



ADB

Myanmar in Transition

Opportunities and Challenges

Asian Development Bank

The logo of the Asian Development Bank (ADB), consisting of the letters 'ADB' in white serif font centered within a solid black square.

Myanmar in Transition

Opportunities and Challenges

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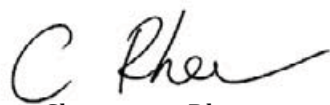
Foreword

Myanmar emerges from decades of isolation with much hope and support from the global and regional communities. The country has high potential for rapid growth and development given its rich natural resources, abundant labor force, and strategic location between the region's two economic giants—the People's Republic of China and India. Many lessons can be drawn from the development experiences of Myanmar's neighbors and can help guide its economic transition to achieve strong and inclusive growth while avoiding social instability and ensuring environmental sustainability.

Greater regional cooperation can unlock the growth potential arising from increased trade and cross-border investment. Myanmar can strengthen its ties with the Association of Southeast Asian Nations (ASEAN) and utilize its unique geographic position as a bridge between South and Southeast Asia, which offer a range of new opportunities. Working in cooperation with other countries will provide a solid platform for Myanmar's renaissance.

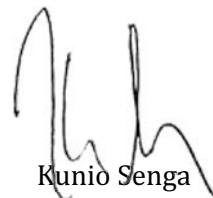
Myanmar is set to chart a course that takes into account its strengths and weaknesses, while leveraging the available opportunities and avoiding the potential risks. Myanmar can also position itself strategically in the rapidly changing global and regional environment to benefit from its advantages. This report was prepared to assess the country's economic and social prospects as it embarks on a new era of reform and renewal. We hope that it broadens and deepens the understanding of the country and provides a foundation for effective development assistance.

This report was prepared jointly by the Asian Development Bank's Economics and Research Department and Southeast Asia Department. The Department of External Relations also provided invaluable support for its publication and dissemination.



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Abbreviations and Acronyms

ADB	—	Asian Development Bank
ASEAN	—	Association of Southeast Asian Nations
CBM	—	Central Bank of Myanmar
DICA	—	Directorate of Investment and Company Administration
FDI	—	foreign direct investment
FY	—	fiscal year
GDP	—	gross domestic product
GMS	—	Greater Mekong Subregion
IHLCS	—	Integrated Household Living Conditions Survey
Lao PDR	—	Lao People’s Democratic Republic
MDG	—	Millennium Development Goal
MIWT	—	Myanmar Inland Water Transport
MK	—	kyat
MOE	—	Ministry of Education
MOFR	—	Ministry of Finance and Revenue
MOH	—	Ministry of Health
MMR	—	maternal mortality ratio
MNPED	—	Ministry of National Planning and Economic Development
PRC	—	People’s Republic of China
TVET	—	technical and vocational education and training
U5MR	—	under 5 mortality rate
VAT	—	value-added tax

Weights and Measures

ha	—	hectare
km	—	kilometer
MW	—	megawatt
t	—	ton

Executive Summary

Myanmar is emerging from five decades of isolation—both economically and politically. With its rich natural resources and strategic location, the country shows good potential for growth. Myanmar could become one of the next rising stars in Asia if it can successfully leverage its rich endowments—such as its natural resources, labor force, and geographic advantage—for economic development and growth.

Myanmar is making brave new moves, as did many of the region’s high growth and transition economies decades earlier. It is opening up to trade, encouraging foreign investment, and deepening its financial sector. Knowing the history of rapid growth in the region can help guide Myanmar in making the critical decisions to achieve its medium- and long-term goals.

Luckily, lessons of economic growth and development are abundant in Asia. The People’s Republic of China (PRC), Indonesia, Malaysia, Thailand, Viet Nam, and recently Cambodia grew by 6%–10% annually during their high-growth periods. Poverty was reduced by as much as half in a decade. Myanmar could grow at 7%–8% per year for a decade or more and raise its per capita income to \$2,000–\$3,000 by 2030.

Every country’s development experience is unique, shaped by its specific history, culture, domestic conditions, and the prevailing international environment. Yet important lessons can also be drawn from the experiences of other successful countries. Three broad lessons are apparent from Asia’s rise. First, inflation must be kept low and stable through effective macroeconomic management. Second, high domestic savings levels are needed to finance investment. And third, agriculture is important but the economy needs to undergo a structural transformation to industry and services as a means to improve productivity, expand exports, and create employment. Along with these broad lessons, Asia’s growth has required investments in human capital and efficient infrastructure, the creation of sound institutions and social stability, and the use of the market mechanism to allocate resources.

Myanmar’s transition comes amid a seismic shift in the global economic landscape. The recent financial crisis gave way to a “new normal” where the global economic weight is shifting from West to East and from North to South. This changing landscape has important implications for economic dynamics in Asia. With the emergence of Asia as a new global growth center, regional integration is now, more than ever, an important ingredient in an effective growth strategy. Myanmar and its neighbors need no longer rely on that aspect of “factory Asia” in which goods were produced in the East for final consumption in the West. Asia is strengthening its own internal demand and thereby creating new opportunities for countries such as Myanmar, as well as contributing to a more balanced global economy.

Greater regional cooperation can unlock the growth potential arising from increased trade and cross-border investment. Myanmar is strategically located between the region's two economic giants, the PRC and India, which are home to over 2.5 billion people. With the PRC moving up the global value chain and its workforce demanding higher wages, some manufacturing firms are seeking to relocate to countries in Southeast Asia, including Myanmar.

Strengthening its ties within the Association of Southeast Asian Nations (ASEAN) and utilizing its unique geographic position as a bridge between the PRC and India and between South and Southeast Asia would open Myanmar to a range of new opportunities. About 26% of ASEAN's total trade takes place among member countries. The group's trade with the PRC has grown significantly—from less than 4% in 2000 to more than 10% in 2011. During the same period, the share of ASEAN's trade with industrialized economies has declined from 54% to 36%. The examples of Cambodia and Viet Nam show that Myanmar can leverage its affiliation with subregional groups and expand from there. The time is ripe for Myanmar to strategically plan its economic transition to take advantage of the growing power of emerging market economies, particularly the rise of Asia, including the PRC, India, and ASEAN.

Myanmar can exploit several strengths and opportunities to catalyze its transition to an open, market economy. A strong commitment to broad-ranging reforms, coupled with a rich endowment of natural assets—abundant land, water, and energy resources; a youthful, low-cost labor force; and its strategic location—provide a strong foundation for growth. Due to the country's rich agricultural resources and favorable climate, agriculture has enormous potential for growth and poverty reduction. The government prioritizes agriculture and rural development as drivers of growth and broad-based development, as agriculture accounts for about 36% of gross domestic product, employs majority of the workforce, and provides 25%–30% of exports by value. Myanmar has good potential for diversifying into a range of nonprimary activities, notably tourism and telecommunications—which are quick wins—as well as manufacturing, construction, and banking.

However, Myanmar also faces multiple constraints and risks that may limit its progress. Key constraints include a weak macroeconomic management framework devoid of market mechanisms, insufficient fiscal resources and inefficient domestic fund mobilization, limited access to finance, deficient infrastructure, inadequate social services that hamper human capital development, and limited industrial diversification. The risks include environmental degradation arising from industrialization and climate change. The agriculture and natural resources sector is particularly vulnerable to the effects of climate change, notably the increasing frequency and severity of extreme weather events and other natural disasters.

Clearly, growth has been the most effective tool for reducing poverty in Asia. But in recent decades, growth has become less equitable in fast growing countries, compared with the earlier experiences of Japan, the Republic of Korea, and other “miracle” economies. Recent evidence also points to mixed and uneven progress across countries and subregions in achieving the Millennium Development Goals (MDGs). Myanmar has made progress toward the MDGs, but one in four of its people remains poor and one in three children below the age of 5 is underweight. Vulnerability to malaria, tuberculosis, HIV/AIDS, and other diseases remains higher in Myanmar than in its peers within the region. Strong growth is imperative for the country to alleviate poverty and improve the standard of living. In turn, inclusiveness is crucial to maintaining good growth momentum because it strengthens social cohesion and contributes to human capital accumulation. With many ethnic groups, creating a harmonious society is a key challenge. Internal political and social tension can be destabilizing and may lead to open conflict.

The course of Myanmar's future growth can be guided by three complementary development strategies: regional integration, inclusiveness, and environmental sustainability. Furthermore, given the myriad challenges the country faces and the limited resources at its disposal, the interventions can be prioritized and reforms sequenced for the maximum benefits.

Key development agendas include the following:

- **Provide macroeconomic stability.** A stable macro environment provides a foundation for investment and long-term growth. Key elements of sound macroeconomic policy include low and stable inflation; a sustainable fiscal position; and a flexible, market-based exchange rate.
- **Mobilize resources for investment.** Increased domestic and foreign savings are critical to meeting the enormous requirements of the private and public sectors. In addition, higher government revenues (e.g., taxation) and more efficient financial intermediation will also help to provide sustainable financing for development.
- **Improve infrastructure and human capital.** The removal of structural impediments in the key areas of education, health, and infrastructure can provide a basis for human capital development and improve connectivity.
- **Diversify into industry and services, while improving agriculture.** Broadening the economic base beyond primary industries can raise productivity and value addition. Yet agriculture, fisheries, and resource industries are not to be neglected as they contain considerable potential for expansion.
- **Reduce the state's role in production.** A further reduction in the government's ownership and control of productive activities can help spur competition and increase investment by creating a level playing field.
- **Strengthen government institutions.** Economic transformation can be supported by effective government institutions, although building institutions and their capacity may take time. Attention might focus on nurturing administrative and regulatory systems; managing resources; and, most importantly, enhancing the capabilities of government personnel throughout the system.

I. Myanmar in Transition

Myanmar is gradually embracing wide-ranging reforms. The recent currency reform is one of many initiatives in this direction. The government is deepening and broadening the reforms to improve monetary and fiscal management while facilitating trade and foreign direct investment (FDI) and removing structural impediments to growth by establishing physical and social infrastructure, building legal and institutional frameworks, and developing banking and financial sectors. Table 1 presents an overview of Myanmar's economic, social, and environmental features. Understanding these features and careful analysis of the key development issues is the first step toward designing and implementing economic and policy reforms to foster the country's growth and development.

Macroeconomic Performance

The near-term outlook for Myanmar's economy is relatively upbeat on the back of strong export earnings from resource commodities and a pick-up in FDI flows. The Asian Development Bank (ADB) forecasts that Myanmar's gross domestic product (GDP) is likely to grow by about 6.0% in 2012 and 6.3% in 2013 (ADB 2012b). Inflation has been brought down to a single digit and fiscal deficits are being kept at 4%–6% of GDP. With hard-earned macroeconomic stability, Myanmar's growth performance may well exceed expectations in the foreseeable horizon. During their high-growth periods, Myanmar's regional peers grew at 6%–10%

per year, reducing their poverty by as much as 50% in one decade (Table 2). If Myanmar's development follows this pattern, the country could grow at 7%–8% every year for an extended period. At such growth rates, its GDP per capita would reach \$2,000–\$3,000 by 2030¹—more than 3 times the current level—propelling Myanmar safely into the ranks of the middle-income countries.

Myanmar reported impressive GDP growth rates, averaging 10.2% during 1992–2010 and 12.2% during 2000–2010 (Figure 1). However, these official growth figures have been deemed overstated and rather unreliable given the country's poor statistical capacity and use of outdated methodologies (Myint 2009). The International Monetary Fund (IMF) Article IV Mission of January 2012 estimated GDP growth to be substantially lower, averaging 4.6% during 2002–2010 and picking up to exceed 5.0% in 2009–2010 (IMF 2012). Various production indicators—presumably correlated with GDP growth—also suggest that Myanmar's economic growth may have been weaker than official government estimates. For example, electricity sales (in kilowatt hours) to households and commercial premises grew on average by 4.5% per annum during 2002–2009 and cement sales by 1.8% per annum during 2004–2009 (CSO 2010).

¹ ADB staff estimates. The estimates assume that population grows at 1.3% per year, which is the average for 2009–2011. Verbiest and Naing (2011) estimate that Myanmar's per capita GDP could reach \$2,814–\$3,361 by 2030, using a scenario of growth at 7.5%–9.5% per year with 0.83% population growth.

Table 1. Myanmar's Basic Statistics

Category	Year ^a				
	2007	2008	2009	2010 ^b	2011 ^b
Economic					
GDP (\$ billion, current)	20.2	31.4	35.2	45.4	51.9
GDP per capita (\$, current) ^b	351.0	537.3	595.7	759.1	856.8
GDP growth (% , in constant prices)	5.5	3.6	5.1	5.3	5.5
Agriculture, livestock, fishery, and forestry	8.0	3.4	4.7	4.4	4.4
Industry	21.8	3.0	5.0	6.3	6.5
Services	12.9	4.2	5.8	6.1	6.3
Gross domestic investment (% of GDP)	...	...	...	...	...
Gross domestic saving (% of GDP)	...	...	...	...	...
Consumer price index (annual % change)	32.9	22.5	8.2	7.3	4.2
Liquidity (M2) (annual % change)	20.9	23.4	34.2	36.8	33.3
Overall fiscal surplus (deficit) (% of GDP)	(3.8)	(2.4)	(4.8)	(5.7)	(5.5)
Merchandise trade balance (% of GDP)	4.6	1.6	2.0	0.8	(0.5)
Current account balance (% of GDP)	0.6	(2.2)	(1.3)	(0.9)	(2.7)
External debt service (% of exports of goods and services)	4.6	5.1	4.3	3.1	3.9
External debt (% of GDP)	37.5	25.8	24.4	24.8	22.8
Poverty and Social	2000			2011	
Population (million)	50.1			60.6	
Population growth (annual % change)	2.0			1.3	[2009–2011]
Maternal mortality ratio (per 100,000 live births)	420.0	[1990]		240.0	[2008]
Infant mortality rate (below 1 year/per 1,000 live births)	79.0	[1990]		50.0	[2010]
Life expectancy at birth (years)	59.9			62.1	[2009]
Adult literacy (%)	89.9			92.0	[2009]
Primary school gross enrollment (%)	100.0	[1999]		116.0	[2009]
Child malnutrition (% below 5 years old)	34.3	[2005]		32.0	[2010]
Population below poverty line (%)	32.1	[2005]		25.6	[2010]
Population with access to safe water (%)	62.6	[2005]		69.4	[2010]
Population with access to sanitation (%)	67.3	[2005]		79.0	[2010]
Environment	2000			2010	
Carbon dioxide emissions (thousand metric tons)	4,276.0	[1990]		12,776.0	[2008]
Carbon dioxide emissions per capita (metric tons)	0.1	[1990]		0.3	[2008]
Forest area (million hectares)	34.9			31.8	
Urban population (% of total population)	28.0			33.9	

... = not available, () = negative, [] = latest year for which data are available, ADB = Asian Development Bank, ADF = Asian Development Fund, GDP = gross domestic product, M2 = broad money, OCR = ordinary capital resources.

^a Fiscal Year (or FY starts 1 April and ends 31 March, such that FY 2010 starts 1 April 2010 and ends 31 March 2011).

^b Estimates.

Sources: ADB 2012a; ADB 2012b; ADB 2012c; ADB 2011a; IMF 2012; MNPED, MOH, and UNICEF 2011; ESCAP, ADB, and UNDP 2012

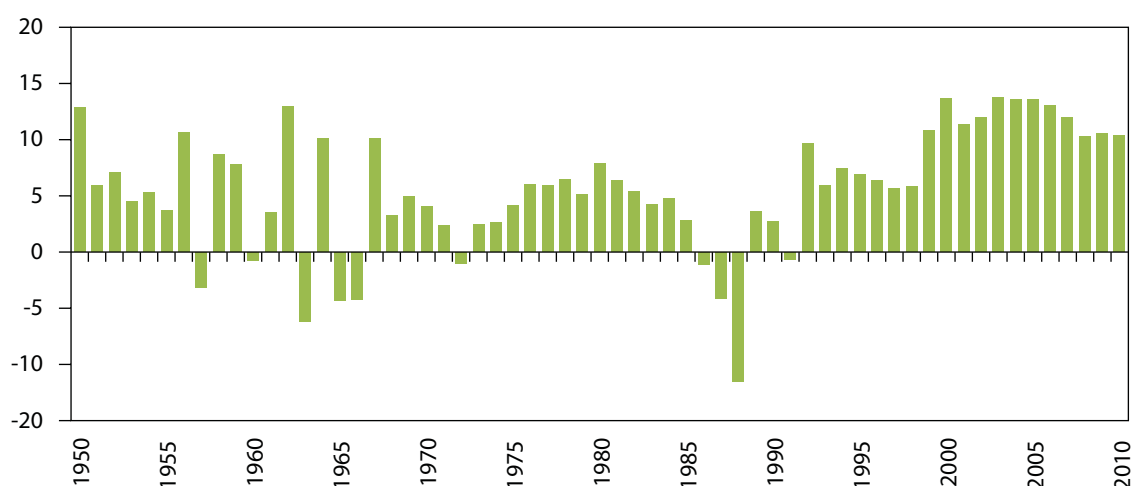
Table 2. Economic Growth and Poverty Reduction

Country	Period	Average annual economic growth rate	Poverty headcount ratios (at \$1.25/day)		
			Earliest	Mid	Latest
Cambodia	1994 – 2010	7.8%	48.6 (1994)	37.7 (2004)	22.8 (2008)
PRC	1991 – 2010	10.4%	63.8 (1992)	28.4 (2002)	13.1 (2008)
Indonesia	1976 – 1990	6.6%	62.8 (1984)		54.3 (1990)
Lao PDR	1994 – 2010	6.8%	55.7 (1992)	44.0 (2002)	33.9 (2008)
Malaysia	1976 – 1990	7.2%	3.2 (1984)		1.9 (1989)
Myanmar	2000 – 2010	12.2% (Government est.) 4.7% (IMF est.)	32.1 (2005)^a		25.6 (2010)^a
Thailand	1976 – 1990	8.0%	21.9 (1981)		11.6 (1990)
Viet Nam	1994 – 2010	7.4%	63.7 (1993)	40.1 (2002)	16.9 (2008)

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

^a Figures for Myanmar are from IHLCS 2011 and based on its national poverty line.

Sources: ADB-SDBS 2012; IMF-IFS 2012; WB-WDI 2012

Figure 1. Myanmar's Real GDP Growth Rates (1950–2010, %)

GDP = gross domestic product.

Sources: 1950-1987 from Myint 2011; 1988-2012 from ADB-SDBS 2012

Indeed, economic activity in Myanmar did not pick up strongly during the 1980s and 1990s. In the 1960s, Myanmar was one of Asia's leading economies. Its per capita income in 1960 was about \$670—more than three times that of Indonesia, more than twice that of Thailand, and slightly lower than that of the Philippines (Booth 2003). However, the IMF estimates that in 2010, Myanmar had Southeast Asia's lowest

per capita GDP in purchasing power parity despite relatively good growth during 2000–2010 (Figure 2).

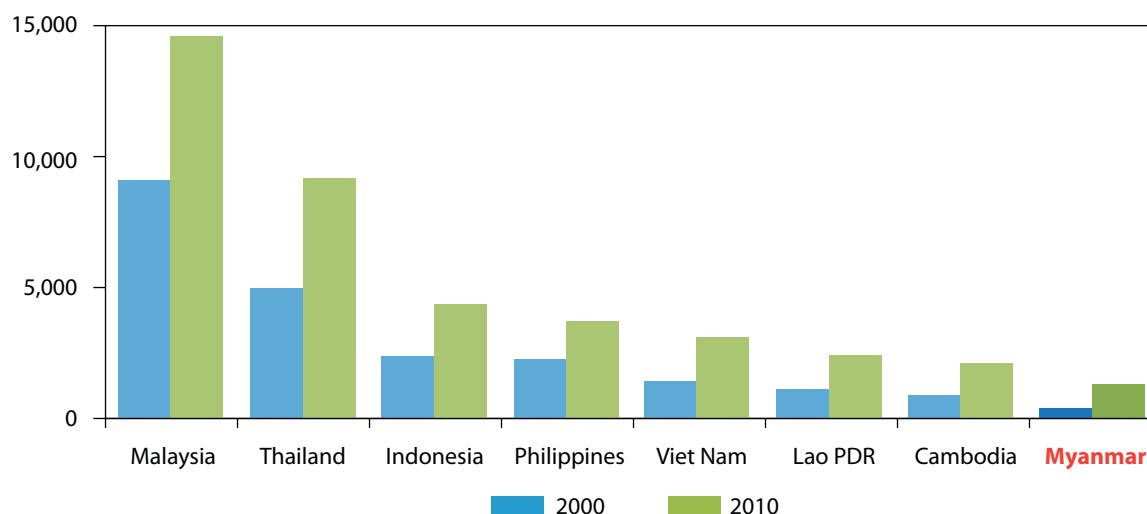
Key factors inhibiting Myanmar's growth rate in the last decades are low investment, limited integration with global markets, dominance of state-owned enterprises in key productive sectors of the economy, and frequent

episodes of macroeconomic instability. In particular, sluggish economic performance may be attributed to the low levels of investment in the economy. During 2000–2010, Myanmar’s gross domestic investment averaged 14.2%, the lowest among ASEAN countries (Table 3).

Inflation stood at 4.2% for 2011 and is expected to rise to 6.2% in 2012 as the effect of the recent moderation in food prices fades (ADB 2012a, 2012b). These single-digit rates,

however, hide the fact that the inflation rate was historically high and variable. The price level in Myanmar nearly quadrupled from 2001 to 2007 with an average annual inflation rate of 25.3%. By comparison, Viet Nam reported an average annual inflation rate of 5.5% and Cambodia had 4.0% in the same period (Figure 3). While Myanmar’s official figures may not be fully reliable, it is clear that the country has experienced periods of exceedingly high inflation. The monetization by the

Figure 2. Per Capita GDP of Selected ASEAN Countries (\$, PPP)

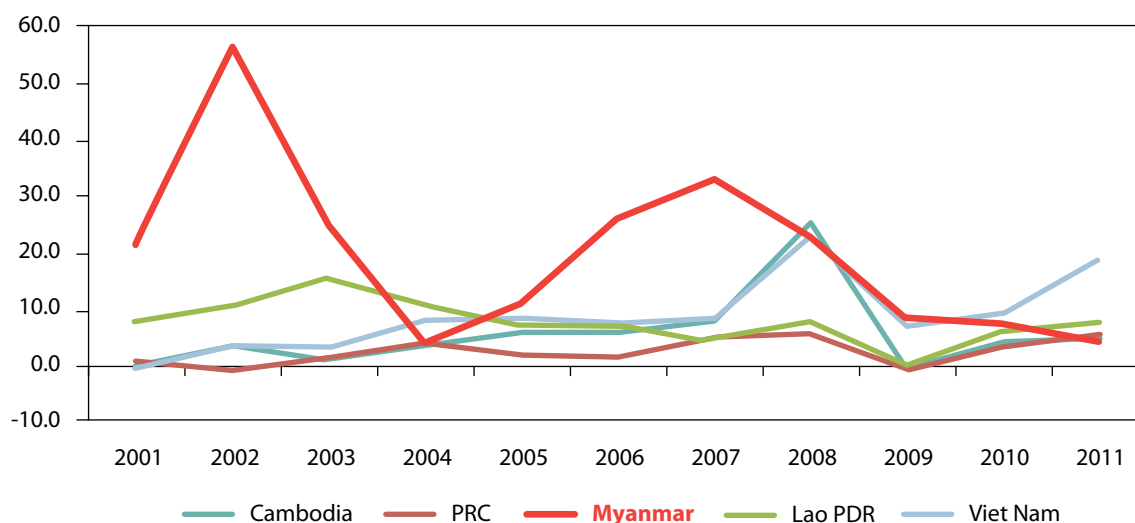


ASEAN = Association of Southeast Asian Nations, GDP = gross domestic product, Lao PDR = Lao People’s Democratic Republic, PPP = purchasing power parity.
Source: Economy Watch 2012

Table 3. Gross Domestic Investment of Selected ASEAN Countries, 2000-2010 (% of GDP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Ave.
Cambodia	16.9	18.5	18.1	20.1	16.2	18.5	22.5	21.2	18.6	21.4	17.6	19.1
Indonesia	22.2	22.5	21.4	25.6	24.1	25.1	25.4	24.9	27.8	31.0	32.5	25.7
Lao PDR	13.9	14.1	17.5	16.7	22.7	23.5	25.6	32.5	30.0	30.7	26.1	23.0
Malaysia	26.9	24.4	24.8	22.8	23.0	20.0	20.5	21.6	19.3	14.4	21.4	21.7
Myanmar	12.4	11.6	10.1	11.0	12.0	13.2	13.7	14.8	15.6	18.9	22.7	14.2
Philippines	18.4	22.1	24.5	23.0	21.6	21.6	18.0	17.3	19.3	16.6	20.5	20.3
Singapore	33.2	26.8	23.8	16.1	21.7	20.0	21.0	21.1	30.2	26.4	23.8	24.0
Thailand	22.8	24.1	23.8	25.0	26.8	31.4	28.3	26.4	29.1	21.2	25.9	25.9
Viet Nam	29.6	31.2	33.2	35.4	35.5	35.6	36.8	43.1	39.7	38.1	38.9	36.1

ASEAN = Association of Southeast Asian Nations, GDP = gross domestic product, Lao PDR = Lao People’s Democratic Republic.
Sources: ADB-SDBS 2012; Lao PDR data from WB-WDI 2012.

Figure 3. Inflation Rates, 1998–2011 (consumer prices)

Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Sources: ADB 2006, 2008, 2010a, 2012b

Central Bank of Myanmar (CBM) of government debt has contributed to this high inflation.

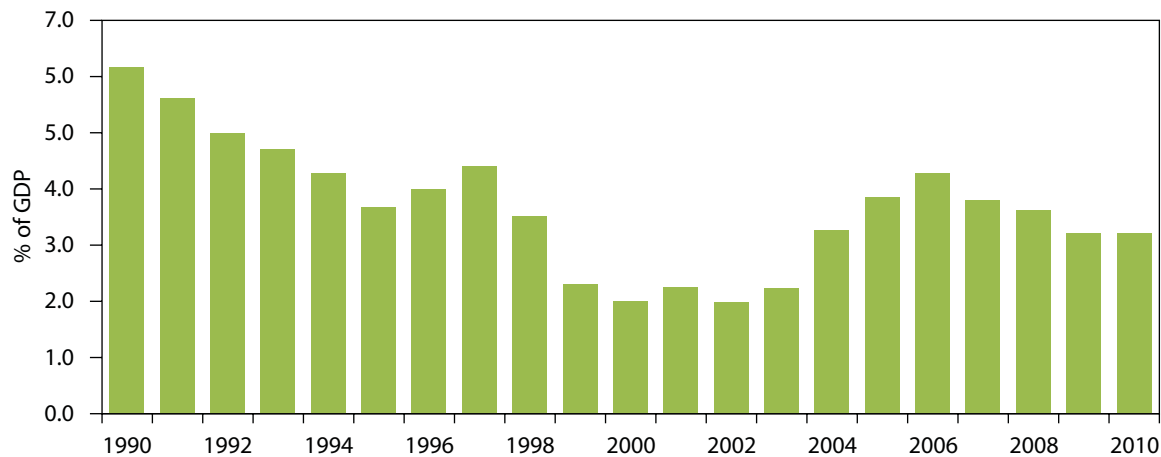
Central bank weakness also exacerbates the situation. In the absence of interbank markets, the CBM's function has been largely limited to financing the government budget deficits. Interest rates are also set administratively. The CBM does not have an independent monetary policy, reflecting its current status as a department within the Ministry of Finance and Revenue (MOFR). A new central bank law was drafted in 2012 which would authorize CBM's operational autonomy. The CBM is launching a major reorganization that will modernize its operations.

Like Cambodia, the Lao People's Democratic Republic (Lao PDR), and Viet Nam, Myanmar's financial sector is at a nascent stage of development. When measured by financial assets to GDP, the country's financial sector is among developing Asia's smallest. Banking—mainly comprising state-owned banks—dominates the financial sector and accounts for most of its assets held outside the CBM. State controls on banks are pervasive, while Myanmar's financial sector is suppressed by limited depth and a narrow focus of financial intermediation. The CBM fixes deposit and lending rates to maintain

a stable interest rate margin at 5.0%–6.0%. The government issues treasury bonds to domestic banks to partly finance the fiscal deficit, but there is no corporate bond market.

Myanmar's high public debt level—estimated at 47.6% of GDP in 2010—is a concern (IMF 2012). Fiscal deficits have been persistently high, mainly due to poor revenue performance. The country's tax revenues as a percentage of GDP fell steadily during 1990–2002, before picking up a bit in the mid-2000s (Figure 4). The average tax-to-GDP ratio during 2004–2010 stands at 3.6%, among the lowest in Asian countries, even as the revenues from natural gas exports have been rising. This is due to the underestimation of revenues, as foreign currency denominated revenues and expenditures were converted to kyat at the official rate at about MK5–MK6 per US dollar² for fiscal purposes rather than using the foreign exchange certificate market exchange rate, which is much higher and more realistic. However, even when these revenue figures are adjusted under the new unified market exchange rate at about MK800 per US dollar in fiscal year

² The kyat was officially pegged to special drawing rights (SDR) at MK8.5/SDR and therefore varied between MK5 and MK6 per US dollar between 2007 and 2011.

Figure 4. Myanmar's Tax Revenue as % of GDP (1990–2010)

GDP = gross domestic product.

Sources: ADB-SDBS 2012; data for 2001-2005 from WB-WDI 2012

(FY) 2012/13,³ they remain far short of the amount required to support the government's priority development spending initiatives over the medium term. Consequently, the government borrows from the CBM and commercial banks to finance its deficit (Figure 5). About 46% of the fiscal deficit in FY2011/12 was financed through bonds; the rest was monetized by the CBM (IMF 2012). This in turn effectively crowds out private sector investments because the country's supply of loanable funds is limited.

Improving revenues is essential for funding development: public expenditures on education and health care have been especially low.⁴ Myanmar is the only developing Asian country with a defense budget that is greater than the education and health budgets combined. The government has substantially increased spending on the social sectors, but education and health spending may still account for less than 2.0% of GDP based on its FY2012/13 budget.

³ IMF (2012) estimated that the impact of adopting a market-based exchange rate on the consolidated public sector budget would be 1.2% of GDP in FY2012/13, driven mainly by an increase in the net transfers from state economic enterprises.

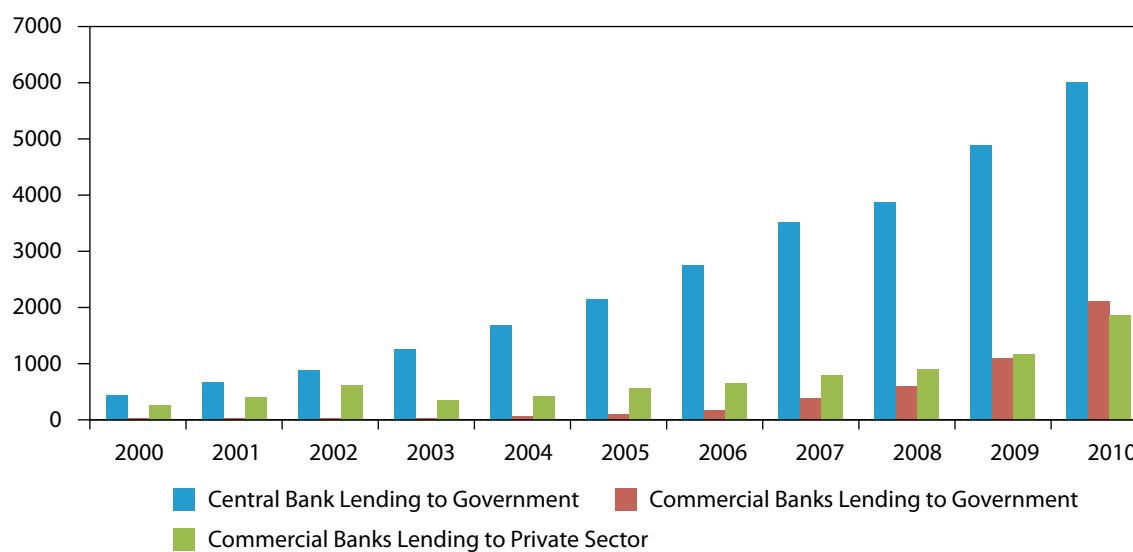
⁴ More details on public expenditure on education and health care can be found in the "Constraints" portion of Section III.

International reserves climbed to an estimated \$6.1 billion in FY2010/11 (equivalent to about 9 months of imports) boosted by natural gas exports and FDI inflows (Table 4). Since Myanmar adopted its "Export First" policy in 1997, exports have expanded significantly. However, imports are rising faster, due to increased imports of capital goods, industrial machinery, and consumer durables. Both trade and current account deficits are expected to widen in FY2012/13 from the previous year.

Myanmar announced an overhaul of its complex exchange rate system in March 2012 as a part of broad reforms to modernize its economy. Myanmar's multiple exchange rate regime included official, semi-official, and unofficial rates. The official government rate, which was fixed at about MK5–MK6 per US dollar, was widely ignored, as the running rate on the black market averaged about MK800 per US dollar. The new managed floating exchange rate regime, which came to effect in April 2012, has a single, market-determined rate.

Poverty and Inequality

Myanmar has made some progress in poverty reduction, although there is further room for

Figure 5. Lending to Government and Private Sector, 2000–2010 (MK billion)

MK = kyat.

Source: IMF-IFS 2012

Table 4. Balance of Payments

	Fiscal Year (\$ million, unless otherwise indicated)					
	2007/08	2008/09	2009/10	2010/11 (Est.)	2011/12 (Proj.)	2012/13 Proj ^a
Trade Balance	924	303	72	799	(238)	(1,779)
Exports	6,446	7,241	7,139	8,980	9,889	10,491
Imports	(5,522)	(6,938)	(7,067)	(8,181)	(10,127)	(12,270)
Current Account Balance (excl Grants)	89	(920)	(947)	(365)	(1,385)	(2,379)
Overall Balance	799	112	619	808	1,729	1,842
Gross Official Reserves						
\$ million	3,054	3,629	4,638	6,070	7,903	9,889
Months of total imports	6.6	6.3	7.9	8.9	9.4	9.7

^aAssumes managed floating exchange rates

Source: IMF 2012

improvement. The latest Integrated Household Living Conditions Survey (IHLCS) indicates that one in every four Myanmar citizens is considered poor (MNPED et al. 2011). This share is fairly comparable to rates in some of its Asian peers, for example, Cambodia at 27% and the Lao PDR at 32%, and is well above the People's Republic of China (PRC) at less than 5% and Viet Nam at 13%.⁵

⁵ Caution is required when comparing poverty incidence figures. The methodology used for Myanmar differs from that used for the other countries. Figures for the other countries are based on the threshold of \$1.25 per day.

Income disparities are geographically linked. The IHLCS report shows that 84% of poverty is found in rural areas and disparities are pronounced across states. The central state of Chin, near the southern borders of Bangladesh and northeastern states of India, has a poverty incidence of 73%. This is in stark contrast to the 11% poverty incidence in Kayah, an eastern state near Northern Thailand, which has the lowest poverty incidence of Myanmar's states. Other well-off states, with poverty incidences below 18%, are Bago, Kayin, Mon, Sagaing, and Yangon. High poverty rates occur

in the coastal states of Ayeyarwady, Rakhine, and Tanintharyi and the landlocked states of Shan and Kachin bordering the PRC. About one-third of these states' populations are poor.

Wide variations in access to basic services such as housing, water, and sanitation also exist across Myanmar's states and rural and urban areas. From 2005–2010, overall access to safe drinking water increased modestly, from 63% to 69%. This is in line with rates of Asian nations with similar income levels, such as 64% in Cambodia and 67% in the Lao PDR. The poor continue to benefit less from access than the rich, and urban areas benefit more than rural areas—81% of the urban population had access to safe drinking water in 2010, versus only 65% of rural dwellers (MNPED et al. 2011).

Access to sanitation and electricity also vary along economic and geographical lines. About 77% of rural and 84% of urban residents have access to sanitation. Access to sanitation is particularly low (54%) in Rakhine state. The gaps in access to electricity between income groups and across states are large. About 34% of rural residents have access to electricity versus 89% of urban residents (MNPED et al. 2011). However, according to the government sources, electrification ratios are much lower.⁶ In 2011, Yangon City had the highest electrification ratio (67%), followed by Nay Pyi Taw (54%), Kayar (37%), and Mandalay (31%).

Millennium Development Goals

Myanmar has made some progress toward achieving its Millennium Development Goals (MDGs), but there is room for further improvement to reach the targets for 2015. Myanmar has made notable progress in areas such as the food poverty incidence, the under-5

mortality rate (U5MR), the maternal mortality ratio (MMR), and sanitation (Table 5). The food poverty incidence decreased from 47% in 1990 to less than 5% in 2010. The U5MR fell from 112/1,000 live births in 1990 to 66/1,000 in 2010, and the MMR fell from 420/100,000 live births in 1990 to 240/100,000 in 2008. The share of the population using improved sanitation facilities increased from 49% in 1995 to 79% in 2010. In addition to these improvements, Myanmar might enhance its efforts in order to reach the projected targets by 2015—the U5MR has been reduced by 45%, against the 67% reduction targeted by 2015, and the MMR has been reduced by 43%, toward the 75% targeted by 2015.

Myanmar's progress toward attaining its MDGs lags behind that of its ASEAN neighbors especially Malaysia and Thailand. Myanmar has particular difficulty improving its performance in the health-related MDG targets aside from the U5MR and the MMR. The HIV prevalence remains high, with 0.6% of the population aged 15–49 infected in 2009. The malaria incidence is much higher than in regional neighbors, and the tuberculosis incidence (388/100,000 population) and prevalence (597/100,000 population) remain higher than regional peers in 2009.⁷

In some areas, Myanmar's performance matches that of its ASEAN neighbors. For example, the literacy of 15–24 year olds in Myanmar in 2010 is high at 95.8%, which is comparable to the 96.9% figure posted by Viet Nam in 2009. The ratio of girls to boys in primary school is 0.93 in 2009, similar to the ratios in the other ASEAN countries. The ratio of girls to boys in secondary school is also relatively high, at 0.96, compared with the ratios in the other ASEAN countries, and is even higher than in Indonesia (0.81) and Viet Nam (0.92).

⁶ The discrepancies may rise from the fact that the government figures may not include electricity that is made available through private power generators and other off-grid sources.

⁷ "Incidence" refers to the number of new cases in the reference year and indicates the risk of contracting a disease; "prevalence" refers to the number of existing cases, both old and new, and indicates how widespread the disease is.

Table 5. Selected MDG Performance Indicators

Indicator	Myanmar		Indonesia		Malaysia		Thailand		Viet Nam	
	Earliest Year	Latest Year	Earliest Year	Latest Year	Earliest Year	Latest Year	Earliest Year	Latest Year	Earliest Year	Latest Year
MDG 1: Eradicate Extreme Poverty and Hunger										
Poverty Incidence (% - \$1.25 PPP)	no data	no data ^a	54.3 (1990)	18.7 (2009)	1.6 (1992)	0.0 (2009)	5.5 (1992)	0.4 (2004)	63.7 (1993)	13.1 (2008)
Underweight Children Under 5 (%)	28.8 (1990)	29.6 (2003) ^b	29.8 (1992)	19.6 (2007)	no data	16.7 (1999)	16.3 (1993)	7.0 (2005)	36.9 (1992)	20.2 (2006)
Food Poverty Incidence (%)	47 (1990)	<5 (2010) ^c	16 (1990)	13 (2004)	<5 (1990)	<5 (2004)	26 (1990)	16 (2004)	31 (1990)	11 (2004)
MDG 2: Achieve Universal Primary Education										
Primary Level Net Enrollment (%)	84.7 (2005)	87.7 (2010)	98.3 (2000)	98.4 (2009)	97.7 (1990)	94.1 (2008)	93.2 (2006)	90.1 (2009)	95.8 (1990)	94.5 (2001)
Literacy of 15-24 Year Olds (%)	94.6 (2000)	95.8 (2010)	98.7 (2004)	99.5 (2008)	97.2 (2000)	98.5 (2009)	98.0 (2000)	98.1 (2005)	93.9 (1990)	96.9 (2009)
MDG 3: Promote Gender Equality and Empower Women										
Girls/Boys in Primary School (Ratio)	0.95 (1991)	0.93 (2010)	0.98 (1991)	0.97 (2009)	0.99 (1991)	0.99 (2008)	0.98 (1991)	0.98 (2009)	0.93 (1991)	0.95 (2001)
Girls/Boys in Secondary School (Ratio)	0.97 (1991)	0.96 (2010)	0.83 (1991)	0.81 (2008)	1.05 (1991)	1.07 (2008)	0.99 (1991)	1.09 (2009)	0.90 (1999)	0.92 (2001)
MDG 4: Reduce Child Mortality										
U5 Mortality Rate (per 1,000 live births)	112 (1990)	66 (2010)	86 (1990)	39 (2009)	18 (1990)	6 (2009)	32 (1990)	14 (2009)	55 (1990)	24 (2009)
Infant Mortality Rate (per 1,000 live births)	79 (1990)	50 (2010)	56 (1990)	30 (2009)	16 (1990)	6 (2009)	27 (1990)	12 (2009)	39 (1990)	20 (2009)
MDG 5: Improve Maternal Health										
Maternal Mortality Ratio (per 100,000 live births)	420 (1990)	240 (2008)	620 (1990)	240 (2008)	56 (1990)	31 (2008)	50 (1990)	48 (2008)	170 (1990)	56 (2008)
Births Attended by Skilled Personnel (%)	56 (1997)	78 (2010)	50 (1995)	75 (2008)	96 (1995)	99 (2007)	99 (2000)	99 (2009)	77 (1997)	88 (2006)
MDG 6: Combat HIV/AIDS, Malaria and Other Diseases										
HIV Prevalence (% of Population Aged 15-49)	0.2 (1990)	0.6 (2009)	<0.1 (2001)	0.2 (2009)	0.4 (2001)	0.5 (2009)	1.7 (2001)	1.3 (2009)	0.3 (2001)	0.4 (2009)
Malaria Incidence (per 100,000 population)	no data	7943 (2008)	no data	1645 (2008)	no data	75 (2008)	no data	55 (2008)	no data	no data
Tuberculosis Incidence (per 100,000 population)	393 (1990)	388 (2009)	88 (1990)	89 (2009)	127 (1990)	83 (2009)	137 (1990)	137 (2009)	204 (1990)	200 (2009)
Tuberculosis prevalence (per 100,000)	924 (1990)	597 (2009)	158 (1990)	131 (2009)	227 (1990)	109 (2009)	209 (1990)	189 (2009)	395 (1990)	333 (2009)
MDG 7: Ensure Environmental Sustainability										
Improved Drinking Water Source (%)	57 (1990)	69 (2010)	71 (1990)	80 (2008)	88 (1990)	100 (2008)	91 (1990)	98 (2008)	58 (1990)	94 (2008)
Improved Facility for Sanitation (%)	49 (1995)	79 (2010)	33 (1990)	52 (2008)	84 (1990)	96 (2008)	80 (1990)	96 (2008)	35 (1990)	75 (2008)
MDG 8: Develop a Global Partnership for Development										
Debt Service as % of Exports	18.2 (1990)	0.2 (2006)	25.6 (1990)	7.3 (2009)	10.6 (1990)	3.1 (2009)	11.4 (1990)	0.8 (2009)	3.2 (1996)	1.7 (2009)

MDG = Millenium Development Goal.

^a Based on IHLCS 2011, poverty headcount ratio under national poverty line is 25.6 in 2010.^b Based on IHLCS 2011, Severe cases account for 9.1, while moderate cases account for 32% in 2010.^c Based on IHLCS 2011, actual figure is 4.8%.

Sources: ADB 2012b; MDGI 2012; MNPED, MOH, and UNICEF 2011, WB-WDI 2012

II. Changing External Environment

As Myanmar opens up, it will be subject to sweeping changes in the global and regional geopolitical and socioeconomic environment. This requires Myanmar to strategically plan its transition to take advantage of the shift in the global economic paradigm from North to South (the growing power of emerging market economies) and from West to East (the rise of Asia, with a nexus between the PRC and India). Increased uncertainty for global growth prospects underscores the importance of socioeconomic resilience in a country's growth path and of regional integration as an alternative source of growth. The global growth paradigm is also shifting from "brown" to "green," presenting new opportunities for resource rich countries such as Myanmar.

Myanmar in the Asian Century

Four years after the onset of the global financial crisis, recovery remains fragile. Global economic activity in the major industrialized economies continues to be subdued. Based on ADB projections, the aggregate GDP for Europe, Japan, and the United States is expected to grow 1.1% in 2012 and 1.7% in 2013 (ADB 2012b). Risks to the outlook have since tilted further toward the downside with the broadening and deepening eurozone crisis. With the expectation of prolonged economic doldrums in the North, relatively strong growth momentum in many developing countries suggests that the drivers of future global growth reside in the South.

Developing Asia has outshined its peers in the developing world. The region's aggregate GDP growth rates since the 1970s have consistently exceeded those in most other parts of the developing world. Developing Asia's share of world GDP (in purchasing power parity terms) increased from 8% in 1980 to close to 30% in 2010 (Jha and MacCawley 2011). The center of economic gravity in the world is shifting toward Asia. By 2050, developing Asia could account for about half of global output as well as half of global trade and investment, though such an outcome is not pre-ordained (ADB 2011a).

Riding on this stellar economic performance, the region has emerged as a new source of demand for the world economy. Asia's fast-growing middle class is becoming a powerful market force. This new affluent class has both the willingness and the ability to pay more for high-quality products, in turn stimulating market innovations and encouraging investment particularly in human capital. Consumer spending in the region shows a healthy expansion in sharp contrast to the industrialized countries. By 2030, the region's consumption is expected to reach \$32 trillion, accounting for 43% of global consumption (ADB 2010b).

Myanmar has much to gain from the rise of emerging market economies in the region. While some of the opportunities are expected to emerge naturally with market dynamics, a strong case can be made for the government to develop a policy framework designed to encourage economic integration with regional markets by expanding trade and investment

linkages. Developing countries often face a host of market imperfections that hamper the efficient allocation of resources, curb efficiency and productivity gains, and ultimately limit economic growth. The most effective approach is to design programs that will encourage the market to function properly—consistent with market principles—by improving the way in which markets work and removing the hurdles that hinder their operations. Proactively leveraging the emerging dynamics may help Myanmar to sustain healthy growth, hence contributing to job creation and poverty reduction.

ASEAN and Intraregional Trade and Investment

The rise of ASEAN and its relationship with the PRC (and India in a matter of time) presents a unique opportunity for Myanmar. Strengthening of regional trade and investment ties within ASEAN and especially between it and the PRC has boosted the subregion's economic prowess. In 2011, about 26% of ASEAN's total trade was among ASEAN members.⁸ Trade with the PRC has grown significantly—from less than 4% in 2000 to more than 10% in 2011. Industrialized economies were the destination for about 36% of total ASEAN trade in 2011, but that was down from 54% in 2000. This increasing trend shows growing regional integration, of which Myanmar can take full advantage.

Developing Asia's three largest economies—the PRC, India, and Indonesia—are home to over 2.75 billion people—40% of the world total. Most Southeast Asian countries have achieved some of the world's highest growth rates in GDP and population in the past few decades. For the next couple of decades, Southeast Asia's consumption rates are expected to increase further with both rapid industrialization and urbanization. Sustained high growth brings

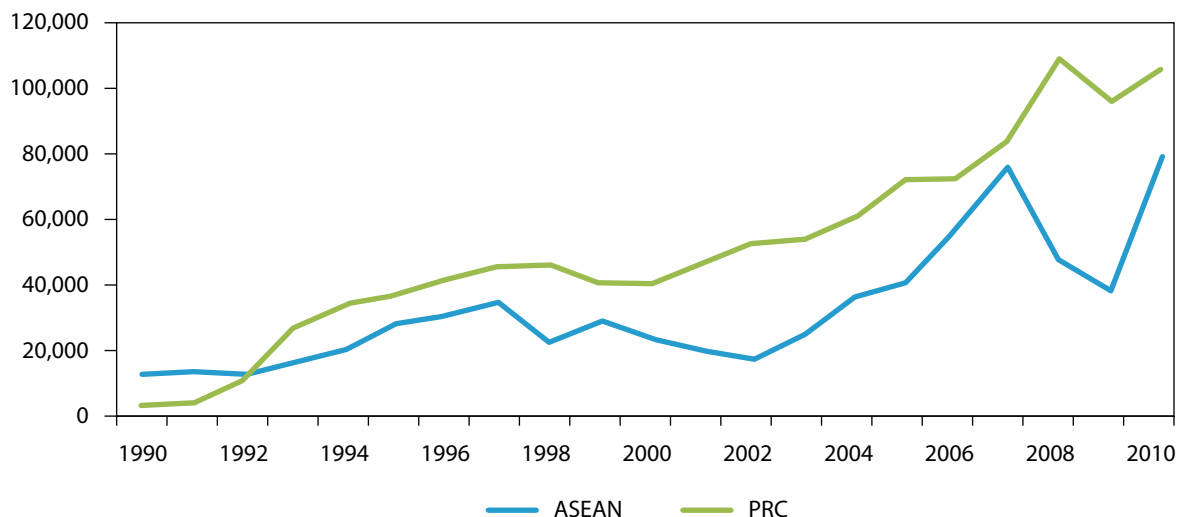
with it poverty reduction and improved living standards. It also provides huge opportunities and new markets for the world at large—but particularly for the subregion itself. Situated between two of the region's giants—the PRC and India—ASEAN members, including Myanmar, can reap distinct benefits from their economic ascent.

Moreover, ASEAN economies, in particular, can effectively compete with the PRC and India for FDI and industrial migration. Since the early 1990s, the PRC has received the majority of FDI flows into developing Asia (Figure 6). However, the strong upward trend in FDI flows to ASEAN since the early 2000s signals a change in the scene. Prior to the onset of the global financial crisis, FDI in ASEAN had nearly risen to match the levels of flows into the PRC. In fact, the flow of FDI to ASEAN from Japan and the United States had surpassed that to the PRC. Though the global financial crisis dealt a serious blow to the FDI flows to ASEAN, the trend indicates that they have surpassed the precrisis levels and are set to grow even further.

The rising wages in the PRC, which may be negatively impacting the competitiveness of its manufacturing sector (Figure 7), can be an important factor in reestablishing the competitiveness of ASEAN countries. With wages in the PRC's coastal cities rising steeply, ASEAN economies are well positioned to regain their competitiveness for FDI, which had been severely diminished in the 1990s. As foreign investors mull over new destinations, they may find ASEAN economies more attractive than inland areas of the PRC. During 2000–2009, wages in the PRC grew by an average of 10%–15% annually while wages in ASEAN countries grew only modestly. If the wage rate increases in the PRC continue to outpace those elsewhere, investors may start looking at other countries in the region to locate or relocate their investments. ASEAN integration that is set to commence in 2015 with reduced tariffs on trade within ASEAN is another important attraction for FDI.

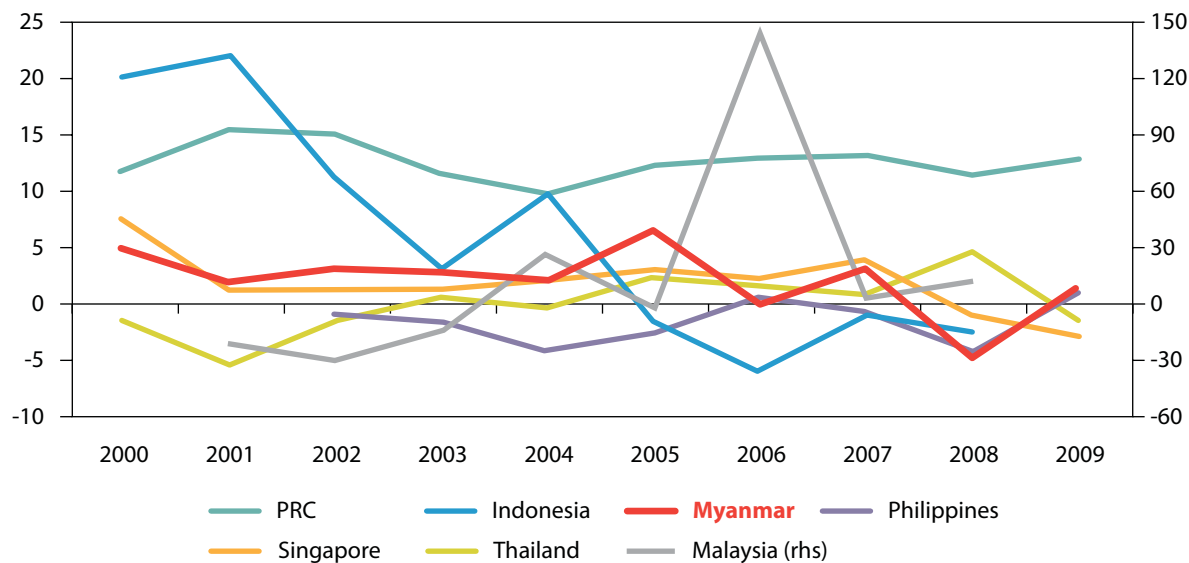
⁸ ADB estimates based on IMF-DOTS 2012.

Figure 6. World Inward FDI Flows to ASEAN and PRC (\$ million)



ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment, PRC = People's Republic of China.
Source: UNCTAD Statistics 2012

Figure 7. Growth Rate of Real Wages



PRC = People's Republic of China.
Source: ILO-LABORSTA 2012

Myanmar's location in the Greater Mekong Subregion (GMS) can also facilitate its integration with the Southeast Asian subregional economy. The GMS Economic Cooperation Program Strategic Framework 2012–2022, approved in late 2011, aims at making the subregion more integrated and

prosperous by 2022 through investments in both hard and soft infrastructure. Particular focus will be on strengthening transport links, developing an integrated approach to energy security, improving telecommunication links, promoting sustainable agriculture, facilitating trade, developing the GMS as a single tourism

destination, enhancing its environmental performance, and building human resources to facilitate the integration. A cross-cutting theme of the framework will be to develop the major GMS corridors into economic corridors that contribute to faster economic growth and poverty reduction. Myanmar may reap substantial gains through the framework, especially by participating in connectivity-related initiatives, including developing electricity grid interconnection infrastructure, and participating in the ASEAN gas pipeline initiative. Myanmar also stands to gain substantially from the tourism- and environment-related initiatives, which are mutually reinforcing.

Myanmar's historic move to a market economy is very timely as it is happening against the backdrop of ASEAN integration toward one economic community. The process toward the ASEAN Economic Community is scheduled to be completed by 2015 based on four interrelated and mutually reinforcing pillars: (1) a single market and production base, (2) a highly competitive economic region, (3) a region of equitable economic development, and (4) a region fully integrated into the global economy. Myanmar stands to benefit immensely from many opportunities by joining ASEAN's integration process. No doubt, ASEAN presents an invaluable entry point for Myanmar's integration with the subregional, regional, and global economies. Strengthening trade, investment, and financial ties with ASEAN can be effectively leveraged to bring Myanmar into the regional business and production network.

Inclusion and Environmental Sustainability

Myanmar can benefit from the many lessons of its neighbors' development experiences, especially to avoid the social instability and environmental degradation they suffered.

Despite the region's spectacular economic performance, poverty persists along with harmful environmental impacts. Thus, Myanmar's long-term development agenda may benefit from placing social inclusion and environmental sustainability at its core.

Stellar growth in developing Asia has been accompanied by rising inequality. While the most effective tool for reducing poverty in recent decades has been growth, it has become less equitable in fast-growing regional states than was the case earlier in Japan and the newly industrialized economies. A recent ADB study noted that during the 1990s and 2000s, inequality increased in 11 of the 28 major economies in the developing Asia. During this period, Asia's Gini coefficient rose from 39 to 46 (ADB 2012b). And Asia's inequality trend has become less favorable even when compared with the trends in other developing regions, such as Latin America and Sub-Saharan Africa, as the pace of the rich becoming richer far exceeds the pace of the poor escaping the poverty trap.

The trend of rising inequality in Asia is worrisome. Enhancing the inclusiveness of Myanmar's growth is important to maintain strong growth momentum in the long run. Increasingly, studies⁹ suggest that widening income inequality can adversely affect growth performance by having a negative impact on political stability, social cohesion, human capital formation, and other human development.

Myanmar relies heavily on natural resources for its main exports, and on industries such as agriculture and tourism, which makes a growth pattern that is environmentally sustainable

⁹ Since the seminal research of Kuznets (1955), suggesting that income inequality tends to increase in the early stages of economic development but decrease in the later stages, a significant body of research has examined the relationship between income inequality and economic development and growth. Both theoretical and empirical studies suggest that income distribution matters for growth sustainability. See Berg and Ostry (2011) for a survey of recent studies on this issue.

essential. In this context, Myanmar can take advantage of the global move from brown to green growth. Green growth entails decoupling economic growth from further increases in greenhouse gas emissions and resource degradation. Myanmar's current growth pattern is placing huge pressure on its environment and, if continued, will certainly be unsustainable given the country's continued population increase, expected rapid industrialization, increased consumption of and demand for natural resources for food production and trade, and increased energy consumption. Myanmar has many poor people with low adaptive capacity, and is vulnerable to environmental shocks such as droughts, floods, and extreme weather conditions that are expected to increase in frequency and intensity as a result of climate change.

As a resource-rich country, Myanmar is well positioned to set a course of growth and development that is green, resilient, and environmentally sustainable. With strong global support, the shift to green growth will generate new jobs and new opportunities for economic advancement based on the development of clean technologies and the greening of economic sectors. Swift action is necessary to capture the full potential of green design and technologies, and to avoid inefficient "brown lock-ins" that can result from continuing the business-as-usual growth path without investment in new infrastructure and technologies. The solutions lie in tapping the synergy in parallel efforts to address the challenges and turn them into new opportunities for green growth. Many options exist, including, for example, developing climate-resilient, green infrastructure and implementing energy efficiency and renewable energy projects, sustainable transport systems, and integrated urban planning.

III. Strengths, Constraints, Opportunities, and Risks

Emergence from a long period of relative isolation, coupled with a desire for reform and change, heralds a bright future for Myanmar. The country can exploit its strengths, notably abundant natural and human resources, and capitalize on the opportunities available from an international community that wants it to succeed and from its location at the heart of the world’s most dynamic region. However, there are considerable constraints to surmount. This section analyzes the strengths, constraints, opportunities, and risks that are evident at the current, crucial time of change (Box).

Strengths

A strong commitment to broad-ranging reforms, coupled with a rich supply of natural assets—abundant land, water, and energy resources; a youthful, low-cost labor force; and Myanmar’s strategic location—provide a strong foundation for high and inclusive growth.

Strong Commitment to Reform. Myanmar has demonstrated a strong commitment to a broad range of reforms. Political reforms that

Myanmar’s Strengths, Constraints, Opportunities and Risks

<p>Strengths</p> <ol style="list-style-type: none"> 1. Strong commitment to reform 2. Large youthful population, providing a low-cost labor force attractive to foreign investment 3. Rich supply of natural resources—land, water, gas, minerals 4. Abundant agricultural resources to be exploited for productivity improvement 5. Tourism potential 	<p>Constraints</p> <ol style="list-style-type: none"> 1. Weak macroeconomic management and lack of experience with market mechanisms 2. Limited fiscal resource mobilization 3. Underdeveloped financial sector 4. Inadequate infrastructure, particularly in transport, electricity access, and tele-communications 5. Low education and health achievement 6. Limited economic diversification
<p>Opportunities</p> <ol style="list-style-type: none"> 1. Strategic location 2. Potential of renewable energy 3. Potential for investment in a range of sectors 	<p>Risks</p> <ol style="list-style-type: none"> 1. Risks from economic reform and liberalization 2. Risks from climate change 3. Pollution from economic activities 4. Tension from internal ethnic conflicts

demonstrate the government's commitments to change are highlighted by (1) the inauguration of a civilian government in 2011, with the release of political prisoners, the easing of media controls, and the institution of a dialogue of national reconciliation; and (2) new laws that allow assembly, labor rights, and political participation. Western nations have responded to these initiatives by easing, suspending, or lifting sanctions on trade and investment.¹⁰ Key economic reforms have followed. State enterprises are being privatized. Foreign investment is being encouraged by easing restrictions on the use of private land and the repatriation of profits. The new law grants the CBM increased autonomy to set monetary policy. In the financial sector, changes are designed to improve access to credit and intermediation, including easing interest rate controls and allowing private banks to expand their branch networks. Reforms in social spending are also apparent, as the recent large increases in education and health budgets confirm.¹¹ The government appears committed to creating a more inclusive, market-oriented, and private-sector-led economy and one that is open to increased foreign investment.

Young Population. Myanmar's youthful population will generate a demographic dividend now and in the coming decades. The 15–28 age cohort currently has 13 million young people who are contributing and will continue to contribute their effort and skills to enhancing productivity and competitiveness (Figure 8). This cohort alone accounts for nearly 40% of the working age population. People below working age also constitute a large portion of the population (25%)—higher than in the PRC (19%) and Thailand (20%), although lower than in India (30%). With proper schooling and skills or professional training, in the years ahead, they will provide the human capital necessary to drive Myanmar's economic transformation. At

the other end of the demographic spectrum, the old age dependency ratio is low, with the share of people 65 and over equal to only 7.4% of the working age population. This is on par with India, at 7.7%, but substantially lower than in the PRC, at 11.5%, and Thailand, at 12.9%.¹²

Rich Natural Resources. Myanmar's natural resources are among its most important assets. They are a source of wealth and in some cases, such as energy resources, provide key inputs for wealth creation in other parts of the economy. Natural resources will continue to be a source of growth if they can be properly and sustainably managed. The country is particularly rich in natural gas, water, forests, and fisheries. Other resources include petroleum oil and several minerals, including tin, antimony, zinc, copper, tungsten, lead, coal, marble, limestone, and precious stones.

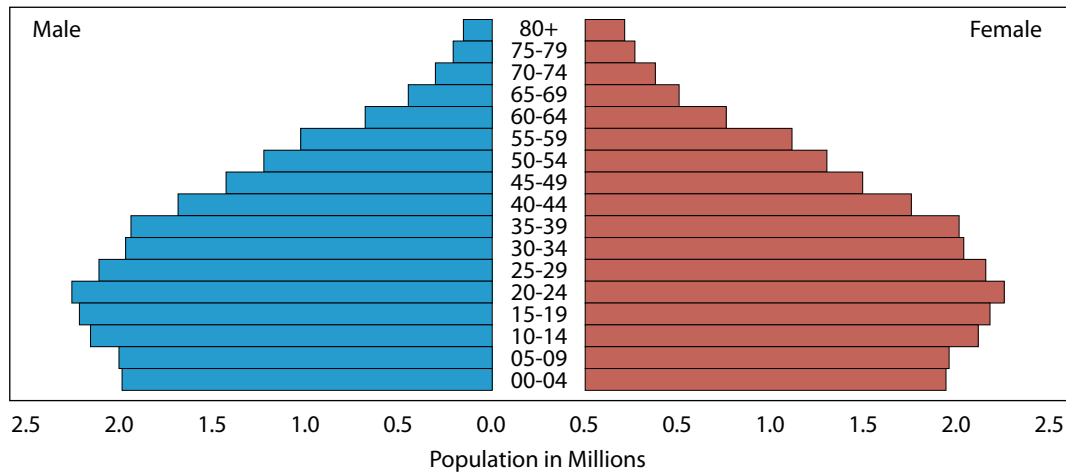
Gas and Oil. Myanmar has a large supply of natural gas. Proven reserves total 7.8 trillion cubic feet (BP 2012) and gas-fired plants account for 21% of total installed power generation capacity. With hydropower providing the main source of electricity generation, gas is exported and is now the country's most important source of export revenue. Moreover, Myanmar is among Southeast Asia's five major energy exporters. A large portion of gas exports flow to Thailand, and the PRC will become an increasingly important consumer when a new (planned) gas pipeline comes on stream. The country also has proven oil reserves of 2.1 billion barrels, more than Thailand and Brunei Darussalam although less than half of the reserves in Malaysia (5.9 billion), Indonesia (5.8 billion), and Viet Nam (4.4 billion) (BP 2012).¹³

¹⁰ Australia recently lifted sanctions (DFAT 2012). The European Union suspended nearly all its sanctions for 1 year (EU 2012).

¹¹ Discussed further in the Constraints section.

¹² Myanmar's overall dependency ratio (people below 15 or above 64 as a percentage of the working age population) is not particularly low at 44%. While old age dependency is low at 7%, young age dependency is high at 36% (WB-WDI 2012).

¹³ Oil production was 18,900 barrels per day in 2009, down from a peak of 32,000 in 1984 (USEIA 2010).

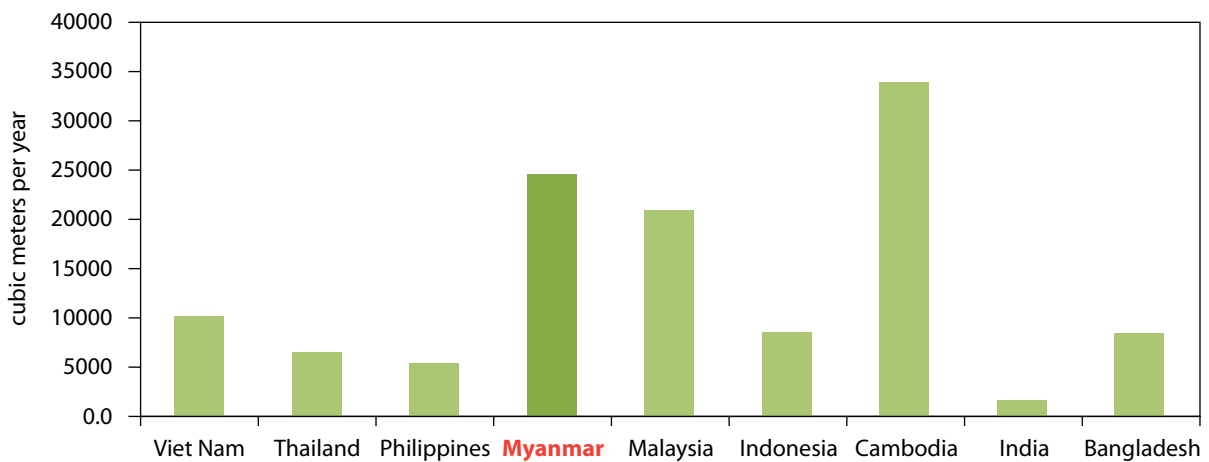
Figure 8. Age and Sex Distribution in Myanmar, 2011

Source: ESCAP Online Database 2012

Water. As of 2010, the country's total renewable water resources stood at 24,352 cubic meters per inhabitant per year, higher than nearly all other economies in Asia (Figure 9). Water is a key energy resource for Myanmar, with hydropower accounting for three-quarters of the country's total installed capacity for electricity. Myanmar uses only 5% of its water resources, of which agriculture consumes 90% and industry and domestic use account for the rest (WEPA 2012). The potential for further utilization of water resources for

hydropower, as well as for irrigation, livestock production, and industry, is substantial.¹⁴

Fisheries. Associated with the country's abundant water resources are substantial fisheries in the major rivers, providing considerable potential for aquaculture development in the low-lying river delta areas in the south and center of the country. Myanmar also has significant marine fisheries resources along its 3,000-kilometer (km) coastline and in its 382,023 hectares (ha) of mangroves (FAO

Figure 9. Total Actual Renewable Water Resources per Inhabitant (2010)

Source: FAO-Aquastat 2012

¹⁴ Hydropower potential is further discussed in the Opportunities section.

2003). During 1998–2009, the total catch of freshwater and marine fish almost tripled (FAO 2012), with expanded aquaculture development being the main factor behind this increase. As a result, fish and shrimp are now major export items.

Forests. Forests cover about 33 million ha or just under 50% of the total land area. They constitute one of the largest reserves in Southeast Asia and are still in a reasonably natural state, with closed forests accounting for 37% of total land area (MAI 2011). Forests generate wealth in the form of wood and related products, which is used for domestic purposes and exported. Forestry exports totaled \$644 million in FY2011/12 (Lay 2012). The forested areas are also a major habitat for tropical and subtropical flora and fauna; thus, as well as being a major economic resource, Myanmar's forests are an essential source of biodiversity and environmental sustainability for South-east Asia.

Agriculture. Agriculture is a key sector of Myanmar's economy, accounting for 36% of output (UNDP 2011a), a majority of the country's employment (ADB 2011b), and 25%–30% of exports by value (WB–WDI 2012).¹⁵ The abundance of land, water, and low-cost labor contribute to the output of the sector and drive its contribution to the economy. Only about 18% of the country's total land area of 68 million ha is used for crop production and only 18.5% of this is irrigated.

Between 1990 and 2010, the areas planted with rice, beans, sesame seed, and vegetables have expanded and output has increased considerably (Table 6). For example, the area planted to rice has nearly doubled and production has almost tripled, showing the impact of both the expansion of cropped area

and enhanced yields. Productivity, despite numerous challenges, has been rising steadily. Despite the lack of irrigation for most of the rice, the current yield is about 4.1 tons (t) per hectare (ha) of unmilled rice, up from 3.4 t/ha in 2000 and not far from Viet Nam's 5.3t/ha. With irrigation and other inputs, this could rise to at least 5.0t/ha (FAO 2012). As a result, the opportunity to expand farm output, both at the extensive margin (more land under cultivation) and the intensive margin (increased productivity) remains enormous. With its good weather, abundant water resources, and large rural population, Myanmar could harvest this "low hanging fruit" as a source of growth in the near term and further develop a vibrant export sector in farm products.

Livestock production has traditionally accounted for about 7.5% of GDP. The livestock population includes cattle, buffaloes, pigs, and poultry. Almost every rural household raises livestock, and livestock contributes substantially to household nutrition and the farm economy by providing protein (meat, eggs, and milk); draught power; and byproducts (hides and leather). Livestock contributes to household income and constitutes a sizable portion of household capital. Almost all livestock is raised using backyard methods, although some commercial production does occur near major cities. The growth in livestock numbers seems to have stagnated in the past decade, although poultry has seen tremendous growth, with the number of birds tripling as a result of the spread of commercial production techniques in periurban areas (UNDP 2011a).

Tourism. Myanmar's virgin jungles, snow-capped mountains, and pristine beaches, combined with a rich and glorious heritage spanning more than 2,000 years, present tremendous potential for tourism. That potential, however, remains highly underexploited. In 2010, tourist arrivals reached 791,500, whereas the Lao PDR—a much smaller country—received 2.5 million visitors and Thailand received nearly 16 million (Figure 10).

¹⁵ Figures for the percentage of exports in recent years range from 30.5% in 2005 to 25.7% in 2008. However, the 2008 figure is probably anomalous because in 2008 much of the rice crop was destroyed by Cyclone Nargis. The percentage of exports from the sector was 27.9% in 2009 (UNDP 2011a).

Constraints

Key constraints to sustaining growth include a weak macroeconomic management framework devoid of market mechanisms, limited access to finance, deficient infrastructure, inadequate social services

dampening the quality of human capital, and limited industrial diversification.

Weak Macroeconomic Management. Myanmar's weak macroeconomic management and underdeveloped financial sector could threaten domestic economic and financial

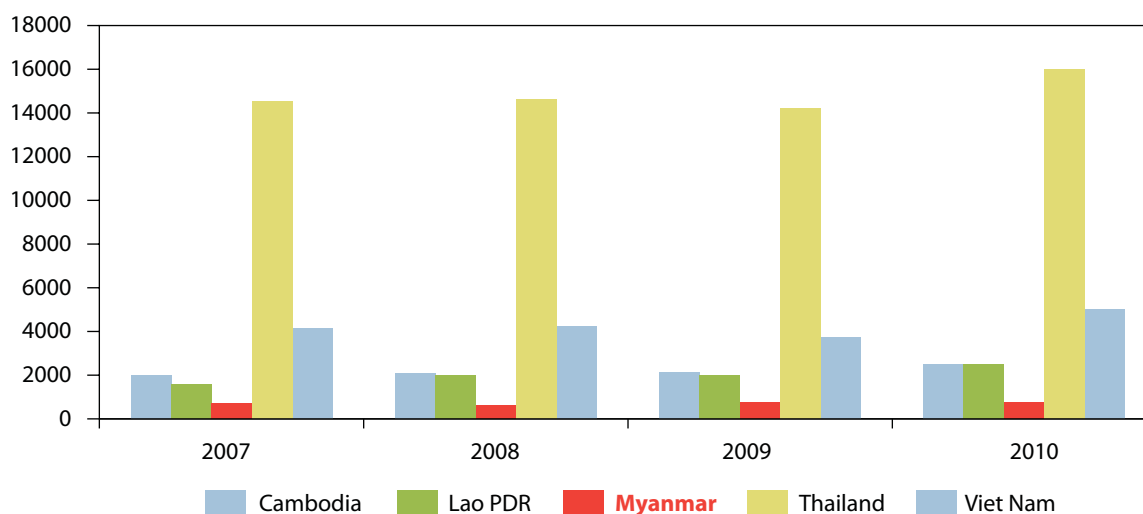
Table 6. Increase in Food Crop Area and Production, 1990–2010

Crop	Year				
	1990	1995	2000	2005	2010
1. Rice Paddy					
Area ('000 ha)	4,760	6,032	6,302	7,384	8,051
Production ('000 metric tons)	13,971	17,956	21,323	27,683	33,204
2. Beans					
Area ('000 ha)	433	1,104	1,762	2,184	2,745
Production ('000 metric tons)	263	752	1,285	2,175	3,029
3. Sesame Seed					
Area ('000 ha)	924	1,131	964	1,337	1,570
Production ('000 metric tons)	206	304	295	503	722
4. Vegetables					
Area ('000 ha)	136	167	207	238	277
Production ('000 metric tons)	163	226	280	336	371

ha = hectare.

Source: FAO-FAOSTAT 2012

Figure 10. Tourist Arrivals ('000)



Lao PDR = Lao People's Democratic Republic.

Source: ASEAN 2012

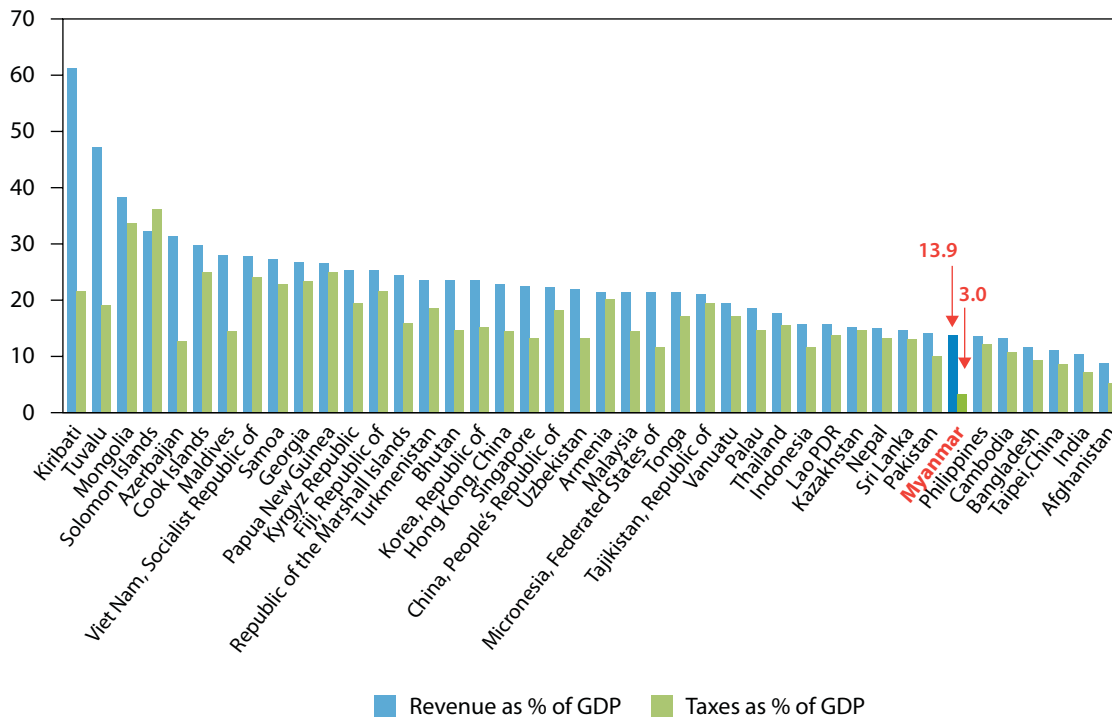
stability. Chronic fiscal deficits and high inflation due to monetization of the deficit have been serious concerns, and are currently being addressed by major reforms in the MOFR and CBM. With the absence of a formal monetary policy framework, uncertainty about monetary stability may hamper investment and make it difficult for private firms to operate in the economy.

Limited Resource Mobilization. A strong tax system is essential to create adequate fiscal space and ensure fiscal stability for the country. Government operations are hampered by chronic budget deficits that stem from insufficient revenue. Among ADB’s developing members, Myanmar has one of the lowest ratios of government revenues and tax collection to GDP (Figure 11). Low levels of personal and commercial income tax collection can be explained by factors including weak institutions, a relatively small tax net, and substantial tax concessions for companies. Low revenue from personal income tax may be attributed in part

to a relatively high threshold of income above which the top marginal personal income tax rate applies. Moreover, unclear tax legislation, the lack of an advance ruling system, and the broad discretionary powers afforded by the tax authorities (for example, with respect to applying tax treaties) are also likely to discourage investment and business activity and therefore inhibit tax collection.

Underdeveloped Financial Sector. The financial sector remains largely underdeveloped, hampering effective mobilization of domestic saving for investment. Access to finance in Myanmar is limited, particularly in rural areas. The number of commercial bank branches per 1,000 square kilometers was only 0.85 in 2010 and some areas had no bank branches. In comparison, the branch density ratio was 2.2 in Cambodia, 27.2 in the Philippines, 11.6 in Thailand, and 7.0 in Viet Nam (IMF-FAS 2012). Pervasive government controls and interventions have contributed to the sector’s underdevelopment. Both the real interest

Figure 11. Revenue and taxes as percent of GDP (2010 or latest available)

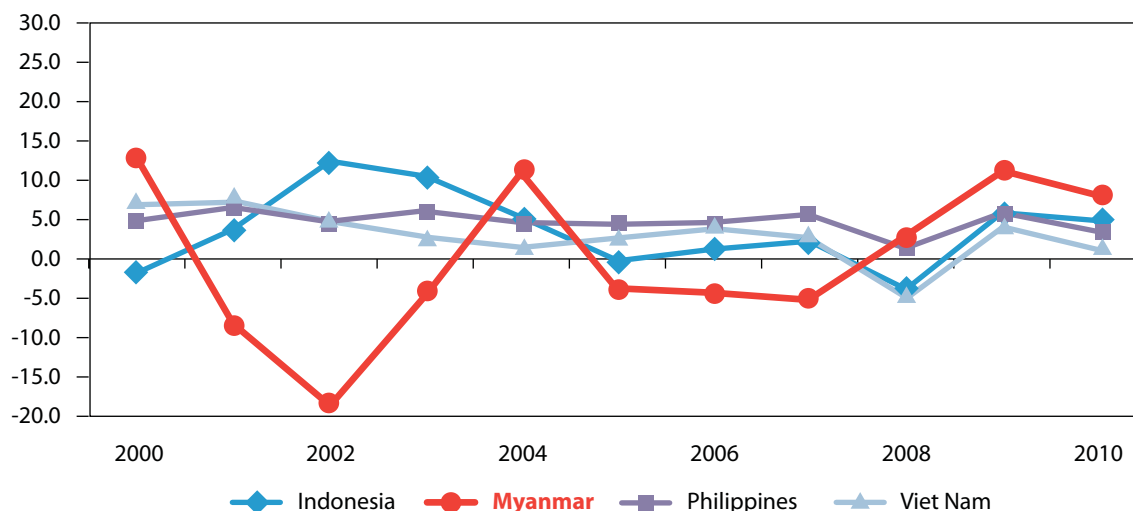


GDP = gross domestic product.
Sources: ADB 2011b and CSO 2010

(lending) rate and the interest rate spread are comparatively high, reflecting inefficiency in the sector (Figures 12 and 13). Myanmar can also pay more attention to scaling up domestic saving to ensure stability and sustainability of development funding even as external financing flow is increasing.

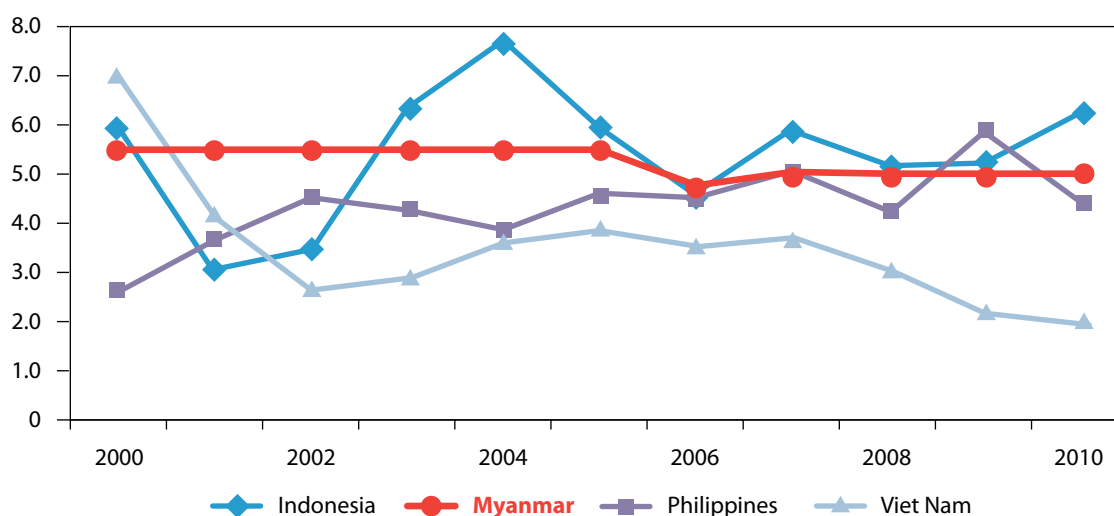
Inadequate Infrastructure. Myanmar lags behind many of its regional neighbors in both the availability and quality of key infrastructure and related services (Figure 14). The country scores more or less on par with Cambodia and the Lao PDR but worse than other countries in the region for both logistics performance and the quality of

Figure 12. Real Interest Rates of Selected ASEAN Countries, 2000–2010 (%)



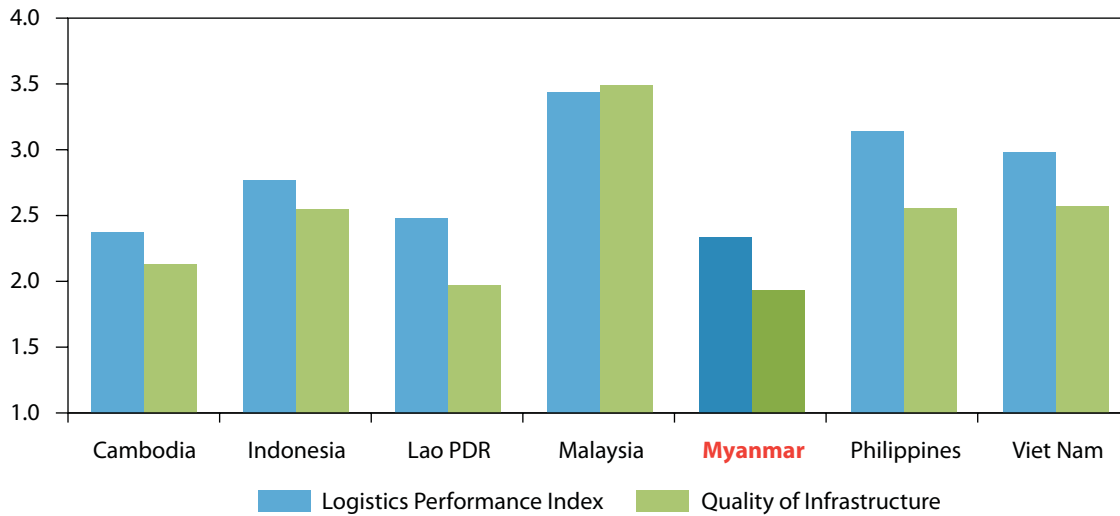
ASEAN = Association of Southeast Asian Nations.
Source: WB-WDI 2012

Figure 13. Interest Rate Spread of Selected ASEAN Countries, 2000–2010 (%)



ASEAN = Association of Southeast Asian Nations.
Note: Interest rate spread is lending rate minus deposit rate.
Source: WB-WDI 2012

Figure 14. Logistics Performance Index and Quality of Infrastructure, 2012

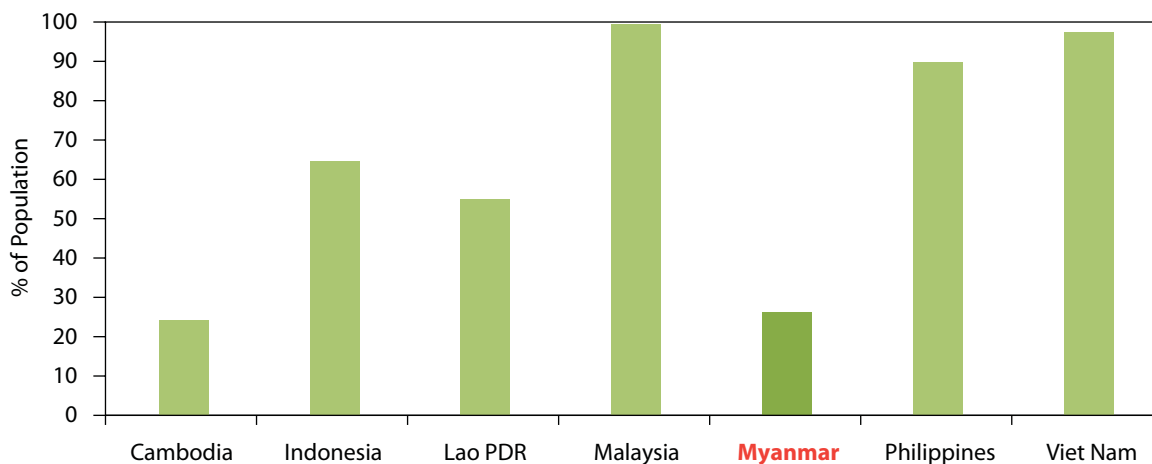


Lao PDR = Lao People’s Democratic Republic.

Note: The Logistics Performance Index (LPI) is a multidimensional assessment of logistics performance that compares the trade logistics profiles of 155 countries and rates them on a scale of 1 (worst) to 5 (best). One component of LPI is the quality of infrastructure which refers to trade- and transport-related infrastructure (e.g., ports, railroads, roads, information technology). Among 155 countries, Myanmar is ranked 129th (with a score of 2.37) in terms of LPI, and 133rd (with a score of 2.10) in terms of quality of infrastructure.

Source: World Bank 2012.

Figure 15. Access to Electricity (% of population)



Lao PDR = Lao People’s Democratic Republic.

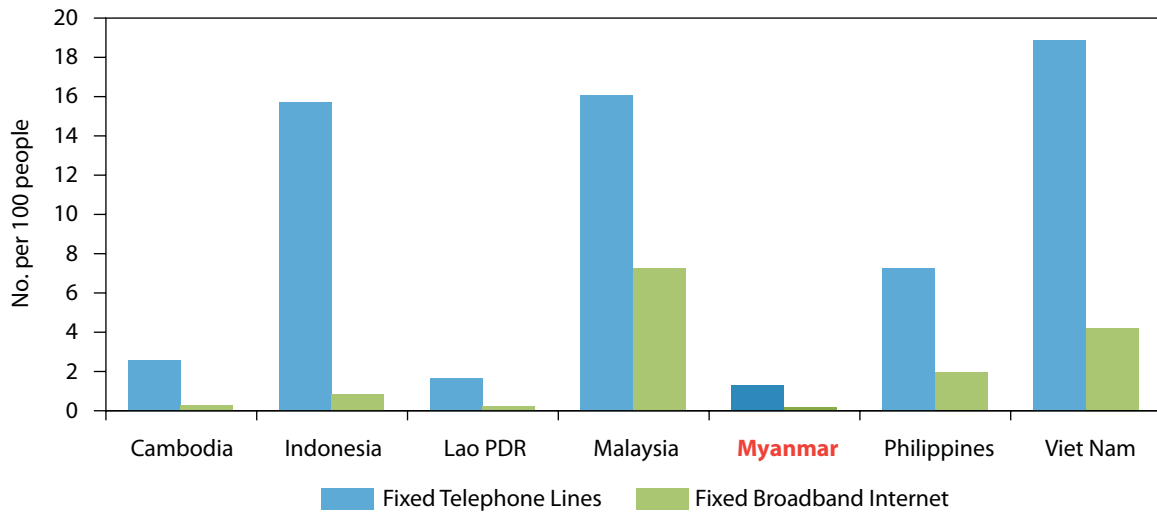
Note: The graph plots 2009 data, except for Myanmar, 2011.

Source: WB-WDI 2012 and data provided by MOEP-1 to the September 2011 ADB mission.

infrastructure. Areas such as transport, access to electricity, and telecommunication merit particular attention. The national transport networks, including road, railway, and inland waterways, are outdated and remain insufficient to support growing economic activity. Only about 26% of Myanmar’s population had access

to electricity in 2011¹⁶ and even then they faced frequent power outages (Figure 15). Similarly, teledensity (both fixed and mobile) and internet access are among the lowest in the region: for every 100 people in Myanmar, only 1.26 have

¹⁶ A higher percentage has access to electricity due to access to off-grid supply sources.

Figure 16. Communications Indicators

Lao PDR = Lao People's Democratic Republic.
Source: WB-WDI 2012

access to fixed telephone lines and 0.03 have broadband internet subscriptions (Figure 16).

Power. Myanmar produced 7,543 million kilowatt hours of electricity in 2010, the bulk of which was from hydropower (68%), followed by gas-fired (23%) and thermal (9%) generation (CSO 2012). Although the country's installed capacity exceeds the peak load (by about 130% in 2011), the available capacity of gas-fired plants is low due to inadequate maintenance and lack of compression in the gas pipeline, which reduces the flow of gas. Moreover, during the dry season, the hydropower plants receive insufficient water to generate at full capacity. Hence, the grid experiences significant load shedding during the dry season of up to 500 megawatts (MW). The network also suffers from high transmission and distribution losses. The demand for power has not been projected, and Myanmar does not have a comprehensive, least-cost generation plan. The main issues and constraints facing the power subsector include (1) the low electrification rate, with persistent power supply shortages in Yangon; (2) high technical and nontechnical losses (27%) due to poor maintenance of transmission and distribution systems (Thein and Myint 2008); (3) lack of technical capacity among staff;

(4) lack of a planning function, including supply and demand projections and analysis of alternative supply options; (5) government-controlled pricing; (6) an absence of energy efficiency and climate change policies; and (7) an absence of legal safeguard requirements.

Transport. The transport subsector is considerably underdeveloped, which hampers the movement of goods and people and constrains economic activity. Investment in the sector during the last 20 years has focused largely on major highways and new railways, with much less attention on operations and maintenance and improvements in lower level networks. A key challenge now is to improve the lower level networks and link them to the major networks to increase access for regional towns, local communities, and rural areas through lower transport costs and wider service. Further, to take advantage of its strategic location and improve connectivity with its neighboring economies, Myanmar might develop and improve border crossings and put in place the essential software changes necessary to facilitate the movement of people and goods across the borders. (Hardware and software changes might include those set out in the GMS Trade and Transit Agreement.)

To enhance its transport sector, Myanmar may wish to consider removing constraints by (1) rationalizing institutional structures that are responsible for the sector but are fragmented and overlapping; (2) developing and implementing an overall transport sector strategy; (2) instituting a rigorous approach to deciding which infrastructure investments to undertake, using economic benefit as an input into the decision-making process; (3) further developing capacity, building, at the subsector level at least, on existing reasonably robust and committed institutions and officials; (4) expanding the role of the private sector; and (5) extending the lower level road network for local communities that have inadequate access to the core road network and, hence, to basic services.

- *Roads.* The country has a total road network of about 130,000 km and roads are the dominant transport subsector. The road density is low, at 40 km per 1,000 square kilometers, compared with 480 in Viet Nam, 350 in Thailand, 200 in Cambodia, and 60 in the Lao PDR (ADB 2011b). In addition, only 20% of the roads are paved to all-weather standard. The core road network of 38,000 km provides access to most of the country's regions and about 46% of the core roads have a paved all-weather surface. By comparison, only 13% of the noncore secondary and local roads have some form of all-weather surfacing and they are in rather poor condition in other respects.¹⁷ The country has 18 vehicles per 1,000 people versus 250 for Indonesia and 370 for Thailand (UNDP 2011c). Despite the low vehicle ratio and a relatively small road network, fatality rates are high (nearly 16 fatalities per 10,000 vehicles versus 6 in Viet Nam, 5 in Thailand, and 1 in Australia [WHO 2012]). This may be partly because

82% of total vehicles are motorcycles (Kyaw 2011).

- *Railways.* The railway network expanded from about 2,000 miles in 1988 to about 3,500 miles in 2010. Most of the expansion has been in the more remote regions, to provide transport services reflecting the government's policy to connect all parts of the country. Most of the new lines, several of which parallel new roads, carry little traffic and were very expensive to construct, as they are typically in mountainous terrain, leaving limited funds to maintain and improve the core network. Thus, the network's infrastructure is in very poor condition. To illustrate the situation, the railways carried about 3 million tons of freight in 2011, the same as in 1993, despite a significant increase in the total volume of freight (rail and non-rail).¹⁸
- *Inland Waterways.* Myanmar has about 5,000 km of navigable waterways, of which about 2,400 km make up the primary inland waterway network. The state enterprise Myanmar Inland Water Transport (MIWT) has about 240 powered vessels available, with a total capacity of about 70,000 tons. Many of these vessels are old. In 2011, the MIWT carried about 28 million passengers and 5 million tons of freight. Most river ports are little more than landing beaches where vessels are loaded over a simple gangplank. Some locations provide specialized cargo handling facilities for bulk commodities such as petroleum, cement, and fertilizer. MIWT tariffs are fixed by the government and set below cost, for both passenger and freight operations. River channels and navigation aids for safe vessel operations need improving.

¹⁷ Unless otherwise indicated, figures in this paragraph are based on preliminary findings from an ADB consultation mission to Myanmar in June 2012.

¹⁸ The information in this paragraph and the next is based on preliminary findings from an ADB consultation mission to Myanmar in June 2012.

- Ports and Civil Aviation.* The Myanmar Port Authority is responsible for the port in Yangon and eight coastal ports—four on the west coast and four on the southeast coast. The facilities at the eight ports are simple, typically pontoon-based, and lack mechanized handling facilities. Most coastal traffic is between the coastal ports and Yangon (ASEAN 2005). The port subsector currently does not face major constraints, but Myanmar could usefully prepare for heightened trade flows resulting from economic liberalization and growth. Improving the coastal ports would allow for more effective use of coastal shipping as part of the country's overall transport mix. Myanmar's civil aviation subsector consists of three international airports at Yangon and Mandalay, and Nay Pyi Taw (which opened in 2011) and over 70 local airports (ICAO 2006). Domestic air services are provided by Myanma Airways, a state enterprise under the Ministry of Transport. Its fleet consists of a few jet and turboprop aircraft that typically are very old by aircraft standards. Other airlines also provide domestic services, including Air Mandalay (a joint venture of Myanma Airways and Singaporean interests). Myanma Airways International, a subsidiary of Myanma Airways, provides some international services to regional destinations, using more modern aircraft such as the Airbus A320 and A321 (Myanmar Airways International 2012).

Urban Development. The urban sector is dominated by the two largest cities, Yangon with about 4.6 million people and Mandalay with about 1 million. Large parts of the two cities consist of resettlement areas resulting from relocations in the 1960s and early 1990s, with estimated populations in the hundreds of thousands. The core constraint to Myanmar's urban development is inadequate infrastructure and poor quality of services. A key cause has

been chronic underinvestment, particularly in water supply and environmental infrastructure, including drainage, wastewater, and solid waste management. As a result, water supply and environmental conditions are often below acceptable standards. The public sector is the key player in infrastructure and service provision, but the lack of a strong private sector in urban areas contrasts with many Southeast Asian countries where private business is a key stakeholder in urban development.

Low Education and Health Attainment. Improvements in education and health will help to relieve the human capital constraint that currently inhibits Myanmar's economy from fulfilling its full potential. Healthy, skilled, and knowledgeable workers are essential to improve the performance of farms and businesses, as well as the government's operations. Recent government action to review and improve the performance of the education sector, as well as a recent and substantial increase in budgetary commitment to education and health care, demonstrate the increased importance placed on human capital, a key ingredient for economic growth and structural transformation.

Education. The education sector has made important progress in recent years, notably in primary education (grades 1–5) with the gross primary completion rate reaching 103% in the school year ending in 2010 (WB–WDI 2012). However, progress has lagged in post-primary education, with net enrollment estimates for secondary education ranging from 53% (MNPED, MOH, and UNICEF 2011) to 58% (MNPED et al. 2011) and much lower for technical and vocational education and training (TVET) and higher education. Moreover, despite progress, there is evidence that secondary education, TVET, and higher education face challenges in terms of education quality and management. Sustained progress in the education sector is also constrained by low government expenditure.

Household surveys suggest that nearly half of the secondary school age children are out of school or considerably lagging in their studies.

Exit from the school system is particularly marked at the transition from primary to middle school: cohort analysis suggests that up to 1 in 4 primary school completers never enter middle school. Extension of post-primary schools (adding early middle school grades to existing primary school sites) has helped expand access. Geographic and socioeconomic gaps are sizable, and appear much larger in secondary education than at the primary level.¹⁹ Key issues, particularly in poor and ethnic areas, include (1) disparities in completion rates and degrees of preparedness from the primary level; (2) demand-side factors such as financial and opportunity costs, language, other cultural factors, and disabilities; and (3) supply-side factors such as gaps in school networks in remote areas, limited financial and human resources, and low quality of education services.

Systemic data on the quality and relevance of secondary (and other levels) of education are lacking but anecdotal evidence suggests challenges in terms of teaching (still largely rote-based) and learning outcomes. On the whole, grade repetition at the secondary level is fairly low, but it rises in the final year of middle school (grade 9) and remains particularly problematic in high school (grades 10–11). The latter, combined with high failure rates on the matriculation exam for higher education, suggest problems in students' mastery of subject content.²⁰

TVET and higher education can play a key role in accelerating the country's socioeconomic transformation. To do so effectively, both subsectors will require more fully competency-

based curricula and address deficiencies in (1) relevance of curricula, materials, methodologies, and program designs; (2) alignment across TVET, higher education, and secondary education; (3) quality control and accreditation, particularly given the proliferation of institutions and programs of varying quality; (4) faculty qualifications and professional support systems; and (5) links to labor market demand, especially in emerging sectors and skill areas.²¹

Financing has been an overarching constraint on education, which the government has made positive steps to overcome in recent years. In FY2011/12, only 3.74% of the national budget was allocated to education, which is still very low by international standards.²² However, the new government's focus on education appears to be translating into increased resourcing. The budget for education more than doubled in nominal terms in FY2012/13, with education's share of the national budget rising by a similar magnitude to 6.26%.²³ The share of the education budget in GDP is expected to double from 0.69% to a projected value of 1.4%–1.5%.²⁴

In addition to increased resources, the government took a critical decision in early 2012 to embark on a Comprehensive

¹⁹ Based on household surveys, 52.4% of 10–15 year-olds from households in the poorest wealth quintile are already out of school, versus only 9.5% in the richest quintile (MNPED, MOH, and UNICEF 2011).

²⁰ This exam is taken at the end of grade 11 and is currently the basis for both certification of high school completion and selection into higher education. In school year 2010, 65.7% of test takers failed, undermining the benefits of high school. Figures are based on Education Management Information System data provided by the Ministry of Education to the ADB mission in May 2012.

²¹ Starting in school year 2013, the Ministry of Education plans to allow registration of private schools, but only for grades 1–11.

²² Budget figures reported herein are based on data kindly provided to the May 2012 ADB mission by the MOFR. In recent years, nearly 90% of education budget has gone to teacher/staff salaries and other recurrent expenditures, leaving scarce resources for capital investments (e.g., school construction) or nonsalary recurrent costs that may be critical to enhancing quality and equity (e.g., teacher training, provision of free textbooks, etc.) (UNESCO 2006).

²³ Figures are based on data provided to ADB in May 2012 by the MOFR.

²⁴ ADB staff estimates. The figures compare FY2011/12 to FY2012/13. MOFR figures allow for a direct calculation of the Ministry of Education budget as a share of total government budget for FY2012/13, but the denominator for the GDP share is only MOFR's estimate of likely GDP, hence the range given.

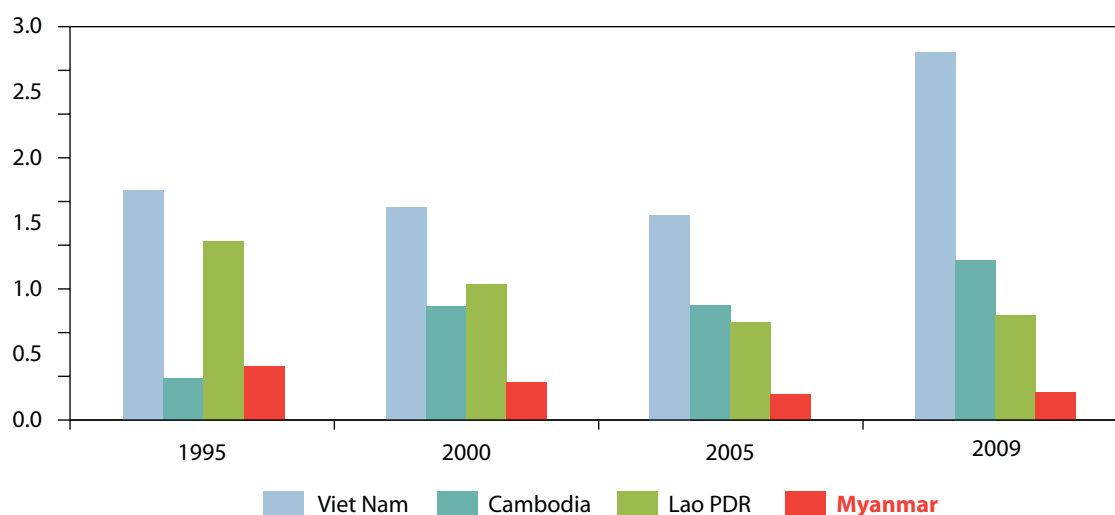
Education Sector Review. The Review, currently being led by the Ministry of Education, is coordinating inputs from relevant ministries and development partners. It will include an in-depth review and assessment of legislation and policies; will seek to identify challenges, priority areas, and strategic options for the sector; and will culminate in the development of a costed education sector plan for future sector investments.

Health. Health indicators remain weak and influence the quality of human capital. As noted earlier, one in three children is malnourished, and more than 10% of children under age 5 are wasting (i.e., low weight relative to height) which impairs their physical and mental development. Maternal mortality is 240 deaths per 100,000 live births, significantly above the rate for neighboring Thailand at 48 (WB-WDI 2012). Life expectancy is 62 years, one of the lowest in the region (WB-WDI 2012). Such low health outcomes are partly the result of a legacy of low expenditure on health care but are also caused by malnutrition, which is strongly linked to household poverty. Health spending equaled only 0.2% of GDP in 2009, significantly lower than in other countries in the region (Figure 17), although the figure may not

account for local government expenditures and it excludes private donations. Low spending has translated into low coverage in terms of health care professionals and health facilities. On average, Myanmar has only 1 physician per 2,188 people and 1 hospital bed per 1,667 people (WB-WDI 2012). On the positive side, public expenditure on health has been increasing in recent years. In FY2012/13, combined spending on health and education is expected to rise to 7.5% of total government expenditure, up from 5.4% a year earlier (IMF 2012). Recent increases can help to improve access to health services and thereby improve health outcomes and human capital development.

Limited Economic Diversification. Myanmar's production structure is heavily focused on primary commodities—natural resources, notably gas and wood, along with farm and fish products. Due to the lack of diversification, the country is susceptible to demand and price fluctuations. A broadening of the productive base would provide added stability and a source of employment for the many people who are currently engaged as surplus rural workers or involved in low-paying informal activities.

Figure 17. Government Expenditure on Health, 1995–2009 (% of GDP)



GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic.

Sources: For Cambodia, staff estimates using ADB 2011b data; for Lao PDR, Myanmar, and Viet Nam, staff estimates using UNESCAP Online Database 2012.

Myanmar has experienced some structural change during the last 4 decades, although this has taken place mostly between industry and services and within industry. In 1965, agriculture contributed 35% of GDP, and this was relatively unchanged in 2010 at 36%. The remaining portion of GDP has shifted away from services toward industry. In 1965, industry contributed 13% of GDP, rising to 26% by 2010, whereas the contribution of services fell from 52% to 38% during the same period (Figure 18). Much of this change may have been due to the development of resource-based industrial activity in energy and mining, given the sharp export increases in such sectors.

The narrow structure of production is seen most clearly in the country’s export profile. Gas, logs, and legumes account for just over two-thirds (68%) of total exports (Figure 19, right side). The country’s export structure has changed considerably in the last 4 decades with the rise and decline of industries. In the 1960s and 1970s, the main exports were agricultural commodities, notably rice, along with wood products. The 1980s witnessed the emergence of petroleum and fisheries exports. Petroleum subsequently declined and then vanished as an export commodity but was replaced by natural gas in the 1990s and 2000s and now accounts

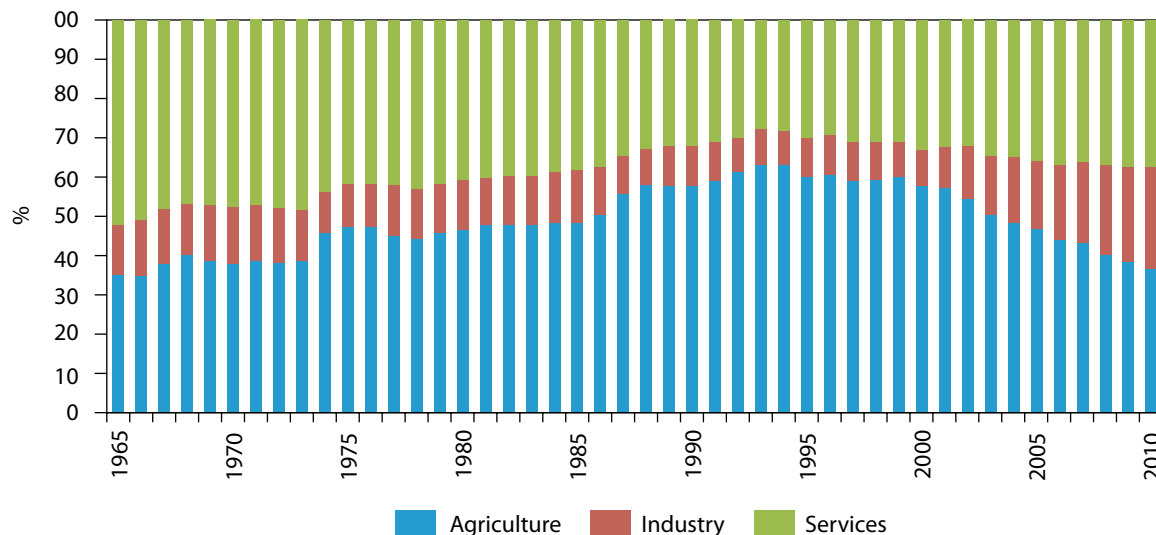
for over 40% of total exports. The main manufacturing industry is garments, which emerged in the 1990s and was the top export among all goods in 2000. The industry declined over the following decade due in large part to sanctions imposed by the United States, a major export market (compare the green areas in Figure 19). Nonetheless, garment exports offer a welcome diversification from a traditional reliance on primary commodities and remain an important source of employment generation.

The development of light manufacturing, agro-processing, and tourism, along with a more conducive environment for small- and medium-sized enterprises, can help to create more quality jobs and absorb part of the workforce still in agriculture and the several million migrants waiting to return to the country.

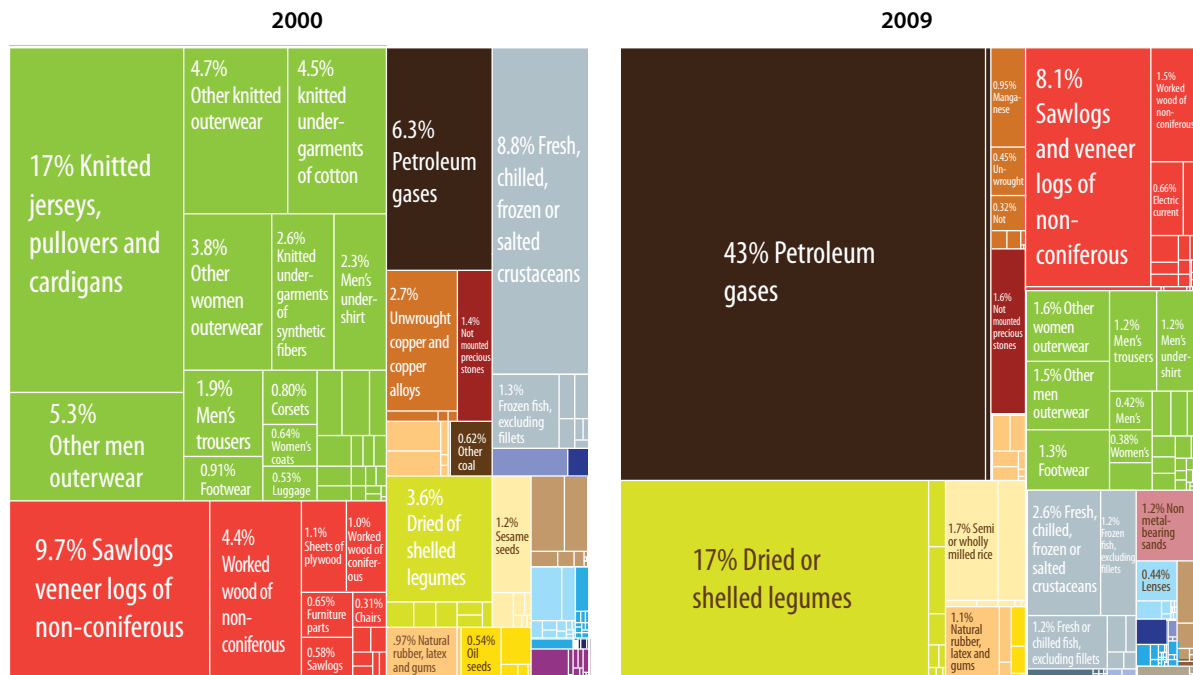
Opportunities

Myanmar’s recent reforms open up a wide range of economic opportunities (including foreign investment in key sectors that are outdated due to decades of isolation), with its strategic location playing a key role.

Figure 18. Sector Shares in Myanmar’s GDP, 1965–2010 (%)



GDP = gross domestic product.
Sources: ADB-SDBS 2012 and WB-WDI 2012

Figure 19. Changing Structure of Myanmar's Exports, % of total

Note: The chart depicts exports of specific commodities as a percentage of total exports. The color coding allows for a quick and easy comparison of product groups in 2000 and 2009.

Source: Simoes and Hidalgo 2011

Strategic Location. Myanmar's strategic location between the region's two emerging economic superpowers and between Asian subregions provides enormous opportunities to benefit from regional economic activity. Rising South-South trade and increased connectivity within the region will make Myanmar's geographic position increasingly important in the years ahead. The country links Southeast Asia and the PRC with South Asia through its part in the ASEAN and Asian highway networks, the Greater Mekong Subregion highways, and roads between Myanmar and the PRC, as Myanmar accounts for vital segments of these regional transport networks (Figure 20). The combined length of segments of these international highways passing through Myanmar is an estimated 5,000 km. Other road segments provide important trade links with neighboring countries, including a 427 km road segment in the north that can link the PRC and India.

Land transport links with its neighbors provide an opportunity for Myanmar to become

a regional trade and production hub. Though estimates of the benefits to Myanmar from improved connectivity with the region are not yet available, it is anticipated that these benefits will be substantial in terms of increased economic activity and employment opportunities. Studies indicate that the Asian Highway can help increase interregional trade by about \$90 billion per annum (Parpiev and Sodikov 2008). Trade to, from, and through Myanmar may increase significantly, given its key location between major economies and subregions. The potential for opportunities is reinforced by the fact that trade between the PRC and India alone reached nearly \$85 billion in 2011, up 84% from \$46 billion 2 years earlier (IMF-DOTS 2012). In addition, there is considerable potential for expanding trade between South and Southeast Asia, which remains at a low level.

Potential of Renewable Energy. Myanmar has abundant renewable energy potential from hydro, biomass, wind, and solar resources. Among these, only hydropower is being

Figure 20. Major International Road Links Passing through Myanmar



AH = Asian Highway/ASEAN Highway, R = GMS Highway.

Note: The map shows existing and future links.

Source: ADB. Roads on the map are based on information provided by the Myanmar Port Authority, Ministry of Transport.

commercially exploited, while the others remain at the research and development or pilot test stages. The hydropower potential from the four main river basins—the Ayeyawaddy, Chindwin, Sittaung, and Thanlwin—is estimated at more than 100,000MW (Thein and Myint 2008). By contrast, the country’s installed hydropower capacity was only 1,781MW in 2012 (Kya-Oh 2012). The Ministry of Electric Power – 1 has identified 92 large-scale hydropower projects with an estimated capacity of 46,100MW.²⁵ The lack of financing prompted the government to express the desire for technological transfer in the renewable energy sector during the 2011 Green Economy and Green Growth Forum in Yangon (Lwin 2011).

Potential for Investment in a Range of Sectors. As it modernizes and liberalizes its economy, Myanmar offers opportunities for investors, both foreign and domestic, in virtually all sectors. The services sector, in particular, is ripe for investment and offers “low hanging fruit” that could provide a quick boost to the economy. Telecommunications, including mobile telephony, is in urgent need of investment. Similarly, the travel and tourism sector possesses huge potential given the country’s natural and cultural features and sites, coupled with the pent-up interest of travelers after decades of Myanmar’s relative isolation. A tourism boom can generate investment in transport, hotels, restaurants, arts and culture, and travel. Agriculture offers considerable potential in basic production and agro-processing, including for export. Complementary areas of marketing, storage, transport, logistics, and the provision of inputs such as machinery and fertilizers are also ripe for investment.

In manufacturing, the abundance of low-cost labor presents an opportunity to expand into labor-intensive and export-oriented manufacturing, including the garment sector. Asian and Western firms may find Myanmar a

new cost-effective platform for light assembly as a means for diversifying their production locations and supplying an expanding domestic market. Investment is also urgently needed in almost all types of infrastructure, from roads and water supply to energy and telecommunications. The increasing trend in Asia is to structure investments through public-private partnerships, which can help to engage foreign private investors by reducing their perceived risks.

Easing of economic sanctions imposed on Myanmar by Western countries will lead to higher levels of trade and investment. Over the past several years, firms from nonsanctioning countries invested significantly in key sectors, with total FDI inflows reaching just under \$3.8 billion since FY2005/06 (Table 7). Three-quarters of that investment (\$2.9 billion) has gone into the oil and gas sector.²⁶ Investment has also flowed into the mining (\$450 million) and power (\$390 million) sectors. Manufacturing and tourism have not yet attracted significant inflows but hold enormous potential, notably as (1) the Government is actively promoting foreign investment, and (2) trade sanctions are being eased, so that investors might now be tempted to take advantage of low-cost labor to produce and export from Myanmar to a broader range of destinations.

Risks

Risks associated with economic reform and liberalization, climate change and environmental degradation, and internal conflicts could be significant.

²⁵ Figures were provided to ADB by the Ministry of Electric Power – 1.

²⁶ Total FDI approvals in the oil and gas sector reached \$10.8 billion from FY2005/06 to September 2010. However, figures for FDI approvals should be treated with caution, as many approved projects may not result in actual investment (as in Table 7). Figures for approved FDI are from data provided by the Directorate of Investment and Company Administration, Ministry of National Planning and Economic Development.

Table 7. FDI Inflows by Sector (US\$ million)

Sector	Fiscal Year						2005-2010
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	
Oil and Gas	229.9	417.2	478.4	743.2	750.0	287.9	2,906.6
Mining	2.2	2.6	3.2	46.6	200.1	160.3	415.0
Power	0	0	220.0	170.0	0	0	390.0
Manufacturing	1.1	1.6	13.2	14.2	11.6	1.5	43.2
Hotel and Tourism	2.7	6.3	0.1	1.0	0	0.3	10.4
Livestock and Fisheries	0	0	0	0.6	1.6	0.2	2.4
Total	235.9	427.7	714.9	975.6	963.3	450.2	3,767.6

FDI = foreign direct investment.

Note: Figures denote actual FDI inflows. Figures may not total exactly due to rounding. Data for FY2010/11 cover April-September 2010 only. No FDI was received in agriculture, construction, industrial estate, real estate, transport and other services during the period.

Source: Directorate of Investment and Company Administration, Ministry of National Planning and Economic Development, Myanmar (data provided to ADB).

Risks from economic reform and liberalization. Myanmar is undertaking a range of economic reforms, which entail a greater use of the market mechanism to allocate resources and manage such key aspects as investment, interest rates, and foreign exchange. Without adequate regulation, supervision and risk mitigation, the pace and sequencing of the reforms and liberalization may undermine the expected benefits.

The Asian financial crisis of 1997–1998 and similar crises in Latin America much earlier highlight the risk of financial liberalization and volatile capital flows when macroeconomic management and regulatory capacity are weak in a country. As Myanmar integrates into the global economy, it also faces a number of key risks that require careful monetary and fiscal management, particularly in the realm of reserve management and exchange rate stability. The risks include (1) high inflation and exchange rate instability due to ineffective sterilization; (2) consequences of an overvaluation and possible overshooting of the currency²⁷ coupled with large foreign capital inflows;

²⁷ "Overshooting" refers to an economic phenomenon where the foreign exchange rate temporarily overreacts to changes in monetary policy given the stickiness of domestic prices and explains high exchange rate volatility in the short run.

(3) sharp depreciation and large capital outflows with even small negative shocks that impair the confidence of foreign investors (posing a considerable challenge for the young central bank in managing foreign reserves and volatile exchange rates); and (4) financial deregulation that could lead to excessive credit growth and bubbles, given the weak regulatory system and capacity. The PRC may provide an instructive case of how gradual and cautious approaches to liberalizing the financial sector and capital account can help maintain stability when the economy is not fully adapted to the market mechanism and market functions are impaired by lack of transparency and weak governance.

Myanmar stands to gain enormously from the rise of Asia and from increased regional integration. There is, however, a risk that the ongoing global slowdown and looming recession may impact regional growth and demand in the near term. Slowing global and regional demand may dampen Myanmar's economic activity, while weaker foreign investment could delay the development process for Myanmar's key industry sectors, such as energy.

Risks from Climate Change. Myanmar can profit from lessons the region's early transformers learned when they overlooked the importance of environmental sustainability. The

Berlin-based climate watchdog, Germanwatch, ranked Myanmar as the second worst country affected by extreme weather events caused by climate change from 1990 to 2008 (Harmeling 2010). The report also ranked Myanmar as the globe's worst-hit country in 2008—in early May of that year Cyclone Nargis devastated the Irrawaddy delta and resulted in economic damage estimated at \$4.1 billion and deaths of more than 138,000 people (ESCAP 2011). More recently, in October 2010, Cyclone Giri hit the western coast of Arakan State. Giri is considered the second most damaging cyclone on record, after Nargis. Cyclone Giri, which packed winds over 200 km per hour, killed at least 45 people, left over 200,000 in need of emergency assistance, and destroyed more than 300 schools and countless homes (Epatko 2010). Although varying in nature and degree, climate change will impact both rural and urban areas in Myanmar.

Myanmar's vast forests currently help to support regional and global ecosystems that are increasingly under threat. There is a risk, however, that the country's efforts to industrialize and leverage its natural resources in an early stage of development could weaken its attention to environmental sustainability. This might make the country more vulnerable to environmental shocks and their impacts on human health, agriculture and food security, and biodiversity. Deforestation is of particular concern, with decreasing forest cover and quality leading to reduced adaptive capacity to future environmental changes and potential to absorb greenhouse gases. Forest fires present an additional climate change pressure (due to increased temperature), especially in the dry forests that dominate the central part of the country.

The Government is currently responding to climate change risk and vulnerability, and in 2009 quickly put in place a 7-year national plan for disaster risk reduction (MSWRR 2009). Although there is currently no national policy target for climate change measures, Myanmar

has made international commitments under the United Nations Framework Convention on Climate Change (UNFCCC) and the related Kyoto Protocol, which Myanmar ratified in 2003 (UNFCCC 2012).

Pollution from Economic Activities.

Increased economic activity threatens the environment due to mining-related pollution, reservoir clearing, and industrial waste and sewage discharge near urban areas. If unregulated and unmonitored, major negative impacts on the environment can be expected, notably as FDI concentrates on energy and extractive industries.

Within Myanmar, awareness of environmental disturbance caused by mining is increasing but has not yet been accompanied by a substantive regulatory response. While the country lacks a national policy target for environmental improvement in the mining sector, some relevant sector policies exist, including the 1994 Mines Law, which is intended to protect the public and the environment from mining activities that may be detrimental to them. Attention is now being devoted to enhancing environmental monitoring in mining areas. Demands are also being made on the mining industry to acquire and report environmental data, comply with applicable industry standards, and adopt the best environmental practices.

Internal Conflicts. Political and social tension within Myanmar remains a potentially destabilizing factor, as long-running ethnic conflict could escalate. The country has 135 officially recognized ethnic groups. The Bamar comprises 68% of the population; the next largest groups are the Shan (9%) and Karen (7%) (Ekeh and Smith 2007). Creating a harmonious society provides a foundation for inclusive and sustainable growth. The government can help create such a society by promoting understanding of the country's different cultures; by engaging in efforts at national reconciliation; by ensuring that

members of ethnic groups have equal access to public services, jobs, and other economic opportunities; and by building the infrastructure necessary for increased connectivity between rich and poor areas.

IV. Implications for Myanmar's Economic Transition

In moving forward, Myanmar can chart a course that takes into account its strengths and constraints, while leveraging the available opportunities and avoiding the potential risks. This also means that Myanmar can position itself strategically in the rapidly changing global and regional environment to benefit from its advantages. Thus, the development strategy for the medium to long run will help to fast track Myanmar's economic integration into the region, improve inclusiveness of economic growth, and make growth environmentally sustainable.

The course of Myanmar's successful transition to a modern industrial economy can be guided by three complementary development strategies—growth with focus on regional integration, inclusiveness, environmental sustainability. The following illustrates key priority areas of policy that Myanmar can consider in moving toward a successful transition.

Managing Macroeconomic Stability

Establishing macroeconomic stability is the first step in gearing an economy for long-term growth. Key elements of sound macroeconomic policies include low and predictable inflation rates, sustainable fiscal positions, and a market-based and flexible exchange rate.

Effective monetary policy is key to ensuring a low and stable inflation environment. Targeting reserve money may be considered,

as it can discipline both fiscal and monetary authorities not to run and monetize excessive deficits. Monetary policy can also support the government's objectives of high growth and full employment.

Fiscal prudence, in conjunction with monetary policy reform, is key to maintaining macroeconomic stability, especially during economic transition. Increasing investment demand during the transition could easily lead the government to run large budget deficits, which governments are often tempted to finance through printing money. However, monetizing budgetary deficits will worsen inflation while the country's young central bank has yet to establish an effective monetary policy framework and lacks capacity for designing and implementing policy in administration and operations. In 2009, the government issued and sold treasury bonds to domestic banks for the first time to finance a part of its deficit. Despite the progress in bond financing, weak revenue collections continue to create funding gaps, which continue to be monetized. The new central bank law provides the CBM with the autonomy to run monetary policy to anchor macroeconomic stability. Meanwhile, the government can strengthen the treasury function in the MOFR and shift to bond financing from monetization of the fiscal deficit.

Strong growth potential and expectations for amelioration of the political situation and foreign relations are attracting large (and potentially speculative) capital flows to Myanmar. Sudden increases in capital flows present significant challenges, given Myanmar's

weak macroeconomic management system and underdeveloped financial sector and markets. The government recognizes these risks to the macroeconomy and major reforms are under way including the unification of official exchange rates and adoption of a managed float, loosening of foreign currency restrictions such as the “Export First” policy, under which private parties were allowed to import only when they had corresponding export earnings, and monetary policy reforms highlighted by the new central bank law.

Even as a more autonomous central bank that adopts a reserve targeting monetary framework and a managed floating currency rate is established, maintaining currency stability and containing inflation can be challenging in the face of volatile and large capital inflows. The possibility of a sudden cessation of foreign exchange inflows and a sudden outflow, cannot be ignored in the process of liberalization, and has been experienced by many transitioning and developing countries. While interventions to “sterilize” foreign exchange inflows are possible under the current law, the CBM can establish mechanisms to effectively manage domestic demand conditions and keep the exchange rate within levels that do not impede the economy’s competitiveness. Allowing the domestic currency to appreciate could of course ease inflationary pressures, but it hurts the export sector and raises the specter of “Dutch disease” effects, i.e., increased exploitation of natural resources while industrialization slows. The tradeoffs facing policy makers in Myanmar are as difficult as those facing policy makers elsewhere. Indeed, many emerging economies (including some in Asia) have deemed it prudent to introduce some capital controls to gain a degree of freedom in monetary policy in the face of large capital inflows. Liberalization of capital outflows, as Myanmar has recently introduced, can also help ease the pressure of currency appreciation and the burden of sterilizing the inflows.

Myanmar could benefit from a sound reserve management system to increase its overall resilience to external shocks. With large capital inflows projected from natural gas exports, FDI, and remittances, the CBM’s role is to ensure that these assets are properly managed by establishing a well-functioning reserve management system. Sound management of reserves can assure that adequate foreign assets are under control at all times to support the currency, manage liquidity, underpin market confidence, and meet other policy objectives. The importance of sound reserve management practices is underscored by the experience of developing countries where weak reserve management systems have resulted in significant losses and sometimes led to currency and financial crises. An effective framework and policy would allow for sound management of the country’s portfolio, including the composition of reserve currencies, choice of investment instruments, and duration of the reserve portfolio.

Mobilizing Domestic Resources

Myanmar’s economic transition will require substantial investment in physical and social infrastructure, development of human capital, and improvement of social services. Given the considerable funding needs over the medium to long run, effective mobilization of both foreign and domestic savings is crucial. While external financing through foreign borrowing and FDI is essential, excessive reliance on external funding sources could subject the economy to a wide range of external shocks and unexpected swings in international investor sentiment. Thus, fostering domestic sources of funding is very important to maintain stability and sustainability. To mobilize domestic resources, substantial increases in government revenues are essential, and developing the domestic financial sector and markets is important to improve financial intermediation.

Creating Fiscal Space

Myanmar is strengthening its tax system to generate adequate revenue and to ensure future economic growth. An efficient, equitable, and transparent tax system is the foundation of fiscal stability. Securing fiscal stability at an early stage will allow the government to have the resources to support the private sector's development (e.g., by providing the necessary infrastructure and social services). Fiscal stability can also ensure that social spending in human capital is not compromised.

Clearly, there is an urgent need to increase government revenues to support high priority development spending initiatives. Poor revenue performance can be attributed to the insufficient tax collection, rooted in the inefficient tax system. Total national budget revenues are estimated at 10%–15% of GDP in the last 5 years or so, of which tax revenues account for less than one-third. The rest comprises transfers from state enterprises and other non-tax revenues. Mobilization of government revenues is low, mainly reflecting limited sources of budget revenues, the complicated tax structure and weak tax administration that encourage tax avoidance, and generous tax incentives that are eroding the tax base. There is also lack of transparency in recording revenue collection in the consolidated budget (the combined central budget and budgets of state economic enterprises).

In recent years, the government has bolstered its tax collection, particularly on commodities, services, and custom duties. Collections have been improving with significant natural gas revenues. Higher tax revenues could be collected by improving tax policies and simplifying tax structures and administration. The government may benefit from broadening tax bases by eliminating tax incentives and concessions. The tax legislation might be also clarified and simplified. Broadening the corporate tax base and simplifying the tax code (e.g., by reducing the number of taxes and rates) would in turn lower tax administration and

compliance costs by reducing opportunities for tax evasion and avoidance. The commercial tax in Myanmar, a turnover tax levied on a wide range of goods and services, is too complicated. A turnover tax tends to be less efficient and more distorting in general than a general sales tax or value-added tax (VAT), as a turnover tax creates multiple layers of tax. Simplifying the tax structure by converting commercial taxes into a general sales tax with a single rate or VAT may help increase the efficiency of tax collection and lessen the burden of tax administration. Any regressive effects of the VAT may then be addressed from the spending side, for example, by linking increased tax revenue to targeted expenditures for the poor such as pro-poor infrastructure and direct transfer payments.

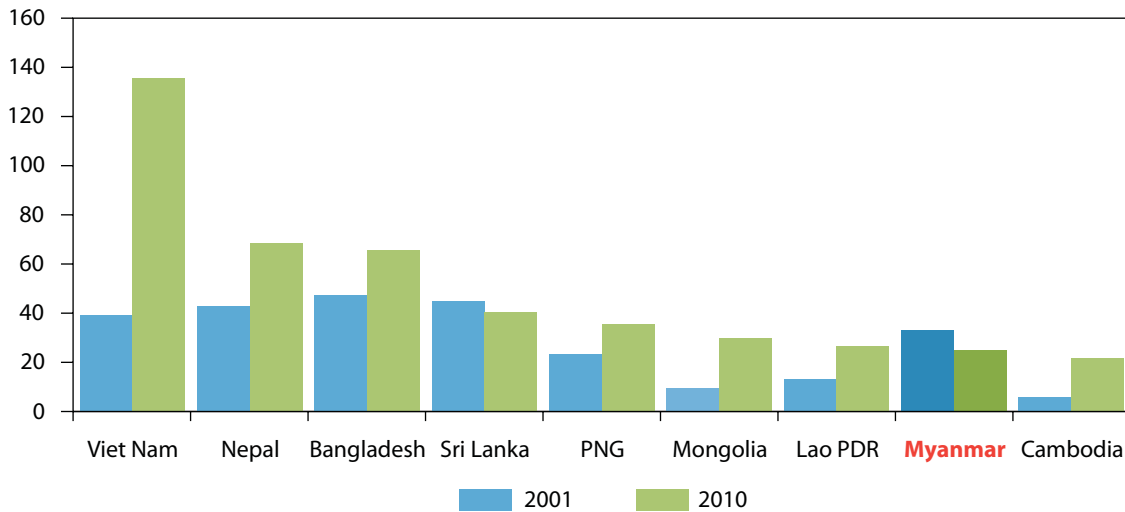
Developing the Financial System

A modernized financial system would facilitate effective intermediation of domestic saving to investment and support broad-based growth. Myanmar's financial sector is very small and kept under tight control. Little private credit is available in Myanmar: at under 25% of GDP (Figure 21), it is below that in most developing Asian peers. By comparison, in Viet Nam private credit exceeded 120% of GDP in 2010.

Gradual financial liberalization is taking place as some restrictions have been eased in recent months. While the CBM continues to set both deposit and loan rates, it allowed private banks to set interest rates (within a limited range) on savings accounts. In response, some banks have raised interest rates on savings accounts to attract customers. The CBM has also lowered the interest charged on loans by a cumulative 4 percentage points to 13% since September 2011. Further improvements in financial intermediation could begin by phasing out deposit-to-capital ratios and expanding the list of collateral beyond landed property to all crops (IMF 2012).

Developing the financial market, especially a functional interbank market, is important to enhance the effectiveness of monetary policy

Figure 21. Credit to the Economy (% of GDP)



GDP = gross domestic product, Lao PDR = Lao People’s Democratic Republic, PNG = Papua New Guinea.
 Source: ADB-SDBS 2012

and mobilize domestic savings for productive investments. The recent steps to lessen administrative controls on interest rates are welcome, and will allow the CBM to be able to use the interest rate as its policy instrument and allow transmission of monetary policy. This will also help strengthen the CBM’s reserve management.

The promotion of financial access for traditionally underserved sectors, such as the poor and small- and medium-sized enterprises, is also a high priority. Banks need to extend their reach to the broader public, especially in rural areas where access to finance is extremely difficult. To enhance financial access will entail strong policy intervention and support, legal and regulatory reforms, and capacity building for financial institutions to provide more efficient microfinance services.

The government has introduced a series of measures to improve access to credit and financial intermediation. For example, the government has allowed private banks to expand their branch networks and has increased the list of collateral to lessen impediments to access to credit. Much more can be done. The CBM is drafting a financial sector roadmap

that will sketch out short, medium, and longer term reforms. The strategy might envisage the development of a sound, market-based financial system over the medium to long run that will enhance resource mobilization and support broad economic growth. In conjunction with the development of monetary policy and increased autonomy of the central bank, the reforms can help to mitigate risks of financial sector instability that may come with financial liberalization.

Strengthening the regulatory and supervisory framework is particularly important for developing economies with a relatively weak financial market infrastructure to support credit risk assessment and effective risk management. It is critical that the minimum capital requirements are met for regulated financial institutions and a rigorous supervisory review process is implemented to ensure that banks maintain sound balance sheets and exercise due vigilance in their risk management practices. But more importantly, building basic financial infrastructure is critical, such as (1) establishing legal and institutional frameworks concerning creditor rights, prudential regulations, and insolvency regimes; (2) building information and governance structures such as credit

information systems, accounting and disclosure rules, and internal and external auditing systems; and (3) strengthening the CBM's role to properly monitor the economy, formulate and conduct appropriate monetary policy, and effectively supervise banks. Strengthened capacity will allow regulators to evaluate banking soundness against the rapidly evolving financial environment and to assess the impact of new developments on the micro- and macro-prudential soundness of financial institutions, risk management, investor protection, and systemic financial stability.

Building Development Foundations

Investing in Infrastructure

Structural impediments in Myanmar cloud the prospect of strong and inclusive growth. The most important impediments relate to education, health, and infrastructure. Many indicators of physical and social infrastructure are lagging in Myanmar. Of particular importance is low connectivity both within and beyond the national border. Investments in infrastructure and connectivity can be scaled up to promote growth and attract private investment, especially as the country is integrating into the regional economy. Investments to develop infrastructure and connectivity will help Myanmar to reap the full potential gains from regional integration, through stimulating economic activity and investment in Myanmar, and by raising revenues from transit trade.

Improved connectivity helps to promote inclusion and social equality. For example, the lack of roads to schools or hospitals in rural and remote areas may prevent people, particularly ethnic minorities living in these areas, from going to school or seeking health care even when these services are already available. Similarly, the economic activity will stay limited to urban areas if the rural communities do not have reliable access to markets. Thus, improving rural infrastructure (such as irrigation, storage,

and transport) is particularly important as it increases agricultural productivity and in turn will have a direct impact on poverty reduction. For irrigation, the two equal focuses can be on rehabilitating and improving maintenance of the existing infrastructure, and developing new irrigation systems.

High priority may be also given to energy. The potential for generating energy through hydropower has been estimated at over 100,000 MW, of which perhaps less than 5% is being exploited currently. To develop its renewable energy sources, Myanmar would benefit from (1) an institutional and legal framework to support development and deployment of these sources; (2) increased finance to support research and development, private investment, and physical infrastructure developments; (3) an enhanced human resource capacity; and (4) appropriate market-based power and petroleum prices. As Myanmar opens up to a changing world, developing a green growth strategy is necessary for driving the country's goal of sustainable development, and creating a more robust and lasting economic prosperity. If Myanmar were to successfully harness its renewable energy potential, it could position itself to be the regional supplier of clean and affordable energy.

Development of different types of infrastructure entails different challenges, but there are common themes: (1) coherent sector strategies and master plans, (2) strengthened institutions and qualified human capital, (3) removal of hurdles to private sector participation, and (4) acquisition of financial resources for developing and maintaining the infrastructure.

Developing Human Capital

Investing in broad human capital development is fundamental for Myanmar to develop into a modern industrialized economy. An equitable, effective, and good quality education system is essential to ensure that workers have the basic skills to integrate innovation and technology

into production. Along with secondary and higher education, expanded access to high quality TVET may be particularly important to equip the economy with a skilled and competitive labor force for sustained and high growth. Linking knowledge and skills taught in the classroom with the needs of the labor market and industries may ensure that workers can be suitably employed. Coordination between the education sector and industrial policies and between training institutions and the private sector is critical to ensure that the country has adequate human capital for development and that problems with skills mismatch are avoided down the road.

Myanmar can strengthen its planning for human resources development to help realize the country's economic potential. The basic infrastructure for primary education is in place, and further attention and investment would improve the quality of secondary education, TVET, and tertiary education, with priority given to upgrading schools, universities, and teacher training. Emphasis on training demobilized soldiers might also be considered. Former army engineering and medical personnel could be given access to programs and courses that prepare them to provide infrastructure and services in rural areas.

Any successful strategy for inclusive growth should address augmenting human capital and providing adequate social protection. Education and health directly improve the quality of life and are critical for broader human development. Myanmar has a fairly efficient public health service system given its income level, but it is seriously underfunded; provides insufficient coverage; and has significant gaps in terms of staffing, equipment, and maintenance. The design of the overall health system is basically sound, but requires administrative reform, and increased government investment will help to improve public health services. In addition, some issues require regional attention. With the opening up of the economy, the movement of people and goods is expected to increase the

country's exposure to regional communicable diseases and its export of drug-resistant malaria and other communicable diseases to other countries. Myanmar could usefully work on building capacity to monitor, treat, and contain endemic and epidemic diseases by enhancing regional health cooperation.

Improving the Investment Climate for Industry and Business

For the last several decades, growth in ASEAN and other East Asian countries has been propelled by their structural transformation into manufacturing and services activities of increased diversity and complexity. Manufacturing and quality services can generate jobs and high productivity and therefore are critical for raising economy-wide output and per capita income, as well as providing opportunities for earning critically needed foreign exchange.

Currently, Myanmar's growth draws largely from exploiting its natural resources (gas, gems, wood); agriculture (legumes, cereals); and fisheries. Further development of its economy, however, requires broadening its base beyond these primary industries while enhancing the value addition in the primary sector. The current level of technological sophistication, the depth of entrepreneurship, and the human capital base suggest that Myanmar may start from producing and exporting simple manufactured goods and low-skilled services, and build gradually to increase complexity. Luckily, the abundant supply of low-cost labor and the proximity to the large markets of the PRC, India, and Thailand would work to Myanmar's advantage.

The importance of agriculture cannot be overemphasized, given the country's geography and climate. The economy could diversify by building on its current assets, notably by expanding agro- and resources processing, and by promoting its rich cultural, historical,

and architectural heritage to develop its fledgling tourism sector. Enhancing agricultural productivity is also important to enhance food security for the growing population in Myanmar, and agricultural exports can be an important source of foreign exchange earnings in the early stage of transition. These developments will not occur naturally but will require supporting infrastructure, complementary inputs, access to finance, appropriate human capital, and a conducive institutional environment.

Establishing an appropriate institutional framework for a level playing field and good governance is also essential for private sector development and a vibrant economy. This will also promote accountability, transparency, and respect for the rule of law, hence fostering an enabling environment for businesses.

Expediting Public Sector Reform

Myanmar's public sector is overextended, covering a wide range of economic activities beyond many of the traditional realms including education, energy, finance, forestry, health care, and telecommunications. The organization and governance structure is weak, leaving it open to mismanagement of staff and resources as well as corruption. Lack of transparency and accountability in decision making often leads to poor design of public programs and hence poor delivery of public services.

Myanmar has been undertaking major reforms in the public domain, including putting its public finance in order by improving revenue management and tax collection and administration. The second round of reform might focus on the state economic enterprises. The public sector would benefit from further rationalization and downsizing by reducing the state's role in many sectors. The government, through its Privatization Commission, has already begun privatizing a number of state economic enterprises, including many

buildings; factories that produce textiles, consumer goods, and electronic and electrical goods; warehouses; and cinemas. Further privatization and deregulation of public utilities can be considered given the government's limited resources and capacity. This will also facilitate foreign investment in these segments and reduce the burden on public finance. Strengthening capacity building in public sector management is of paramount importance to ensure successful reform.

The reform of the public sector is a long-term challenge, requiring full political commitment. The government may wish to consider focusing on (1) promoting efficient and effective use of public resources, (2) ensuring transparency in the management and decision making pertaining to its resources, and (3) providing adequate public services and infrastructure for the poor.

Building Planning and Statistical Capacity

Myanmar faces an extensive list of development challenges and the resources required to overcome them remain limited. Prioritizing the development issues and sectors is essential, based on effective cost-benefit analysis and an overarching framework for medium- and long-term national development goals. The prioritization will help identify and sequence reforms and investments so as to maximize the dividends. Developing an overarching framework requires analysis at the macro level and prioritizing themes and sectors. Theme and sector studies can also help in preparing medium-term strategies and investment plans.

Such a comprehensive exercise requires a strong planning agency/body within the government that will guide and coordinate the effort and translate it into a cohesive medium-term development plan. Other transitional

economies in the region have institutionalized development planning through medium-term development plans that typically coordinate and guide their development activities for a period of 5–6 years. For example, a cornerstone of Viet Nam’s development planning is its Five-Year Socio-Economic Development Plan, which has helped the country maintain an impressive rate of economic growth and poverty reduction.

Effective policymaking, planning, implementation, and monitoring will require reliable, timely, and relevant information on the country’s social, economic, and environmental conditions. Most government ministries are endowed with some statistical abilities to meet the data requirements in their sector; however, the absence of adequate institutional arrangements poses profound challenges in coordinating statistical activities and maintaining uniform statistical standards across ministries.

For evidence-based development strategies, Myanmar could benefit from building its statistical capacity. This can be achieved by developing the technical capacity to produce statistics in line with internationally accepted standards and methodologies, and developing the institutional, organizational, and strategic capacity to produce national strategies for statistics, and strengthening statistical coordination mechanisms, statistics law, and organization. In doing so, the country will have the opportunity to draw lessons from other transition countries in the region (such as Cambodia and Viet Nam, which initiated reforms in the 1990s and began building statistical institutions and technical capacity to meet the information needs of a market economy). Investing in statistical capacity building requires short-term and medium- to long-term commitment.

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Myanmar in Transition: Opportunities and Challenges

Myanmar, which is emerging from decades of isolation, is poised to accelerate its economic growth on the back of its abundant labor force, rich natural resources, and geographical location. But the country faces many development challenges to achieve strong and inclusive growth. To take advantage of its rich potential and endowments, Myanmar can also use its strategic location between the People's Republic of China and India, and act as a conduit between South and Southeast Asia.

In order to sustain its growth momentum in the long run, Myanmar should aim for a growth trajectory that is inclusive, equitable, and environmentally sustainable. This special report assesses the country's strengths and weaknesses and highlights the challenges and risks. The key lies in prioritizing the actions to surmount the challenges and introducing the requisite reforms.

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ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

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