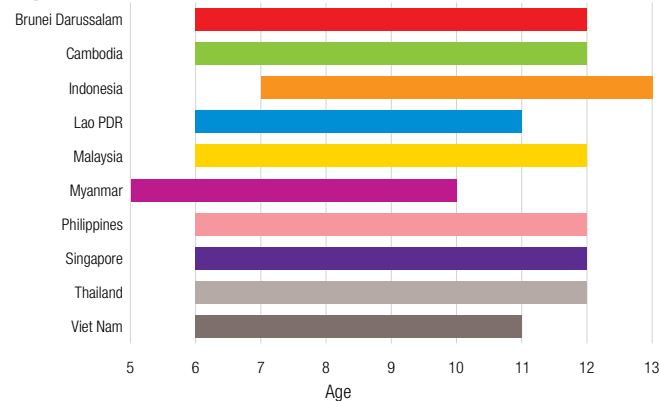
**Figure 61: Net Primary Enrolment Rates**



Source: World Bank (2014b).

Note: Some values are interpolated.

**Figure 62: Duration of Primary Education**

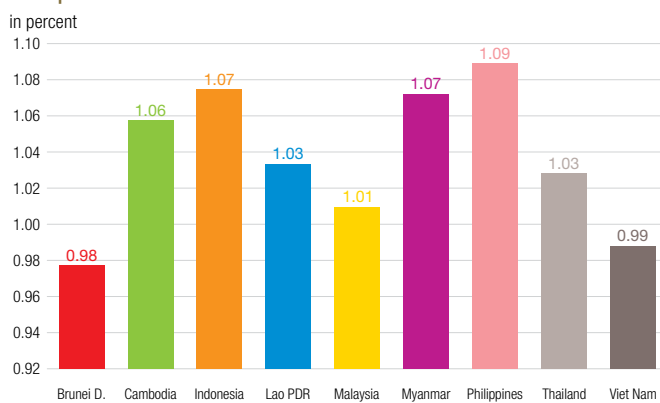


Source: UNESCO (2014).  
Note: Data is for 2013.

Steady progress has been made by ASEAN countries over the past 15 years in ensuring that children finish primary school (Figure 63). The largest increases occurred in Cambodia, Lao PDR, Myanmar, and Viet Nam. Increases in primary school completion rates were, however, slower in Indonesia and the Philippines (74 percent in 1998 compared to 79 percent in 2008). The gap in primary completion rates across the ASEAN remains large. Brunei Darussalam (99 percent), Malaysia (99 percent), Singapore (99 percent), Thailand (99 percent) and Viet Nam (97 percent) report near-universal completion. However, only 73 percent of entering primary school students in Cambodia; 90 percent in Indonesia, 70 percent in Lao PDR; 75 percent in Myanmar; and 79 percent in the Philippines reach Grade 5.

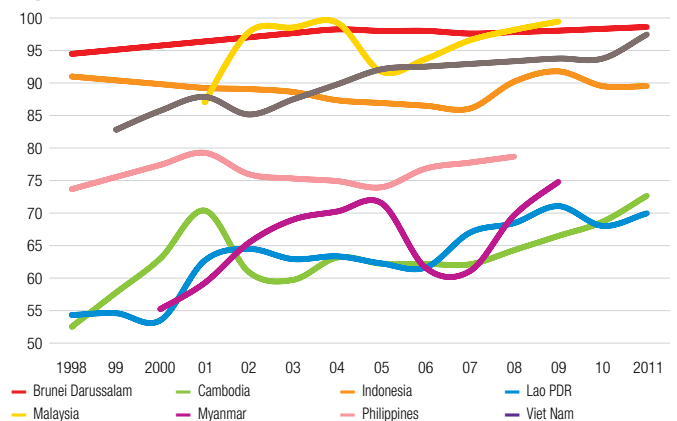
Except Brunei Darussalam and Viet Nam, all ASEAN countries for which data is available report that, once enrolled, girls are more likely to complete primary school than boys (Figure 64). The differences are largest in Cambodia, Indonesia, Myanmar, and the Philippines.

**Figure 64: Ratio of Female to Male Primary School Completion**



Source: World Bank (2014b).

**Figure 63: Primary School Completion Rates, 1998–2011**



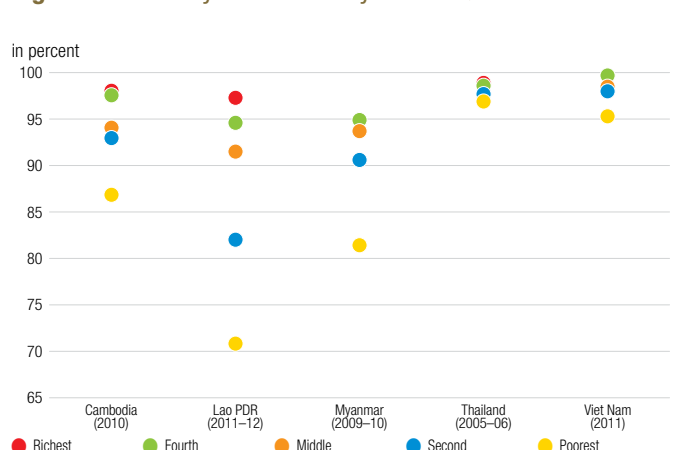
Source: World Bank (2014b).  
Note: Some values are interpolated; Completion is measured as persistence to Grade 5.

**Table 8: Investment in Primary Education**

Country	Share of Educ. Expenditure		Expend./Stud. (% GDP pc)		Pupil-Teacher Ratio	
	Level (%)	Year	Level (%)	Year	Ratio	Year
Brunei Darussalam	28.5	2010	5	2010	11	2012
Cambodia	41.8	2010	7	2010	46	2012
Indonesia	41.8	2012	12	2012	19	2012
Lao PDR	62.5	2005	10	2005	27	2012
Malaysia	29.3	2011	17	2011	13	2011
Myanmar	50.5	2011	3	2003	28	2010
Philippines	55.0	2009	9	2008	31	2009
Singapore	22.0	2013	11	2010	17	2009
Thailand	37.9	2012	38	2012	16	2012
Viet Nam	32.1	2010	25	2010	19	2012

Source: World Bank (2014b), UNESCO (2014).  
Note: "Share of Educ. Expenditure" is the share of government expenditure on education spent on primary education. "Expend./Stud. (% GDP pc)" is expenditure per enrolled student as a percentage of GDP per capita.

**Figure 65: Primary Attendance by Wealth Quintile**



Source: UNICEF (2014c).

For five ASEAN countries, data is available that shows how primary school attendance correlates with household wealth (Figure 65). In Thailand and Viet Nam, differences are relatively small—children from poorer households are almost as likely to attend school as those from richer households. However, in Cambodia, Lao PDR, and Myanmar, there are substantial differences. In Lao PDR, only 71 percent of children from households in the poorest quintile attend school, compared to 97 percent of children from households in the richest quintile.

### Literacy

As a result of the progress made in increasing access to primary education, gaps across the ASEAN in self-reported literacy among the youth cohort are relatively minimal (Table 9). With the exception of Cambodia and Lao PDR, both youth and adult literacy in all ASEAN countries are above 90 percent.

The scale of the progress made in improving access to education is apparent from the large differentials which continue to exist between member states in literacy rates among the elderly cohort. In Brunei Darussalam, Cambodia, and Lao PDR, little over a third of the elderly population is able to read and write. Only in the Philippines are more than four out of every five elderly citizens literate.

Gender gaps in literacy are minimal among the youth cohort in all ASEAN member states except Lao PDR, where literacy rates among female youth are 12 percentage points than their male counterparts. The relative gender parity that exists in literacy rates among the youth cohort contrasts strikingly with the gender gaps in literacy that persist among older generations. In Cambodia and Lao PDR, for instance, gender gaps in literacy among the elderly are 74 and 72 percentage points respectively. Only in the Philippines is there relative gender parity in elderly literacy rates.

**Table 9: Self-Reported Literacy Rates by Demographic Group**

Country	Youth (15–24)		Adult (15+)		Elderly (65+)	
	Level (%)	Year	Level (%)	Year	Level (%)	Year
Brunei D.	100	2012	95	2012	38	2001
Camb.	87	2009	74	2009	40	2009
Indonesia	99	2011	93	2011	64	2011
Lao PDR	84	2005	73	2005	35	2005
Malaysia	98	2010	93	2010	58	2010
Myanmar	96	2012	93	2012	75	2000
Philip.	98	2008	95	2008	87	2008
Sing.	100	2012	96	2012	76	2010
Thailand	97	2010	96	2010	73	2005
Viet Nam	97	2009	94	2009	77	2009

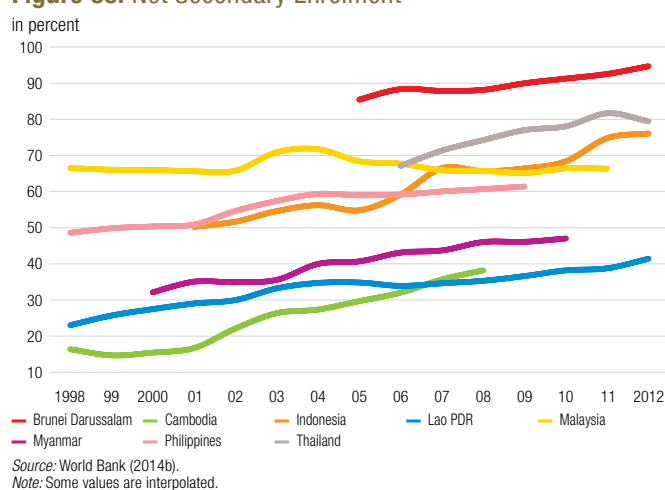
Source: World Bank (2014b); UNESCO (2014).

### Secondary School Enrolment

Secondary school enrolment has increased in almost all ASEAN countries over the past 15 years (Figure 66). Particularly large increases were achieved in Cambodia, Lao PDR, Myanmar, and Indonesia. More modest increases were observed in Brunei Darussalam, the Philippines, and Thailand. Malaysia's net secondary enrolment, however, stood at the same level in 2011 as in 1998.

Although the gap has narrowed over the past 15 years, stark differences remain across the ASEAN (Table 10). While Brunei Darussalam has achieved near-universal secondary school enrolment (95 percent), only 38 percent of secondary school age children in Cambodia, 41 percent in Lao PDR, and 47 percent in

**Figure 66: Net Secondary Enrolment**



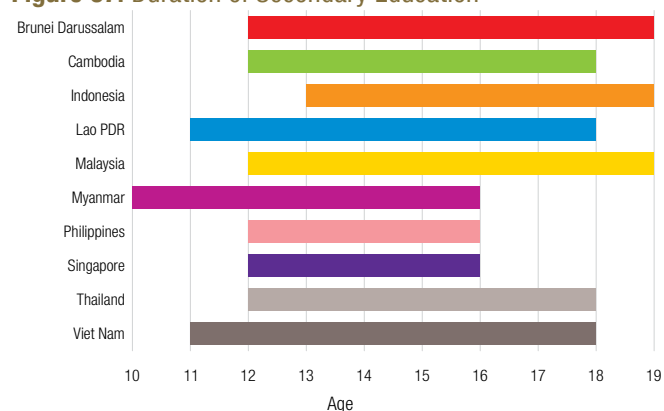
Source: World Bank (2014b).  
Note: Some values are interpolated.

Myanmar attend secondary school.

While small relative to other developing countries, gender gaps in secondary enrolment within the ASEAN are larger than those for primary enrolment. In Cambodia, Lao PDR, and Viet Nam, boys are 15, 13, and 10 percentage points respectively more likely than girls to enroll in secondary school. In a number of other ASEAN countries, however, boys are less likely to attend secondary school than girls. In Myanmar, Philippines, and Thailand, girls are five, eight, and six percentage points more likely than boys to enroll in secondary school.

The gaps in access to secondary education across the ASEAN are confirmed by data on net secondary school attendance collected by household surveys.<sup>7</sup> Cambodia (45 percent) and Lao PDR (45 percent) have the lowest levels of secondary school attendance of the seven ASEAN countries for which data is available. Indonesia (58 percent), Myanmar (58 percent), and the Philippines (63 percent) have moderate levels of secondary school attendance, while attendance levels in Thailand (80 percent) and Viet Nam (81 percent) are relatively high. According to data on attendance, girls are more likely than boys to attend secondary school in the Philippines, Thailand, and Viet Nam, while boys are more likely than girls to attend school in Cambodia.

**Figure 67: Duration of Secondary Education**



Source: UNESCO (2014).  
Note: Data is for 2013.

**Table 10: Secondary School Enrolment Rates**

Country	Gross		Net	
	Level (%)	Year	Level (%)	Year
Brunei Darussalam	108	2012	95	2012
Cambodia	45	2008	38	2008
Indonesia	83	2012	76	2012
Lao PDR	47	2012	41	2012
Malaysia	67	2011	66	2011
Myanmar	50	2010	47	2010
Philippines	85	2009	61	2009
Thailand	87	2012	79	2012
Viet Nam	57	1998	-	-

Source: World Bank (2014b)

**Table 11: Investment in Secondary Education**

Country	Share of Educ. Expenditure		Expend. / Stud. (% GDP pc)		Pupil-Teacher Ratio	
	Level (%)	Year	Level (%)	Year	Ratio	Year
Brunei D.	29.9	2013	8	2013	10	2012
Camb.	17.6	2010	6	2001	29	2007
Indonesia	26.0	2012	11	2012	17	2012
Lao PDR	19.0	2002	9	2002	20	2011
Malaysia	30.6	2011	20	2011	14	2011
Myanmar	23.5	2011	3	2003	34	2010
Philip.	29.7	2009	9	2008	35	2009
Sing.	23.0	2013	17	2010	15	2009
Thailand	35.4	2012	37	2012	20	2011
Viet Nam	38.1	2010	-	-	29	1998

Source: World Bank (2014b), UNESCO (2014).

Note: "Share of Educ. Expenditure" is the share of government expenditure on education spent on secondary education. "Expend./Stud. (% GDP pc)" is expenditure per enrolled student as a percentage of GDP per capita.

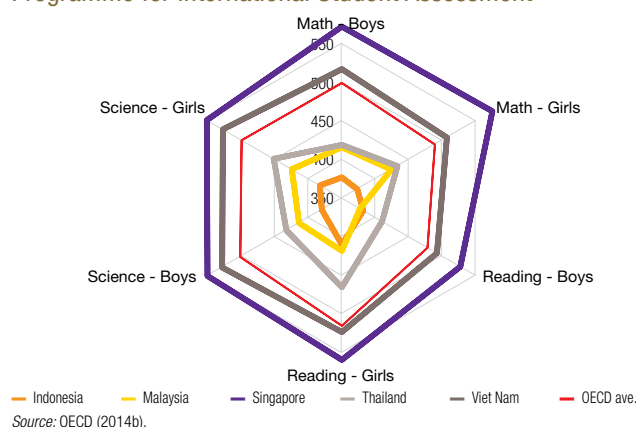
As with primary education, substantial differences exist between ASEAN countries in the level of investments in secondary education (Table 11). Malaysia and Thailand report relatively high levels of funding per enrolled student, even in spite of their high enrollment rates. Funding levels in Brunei Darussalam, Cambodia, Lao PDR, Myanmar, and the Philippines are lower. Differences in funding levels map onto differences in pupil-teacher ratios, which range from lows of 10 in Brunei Darussalam, 14 in Malaysia, and 15 in Singapore to 29 in Cambodia, 34 in Myanmar, and 35 in the Philippines.

Differences in secondary school funding levels and pupil-teacher ratios produce differences in student attainment. Data collected by the Organization for Economic Cooperation and Development (OECD) Programme for International

<sup>7</sup> School enrolment data is based on responses by national educational or statistical agencies to annual questionnaires submitted to the UNESCO Institute of Statistics (UNESCO [2012]). Attendance data, however, is collected directly from face-to-face or phone interviews with a representative sample of parents.

Student Assessment (PISA) permits comparisons of secondary school student skills and achievement between a number of countries in the ASEAN and with the OECD average (Figure 68).<sup>8</sup> Across the countries for which data is available—Indonesia, Malaysia, Singapore, Thailand, and Viet Nam—sizeable differences exist in student achievement in mathematics, reading and science. Male and female students in Viet Nam and Singapore exceed the OECD average in all dimensions. However, students in Indonesia, Malaysia, and Thailand perform worse. Students in Thailand outperform counterparts in Malaysia in all dimensions and those in Malaysia outperform counterparts in Indonesia in all dimensions except girls' reading.

**Figure 68:** Comparison of Mean Scores from 2012 Programme for International Student Assessment



### Tertiary School Enrolment

ASEAN member states have generally made progress over the past 15 years in increasing access to tertiary education. Thailand almost doubled gross enrolment between 1998 and 2012. Cambodia and Lao PDR also increased enrolment from minimal levels in 1998 to 16 percent and 17 percent in 2012, respectively. Brunei Darussalam, Indonesia, Malaysia, and Viet Nam reported a doubling or near-doubling of tertiary enrolment rates. No increase was observed, however, in the Philippines between 1998 and 2012.

**Table 12:** Gross Tertiary Enrolment

Country	Level (%)	Year
Brunei Darussalam	24	2012
Cambodia	16	2011
Indonesia	32	2012
Lao PDR	17	2012
Malaysia	36	2011
Myanmar	14	2011
Philippines	28	2009
Thailand	51	2013
Viet Nam	25	2012

Source: World Bank (2014b).

Note: Completion is measured as persistence to Grade 5. Gross tertiary enrolment is the total enrolment in tertiary education expressed as a percentage of the total population of the five-year age group that follows the official secondary school leaving age.

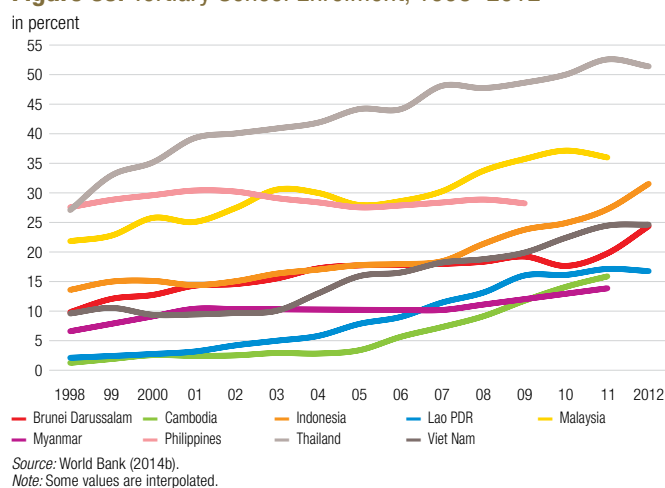
With the exception of Cambodia and Lao PDR, where the male-to-female tertiary enrolment rates are 61 and 82 percent, respectively, male enrolments exceed female enrolments in the ASEAN. Male enrolments are particularly high relative to female enrolments in Brunei Darussalam (174 percent), Malaysia (12 percent), Myanmar (134 percent), the Philippines (124 percent),

**Table 13:** Investment in Tertiary Education

Country	Share of Educ. Expenditure		Expend./Stud. (% GDP pc)	
	Level (%)	Year	Level (%)	Year
Brunei Darussalam	34	2013	58	2013
Cambodia	15	2010	28	2010
Indonesia	17	2012	24	2012
Lao PDR	13	2002	86	2002
Malaysia	37	2011	61	2011
Myanmar	19	2011	12	2011
Philippines	12	2009	10	2008
Thailand	35	2013	23	2013
Viet Nam	9	2012	19	2012

Source: World Bank (2014b); UNESCO (2014)

**Figure 69:** Tertiary School Enrolment, 1998–2012

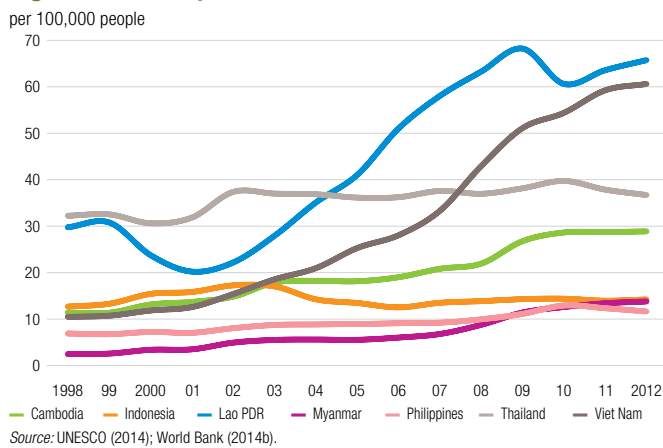


8 The 2012 PISA was administered to 510,000 students between the ages of 15 years, 3 months and 16 years, 2 months. Participating students were drawn from a sample of 28 million students in the age group in 65 countries and territories. The test lasted two hours, was paper-based and included both open-ended and multiple-choice questions (OECD [2014a]).

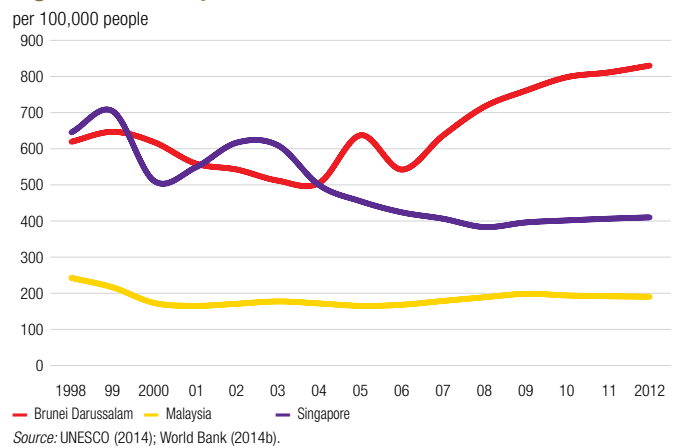
and Thailand (134 percent). There is relative gender parity in tertiary enrolments in Indonesia (103 percent) and Viet Nam (102 percent).

Students from a number of ASEAN member states are increasingly heading abroad for tertiary education (Figure 70 and Figure 71). Between 1998 and 2012, the number of outbound international students from Lao PDR and Viet Nam increased dramatically. Despite these increases, the share of students studying abroad remains much higher for Brunei Darussalam, Malaysia and Singapore than for other ASEAN countries.

**Figure 70: Tertiary Students Abroad**



**Figure 71: Tertiary Students Abroad**





## Health

No economic and development indicators are perhaps more important than the ability of health systems to protect human life. While modern medicine has made great strides over the past century in developing preventions and treatments for ailments that previously claimed millions of lives, there still exists great variation both with and between countries in access to such protections. Ordinarily, expectant mothers and children are much less likely to die in richer countries and, within countries, expectant mothers and young children are less likely to die if they reside in a wealthier household.

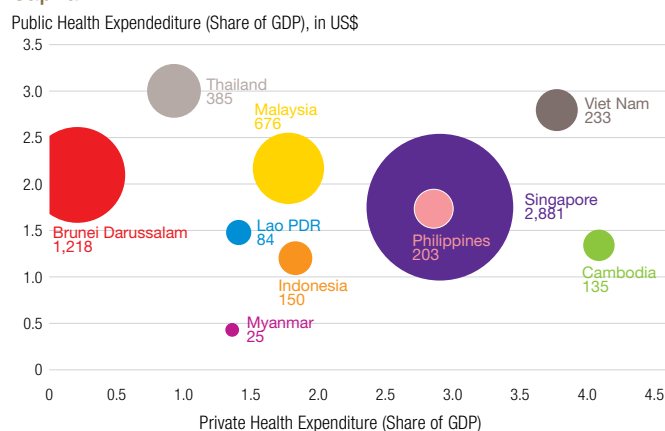
To assess the progress of the ASEAN in ensuring equitable access to critical health care, we track the following indicators: (i) *Child, Infant, and Neo-Natal Mortality*, which reports the rates of death among children (under five), infants (first twelve months), and young babies (first month);<sup>9</sup> (ii) *Maternal Mortality*, which monitors the incidence of deaths of women due to complications arising from pregnancy or childbirth;<sup>10</sup> and (iii) *Access to Prenatal and Delivery Care*, which assesses the proportion of pregnant women that are attended to at least once during pregnancy by skilled health personnel and the proportion of births that are attended to by skilled medical professionals, including midwives.

### Child, Infant and Neo-Natal Mortality

Since 1990, the number of children across the world that die before their fifth birthday has fallen by nearly 50 percent.<sup>11</sup> Nonetheless, 18,000 children were dying every day as of 2012.<sup>12</sup> The vast majority of these deaths are due to preventable afflictions such as pneumonia (17 percent of deaths), diarrhea (9 percent), and malaria (7 percent).

Over the past two decades, ASEAN has witnessed a spectacular fall in child mortality (Figure 73). In 1982, over 1.1 million children under five died in the ten countries that now make up the ASEAN. By 2012, that number had been cut by two-thirds. This reduction has happened even as the population of the region has

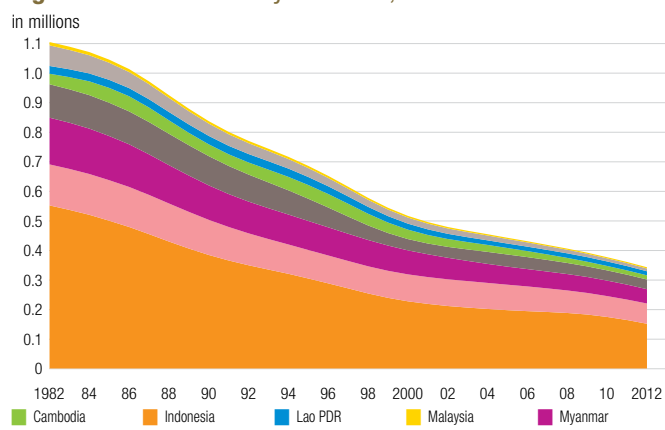
**Figure 72: Health Spending/GDP and Health Spending per Capita**



Source: World Bank (2014b).

Note: Size of bubbles represents total value of public and private health spending per capita.

**Figure 73: Child Mortality in ASEAN, 1982–2012**



Source: UNICEF (2014c); World Bank (2014b).

Note: Child mortality rates are expressed as deaths per thousand live births.

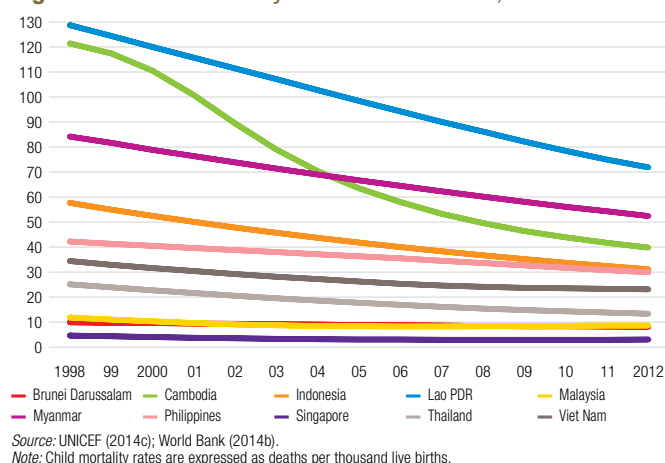
9 Where vital registration systems are insufficient, rates are derived by the United Nations Inter-agency Group for Child Mortality Estimation (IGME) from data collected by household surveys. A statistical model is fitted to data points that meet quality standards established by IGME and used to extrapolate trends (Hill et al. [2012]).

10 Maternal mortality refers to the death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management. Rates are estimated using a regression model using all available national-level maternal mortality data and data on GDP, general fertility rate, and the proportion of births that are attended by skilled personnel (Wilmoth et al. [2012]).

11 While impressive, this rate of progress is less than prescribed by the fourth MDG, which committed to a two-thirds reduction over 1990–2015.

12 UN Inter-Agency Group for Child Mortality Estimation (2013).

**Figure 74: Child Mortality Rates in the ASEAN, 1998–2012**



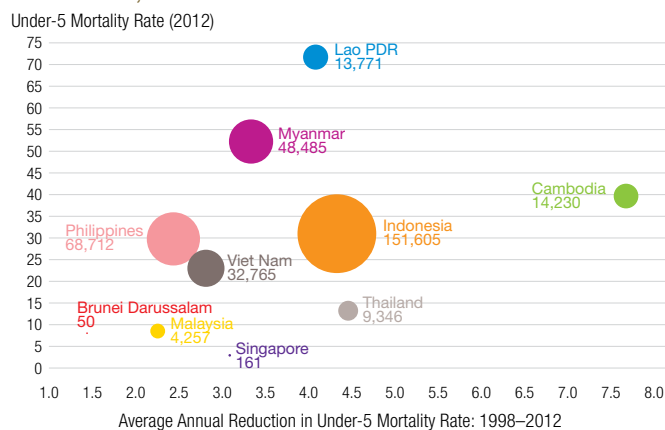
Source: UNICEF (2014c); World Bank (2014b).  
 Note: Child mortality rates are expressed as deaths per thousand live births.

continued to grow, thereby reflecting an even greater fall in child mortality rates (Figure 74).

While the region as a whole has made great progress in reducing child mortality, some member states have achieved especially notable successes. Between 1998 and 2012, Cambodia achieved the highest average annual reduction of any ASEAN member state, reducing child mortality from a rate of 121 deaths per 1,000 live births in 1998 to 40 deaths per 1,000 live births in 2012. Lao PDR, Indonesia, and Thailand also achieved substantial reductions in their respective child mortality rates. Reductions were more modest in the Philippines (from 42 in 1998 to 30 in 2012) and Viet Nam (from 34 in 1998 to 23 in 2012). Due to its large population size, Indonesia had the highest number of estimated child deaths in 2012, followed by the Philippines (Figure 75).

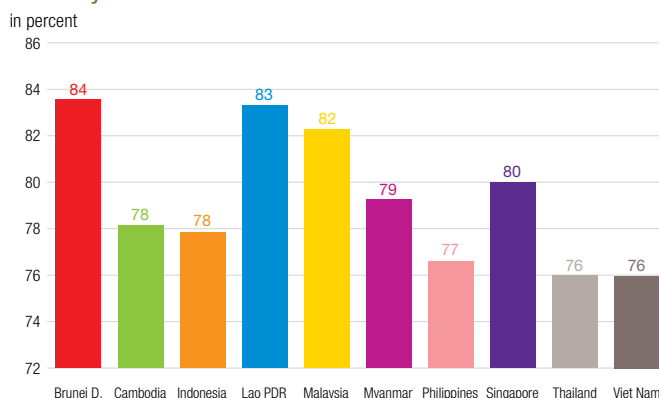
In all ASEAN countries, boys are appreciably more likely to die before their fifth birthday than are girls (Figure 76). In Thailand and Viet Nam, for instance, girls are 24 percentage points less likely to die before their fifth birthday than are boys. Among ASEAN member states, the gender gap in child mortality is smallest in Brunei Darussalam, but still sizeable at 16 percentage points.

**Figure 75: Child Mortality Rates, Reduction in Child Mortality: 1998–2012, and 2012 Child Deaths**



Source: UNICEF (2014c); World Bank (2014b).

**Figure 76: Ratio of Female Child Mortality Rate to Male Child Mortality Rate**



Source: World Bank (2014b).

The number of infants that die each year in the ASEAN has also fallen substantially over the past two decades. Whereas nearly 800,000 children died before reaching their first birthday in 1982, less than 300,000 infants died across the ASEAN in 2012. The reduction in infant mortality rates was largest in Cambodia, with Lao PDR, Indonesia, and Thailand also achieving large reductions in their respective rates. Reductions were more modest in the Philippines and Viet Nam. While the gap among ASEAN member states in infant mortality rates has appreciably narrowed since 1998, large differences

**Table 14: Infant Mortality Rates, 2012**

Country	Rate
Brunei Darussalam	6.7
Cambodia	33.9
Indonesia	25.8
Lao PDR	54.0
Malaysia	7.3
Myanmar	41.1
Philippines	23.5
Singapore	2.3
Thailand	11.4
Viet Nam	18.4

Source: World Bank (2014b).

remain (Table 14). Infants born in Lao PDR are more than twenty times more likely to die before their first birthday than are infants born in Singapore.

Diarrhea—along with pneumonia—is among the leading causes of child death, accounting for 9 percent of all deaths among children below the age of five worldwide.<sup>13</sup> Diarrhea in children can be inexpensively and effectively treated, however, by the simple administration of oral rehydration salts (ORS), together with continued feeding. This approach has been advocated since the 1970s,<sup>14</sup> but to date only 40 percent of children under the age of five with diarrhea receive the recommended treatment.<sup>15</sup>

Household survey data indicates that roughly one half of diarrhea-afflicted children in seven ASEAN developing countries—Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand, and Viet Nam—receive proper treatment (Table 15). In many countries, and particularly in Lao PDR, Myanmar, and the Philippines, children from the poorest households are less likely to receive treatment than those from richer households (Figure 77). While Lao PDR and Myanmar have made substantial progress in increasing the access of children afflicted with diarrhea to treatment, little or no progress appears to have been made over time in Cambodia, Myanmar, and the Philippines (Figure 78).

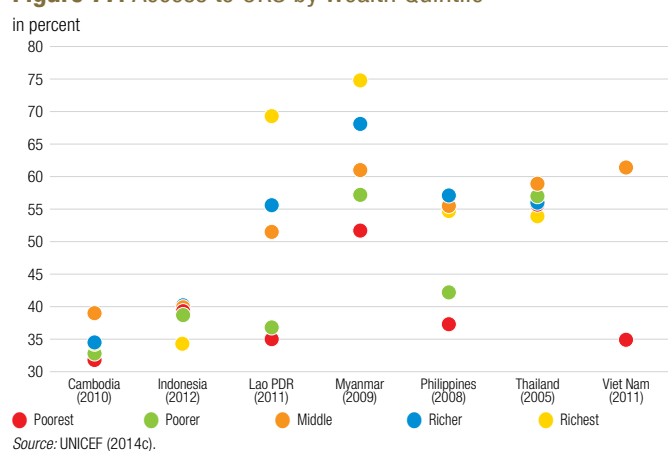
**Table 15: Access to Diarrhea Treatment**

Country	Level (%)	Year
Cambodia	48	2010
Indonesia	61	2012
Lao PDR	57	2012
Myanmar	50	2010
Philippines	60	2008
Thailand	46	2006
Viet Nam	57	2011

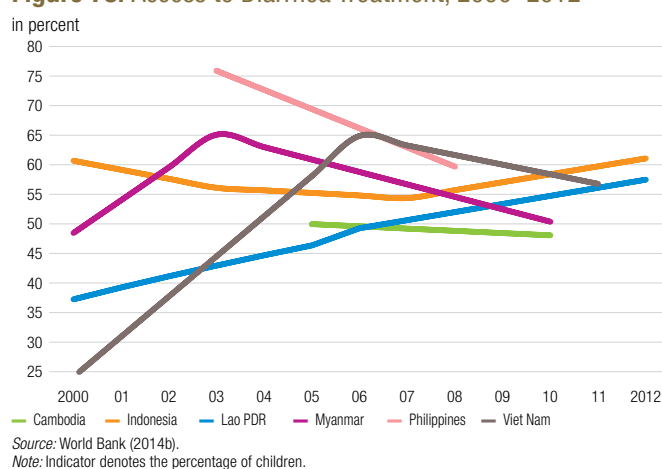
Source: World Bank (2014b).

Note: Indicator denotes the percentage of children under age five with diarrhea in the two weeks prior to the survey who received either oral rehydration therapy or increased fluids, with continued feeding.

**Figure 77: Access to ORS by Wealth Quintile**



**Figure 78: Access to Diarrhea Treatment, 2000–2012**



While child and infant mortality has decreased dramatically across the ASEAN over the past two decades, the rate of reduction in deaths which occur in the first month of life ('neo-natal') has not matched the rate of reduction in deaths that occur in older stages of infancy and childhood (Figure 79). As a result, the share of child deaths that occur in the neo-natal phase has been increasing. As of 2012, neo-natal deaths made up 49 percent of child deaths in the ASEAN.

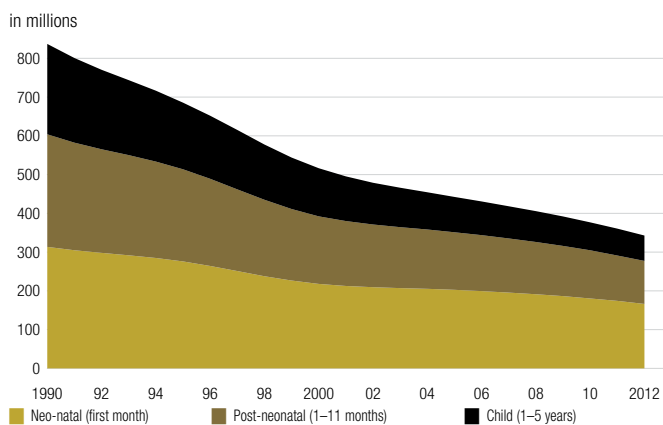
While all ASEAN member states have made progress in reducing neo-natal mortality rates, there is large variation across the region in the extent to which rates have fallen (Figure 80). As with child and infant mortality, Cambodia

13 UNICEF (2013a).

14 Ibid.

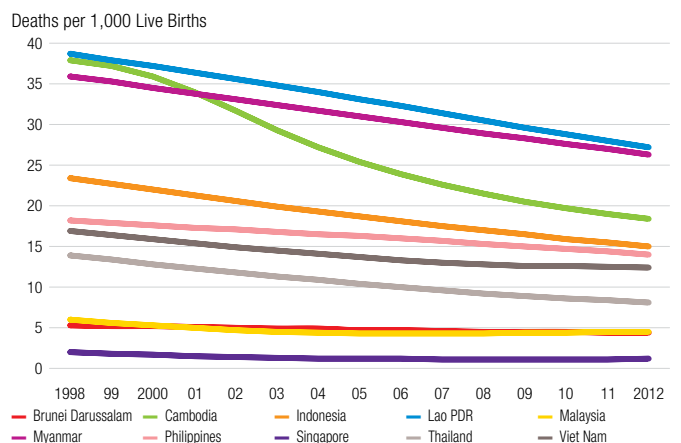
15 UNICEF (2014b).

**Figure 79: Total ASEAN Child Deaths by Age, 1990–2012**



Source: UNICEF (2014c); World Bank (2014b).

**Figure 80: Neo-Natal Mortality Rates in the ASEAN, 1998–2012**



Source: UNICEF (2014c); World Bank (2014b).

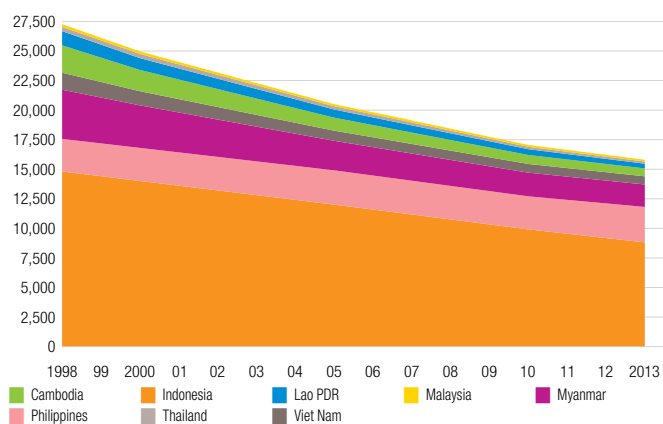
has achieved the largest reductions in neo-natal mortality. Thailand, Singapore, and Indonesia also achieved substantial reductions. Among ASEAN countries with neo-natal mortality rates above 10 in 1998, reductions were more modest in Lao PDR, Myanmar, the Philippines, and Viet Nam.

While the gap among ASEAN member states in neo-natal mortality rates has appreciably narrowed since 1998, differences remain. Babies born in Lao PDR, which had an estimated neo-natal mortality rate of 27.2 deaths per 1,000 live births in 2012, are more than twenty two times as likely to die in their first month than babies born in Singapore, where the neo-natal mortality rate was a mere 1.2 deaths per 1,000 live births in 2012. Myanmar (26.3), Cambodia (18.3), Indonesia (15.0), the Philippines (14.0), and Viet Nam (12.4) all have relatively high neo-natal mortality. Neo-natal mortality is relatively low by contrast in Brunei Darussalam (4.4), Malaysia (4.5), and Thailand (8.1).

### Maternal Mortality

Many deaths during pregnancy and childbirth can be prevented by access to well-trained and equipped medical professionals. Improved access to care has enabled declines in estimated rates of maternal mortality across the ASEAN over the past two decades. As of 1990, it estimated that, within the ten countries that are now ASEAN

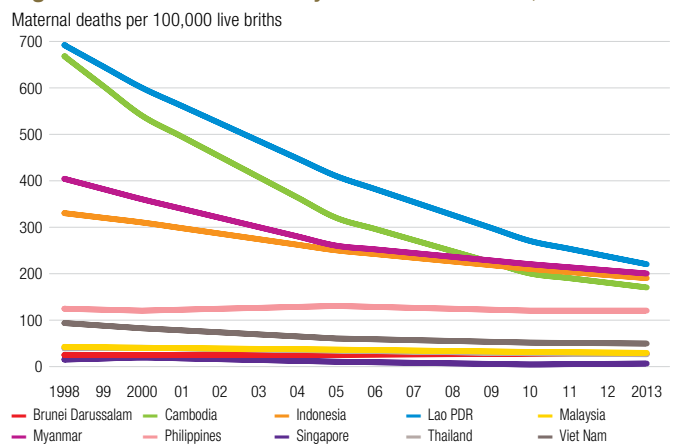
**Figure 81: Maternal Mortality in ASEAN, 1998–2013**



Source: UNICEF (2014c); World Bank (2014b).

Note: Intermediate values have been interpolated based on 2000, 2005, 2010, and 2013 estimates. Maternal mortality is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

**Figure 82: Maternal Mortality Ratio in the ASEAN, 1982–2013**



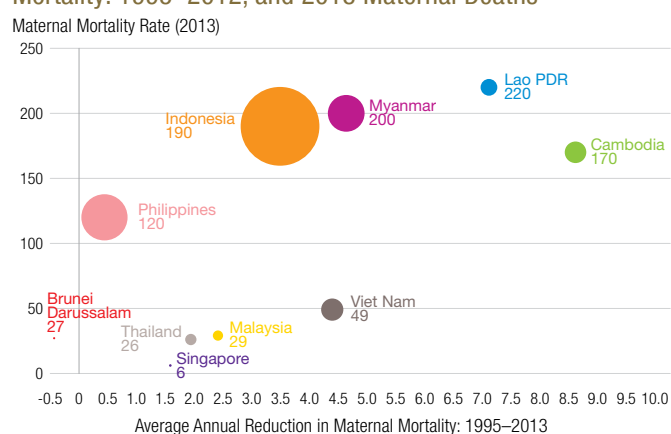
Source: UNICEF (2014c); World Bank (2014b).

Note: Intermediate values have been interpolated based on 2000, 2005, 2010, and 2013 estimates. Maternal mortality is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

member states, approximately 39,000 mothers or mothers-to-be died from causes related to or aggravated by the pregnancy or its management. As of 2013, it is estimated that under 16,000 mothers or mothers-to-be died from such causes (Figure 81).

Since 1995, maternal mortality ratios are estimated to have declined in all ASEAN countries but one (Figure 82 and Figure 83). Consistent with its progress in reducing child mortality, Cambodia is estimated to have achieved the largest fall in maternal mortality. Lao PDR is also estimated to have achieved a similarly large reduction. Indonesia, Myanmar, and Viet Nam are estimated to have achieved more modest reductions in mortality ratios. Maternal mortality ratios in the Philippines are estimated to have fallen only slightly over the period.

**Figure 83: Maternal Mortality Ratio, Reduction in Maternal Mortality: 1995–2012, and 2013 Maternal Deaths**



**Table 16: Maternal Mortality, 2013**

Country	Maternal Mortality Ratio	Lifetime Risk of Maternal Death
Brunei Darussalam	27	1:1900
Cambodia	170	1:180
Indonesia	190	1:220
Lao PDR	220	1:130
Malaysia	29	1:1600
Myanmar	200	1:250
Philippines	120	1:250
Singapore	6	1:13,900
Thailand	26	1:2,900
Viet Nam	49	1:1,100

Source: UNICEF (2014c).  
Note: The lifetime risk of maternal death is the probability that a 15-year-old girl will die from complications of pregnancy or childbirth over her lifetime.

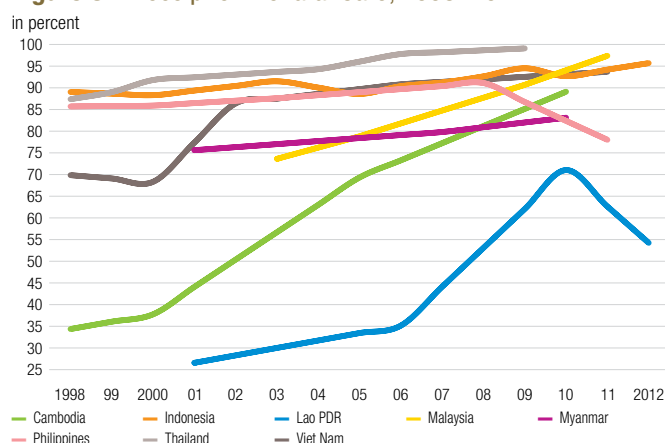
Even with the substantial progress achieved in reducing rates of maternal mortality in Cambodia, Indonesia, Lao PDR and Myanmar, substantial differences in health risks associated with pregnancy persist across the ASEAN (Table 16). Expectant mothers in Lao PDR, for instance, are 36 times more likely to die during pregnancy than those in Singapore.

Similarly, large variation exists in the lifetime risk of maternal death, an indicator which incorporates information from maternal mortality and fertility rates. A 15 year-old girl in Singapore has only a 1-in-13,900 chance of dying from complications of pregnancy or childbirth in her lifetime. Women in Lao PDR, however, face a 1-in-130 risk. Lifetime risk of maternal death is also high in Cambodia (1:180), Indonesia (1:220), Myanmar (1:250), and the Philippines (1:250).

### Access to Prenatal and Delivery Care

Underlying the dramatic progress achieved in recent decades in reducing child and maternal mortality has been the improvement in the access of expectant mothers to prenatal care and skilled birth attendance (Figure 84). Whereas in 1998, only 35 percent of expectant mothers in Cambodia received even a single episode of prenatal care, by 2012, 89 percent of expectant mothers were receiving such care. Expectant mothers in Lao PDR also experienced a substantial increase in access to prenatal care between 2001 and 2010, although access appeared to decline after 2010,

**Figure 84: Receipt of Prenatal Care, 1998–2012**



Source: World Bank (2014b).  
Note: Data represent percentages of pregnant women who were attended to at least once by skilled health personnel.

with only a half of expectant mothers receiving care in 2012. Progress in increasing access to prenatal and delivery care has been steady in many other ASEAN countries, although the Philippines reported a decline in access to prenatal care between 1998 and 2011.

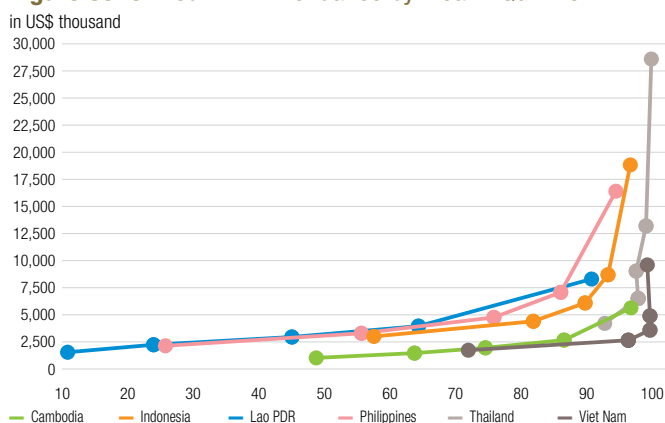
As with other health indicators, differences in access to care during pregnancy and delivery persist both between and within ASEAN member states (Table 17). As of 2012, only 54 percent of expectant mothers in Lao PDR receive even a single instance of prenatal care, compared to 99 percent of expectant mothers in Thailand. Similarly, only 42 percent of deliveries in Lao PDR are attended to by a skilled birth attendant, compared to all births in Brunei Darussalam.

**Table 17: Prenatal Care**

Country	Receipt of Prenatal Care		Nurses/Midwives (per 1,000 People)	
	Rate (%)	Level	Rate	Level
Brunei Darussalam	-	-	7.7	2011
Cambodia	89	2010	0.9	2011
Indonesia	96	2012	1.4	2012
Lao PDR	54	2012	0.9	2012
Malaysia	97	2011	3.3	2010
Myanmar	83	2010	1.0	2012
Philippines	78	2011	6.0	2012
Singapore	-	-	6.4	2004
Thailand	99	2009	2.1	2010
Viet Nam	94	2011	1.1	2011

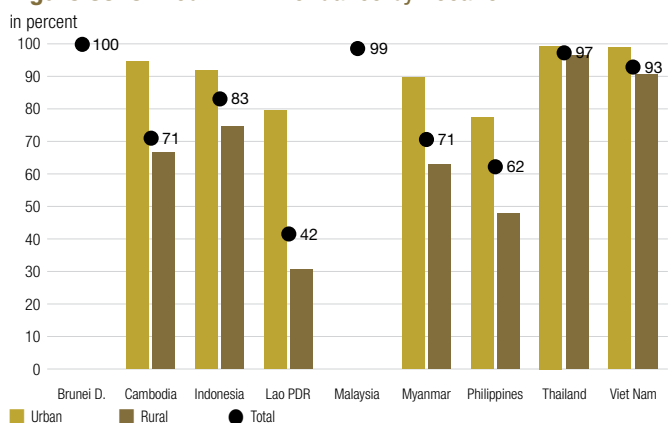
Source: World Bank (2014b).

**Figure 85: Skilled Birth Attendance by Wealth Quintile**



Source: UNICEF (2014c).  
 Note: Data for Cambodia for 2010; Indonesia for 2012; Lao PDR for 2011–12; Myanmar for 2009–10; Philippines for 2008; Thailand for 2005–06; and Viet Nam for 2011.

**Figure 86: Skilled Birth Attendance by Location**



Source: UNICEF (2014c).  
 Note: Data for Cambodia for 2010; Indonesia for 2012; Lao PDR for 2011–12; Myanmar for 2009–10; Philippines for 2008; Thailand for 2005–06; and Viet Nam for 2011.

Substantial differences in access to prenatal and delivery care also exist within member states. Access to skilled birth attendance correlates strongly with socioeconomic status (Figure 85). In Lao PDR, only 11 percent of deliveries by mothers from the poorest wealth quintile are attended, compared to 91 percent of deliveries by mothers from the richest quintile. The corresponding figures for the Philippines are similar: 26 percent compared to 94 percent. Thailand represents an exception, with skilled birth attendance rates that are high regardless of the socioeconomic status of the mother. Skilled birth attendance rates also differ markedly by location (Figure 86), with rural deliveries relatively unlikely to be attended. In Lao PDR, only 31 percent of deliveries in rural areas are attended, compared to 80 percent in urban areas. Thailand again provides the exception, where some 97 percent of rural deliveries are attended.

## Childhood Nutrition

The access of children and pregnant women to adequate nutrition is a critical factor in reducing child and maternal mortality, increasing educational attendance and enrolment, and ultimately improving economic productivity. Globally, it is estimated that 45 percent of child deaths are attributable to poor nutrition.<sup>16</sup> In addition to its effects on mortality, poor nutrition during the first two years of life increases the frequency and severity of common infections and lengthens recoveries from such infections and is also associated with suboptimal brain development, with long-lasting adverse consequences on cognitive ability, school performance, and job performance.<sup>17</sup>

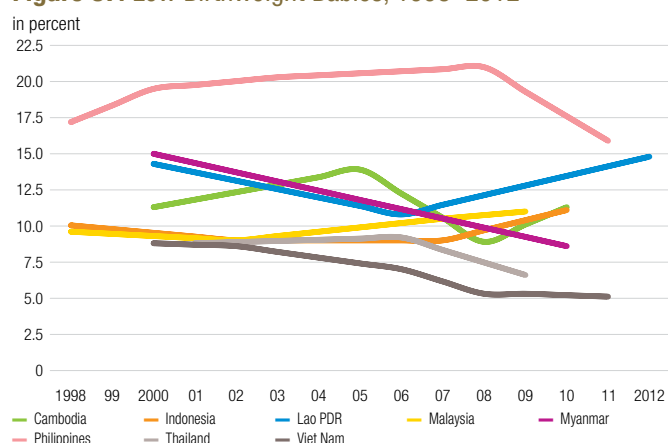
Poor nutrition is, of course, a highly preventable affliction. Proven interventions to reduce malnourishment include improving the nutrition of pregnant women and new mothers; exclusive breastfeeding during the first six months of life and the timely provision of complementary food; and appropriate micronutrient interventions.<sup>18</sup> It is particularly critical that nutrition-enhancing interventions are delivered prior to a child's second birthday, with improvements after this appearing to have little impact.

To assess the progress of the ASEAN in ensuring equitable access to nutrition, we track the following indicators: (i) *Low Birthweight Babies*, as assessed by the proportion of newborns that weigh less than 2,500 grams; and (ii) *Child Malnourishment*, which is measured by the prevalence among children under five of: stunting, underweight, wasting, severe wasting and overweight.<sup>19</sup>

### Low Birthweight

Low birthweight can result from inadequate dietary intake during pregnancy, disease, as well as environmental and psychosocial stress affecting the mother.<sup>20</sup> Low birthweight increases the risk of death in infancy and childhood and, among those children that survive, results in increased risk of disease, continued undernourishment, and impaired mental function. Globally, it is estimated that 15 percent of babies are born with low birthweight.

**Figure 87: Low Birthweight Babies, 1998–2012**



Source: World Bank (2014b); UNICEF (2014b).  
Note: Intermediate values have been interpolated.

**Table 18: Low Birthweight Babies**

Country	Level	Year
Brunei Darussalam	10	1999
Cambodia	11	2000
Indonesia	11	2010
Lao PDR	15	2012
Malaysia	11	2009
Myanmar	9	2010
Philippines	16	2011
Singapore	8	2000
Thailand	7	2009
Viet Nam	5	2011

Source: World Bank (2014b).  
Note: Percentages represent newborns weighing less than 2.5 kg.

16 U.N. Inter-Agency Group for Child Mortality Estimation (2013).

17 UNICEF (2013b).

18 Ibid.

19 Stunting is where height for age is more than two standard deviations below the median for the international reference population. Underweight is where weight for age is more than two standard deviations below the median for the international reference population. Wasting and severe wasting are where weight for height is more than two and three standard deviations, respectively, below the median. Overweight is where weight for height is more than two standard deviations above the median.

20 UNICEF (2013b).

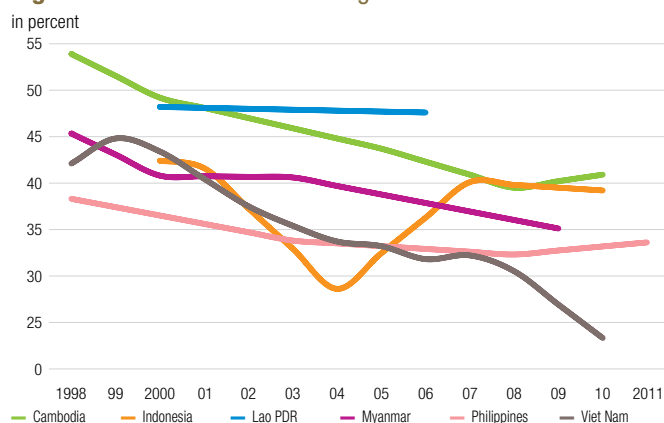
Progress across the ASEAN in reducing the proportion of low-birthweight babies has been uneven (Figure 87). Myanmar has had the most success, reporting a reduction in the proportion of low-birthweight babies born from 15 percent in 2001 to 9 percent in 2010. Low birthweights also declined in Thailand from 9 percent in 2001 to 7 percent in 2009 and in Viet Nam from 9 percent in 2000 to 5 percent in 2011. The Philippines, which has the highest reported level of low birthweight babies at 16 percent in 2011, had relatively little progress over the period, with the proportion falling only by a single percentage point. Progress has also been minimal in Cambodia, Lao PDR, and Malaysia. Differences across the ASEAN in the incidence of low birthweight thus persist (Table 18).

### Child Malnourishment

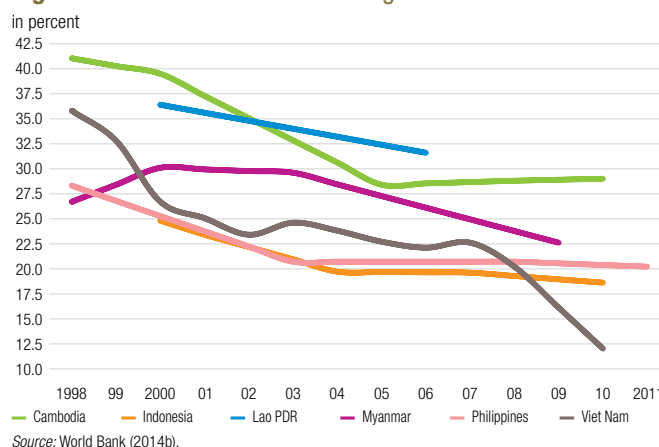
Approximately a quarter of children globally are stunted or have heights that fall well below international norms. Children residing in rural areas and/or poor households are more likely to be stunted than counterparts in urban areas and/or rich households. As of 2011, 16 percent of children around the world under five were underweight.<sup>21</sup> Moderate and severe wasting represents acute malnutrition, with afflicted children suffering a markedly increased rate of death.<sup>22</sup> While the proportion of overweight children has been declining over the past two decades, there has been a corresponding increase in the proportion of overweight children in developing countries.

The prevalence of child malnourishment—as manifested by height and weight that fall well below international norms—has generally decreased across the ASEAN during the past 15 years (Figure 88 and Figure 89). Viet Nam, in particular, has achieved substantial reductions in child malnourishment, with the prevalence of stunting decreasing from 42 percent in 1998 to 23 percent in 2010 and the ratio of children that are underweight falling from 36 percent in 1998 to 12 percent in 2010. Cambodia also achieved noteworthy success, with stunting falling from 54 percent in 1998 to 41 percent in 2010 and the ratio of underweight children falling from 41 percent in 1998 to 29 percent in 2010. Reductions in child malnourishment over the period were also achieved by Indonesia, Myanmar, and the Philippines.

**Figure 88: Prevalence of Stunting**



**Figure 89: Prevalence of Underweight Children**



The prevalence of child malnourishment across the ASEAN, nonetheless, remains high (Table 19). The most recent data indicates that 41 percent of children in Cambodia are stunted and 29 percent are underweight; 48 percent of children in Lao PDR are stunted and 32 percent are underweight; 35 percent of children in Myanmar are stunted and 23 percent are underweight; and 34 percent of children in the Philippines are stunted and 20 percent are underweight.

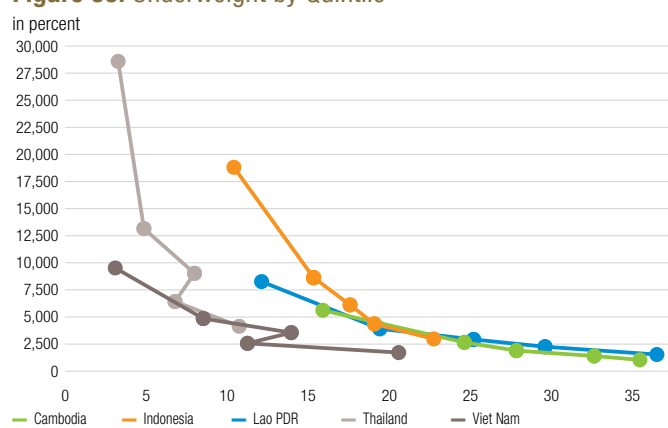
<sup>21</sup> UNICEF (2013b).

<sup>22</sup> Ibid.



Unsurprisingly, child malnourishment in the ASEAN is strongly associated with socioeconomic status of the household and location (Figure 90 and Figure 91). According to household survey data, 35 percent of children from the poorest quintile of households in Cambodia are moderately or severely underweight, compared to just 16 percent of children from the richest households. Likewise, 30 percent of children living in rural areas in Cambodia are underweight, compared to 19 percent of those residing in urban areas. Thailand again represents something of an exception, however, with the proportion of children that are underweight being relatively constant across socioeconomic groups and locations.

**Figure 90: Underweight by Quintile**



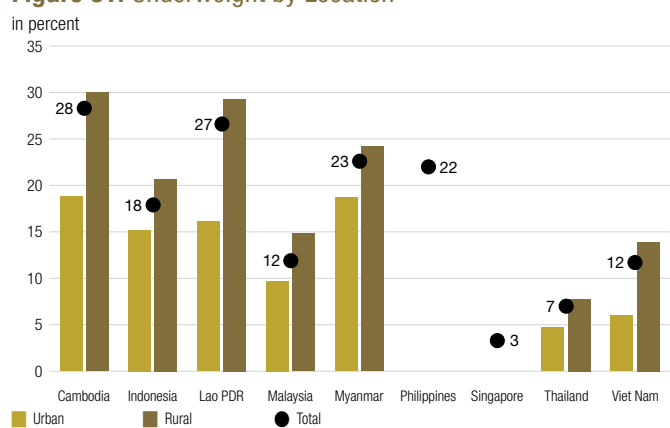
Source: UNICEF (2014c).  
Note: Data for Cambodia is for 2010; Indonesia for 2012; Lao PDR for 2011–12; Myanmar for 2009–10; Philippines for 2008; Thailand for 2005–06; and Viet Nam for 2011.

**Table 19: Prevalence of Child Malnourishment**

Country	Stunting		Underweight	
	Level (%)	Year	Level (%)	Year
Cambodia	41	2010	29	2010
Indonesia	39	2010	19	2010
Lao PDR	48	2006	32	2006
Malaysia	21	1999	17	1999
Myanmar	35	2009	23	2009
Philippines	34	2011	20	2011
Singapore	4	2000	3	2000
Thailand	16	2006	7	2006
Viet Nam	23	2010	12	2010

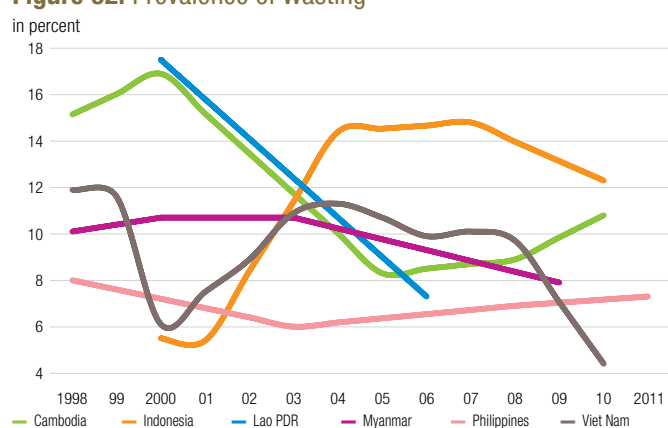
Source: World Bank (2014b).  
Note: Stunting and underweight are children under age 5 whose height for age and weight for age, respectively, is more than two standard deviations below the median for the international reference population.

**Figure 91: Underweight by Location**



Source: UNICEF (2014c).  
Note: Data for Cambodia is for 2010; Indonesia for 2012; Lao PDR for 2011–12; Myanmar for 2009–10; Philippines for 2008; Thailand for 2005–06; and Viet Nam for 2011.

**Figure 92: Prevalence of Wasting**



Source: World Bank (2014b); WHO (2014).

**Figure 93: Prevalence of Severe Wasting**



Source: World Bank (2014b); WHO (2014).

The prevalence of wasting and severe wasting among children—which refers to levels of weight for height that are far below international norms—has been reduced in a number of ASEAN countries over the past 15 years (Figure 92 and Figure 93). Among Cambodian children, wasting and severe wasting fell from 15 percent and 6 percent in 1998 to 11 percent and 3 percent in 2010. Among Laotian children, wasting and severe wasting fell from 18 percent and 8 percent in 2000 to 7 percent and 2 percent in 2006. Viet Nam also reported a reduction in wasting, which fell from 12 percent in 1998 to 4 percent in 2010. Both wasting and severe wasting increased, however, in Indonesia,

with wasting rising from 6 percent in 2000 to 12 percent in 2010 and severe wasting rising from 1 percent in 2000 to 5 percent in 2010.

As with other nutrition indicators, there remain substantial gaps across the ASEAN in the prevalence of wasting and severe wasting (Table 20). Among ASEAN member states with relatively recent data, Indonesia has the highest levels of wasting (12 percent as of 2010) and severe wasting (5 percent). At the other end of the spectrum, Singapore has the lowest levels of wasting (4 percent) and severe wasting (1 percent) among the ASEAN member states.

**Table 20: Prevalence of Wasting and Severe Wasting**

Proportion of Children Under Five

Country	Wasting		Severe Wasting	
	Prev. (%)	Year	Prev. (%)	Year
Cambodia	10.8	2010	2.8	2010
Indonesia	12.3	2010	5.4	2010
Lao PDR	7.3	2006	1.7	2006
Malaysia	15.3	1999	-	-
Myanmar	7.9	2009	2.1	2009
Philippines	7.3	2011	2.4	2011
Singapore	3.6	2000	0.5	2000
Thailand	4.7	2006	1.4	2006
Viet Nam	4.4	2010	1.5	2010

Source: World Bank (2014b).

Note: Wasting and severe wasting respectively refer to children whose weight for height is more than two and three standard deviations below the median for the international reference population.

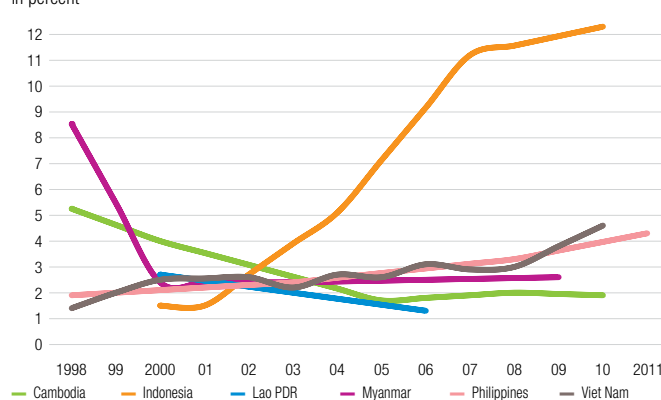
There has been substantial diversity in changes in child obesity across the ASEAN over the past 15 years (Figure 94). Myanmar achieved a substantial reduction in child obesity, which fell from 9 percent in 1998 to 3 percent in 2009. Cambodia also achieved a decrease, reducing child obesity rates from 5 percent in 1998 to 2 percent in 2010. However, in Indonesia, child obesity rates have increased substantially, from 2 percent in 2000 to 12 percent in 2010. The Philippines also reported an increase, from 2 percent in 1998 to 4 percent in 2011.

Rates of child obesity in the ASEAN currently range widely from a low of 1 percent in Lao PDR to a high of 12 percent in Indonesia (Table 21). Compared with other ASEAN member states, Malaysia and the Philippines report relatively high levels of child obesity, while Cambodia, Myanmar, and Singapore report relatively low levels.

In Cambodia and Indonesia, child obesity is more common among girls than boys (Figure 95). In Lao PDR, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam, however, the opposite is true. Child obesity is substantially more prevalent among boys in Lao PDR and Singapore, although both countries report relatively low levels of overall child obesity.

**Figure 94: Prevalence of Obesity, 1998–2011**

in percent



Source: World Bank (2014b).

Note: Some intermediate values have been interpolated.

**Table 21: Prevalence of Obesity**

Proportion of Children Under Five

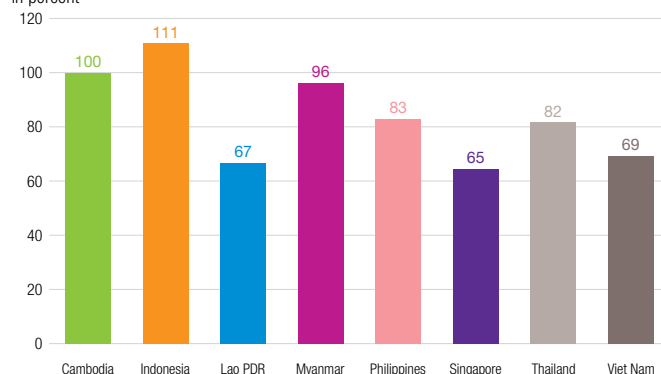
Country	Prev. (%)	Year
Cambodia	1.9	2010
Indonesia	12.3	2010
Lao PDR	1.3	2006
Malaysia	5.5	1999
Myanmar	2.6	2009
Philippines	4.3	2011
Singapore	2.6	2000
Thailand	8.0	2006
Viet Nam	4.6	2010

Source: World Bank (2014b).

Note: Obesity refers to children whose weight for height is more than two standard deviations above the median for the international reference population.

**Figure 95: Ratio of Female to Male Prevalence of Obesity**

in percent



Source: World Bank (2014b).

Note: Obesity refers to children whose weight for height is more than two standard deviations above the median for the international reference population.

## Water, Sanitation and Electricity

Access to modern amenities and services—such as clean drinking water, hygienic sanitary facilities, regular electricity, and non-solid cooking fuels—are generally taken for granted by residents of high-income countries. However, inadequate access to such amenities and services can be life-threatening for poor households in low- and middle-income countries. The sourcing of drinking water from polluted rivers, streams, and ponds, for instance, provoke bacterial and other water-borne infections and diseases—such as giardia, cholera, and dysentery—that cause millions of deaths globally each year. Poor sanitation practices that result in the contamination of food and/or water supplies by fecal matter have the same devastating effects. An overwhelming percentage of these deaths, due ultimately to unsafe water supplies, poor sanitation, and/or inadequate hygiene practices, afflict children from poor households.<sup>23</sup> A lack of access to electricity and modern fuels also can be fatal. The use of coal and wood-based biomass fuels for cooking, for instance, leads to millions of premature deaths globally each year caused by the inhalation of indoor air pollution, particularly by women and children.<sup>24</sup>

To assess the progress of the ASEAN in improving equitable access to amenities and services, we track the following indicators: (i) *Drinking Water*, which assesses, via data provided the WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation (WHO & UNICEF, 2014), the proportion of the population that draws water from ‘improved’ sources which adequately protect water from outside contamination, as opposed to from ‘unimproved’ sources or ‘surface water’, which do not provide such protections; (ii) *Sanitation*, which assesses access to ‘improved’ facilities, which are defined as providing for hygienic separation of human excreta from human contact and include flush latrines, septic tanks, pit latrines, and composting toilets; and (iii) *Electricity and Modern Fuels*, which measures the proportion of the population that has access to electricity and which uses fuels other than biomass for cooking.

### Drinking Water

In developed urban areas, drinking water is ordinarily drawn from piped facilities that assure relative purity. Poor households and particularly those residing in rural areas commonly do not have access to sources that offer a similar level of protection. Rather, water may be sourced from open wells, unprotected springs, water tankers, or even from rivers, dams, lakes, ponds, streams or irrigation channels.

The access of ASEAN populations to improved water sources—that is a source that, by the nature of its construction, adequately protects the source from outside contamination—increased substantially during the past 15 years (Table 22). Increases between 1998 and 2012 were particularly significant in Cambodia (from 37 to 71 percent), Lao PDR (from 41 to 72 percent), Myanmar (from 64 to 86 percent) and Viet Nam (from 74 to 95 percent).<sup>25</sup>

However, substantial disparities continue to exist in the ability of populations to protect themselves from water-borne diseases. As of 2012, almost three in ten people

**Table 22: Access to Improved Source**

Country	1998	2005	2012
Cambodia	37	54	71
Indonesia	76	81	85
Lao PDR	41	57	72
Malaysia	95	100	100
Myanmar	64	75	86
Philippines	87	90	92
Singapore	100	100	100
Thailand	91	94	96
Viet Nam	74	85	95

Source: WHO and UNICEF (2014).

<sup>23</sup> Hutton and Haller (2004).

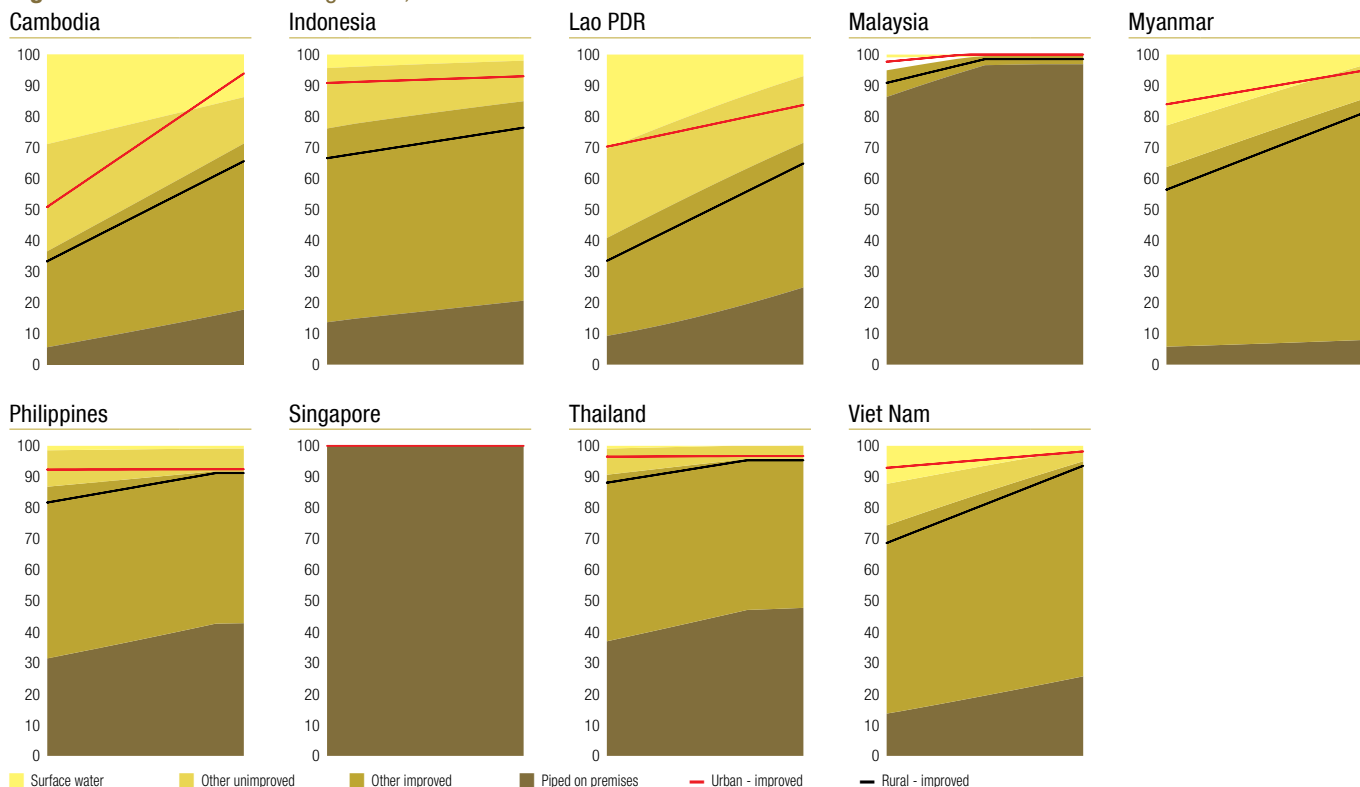
<sup>24</sup> World Bank (2011).

<sup>25</sup> Estimates are derived from the WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation (JMP). JMP estimates are designed to be comparable among countries and across time and are based on regressions using data from household surveys and censuses.

in Cambodia and in Lao PDR drew water from unimproved sources such as rivers, lakes, canals, or unprotected wells and springs. Access to improved sources in Indonesia, Myanmar, Philippines, Thailand, and Viet Nam, while increasing, is still below universal levels.

In Cambodia, Indonesia, Lao PDR, and Myanmar, significant disparities in access exist between rural and urban populations. As such, achieving universal access to improved water sources requires a particular focus on the installation of protected facilities in rural areas.

**Figure 96: Sources of Drinking Water, 1998–2012**



Source: WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation. Note: "Surface Water" refers to water drawn from rivers, dams, lakes, ponds, streams, canals, or irrigation channels. "Other Unimproved" refers to water drawn from unprotected dug wells, unprotected springs, carts with small tank or drum, or bottled water. "Other Improved" refers to water drawn from public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, or rainwater collection. "Piped on Premises" refers to water drawn from a piped household water connection located inside the user's dwelling, plot or yard. (WHO / UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation).

### Sanitation

Flush latrines have come to be taken for granted in developed urban areas, but nonetheless represent a life-saving technology. Without access to latrines or other facilities that guarantee the separation of human waste from human contact, there is a distinct probability of contracting an affliction that is at best immobilizing and, in the absence of proper treatment, can be fatal.

The access of ASEAN populations to improved sanitation facilities—that is, a source that hygienically separates human excreta from human contact—has improved during the past 15 years. Lao PDR, in particular, achieved a substantial improvement, increasing access from 22 percent of the population in 1998 to 65 percent in 2012. Large improvements were also observed in Cambodia (13 percent to 37 percent), Indonesia (45 percent to 59 percent), Myanmar (58 percent to 77 percent), and Viet Nam (51 percent to 75 percent).

Despite this progress, large gaps exist across the ASEAN in access to improved sanitation. Whereas Malaysia, Thailand, and Singapore have all but eliminated unhygienic sanitation practices, almost two-thirds of the Cambodian population does not have access to an improved facility. Indonesia (59 percent), Lao PDR (65 percent), Myanmar

(77 percent), the Philippines (74 percent), and Viet Nam (75 percent) all report low levels of access to improved facilities.

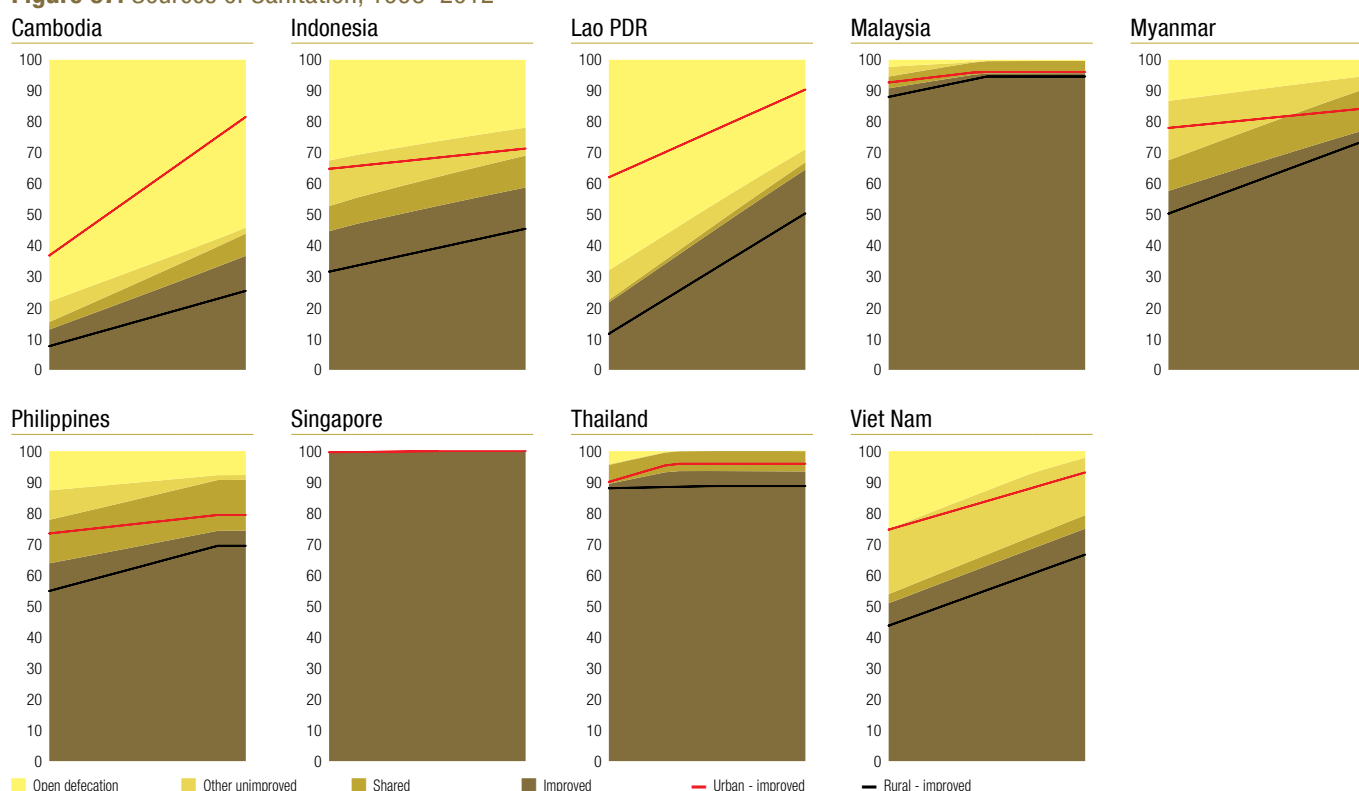
As with access to improved water sources, substantial discrepancies exist within ASEAN countries between the access of rural and urban populations to improved sanitation facilities. Unhygienic sanitation practices are prevalent in rural areas of Cambodia and Lao PDR. Large gaps in access exist also between rural and urban populations in Indonesia and Viet Nam.

**Table 23: Access to Sanitation**

Country	1998	2005	2012
Cambodia	13	25	37
Indonesia	45	52	59
Lao PDR	22	43	65
Malaysia	91	96	96
Myanmar	58	68	77
Philippines	64	70	74
Singapore	100	100	100
Thailand	89	94	93
Viet Nam	51	63	75

Source: WHO and UNICEF (2014).

**Figure 97: Sources of Sanitation, 1998–2012**



Source: WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation.

Note: "Open Defecation" refers to the disposal of human feces in fields, forests, bushes, open bodies of water, beaches or other open spaces or disposed of with solid waste. "Other Unimproved" refers to practices that do not ensure hygienic separation of human excreta from human contact and includes use of facilities such as pit latrines without a slab or platform, hanging latrines and bucket latrines. "Shared" refers to the use facilities of an otherwise acceptable type shared between two or more households. "Improved" facilities ensure hygienic separation of human excreta from human contact and includes use of facilities such as flush/pour flush to a piped sewer system, septic tank or pit latrine; a ventilated improved pit latrine; a pit latrine with slab; or a composting toilet.

### Electricity and Modern Fuels

Electricity facilitates access not just to an ever-expanding variety of productivity-enhancing and life-broadening package of technological innovations, but also is often a prerequisite for improving health and education outcomes. Without access to electricity or other modern fuels, households are dependent on solid fuels for cooking which in turn can lead to indoor pollution and a life threatening series of respiratory ailments. Household access to electricity also serves an important role in enabling children to learn during the evening hours and in enabling citizens to keep abreast of national political affairs and events.

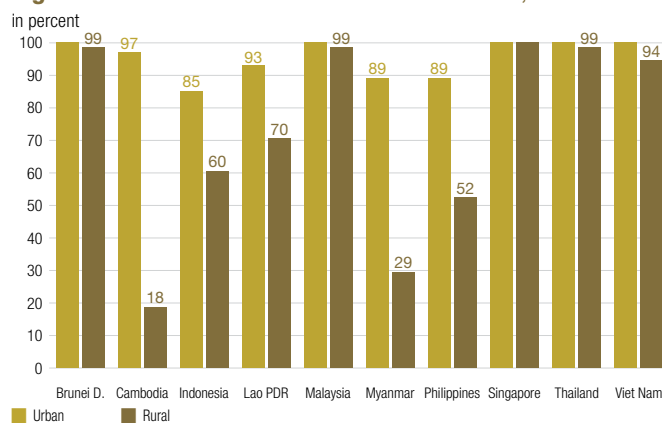
Approximately 134 million people (22 percent of the region's population) in the ASEAN do not have access to electricity and 280 million people (47 percent of the region's population) rely on biomass (such as wood, straw, or

**Table 24: Access to Modern Energy Services**

Country	Electricity	Cooking
Brunei Darussalam	100	100
Cambodia	34	12
Indonesia	73	58
Lao PDR	78	35
Malaysia	99	97
Myanmar	49	8
Philippines	70	50
Singapore	100	100
Thailand	99	74
Viet Nam	96	44

Source: International Energy Agency (2013a).

**Figure 98: Urban and Rural Electrification Rates, 2011**



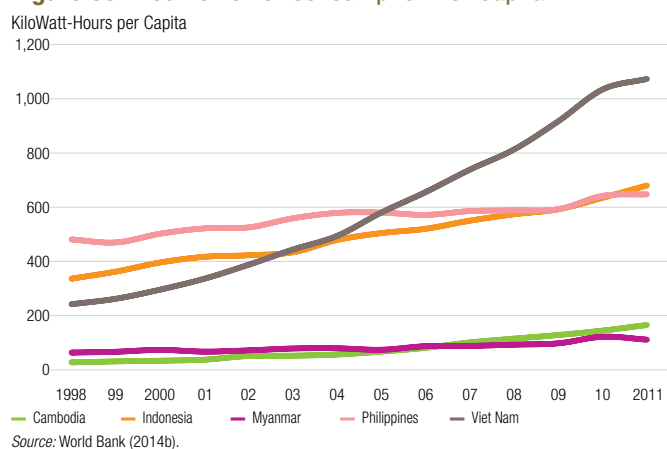
Source: International Energy Agency (2013b).

charcoal) for cooking.<sup>26</sup> As with other service areas, there is substantial variation within the region (see Table 24). Access to modern energy services is nearly universal in Brunei Darussalam, Malaysia and Singapore.<sup>27</sup> Access to electricity is also nearly universal in Thailand and Viet Nam, although more than a quarter of Thailand’s population and more than half of Viet Nam’s population rely on biomass for cooking. Access to energy is low in Indonesia, Lao PDR and the Philippines and very low in Cambodia and Myanmar. Two-thirds of Cambodia’s population and a half of Myanmar’s population lack access to electricity, while nine-tenths of the respective populations rely on biomass for cooking. As shown in Figure 98, there are large differences in rural and urban electrification rates. In Cambodia, for instance, only 18 percent of the rural population has access to electricity. Rural electrification rates are also low in Myanmar (29 percent), the Philippines (60 percent), and Lao PDR (70 percent).

Despite the large variation that exists within the ASEAN in access to energy, substantial progress has been made over the past decade. According to International Energy Agency (IEA) statistics, for instance, Indonesia and Viet Nam’s electrification rate stood at only 53 percent and 80 percent, respectively, in 2002 (compared to 73 percent and 96 percent in 2011).<sup>28</sup> The IEA further reports that Lao PDR almost doubled its electrification rate between 2002 and 2011.<sup>29</sup>

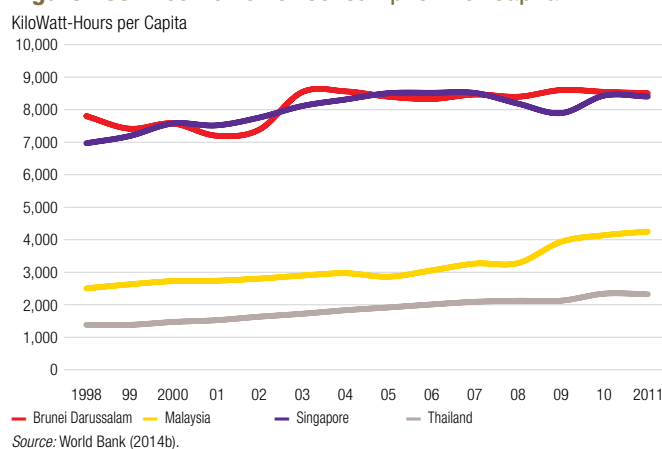
The improvements made by some countries are also evident in available statistics on electric power consumption per capita (Figure 99 and Figure 100). Cambodia and Viet Nam achieved 15 percent and 12 annual growth rates,

**Figure 99: Electric Power Consumption Per Capita**



Source: World Bank (2014b).

**Figure 100: Electric Power Consumption Per Capita**



Source: World Bank (2014b).

26 International Energy Agency (2013a), p. 26.

27 Modern cooking fuels include fuels such as natural gas and LPG and which serve as alternatives to biomass.

28 International Energy Agency (2013a), p. 27.

29 Ibid.

respectively, in electric power consumption per capita. In the Philippines, however, power consumption grew much slower, at 2 percent per year. The differences in consumption per capita across ASEAN member states are stark, with residents of Brunei Darussalam and Singapore enjoying levels in 2011 more than seventy times that of Cambodian residents.

# Conclusions



## Key Findings

The ASEAN Equitable Development Monitor 2014 demonstrates that substantial progress has been made in reducing development gaps across the ASEAN community. Over the past 15 years, the poorest countries of the ASEAN have generally grown the fastest, meaning that the gaps that exist between ASEAN member states in living standards have steadily narrowed. The integration of ASEAN member states into the global economy has increased, with many of the poorest countries having integrated the most rapidly. Access to primary education has increased and progress in improving health services and access to clean water and sanitation for citizens in the poorest ASEAN member states has helped reduce child and infant mortality.

Yet even with this broad-based progress, development gaps across the community remain large in many areas. The Monitor highlights key policy challenges that require continued attention if the ASEAN community is to continue to succeed in ensuring that its poorest citizens are able to fully benefit from economic integration. These challenges include:

- Sustaining the pace of economic growth both among low-income ASEAN member states (Cambodia, Lao PDR, Myanmar and Viet Nam) and among middle- and high-income member states (Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand);
- Reducing the burden placed by business regulation on the creation and successful operation of formal enterprises, particularly those in low- and middle-income member states;
- Enabling poor citizens in low- and middle-income ASEAN countries to smooth consumption through savings and borrowing, exploit business opportunities, and manage financial risks by increasing their access to financial services;
- Ensuring that all citizens in the ASEAN community possess the set of knowledge and skills necessary to participate productively in the economic community through increasing pre-primary, primary, and secondary school enrolment and completion rates and increasing the overall quality of educational instruction;
- Sustaining recent gains in the reduction of child and maternal mortality by extending the access of poor citizens and those residing in rural areas to critical medical services such as pre-natal care and skilled birth attendance;
- Doing more to provide all citizens of the ASEAN with an equal start in life through reducing the incidence of low birthweight and ensuring that children receiving adequate levels of nutrition during the first two years of life;
- Eliminating gaps between the access of the rich and poor and between rural and urban residents in their access to clean water and sanitation and to electricity.

Each of these policy challenges is complex. Addressing them successfully will require: a firm commitment by all ASEAN member states and their development partners; more resources directed to gaps of highest priority; the development and implementation of innovative solutions; and the use of rigorous evidence regarding the effectiveness of various interventions. Nevertheless, the past success of ASEAN member states in reducing poverty, stimulating economic growth, and improving the delivery of basic services augur well for the future.

## Suggestions Going Forward

The analysis in this Monitor also highlights three areas for further work.

First, while rich data exist for a number of indicators and for most ASEAN member states, there remain significant gaps in the availability of data on key indicators necessary to monitor various facets of equitable development in many countries. Without such data, the member states will be unable to set clear priorities for action both within countries and across countries. Therefore, a key step in enhancing the ability of the community to monitor equitable development and make progress towards this goal is for all member states to work together and with development partners to enhance the availability, quality, and completeness of data on key development outcomes and their determinants.

Second, based on the trends elaborated in the Monitor as well as other data, ASEAN member states may wish to identify specific thematic priorities for narrowing development gaps within and between ASEAN member states. This prioritization process could include the setting of specific benchmarks or targets for narrowing development gaps across the ASEAN community, which build, for instance, on the Millennium Development Goals. These benchmarks could then be reviewed periodically to assess progress, understand the factors underlying instances of poor performance, and identify aspects that need renewed attention.

Third, along with setting these priorities and benchmarks, a process might be established for the community to periodically review progress of the ASEAN member states in implementing policies and programs targeted at reducing development gaps. The generation and dissemination of evidence on the effectiveness of relevant policies and programs should be part of such a process. While a number of ASEAN member states have pioneered the collection and use of rigorous evidence in policymaking and, as a result of which there is now more evidence on the effectiveness of programs in many sectors, a renewed emphasis among all ASEAN member states to evaluate development interventions rigorously and to share knowledge on good practices will contribute to the goal of an ASEAN community that is able to develop both rapidly and equitably.

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