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IMMEDIATE ATTENTION

SM/14/263

August 28, 2014

To: Members of the Executive Board

From: The Secretary

Subject: **Global Monitoring Report 2014—Ending Poverty and Sharing Prosperity**

Attached for consideration by the Executive Directors is the 2014 Global Monitoring Report—ending poverty and sharing prosperity, prepared jointly by the staffs of the Fund and the World Bank. It is not proposed to bring this report to the agenda of the Executive Board for discussion unless an Executive Director so requests by **noon on Thursday, September 4, 2014**. The report is to be discussed by World Bank Executive Directors at a meeting of the World Bank's Committee of the Whole scheduled for September 9, 2014.

Following the discussion, the report will be revised as necessary and published. The overview will be distributed to the Development Committee as a background document.

Questions may be addressed to Ms. Pattillo (ext. 37319) and Mr. Nielsen (ext. 36467) in SPR.

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

Att: (1)

Other Distribution:
Department Heads

World Bank Group and the International Monetary Fund

Global Monitoring Report 2014

Ending Poverty and Sharing Prosperity

DRAFT

August 25, 2014

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Abbreviations and Acronyms

ADB	Asian Development Bank
AE	advanced economies
AfDB	African Development Bank
AP3F	Asia-Pacific Project Preparation Facility
ASEAN	Association of Southeast Asian Nations
BPA	Busan Partnership Agreement
BRICS	Brazil, Russia, India, China and South Africa
CAHRS	Cornell Center for Advanced Human Resource Studies
CCP	Central Counterparties
CCTs	Conditional cash transfers
CDIA	Cities Development Initiative for Asia
CEB	Chief Executives Board for Coordination
CEDEFOP	European Centre for the Development of Vocational Training
CHP5	Combined Heat and Power Plant Number 5
CITs	Conditional in-kind transfers
CO_2	Carbon Dioxide
CPF	Country Partnership Framework
CPI	Consumer Price Index
CRS	creditor reporting system
DAC	Development Assistance Committee
DALY	Disability-Adjusted Life Year
DECPG	Development Economics Prospects Group
DDC	District Development Committee
DEIS	Development Effectiveness Indicator System
DHS	Demographic and Health Surveys
DHS	Department of Human Services
DoE	Department of Energy
DRC	Data Recognition Corporation
EAP	East Asia and Pacific
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECA	Europe and Central Asia
ECATSD	Europe and Central Asia Team for Statistical Development
ECD	Early Childhood Development
EM	emerging markets
EMDC	emerging market and developing countries
EPL	employment protection legislation
EU	European Union
FAO	Food and Agriculture Organization
FCS	fragile and conflict-affected states
FDI	foreign direct investment
FSS	forward spending survey
FY	fiscal year
G20	Group of Twenty
GAP	Good Agricultural Practices
GACA	Saudi Arabian Civil Aviation Authority

GCC	Gulf Cooperation Council
GDP	Gross National Product
GEP	Global Economic Prospects
GIDD	Global Income Distribution Dynamic
GMI	Guaranteed Minimum Income Program
GMR	Global Monitoring Report
GNI	gross national income
GPEDC	Global Partnership for Effective Development Cooperation
GSK	GlaxoSmithKline
GOC	Government of Colombia
GTA	Global Trade Alert
HBI	Household Budget Surveys
HIV/AIDS	human immunodeficiency virus / acquired immunodeficiency syndrome
HIPC	highly indebted poor countries
HLM	High Level Meeting
HODECT	Horticultural Development Council of Tanzania
IADB	Inter-American Development Bank
IATI	International Aid Transparency Initiative
ICE	Instituto Costarricense de Electricidad
ICGGI	Investment Climate and Good Governance Initiative
ICT	information and communications technology
ICP	International Comparison Program
ICT	Information and communications technology
IDA	International Development Association
IEG	Independent Evaluation Group
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	International Financial Institutions
IIC	Inter-American Investment Corporation
IIFCL	India’s Infrastructure Finance Company Ltd
ILO	International Labor Organization
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPU	Inter-Parliamentary Union
IsDB	Islamic Development Bank
ITU	International Telecommunication Union
IT	Information and Technology
KICB	Kyrgyz Investment and Credit Bank
KILM	Key Indicators of Labour Market
LAC	Latin America and the Caribbean
LC2	Local Currency and Capital Markets
LCY	Local Currency
LDC	least developed country
LIC	low-income country
LIDC	low-income developing countries
LINKAGE	global dynamic computable general equilibrium
LRSA	last resort social assistant
LTP	Legal Transition Program
M&E	Monitoring and Evaluation
MAF	MDG acceleration framework
MCI	Monetary Conditions Index

MCM	Ministerial Council Meeting
MDB	Multilateral Development Banks
MDG	Millennium Development Goal
MDG 1	Eradicate extreme poverty and hunger
MDG 1a	extreme poverty reduction
MDG 2	Achieve universal primary education
MDG 3	Promote gender equality and empower women
MDG 3a	gender equality in primary education
MDG 4	Reduce child mortality
MDG 5	Improve maternal health
MDG 6	Combat HIV/AIDS, malaria, and other diseases
MDG 7	Ensure environmental sustainability
MDG 7a	Carbon dioxide emissions continue to surge to unprecedented levels
MDG 7b	Better access to improved water sources remains a problem, especially for sub-Saharan Africa
MDG 7c	Access to safe drinking water
MDG 7d	improving the lives of at least 100 million slum dwellers
MDG 8	Develop a global partnership for development
MENA	Middle East and North Africa
MIC	middle-income country
MICS	Multiple Indicator Cluster Surveys
MIF	Multilateral Investment Fund
MIGA	Multilateral Investment Guarantee Agency
MoFEA	Ministry of Finance and Economic Affairs
NADE	National Association for Developmental Education
NAS	National Account Statistics
NBF	Nepal Business Forum
NIA	National Income Accounts
NICRP	Nepal Investment Climate Reform Program
NGO	non-governmental organization
NSS	National Sample Survey
ODA	official development assistance
ODI	Overseas Development Institute
ODF	Open Defecation Free
OECD	Organisation for Economic Co-operation and Development
PAHO	Pan American Health Organization
PAI	Immunization Program
PARIS21	Partnership in Statistics for Development in the 21st Century
PDMF	Project Development and Monitoring Fund
PFM	public financial management
PIAAC	Programme for the International Assessment of Adult Competencies
PILA	Planilla Integrada de Liquidacion de Aportes
PISA	Programme for International Student Assessment
PIT	Personal Income Tax
PMNCH	Partnership for Maternal, Newborn and Child Health
PMO-RALG	Prime Minister’s Office Regional Administration and Local Government
Povcalnet	online interactive poverty analysis tool
PPIAF	Public Private Infrastructure Advisory Facility
PRONATEC	National Technical Education and Employment Program
PPP	Public-Private Partnership
ppp	purchasing power parity

PRG	Partial Risk Guarantee
PRR	Poverty Research Report
PSC	public service contract
PURA	Providing Urban Facilities in Rural Areas
PTAs	preferential trade agreements
PWs	Public works programs
Q1	first quarter
Q2	second quarter
Q3	third quarter
Q4	fourth quarter
RDM	Robust Decision Making
RIPS	Information System of Health Providers
REDD+	Reducing Emissions from Deforestation and Forest Degradation
REIT	Real Estate Investment Trust
RUAF	Registro Unico de Afiliados
SABER	Systems Approach for Better Education Results
SAIS	Social Assistance Information System
SAR	South Asia
SCD	Systematic Country Diagnostic
SEDAPAL	Servicio de Agua Potable y Alcantarillado de Lima
SEDLAC	Socio-Economic Database for Latin America and the Caribbean
SIHO	Information System of Public Hospitals
SISBEN	Sistema de Identificacion de Potenciales Beneficiarios de Programas Sociales
SISPRO	Sistema Integral de Informacion de la Proteccion Social
SME	Small and medium enterprises
SO_2	Sulfur dioxide
SPS	Social Protection System
SSA	Sub-Saharan Africa
SSNs	Social safety nets
STEM	science, technology, engineering and mathematics
STEP	Skills Toward Employment and Productivity
SWAp	Sector Wide Approach
TA	Technical Assistance
TAHA	Tanzania Horticulture Association
TEEB	The Economics of Ecosystems and Biodiversity
TIMSS	Trends in International Mathematics and Science Study
TVET	technical and vocational education and training
UCTs	Unconditional cash transfers
UITs	Unconditional in-kind transfers
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNHABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services Loading
UNWWAP	United Nations World Water Assessment Programme
VET	Vocational Education and Training
VPO	Vice President’s Office
WASH	Water, Sanitation and Hygiene

WB	World Bank
WBG	World Bank Group
WDI	World Development Indicators
WDR	World Development Report
WEO	World Economic Outlook
WFP	World Food Progamme
WPP	World Population Prospects
WHO	World Health Organization
WTO	World Trade Organization

Overview

0.1 One year ago, the World Bank Group (WBG) proposed two goals to measure success in promoting sustainable economic development, and to monitor its own effectiveness in delivering results. The first goal is to essentially end extreme poverty: by reducing the share of people living on less than $1.25 a day to less than 3 percent of the global population by 2030. The second goal is to promote shared prosperity: by improving the living standards of the bottom 40 percent of the population in every country.

0.2 This Report—written jointly by the World Bank and the International Monetary Fund (IMF) with substantive inputs from the Organization for Economic Cooperation and Development (OECD)—presents the first account of the challenge of ending extreme poverty and promoting globally shared prosperity, while continuing to monitor progress towards the Millennium Development Goals. It has three novel features:

i. GMR 2014 introduces the WBG's twin goals and monitors the policies and institutions important to achieving them, while continuing to report on the status of the MDGs.

ii. While the MDGs were focused on the developing world, the WBG's goal of shared prosperity is universal and signals a shift towards the post-2015 development goals. Shared prosperity is as much a concern in high-income countries as in developing economies. This Report extends the coverage of the GMR to include performance of the bottom 40 percent in all countries, including high income ones.

iii. While economic growth will require macroeconomic stability, efficient investments in human and physical capital including infrastructure, and evenhanded regulation of enterprise and well-functioning financial institutions, GMR 2014 focuses attention on three elements of economic policy that make economic growth inclusive and sustainable, within and across generations: greater investments in human capital with a focus on the poor, prudent use of safety nets, and policies to make growth greener.

0.3 GMR 2014 is, therefore, a transitional report, as it introduces the WBG's twin goals while continuing to monitor progress toward the MDGs. The WBG's twin goals of ending poverty and boosting shared prosperity retain an emphasis on growth and economic dynamism, while underscoring two important principles: the world should pay special attention to the living standards of the poorer segments of the population, and should secure the future of the planet and its resources so that current prosperity does not come at the cost of future generations.

The Scope of this Report

0.4 Growth has many drivers. There is broad consensus that macroeconomic stability, increases in financial, human, and physical capital including infrastructure, and evenhanded regulation of enterprises and financial institutions are at the core of any strategy for enhancing growth. But more is needed to make economic growth inclusive and sustainable.

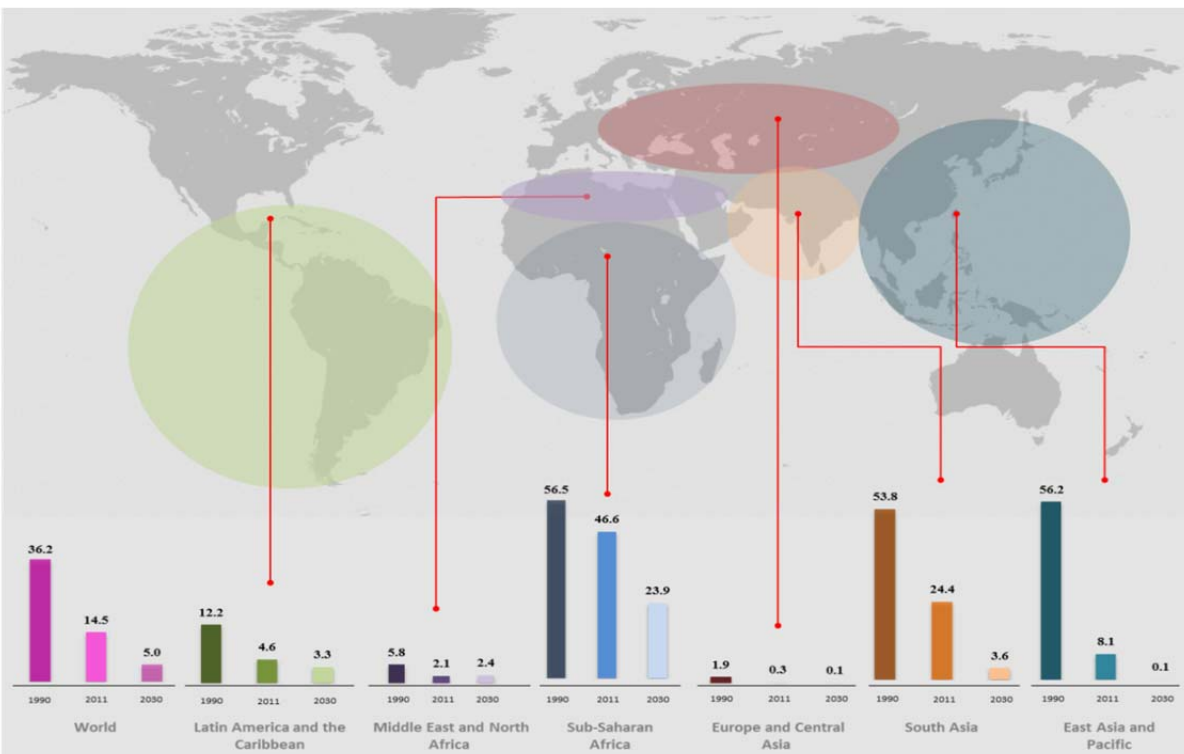
0.5 This Report focuses on three of the elements needed to make growth inclusive and sustainable: investments in human capital, the best use of safety nets, and steps to ensure the environmental sustainability of development. These three elements are both at the core of any country's development strategy and fundamental to the achievement of the WBG's twin goals, the MDGs, or any reasonable set of development indicators chosen to succeed them. In a nutshell, the main message of this Report is that to achieve the development objectives set as targets for the next fifteen years, growth will have to be accompanied by considerably greater investments in human capital in particular of the poor, be supported by improved social safety nets, and be environmentally sustainable.

Progress Towards Development Goals

Ending extreme poverty

0.6 The WBG's twin goals are motivated by the experience of the last two decades in making progress towards the Millennium Development Goals (MDGs), as well as emerging development challenges. The success in reaching MDG 1.a—halving extreme poverty—in 2010, five years ahead of schedule, has emboldened the WBG to set a more ambitious goal.[1] In 2011, just over a billion people remained in extreme poverty, around 14.5 percent of the world's population.[2] The first goal aims to virtually eliminate it during the next fifteen years, i.e., get to 3 percent by 2030 (figure 0.1). Global poverty reduction has been mostly due to progress in the rapidly growing economies of East Asia and to a lesser extent South Asia, and regional patterns signal problems in ending poverty by 2030.

Figure 0.1 Global and regional poverty headcounts estimates for 1990, 2011, and 2030



Source: PovcalNet is the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.
Note: The 1990 and 2011 estimates are based on household budget surveys, 2030 is a projection based on a reference scenario. See discussion on scenarios in the Report Card.

0.7 While in 1990 the magnitude of extreme poverty was greatest in East Asia, sub-Saharan Africa and South Asia now account for about three quarters of the global poor. According to the 2011 estimates, extreme poverty in sub-Saharan Africa was around 47 percent. Almost three-fifths of the world's extreme poor are concentrated in just five countries: India, Nigeria, China, Bangladesh, and the Democratic Republic of Congo. Adding another five countries (Indonesia, Ethiopia, Pakistan, Tanzania, and the Philippines) would encompass almost 70 percent of the extreme poor.

0.8 Growth is the major driver of poverty reduction, and was instrumental in halving extreme poverty between 1990 and 2010. However, ending poverty by 2030 is unlikely to become a reality unless economic growth patterns change. According to the recently completed World Bank's Policy Research Report on Poverty and Shared Prosperity, if each country's per capita household income/consumption grows at its average annual rate over the past twenty years, global poverty is projected to be just under 7 percent in 2030, much higher than WBG's 3 percent extreme poverty target. Under this scenario, 23 countries will still have poverty rates above 30 percent in 2030. To achieve the 3 percent extreme poverty target will not be easy. For example, per capita household income/consumption in Tanzania will need to grow at almost 6 percent per year, compared to the current rate of just over 1 percent; and growth in the Philippines will have to increase from just over 1 percent to almost 8 percent per year.

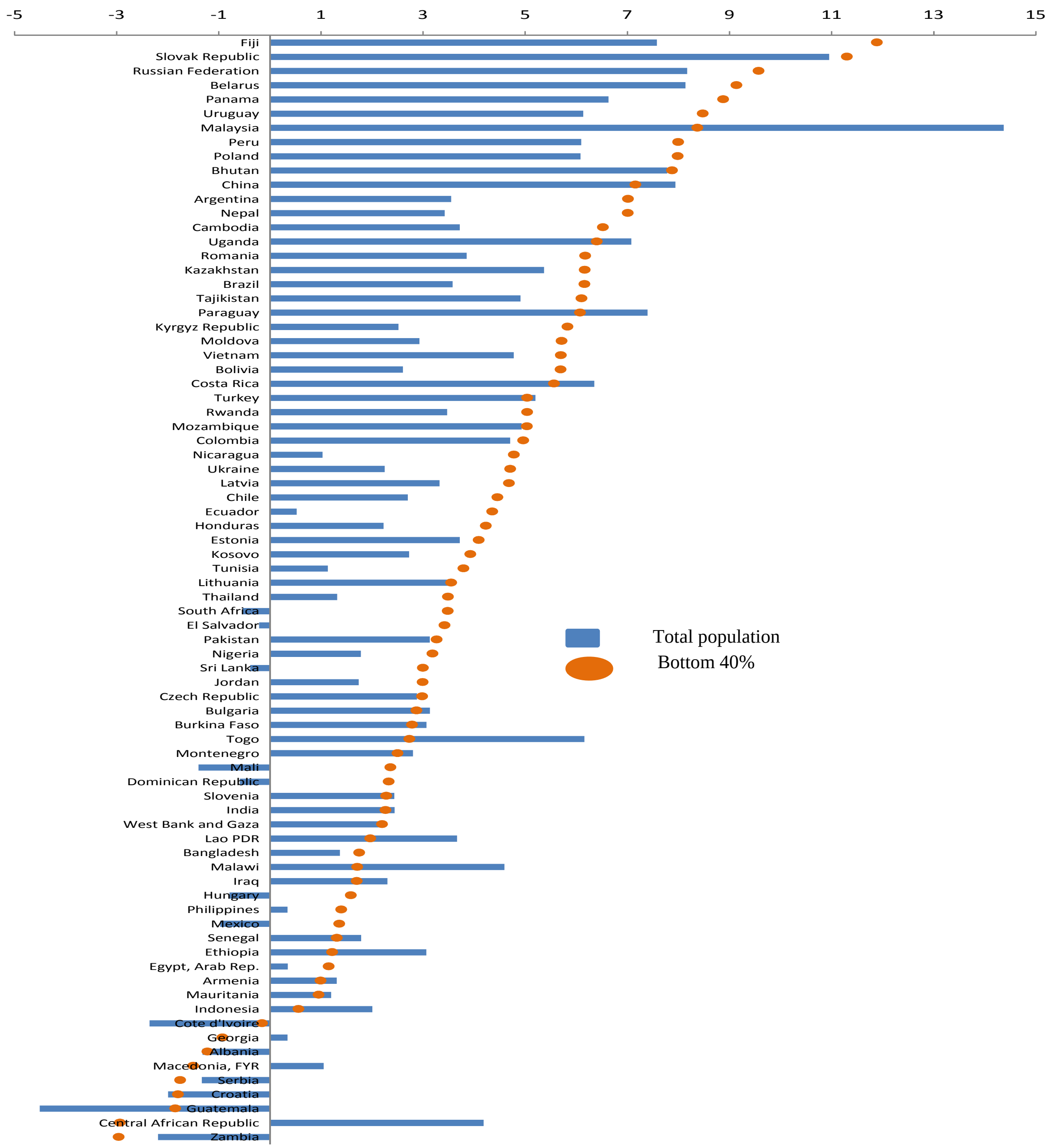
Sharing prosperity

0.9 The world's Report card on the social indicators represented by MDGs 2 – 7 is much less satisfactory, and many of those basic needs of poor people remain unmet.[3] An additional three MDG targets have been met ahead of the 2015 deadline: gender equality in primary education (MDG 3.a), access to safe drinking water (MDG 7.c), and improving the lives of at least 100 million slum dwellers (MDG 7.d). The remaining MDGs are lagging and are not expected to be achieved by the deadline, except for possibly gender equality in secondary education (MDG 3.b). Indicators, proxying the socioeconomic status of the bottom 40 percent of the population, have proven difficult to improve, even though the growth of incomes of the bottom 40 percent of the population has not been slower than that of the general population in many countries. This inequality in basic living standards is worrisome. These developments have inspired the WBG's goal of shared prosperity.[4] The second goal puts the spotlight on the unfinished MDG agenda, but it goes beyond MDGs 2 - 7 by making a commitment to more equitable living standards in every country.

0.10 During the 2000s, the bottom 40 percent enjoyed more rapid growth in income (or consumption) than the average growth of the population in many countries. Using the period 2002 to 2012 to calculate for each country the latest 5 year annual average of income or consumption growth, the bottom 40 percent fared better than the country average in 52 out of 78 countries (excluding China and India).[5] But there is much variation across countries. In 7 countries[6] the bottom 40 percent experienced annual growth rates of more than 8 percent, while in 9 countries, the income or consumption of the bottom 40 percent declined over the period (figure 0.2).[7]

Figure 0.2 **Growth of per capita income/consumption of the bottom 40 percent exceeded the country average in most countries (2002-2012 in 2005 ppp)**

(% annualized growth for a 5 year period between 2002-2012)



Source: Staff calculations based on PovcalNet.

Notes: 1. Based on real mean per capita consumption or income measured at 2005 purchasing power parity (ppp) exchange rates using data available from PovcalNet for each country. Europe and Central Asia are an exception as their data comes from ECATSD. PovcalNet is the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

2: The National Sample Survey (NSS) reports that the growth of per capita income/consumption of the total population of India was 2 percent between 2002 and 2010 in 2005 ppp. However, according to the National Account Statistics (NAS) this figure was much higher.

0.11 While gaps in living standards have been closing, the well-being of households in the bottom 40 percent remains much lower than in households in the top 60 percent. For countries with data available for the period 2005-2012, young children in the poorest households are 2-3 times more likely to be malnourished than those in the top wealth quintile. Under-five mortality rates are significantly higher for the bottom 40 percent than for the top 60 percent. Access to an improved water source and to improved sanitation remain highly unequal in many low-income countries, although in many middle-income countries coverage is approaching 100 percent for all income groups.

0.12 More progress has been made in achieving full coverage in primary education, although coverage remains short of the target. In many countries the richer quintiles have already achieved close to 100 percent enrollment. Improvements in primary enrollment have generally benefited the poor and girls. However, enrollment beyond primary school in the bottom 40 percent remains low. In a sample of 31 low- and lower middle-income African and South Asian countries, a child in the top quintile was 25 times more likely to complete secondary school than a child in the bottom quintile.

Immediate Global Growth Prospects

0.13 The global economy is expected to strengthen between now and end-2015 following a sluggish patch during the first half of this year. In 2015—the last year of MDG-monitoring—overall global growth is expected to be 4 percent. Growth in advanced economies should move above 2 percent (for the first time since 2010) while growth in emerging market and developing countries should also increase to 5 percent. This expansion will take place against the background of relatively stable prices, supported by generally sound macroeconomic policies in most countries. While the outlook is broadly favorable–boding well for the poor—there are significant downside risks, including from geopolitical developments and the potential for a financial market correction.

0.14 Low-income developing countries have continued to record strong economic growth, on the order of 6 percent per annum, in recent years, and this favorable trend is expected to continue in 2014-15. That said, these economies remain vulnerable to adverse shocks, particularly the potential for a protracted slowdown in emerging market countries' growth. The impact of such a slowdown would vary greatly across countries, depending on specific country characteristics such as the size of available macroeconomic buffers.

The Challenges in High Income Economies

0.15 In high-income countries, the rising concern about shared prosperity is a reaction to income inequality that has reached levels unprecedented in the post-war period. The average income of the richest 10 percent of the population is now about 9.5 times that of the poorest 10 percent, as opposed to 7 times 25 years ago. Most strikingly, income inequality is increasing even in traditionally egalitarian high-income stalwarts like Germany, Denmark and Sweden. At present, 11 percent of the OECD population lives in relative poverty.[8] The elderly, children and youth are the most affected. Evidence indicates that high inequality dampens economic growth over the long run. On average, a one Gini point increase in income inequality is estimated to lower annual GDP per capita growth by around 0.2 percentage points in advanced countries; the effect is estimated to be somewhat smaller (in the order of 0.14) in empirical analysis for a larger set of countries.

The specter of inequality

0.16 Inequality in high-income OECD countries arises from the impact of technological progress, which has increased wage dispersion in favor of higher-skilled workers, such as information and communications technology (ICT) or financial services professionals, and to a lesser degree, globalization. Most technology-related jobs require tertiary educational attainment, especially in the areas of STEM disciplines (science, technology, engineering and mathematics). Typically, tertiary-educated adults are more likely to find jobs and earn higher salaries, while workers lacking tertiary skills are excluded. Rising shares of non-wage income from capital for richer households has also fueled income inequality.

Early and continuous investments in human capital

0.17 Inequality of opportunities due to poor human capital holds back the poor from getting better paying jobs and increasing intergenerational social and economic mobility. On average, people with better educations live 6 years longer than their poorly educated peers in 14 OECD countries. The *OECD's Programme for International Student Assessment* (PISA) shows that children who have enrolled in pre-school education perform better throughout their life and tend to be better integrated socially. Disadvantaged students tend to have less access to pre-primary education. Even when they attend primary schools, most of the low skilled and poor workers will have left school before finishing upper-secondary education. Further, the poor quality of education in low-performing schools yields low returns to their learning experience, and thus require additional efforts to catch up through supplementary courses.

More inclusive labor markets

0.18 The structure of labor markets should be conducive to job creation. Safety nets should strike a balance between providing the flexibility employers need to hire and fire workers and the need to protect workers against adverse income shocks, by extending coverage of unemployment benefits and measures to boost replacement rates and effective activation policies. It is important to design policies which make it easier for vulnerable and less experienced workers to find jobs.

0.19 Social protection systems are pro-inclusive and efficient when they operate in tandem with employment policies by focusing on social benefits that are employment-related and are accompanied by measures to promote the employment of the young and older workers. They can also finance childcare or educational reforms, for example the move towards provision of early childhood education as in Australia and the United Kingdom, and the provision of subsidies to childcare in Republic of Korea.

More attention to the environment

0.20 As in developing countries, the poor, young, and elderly in high-income economies are particularly vulnerable to environmental degradation. People with lower incomes are more likely to live in environmentally distressed areas and thus be subjected to pollution and other environmental hazards.

0.21 Environmental policies in high income countries are important for sustaining shared prosperity across generations. However, the distributional implications of these policies vary across countries, regions, sectors and groups in society, and they can have beneficial or adverse effects on equity and labor earnings of the poor. For example, irrigation subsidies that boost agricultural production can impair the efficiency of water use and exacerbate off-farm pollution, since water charges for farmers rarely reflect real scarcity or environmental costs. Reducing these subsidies can thus improve the environment and may improve equity, since they typically benefit rich farmers. However, reducing subsidies may also harm poor agricultural workers.

0.22 Governments often offset the negative impact of environmental policy actions and reinforce their positive impact through re-cycling the revenue streams raised by environmental levies, or saved by the removal of harmful subsidies, towards ends which target social equity. Inadequate urban drainage is a major problem in many OECD countries and leads to high volumes of polluted run-off flooding streets and the environment.

The Challenges Facing Developing Economies

0.23 Investing in human capital has a profound effect through its potential to lift or keep an individual out of poverty and spur robust economic growth, and is thus critical to achieve the twin goals. As investments in human capital are cumulative and portable, they facilitate social and economic mobility. Inclusive growth requires the generation of jobs, initially in low-skilled, labor-intensive sectors, since labor earnings are the largest source of income for the poor and those at the bottom 40 percent of the income distribution.

Earlier and greater investments in educating the young

0.24 Early investments in human capital are the most effective, as poor nutrition and disease at a young age can have life-long implications for educational attainment and adult earnings. Immunizations can have a benefit-to-cost ratio up to 20:1, and deworming can have a benefit-to-cost ratio as high as 6:1. Unfortunately, in a large number of low- and middle-income countries with high rates of poverty among children and youth, early childhood development (ECD) programs are scarce.

0.25 Investments in human capital through life-long learning that target the most vulnerable can play a pivotal role in breaking the inter-generational transmission of poverty. Educational policies must be geared to ensure that kids can attend, and learn from, primary school. However, a primary education is often not sufficient to achieve high levels of labor productivity and earnings later in life. In low- and middle-income countries, the transition from primary school into secondary school or technical or vocational school is becoming increasingly important to stay out of poverty and improve one's standard of living.

0.26 Investments in education and skills training are needed to better match workers' abilities with the demand for labor. Enterprise surveys show that employer complaints about skills are more often voiced by firms that are newer, faster-growing, more outwardly oriented, and more eager to move up the technology ladder. Investments in education that foster marketable skills can thus attract more dynamic firms and contribute directly to economic growth. In developing countries where a large share of the poor rely on agriculture, the test of marketable skills is reflected in higher yields in farming, increased access to off-farm small enterprises, migration to urban areas or countries with higher incomes, and transition to formal sector employment.

Better social safety nets

0.27 As extreme poverty declines, growth on its own lifts fewer and fewer people out of poverty because the remaining poor face significant barriers to raising their income. Members of disadvantaged groups who are excluded from labor or credit markets or reside in remote, or fragile and conflict-affected, areas are typically unable to benefit enough from the growth process to escape poverty and deprivation. Thus achieving the twin goals will require devoting more resources to safety nets to reach the remaining extreme poor.

0.28 Safety nets in low- and middle-income countries provide rudimentary benefits during economic crises such as the spikes in food and fuel prices, droughts, earthquakes and floods, and can remove barriers to economic opportunity for the poor, and even more importantly for their children. Well-designed social safety nets can also raise growth through many channels: they protect the productive assets of the poor, for example enabling households to avoid selling cattle following a sudden decline in income; they help build human capital by encouraging school attendance and take up of health services through conditional cash transfer programs; they provide infrastructure and services to poor communities; they may make growth-enhancing reforms politically feasible; and they can increase profitable investment by improving access to credit and inputs, by changing incentives and reducing information asymmetries, and by improving households' ability to manage risk.

0.29 Efficient social safety nets in low-income settings redistribute some of the gains from growth while contributing to higher growth. Conditional cash transfer programs like Brazil's Bolsa Familia have increased school attendance by compensating poor households for the direct costs (e.g. school fees, uniforms) and indirect costs (foregone income because children go to school rather than work) involved. On the other hand, poorly targeted general subsidy programs, such as energy subsidies, decrease economic efficiency and equity. In low- and middle-income countries on average, blanket subsidies for energy, except for kerosene in low-income countries, benefits the richest 20 percent of households six times more than the poorest 20 percent. Annual global energy subsidies (including estimates for the costs of negative externalities) are about US$2 trillion. Reducing these subsidies would allow greater resources to be directed to enhancing growth or assisting the poor, either through improving their ability to participate in economic activities or through income support. For example, in 2005 Indonesia devoted part of the $4.5 billion saved by reducing fuel subsidies to increasing cash transfers to low-income individuals and improving health services.

0.30 The cost of safety nets rises as poverty declines. Identifying and efficiently reaching the poor is a formidable challenge in many countries, as it requires increased resources and improved targeting. Many of those who remain in extreme poverty are harder to reach, so that the administrative costs of safety net programs tend to rise as poverty declines. However, recent developments in ICT, such as the India's new program to provide all its citizens and residence a unique official identity, have the potential to reduce these administrative cost significantly and improve targeting.

More emphasis on green growth policies

0.31 Without action to contain the adverse implications of global and national environmental challenges, the sustainability of reducing poverty and boosting shared prosperity is clearly at risk. Global climate change and more local forms of environmental degradation, such as air pollution and land degradation, tend to particularly harm the poor, because many live in ecologically fragile areas and depend on environmental goods and services for their livelihoods. Environmental degradation also imposes significant costs on the economy as a whole (estimated at 3 to 10 percent of GDP in a sample of 20 countries representing about 40 percent of the population in developing countries) and poses urgent challenges to the sustainability of economic growth. Alarmingly, about a third of the developing countries have experienced a decline in per capita wealth (where wealth includes natural resources) in all years in which data are available. Policies to improve sustainability should be selected on the basis of addressing the most urgent challenges and with the smallest costs. Each and every country's growth strategy should include tailored actions to promote green growth. These strategies can look very different in each country, depending on its needs, priorities, and capacities.

0.32 Countries should focus on maximizing local and immediate benefits and avoiding costly investments in infrastructure and machinery that use energy inefficiently and are intended to last over many years. Suitable measures include investments in preparing for the higher frequency of extreme weather events anticipated with climate change, energy-efficient performance standards, climate-resilient building standards, better land use planning, integrated water reservoir and river basin management, and climate smart intensification of agriculture. Other urgent measures that involve some tradeoffs with short-term, local benefits include efficient pricing of carbon resources and of water, and limits on the exploitation of forests, natural habitats, coastal zones, and fisheries. Such actions may require international cooperation through technology transfers, finance, or treaties—especially where they involve global public goods. But even without global agreements and mechanisms, countries can make progress in tackling environmental challenges, particularly by focusing on low-cost policies.

0.33 Green growth policies can directly benefit the poor. For example, poor households can be paid for efforts to protect the environment, as in the Brazilian Bolsa Floresta program which rewards poor families for stopping deforestation on the condition that children are enrolled in school. Environmental protection activities such as land restoration, selective logging for sustainable forest management, and guards in protected areas can generate low-skill employment opportunities for the poor. On the other hand, green growth policies may also limit the exploitation of natural resources in ways that hurt the poor, for example by imposing efficient pricing of carbon resources and water, and limits on the exploitation of forests, natural habitats, coastal zones, and fisheries. Such policies require complementary social policies to offset the impact.

More, better and more timely data needed to inform policy

0.34 All these policy actions require better and more timely data. The 2013 report of the High-Level Panel on the Post-2015 Development Agenda, convened by the UN Secretary-General, calls for a "data revolution for sustainable development, with a new international initiative to improve the quality of statistics and information available to citizens." The development community urgently needs to improve the availability of data for analysis of the twin goals, and of the MDGs and their successors beyond 2015. Increasing the timeliness and frequency of data collection will require more resources and improvements in the capacity of statistical agencies. Technology that can improve data collection and well-designed survey-to-survey imputations should be scaled up. Greater frequency should not, however, come at the cost of quality. The guidelines for measuring poverty need to be standardized, and more emphasis placed on maintaining comparable measures of consumption and income..

Main Messages

0.35 The 2014 GMR reaffirms the centrality of economic growth, and the importance of inclusive and sustainable growth, for achieving the twin goals of ending poverty and improving the living standards of the bottom 40 percent in every country—developed and developing. The policy areas are very similar for both groups of countries, although the policies themselves differ significantly between the two groups in some areas. Recommended policies also differ within the two groups, and do not depend only on income levels, as can be seen in the particular challenges facing fragile and post conflict situations, as well as small states. In general, the most useful policy lessons for achieving the twin goals are provided by countries with comparable characteristics, initial conditions, and constraints to growth. The Report has 6 main messages:

i. Global growth prospects for the immediate future are encouraging, with the world's economy expected to grow between 3 and 4 percent in 2014-15. While conflicts in Eastern Europe and the Middle East are clouding these prospects, emerging and developing countries are expected to grow about 5 percent in 2015. Most encouragingly, the three regions with almost 95 percent of world's poor—East Asia, South Asia and Sub Saharan Africa—are expected to grow at an annual average of 6 percent over the next two years.

ii. The medium-term prospects of the world economy provide reason to be optimistic about meeting the World Bank Group's interim target of reducing extreme poverty to single digits by 2020. However, even if extreme poverty continues to fall as projected in East and South Asia, the prospects of reducing global poverty to below 3 percent by 2030 are not good. Ending extreme poverty by 2030 will require sustained high growth globally and accelerated poverty reduction in Sub-Saharan Africa and fragile and conflict-affected states over the next fifteen years.

iii. The prospects for boosting shared prosperity—defined by the World Bank Group as improvements in the living standards of the bottom 40 percent—are more complex. In low and middle-income countries, shared prosperity is constrained by slow and uneven progress in MDGs 2 through 7, especially in education, health and sanitation. Shared prosperity in high- and some middle-income countries is stalling because of unemployment driven by technological change that favors high-skilled workers and globalization.

iv. Macroeconomic stability, adequate investments in infrastructure, and evenhanded regulation of enterprise are necessary conditions for economic growth and improved living standards in all countries—developing, newly industrialized and high income. But to make this growth inclusive, countries at all stages of development require greater investments in human capital—especially the education and health of the less well-off segments of the population.

While the priorities for investments in education and health differ across countries, developing countries will require more attention to early childhood development of disadvantaged children, especially girls, to break the inter-generational transmission of poverty. In high and some middle income economies, the priorities are completion of secondary education that leads to academic or vocational education and training qualification. Educational systems should have adequate financing and good teachers to achieve clear learning standards that deliver job-relevant skills necessary for better paying jobs in all countries.

v. Well-designed safety nets can play a pivotal role in fostering inclusive human development. In some middle- and low-income countries, safety nets assist the poor and vulnerable, redistribute the gains from growth, and contribute to growth by enhancing the ability of the poor and ultimately their children to benefit from economic development. In high- and many middle-income countries, safety nets complement sophisticated social protection systems supported by tax-benefit systems. In developing countries, (conditional) cash transfer programs are efficient instruments for reaching the poor. Replacing energy subsidies, which are estimated globally at $2.0 trillion (about 2.9 percent of world GDP) for 2001, with well-targeted safety nets can benefit the poor at a much lower cost to the government.

vi. Addressing climate change is vital to sustainable, inclusive growth. Green growth policies preserve the natural assets of our planet so that they can be shared with future generations. Increasing environment-related taxes or removing subsidies can ensure that prices reflect better the full environmental and social costs of resource usage. As these policies may also hurt the poor, they should be off set with targeted support. While developing countries most likely should focus on energy efficiency, developed countries face the challenge of switching to cleaner sources of energy.

vii. It is time for a data revolution to improve the availability and quality of statistics. Immediate action is needed to produce more comprehensive, reliable, and timely data to monitor progress in achieving development goals, and inform the policies required for economic growth to be adequate, inclusive and sustainable.

A Roadmap to the Report

0.36 GMR 2014 has two parts. The first consists of a Report Card on the status of the MDGs and the WBG twin goals. The Report Card presents a global assessment of progress to date, including data on the WGB twin goals and the MDGs at the global, regional, and country levels. It also assesses the prospects for achieving the poverty target and various indicators that can be valuable in monitoring the world's endeavor to improve the lives of the less well off in society in the future. In particular, the Report Card records the disappointing performance related with the MDGs 2-7 in most developing countries, and growing disparities between the upper and lower segments of the income distribution in high-income countries. An MDG-specific Annex supplements the Report Card.

0.37 The second part has four chapters that discuss policies and institutions that can help to address the opportunities and challenges related with human capital accumulation and the environment such that they enhance growth, end poverty and promote shared prosperity.

- Chapter 1 centers on economic growth, its inclusiveness and sustainability that are the rudimentary elements of any conceptual framework used to achieve the WBG's twin goals. It notes that growth may not be adequate for the twin goals. Chapter 1 focuses on two ingredients of the inclusiveness of growth – jobs and a social contract. The latter consists of the equality of opportunity and safety nets. Human capital can play a pivotal role in enhancing the equality of opportunity of the less well-off. The implications of environmental sustainability for the twin goals are also introduced in chapter 1.

- The immediate growth prospects in developing and high-income countries are outlined in Chapter 2. The chapter provides a reminder that the economic growth prospects of developing countries still hinge on the robustness of economic growth in the high-income economies.

- Chapter 3 examines the debates on growth and inequality in the high income OECD countries, and is a contribution of the staff of the OECD. It highlights the challenge posed by structural factors, productivity and labor utilization and the potential of human capital, especially education and skills, and the role of safety nets in addressing these challenges. It also discusses the case for green growth in high-income countries.

- Finally, Chapter 4 addresses the policy agenda for increasing the inclusiveness and sustainability of growth in developing countries. Given their large deficits in health and education, as documented by the unsatisfactory progress in most developing countries towards MDGs 2 through 7, it presents a compelling case for policies and institutions that boost human capital. Early childhood development programs and investments that address the largest gaps between the poor and the rich are priorities. The chapter examines how social safety nets can enhance growth and redistribute some of the gains from growth. It also discusses the challenges and opportunities developing countries face to green their growth.

0.38 The structure and the contents of the Report illustrate how the relationships between enhancing growth, ending extreme poverty and promoting shared prosperity are even more complicated in developing economies than they are in the high income countries. With institutional capacity and fiscal resources more constrained, developing countries face an especially difficult task in ensuring the adequacy, inclusiveness and sustainability of economic growth. But they also show that the policies to promote shared prosperity have more than a few common prerequisites—a focus on investments in human capital, the judicious use of social safety nets, and a mindfulness of the environmental consequences of economic growth.

Notes

[1] In 1990, about 43.1 percent of the developing world's population (about 1.9 billion people) lived below the extreme poverty line defined as $1.25 a day. MDG 1 aimed to halve this number by 2015. It was achieved in 2010. Today, approximately 1 billion people still reside below the extreme poverty line.

[2] MDG 1 refers to the developing world's population, whereas the WBG's poverty target is related with the world's population.

[3] The MDG Annex provides a detailed report on the world's MDG achievements.

[4] The shared prosperity goal is defined by the WBG as income growth of the bottom 40 percent of the population. It is important to be mindful of the fact that while real income is an overarching concept, poverty has multiple dimensions that the world needs to be concerned with. Fortunately, the shared prosperity measure has significant overlap with the non-income dimensions of welfare covered by MDGs 2-7.

[5] The source of the data for the 78 countries is PovcalNet.

[6] These countries are: Fiji, Slovak Republic, Russia, Belarus, Panama, Uruguay, and Malaysia

[7] These countries are: Cote d'Ivoire, Georgia, Albania, Macedonia, Serbia, Croatia, Guatemala, Central African Republic, and Zambia.

[8] Measured by the median household disposable income.

REPORT CARD

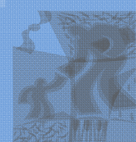
The World Bank Twin Goals
&
The Millennium Development Goals 2014

World Bank Group Strategy

1

End extreme poverty

Reduce the percentage of people living on less than $1.25 a day to 3 percent by 2030



2

Promote shared prosperity

Improve the living standards of the bottom 40 percent of the population in every country

Strategy Outcomes

- Align all WBG activities and resources to the two goals, maximize development impact, and emphasize WBG comparative advantage.
- Operationalize the goals through the new country engagement model to help country clients identify and tackle the toughest development challenges.
- Be recognized as a Solutions WBG offering world-class knowledge services and customized development solutions grounded in evidence and focused on results.
- Seek transformational engagements and take smart risks.
- Promote scaled-up partnerships that are strategically aligned with the goals, and crowd in public and private resources, expertise, and ideas.
- Work as One World Bank Group committed to achieving the goals.

Monitoring the Road to Ending Poverty and Shared Prosperity

External

Monitoring of goals

Global, regional, country level poverty
- Household income
- Consumption per capita

Monitoring of bottom 40%
- Prevalence of Underweight (% of children under age 5)
- Primary Completion rate (% of relevant age group)
- Under-five mortality rate (per 1,000 live births)
- Infant mortality rate (per 1,000 live births)
- Assistance during birth delivery (any skilled personnel) (% of births)
- HIV prevalence rate among adults (15 to 49 years)
- Access to improved water (% of the population)
- Access to improved sanitation facilities (% of the population)

Internal

The World Bank Corporate Scorecard – Potential Areas for WBG Strategy Results Framework

Tier One (*country level data*)
- Poverty Goal
- Shared Prosperity Goal
- Sustainability indicators – environmental, social and economic

Tier Two (*Indicators common to all agencies*)
- Private capital mobilized by WBG
- Number of people reached by infrastructure services
- Additional indicators based on new Global Practices

Tiers Three and Four
- Leveraged resources
- Transformational projects
- One WBG – joint projects and regional business planning
- Improved knowledge flows
- Systematic country diagnostics
- Greater strategic alignment of partnership programs

Based on available data

1. The Report Card presents a global assessment of progress to date, including data[1] on the WGB twin goals and the MDGs at the global, regional, and country levels. The Report Card identifies the outstanding performers that have made considerable progress, discusses expected and unexpected outcomes gleaned from monitoring progress towards the twin goals and the MDG targets, and shows where progress has slowed or indicators have deteriorated.[*] The key messages are:

i. The Global Monitoring Report will include for the first time the World Bank Group's twin goals of ending extreme poverty by 2030 and boosting the incomes of the bottom 40 percent (including in high-income economies), referred to as shared prosperity. Focusing on the bottom 40 percent will assist in the eventual attainment of the MDGs, as the delivery of MDG-related services to the bottom 40 percent is clearly lagging.

ii. The interim goal of reducing extreme poverty to below 9 percent of the global population by 2020 is likely to be reached, while the goal of ending poverty by 2030 remains aspirational. Shared prosperity: growth has improved the incomes/consumption of the bottom 40 percent (with some regional variation), but it has not been sufficient to reach the health, education, and other non-income development goals.

iii. MDGs: Only a few MDG targets (poverty, gender equality in primary and secondary education, water, and slums) have been met at the global level. The gender equality on secondary enrollment target is likely to be met by 2015, while the remaining MDGs (primary education completion, access to basic sanitation, and infant, child and maternal mortality) are lagging and will not be achieved without rapid acceleration toward the finish line. Being able to report regularly on the WBG twin goals and current MDGs and their successors will require a major effort, and will also need to recognize the importance of the unfinished data agenda.

Twin goals

2. One year ago, the World Bank Group (WBG) proposed two goals to measure success in promoting sustainable economic development, and to monitor its own effectiveness in delivering results. The first goal is to essentially end extreme poverty: by reducing the share of people living on less than $1.25 a day to less than 3 percent of the global population by 2030. The second goal is to promote shared prosperity: by improving the living standards of the bottom 40 percent of the population in every country (World Bank 2014c).

3. The first goal of ending poverty can be seen as a continuation of part of MDG 1, which aims to eradicate extreme poverty and hunger, and has as its main target to halve the share of people who live in extreme poverty by 2015 (from the 1990 level). The success in reaching MDG 1.a—halving extreme poverty—in 2010, five years ahead of schedule, has emboldened the WBG to set a more ambitious goal. The second goal of boosting shared prosperity is new and

[*] All regional and global poverty estimates in this chapter are based on an internal working version of the World Bank's PovcalNet database, with data as of August 2014. While every effort was made to use the most up-to-date data available, the estimates presented in this report should be seen as approximate; the official global and regional poverty estimates will be published in the final publication of the Global Monitoring Report. Concurrent with the publication of the Global Monitoring Report, the World Bank's PovcalNet website will be updated.

opportune. It shifts the focus in evaluating economic development from average income growth to income growth of the bottom 40 percent. Indicators proxying the socioeconomic status of the bottom 40 percent of the population, have proven difficult to improve, even though the growth of incomes of the bottom 40 percent of the population has not been slower than that of the general population in many countries. This growing inequality in basic living standards is worrisome. These developments have inspired the WBG's goal of shared prosperity. Thus the two WBG goals retain an emphasis on growth and economic dynamism, while emphasizing that the world should pay particularly attention to those who are less fortunate.

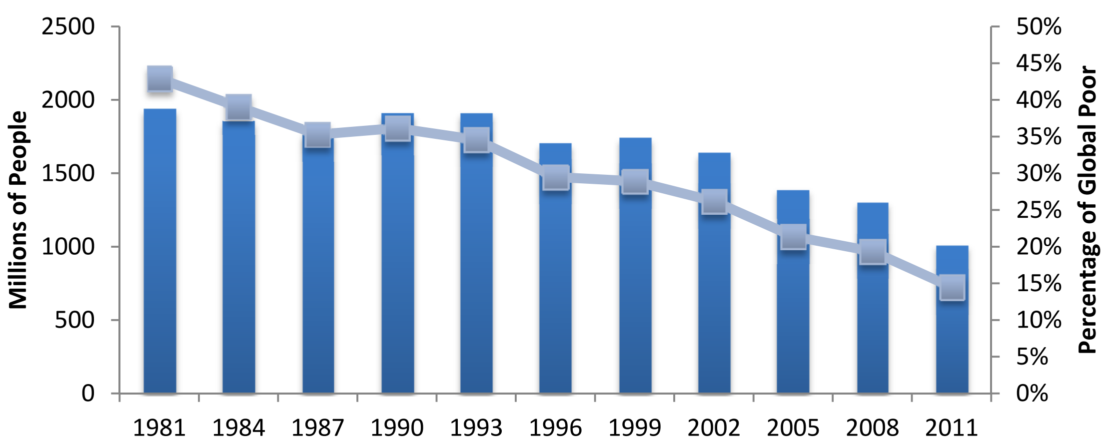
Ending extreme poverty

4. Global poverty has declined significantly over the last few decades. The number of people living on below $1.25 a day (referred to as extreme poverty) has halved since 1990, reaching around 1 billion people in 2011 (figure 1 and table 1), representing 14.5 percent of the entire global population. The $1.25 per day poverty line is in 2005 prices, and represents the average of the national poverty lines of the 15 poorest developing countries.[1]

5. New poverty estimates for 2010 and 2011[2] show a notable decline in extreme poverty (table 1). In part this decline reflects newly available household surveys which show much lower poverty measures. For example, India's poverty headcount fell by 10 percentage points within two years (from the National Sample Survey (NSS) 2009/10 to NSS 2011/12). Lower poverty rates also reflect revisions to data on population, which can affect headcount poverty estimates at the country and regional levels. For example, China's urban population was revised upwards, which reduces China's national headcount poverty estimate by 1 to 2 percentage points (since China's poor are concentrated in rural areas, a higher urban population estimate raises the total population estimate with little impact on the total number of poor). In addition, the lower poverty estimates reflect revisions to consumer price (CPI) data and national accounts data.[3]

Figure 1 Poverty has been steadily declining

Millions of people living below $1.25 per day, Percentage of people living below $1.25 per day (global)



Source: World Bank, PovcalNet: the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

Table 1 Extreme poverty by region

% of population below US$1.25 a day (2005 ppp)						Projections[4]		
Region	**1990**	**2005**	**2008**	**2010**	**2011**	**2015**	**2020**	**2030**
East Asia and Pacific	58.2	17.8	13.7	10.6	8.1	4.2	1.5	0.1[5]
Eastern Europe and Central Asia	1.7	1.1	0.4	0.5	0.3	0.3	0.2	0.1
Latin America and the Caribbean	11.5	7.6	5.4	4.8	4.6	4.3	3.8	3.0
Middle East and North Africa	6.2	3.8	2.7	2.2	2.1	2.2	1.8	2.3
South Asia	53.2	39.3	34.5	30.1	24.4	18.1	13.8	4.1
Sub-Saharan Africa	56.6	52.9	49.7	48.2	46.6	41.0	34.2	23.8
Total (developing world)	**43.5**	**25.2**	**22.0**	**19.6**	**17.0**	**13.4**	**10.5**	**6.2**
Total	**36.4**	**21.5**	**18.7**	**16.7**	**14.5**	**11.5**	**9.1**	**5.4**
Millions of people below US$1.25 a day (2005 ppp)						**Projections**		
Region	**1990**	**2005**	**2008**	**2010**	**2011**	**2015**	**2020**	**2030**
East Asia and Pacific	957.1	345.1	271.7	213.8	163.4	88.7	31.3	2.0
Eastern Europe and Central Asia	7.7	5.3	1.8	2.4	1.6	1.3	0.8	0.5
Latin America and the Caribbean	50.6	42.0	31.3	28.3	27.5	27.0	24.8	21.2
Middle East and North Africa	14.0	11.4	8.4	7.1	7.1	7.9	7.0	10.2
South Asia	603.2	588.8	539.2	483.0	397.8	310.6	249.6	82.2
Sub-Saharan Africa	287.1	400.1	407.4	416.5	413.6	403.6	382.9	338.3
Total	**1,919.8**	**1,392.6**	**1,259.7**	**1,151.0**	**1,011.1**	**839.1**	**696.4**	**454.4**

Source: World Bank staff calculations from PovcalNet database, the on-line tool for poverty measurement developed by the Development Research Group of the World Bank.
See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

6. Poverty has been more prevalent in sub-Saharan Africa and South Asia than in other developing regions, accounting for about three quarters of the global poor. According to the 2011 estimates, almost three-fifths of the world's extreme poor are concentrated in just five countries: Bangladesh, China, the Democratic Republic of Congo, India, and Nigeria (figure 2). Adding another five countries (Ethiopia, Indonesia, Pakistan, the Philippines, and Tanzania) would encompass just over 70 percent of the extreme poor.

Figure 2 Top 10 countries with largest share of the global extreme poor (2011)

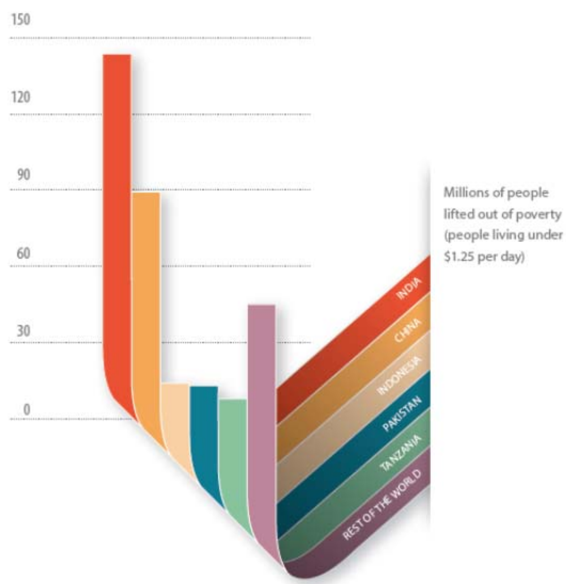
Percentage of people living under $1.25 per day

Source: World Bank, PovcalNet: the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

7. The world's most populous countries, China and India have played a central role in the global reduction of poverty as measured by the $1.25 poverty line. Together they lifted some 232 million people out of poverty from 2008 to 2011 (figure 3).

Figure 3 Leading 5 contributors to poverty reduction from 2008 to 2011

Reduction of poverty between 2008-2011 (Million people living under $1.25 per day)

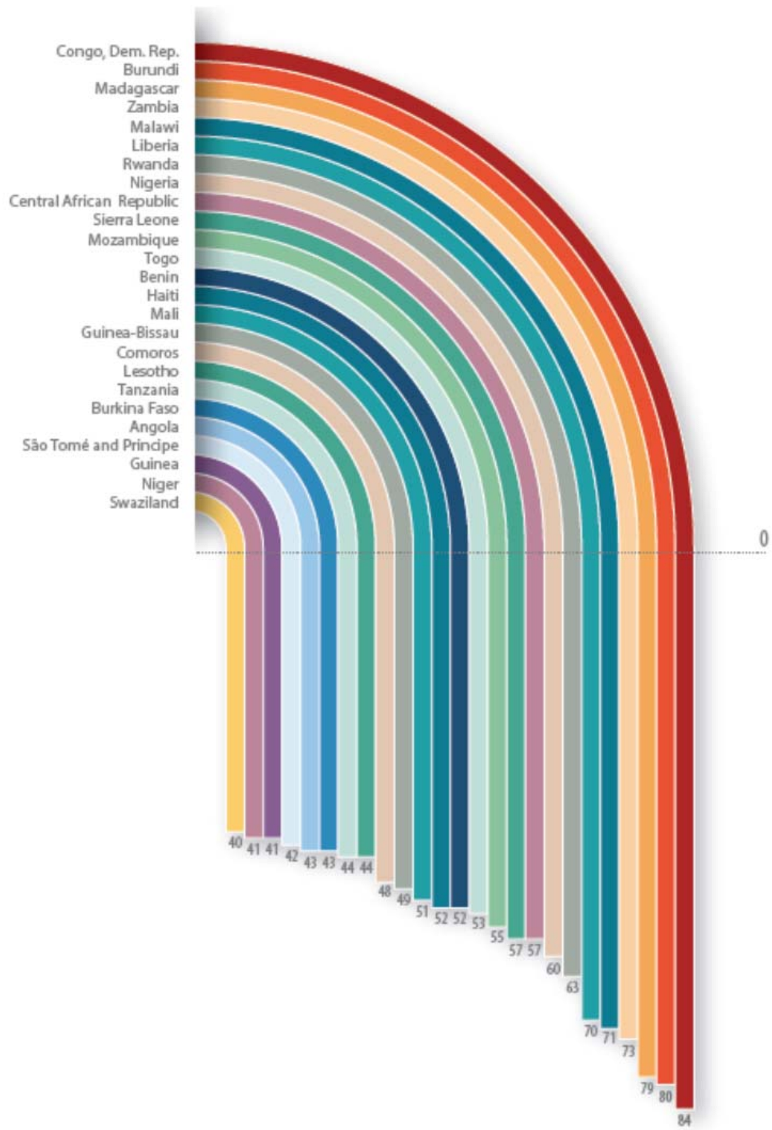


Source: World Bank, PovcalNet: the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

8. In many low- and lower middle-income countries, there is significant overlap between those living in absolute poverty and the bottom 40 percent of the population. In 25 countries (figure 4) the number of people living in extreme poverty is equal to or more than 40 percent of the population in 2011. These countries account for about a quarter of the world's extremely poor people. All these countries except Haiti are in sub-Saharan Africa, and all except for Nigeria, the Democratic Republic of Congo and Tanzania have a population of less than 30 million people. Therefore, their high poverty rates do not make a significant contribution to the total number of the extremely poor at the global level. Nevertheless, reducing poverty in these countries is a moral imperative and as important as poverty reduction in any other country (World Bank 2014b).

Figure 4 Countries where 40 percent or more of the population is extremely poor (2011)

Percentage of extremely poor people



Source: World Bank, PovcalNet: the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

World poverty 2030: scenarios

9. How long would it take to lift one billion people out of poverty?[6] An annual per capita consumption growth of 4 percent in every country around the world, combined with no change in income distribution in each country, would result in a reduction of global poverty to about 3 percent of the world's population by 2030. Even though this scenario underlines the view that ending global poverty is not impossible, it is achievable only with strong effort and commitment from all countries and results in a per capita growth rate of 4 percent. Even under this scenario, however, poverty in sub-Saharan Africa would remain just over 19 percent in 2030, accounting for nearly 80 percent of the global poor in that year. Six countries would still have poverty rates above 30 percent in 2030: Burundi, the Democratic Republic of Congo, Haiti, Madagascar, Malawi, and Zambia.[7]

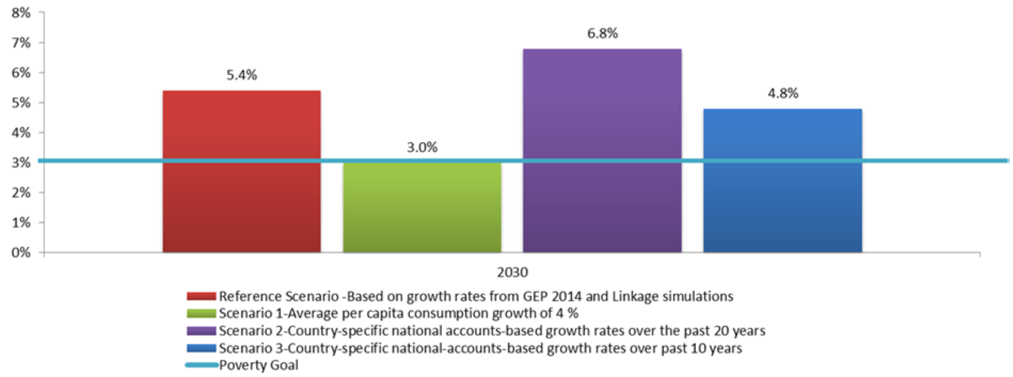
10. Of course, growth rates differ greatly among developing countries. A second scenario assumes that GDP per capita increases in each country at the average annual growth rate achieved in that country over the past twenty years. Global poverty under this scenario would remain about 6.8 percent of the world's population by 2030, still very far from the 3 percent target. And the number of countries with more than 30 percent poverty rates would increase from six in the first scenario to 23.[8]

11. A third scenario maintains the assumption of country-specific growth rates, but now applies the average annual rate achieved during the past 10 years, instead of the past 20 years. Poverty would fall to about 4.8 percent of the world's population by 2030, which is lower than the previous scenario, but still well above the global target of 3 percent. The number of countries with poverty rates above 30 percent would still be 17 in 2030.[9]

12. The reference scenario uses growth rate projections from the Global Economic Prospects Report (World Bank 2014a). Global per capita GDP increases by 1.7 percent per year, with developing countries growing at a rate slightly below 4 percent and developed countries growing at about 0.6 percent. In this scenario, the global poverty rate in 2030 would still be just above 2 percentage points above the 3 percent target. Figure 5 shows the extreme poverty headcounts by for the various scenarios discussed by 2030.

Figure 5 **World poverty scenarios for 2030 vary with different growth rate assumptions**

Percentage of extreme poverty assuming different growth rates in 2030



Source: Policy Research Report, 2014 and World Bank staff calculations from Global Economic Prospects (GEP) and World Bank's Global Linkage simulation tool.

13. These scenarios may be optimistic, in that they assume that the past relationship between per capita GDP growth and the decline in the poverty headcount index continues into the future.[10] Unfortunately, there is already some evidence that the poverty target may become more difficult to reach as it becomes closer. A large number of people tend to live on average incomes while relatively fewer live on very high or very low incomes. After poverty reduction has reached the mass of poor people concentrated closer to the middle of the income distribution, poverty will fall more slowly, even if the pace of growth remains unchanged (see also chapter 1).

14. Many poor people may become "trapped" in poverty because of failures in credit, land, or other key markets, or because low levels of education, skills, or health prevent them from availing of new opportunities proffered by a general expansion of economic activity. The remaining poor may be in hard-to-reach pockets of the population, for example because they live far from centers of economic activity or because they suffer exclusion due to ethnicity or language. Also, many poor people live in countries experiencing conflict, which may not participate in any global expansion of economic activity. All of these factors may contribute to unevenness in the rate of poverty reduction within and between countries, and can result in a declining responsiveness of poverty reduction to a given rate of aggregate growth over time.

Promoting shared prosperity

15. The WBG shared prosperity goal is to increase per capita real household income or consumption of the bottom 40 percent of each country's population. Since the goal is country specific, there is no explicit target set at the global level. The tracking of shared prosperity can reinforce poverty reduction efforts in the low- and lower middle-income countries by bringing attention to those not covered by social inclusion policies but who might otherwise be left behind.[11] Calculating progress in shared prosperity requires comparable income surveys for multiple years. Figure 6 shows examples from four countries where multiple surveys exist since the 1980s and 1990s. In Uganda, shared prosperity varied significantly in the late 1990s and, but subsequently started increasing after that period, reaching a peak in the last years. Similarly, in Brazil, shared prosperity varied significantly in the 1990s before beginning an increasing trend

from the early 2000s. In this sense, performance has been better in both countries in more recent years. This is also the case in South Africa and Sri Lanka.

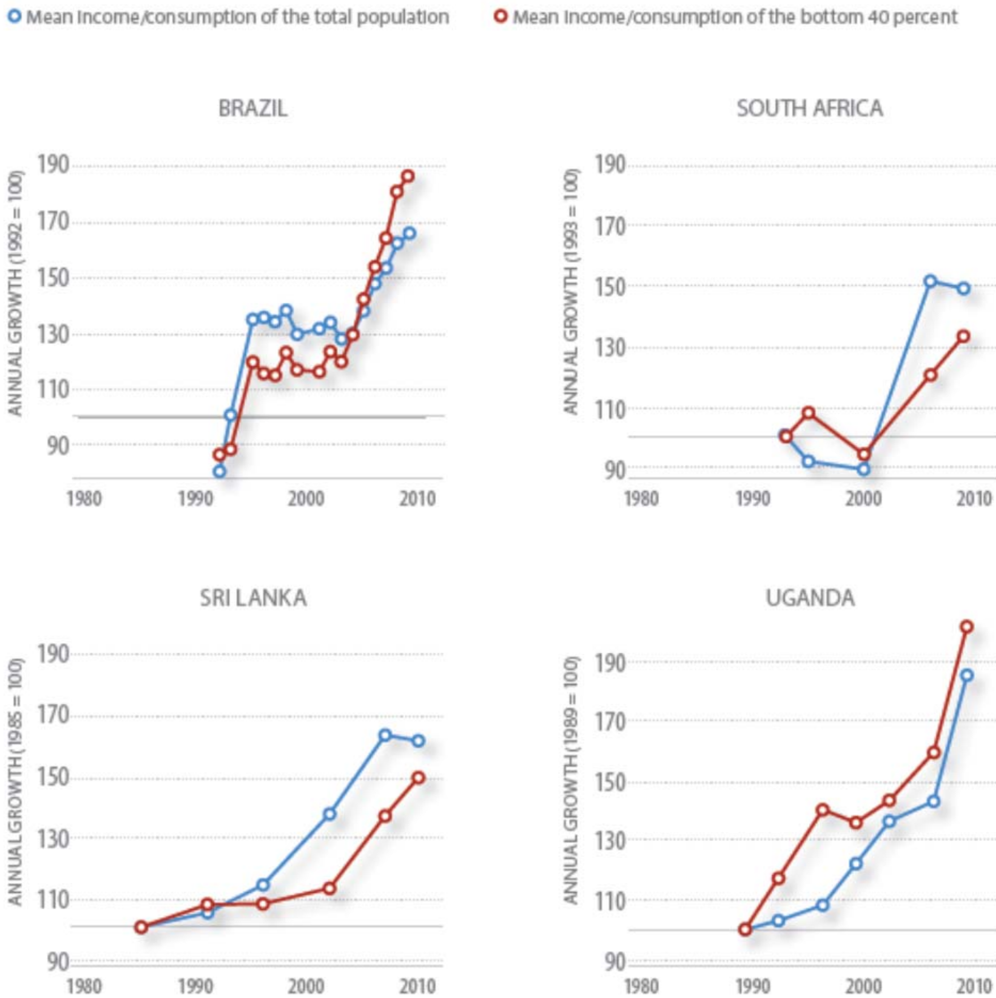
16. Another way to view the data on shared prosperity is to compare the performance of the bottom 40 percent with that of other parts of the income distribution (for example the top 60 percent of the population) or overall national performance. Alongside trends in average income of the bottom 40 percent, figure 6 also shows income growth rates for the total population. In addition to providing a means to compare performance of shared prosperity across countries, this comparison also allows an assessment of the evolution of income inequality. For example, the bottom 40 percent in South Africa did better than average during the mid-1990s (suggesting not only that incomes at the bottom 40 grew but also that there was some catching up). By contrast, by the 2000s, income growth for the bottom 40 percent increased, compared to the mid-1990s, but was significantly slower than average income growth, implying increased inequality. In Uganda, on the other hand, the average income of the bottom 40 percent has increased over time, and at rates that were equal or higher than the national average.

Tracking shared prosperity in practice

17. In what way do the characteristics of the bottom 40 percent of the population of a given country differ from those of the population as a whole (or the top 60 percent)? Shared prosperity is a relative concept; income levels of the bottom 40 percent differ across countries. For example, the average household in the bottom 40 percent of the United States income distribution would be among the richest 10 percent in Brazil. Similarly, the average household in the bottom 40 percent of Brazil's income distribution would be at approximately the 90th percentile of the income distribution in India.

Figure 6 **Evolution of mean income or consumption of the bottom 40 percent and the overall population**

Mean income/consumption of the total population and bottom 40 percent



Source: Policy Research Report, 2014.

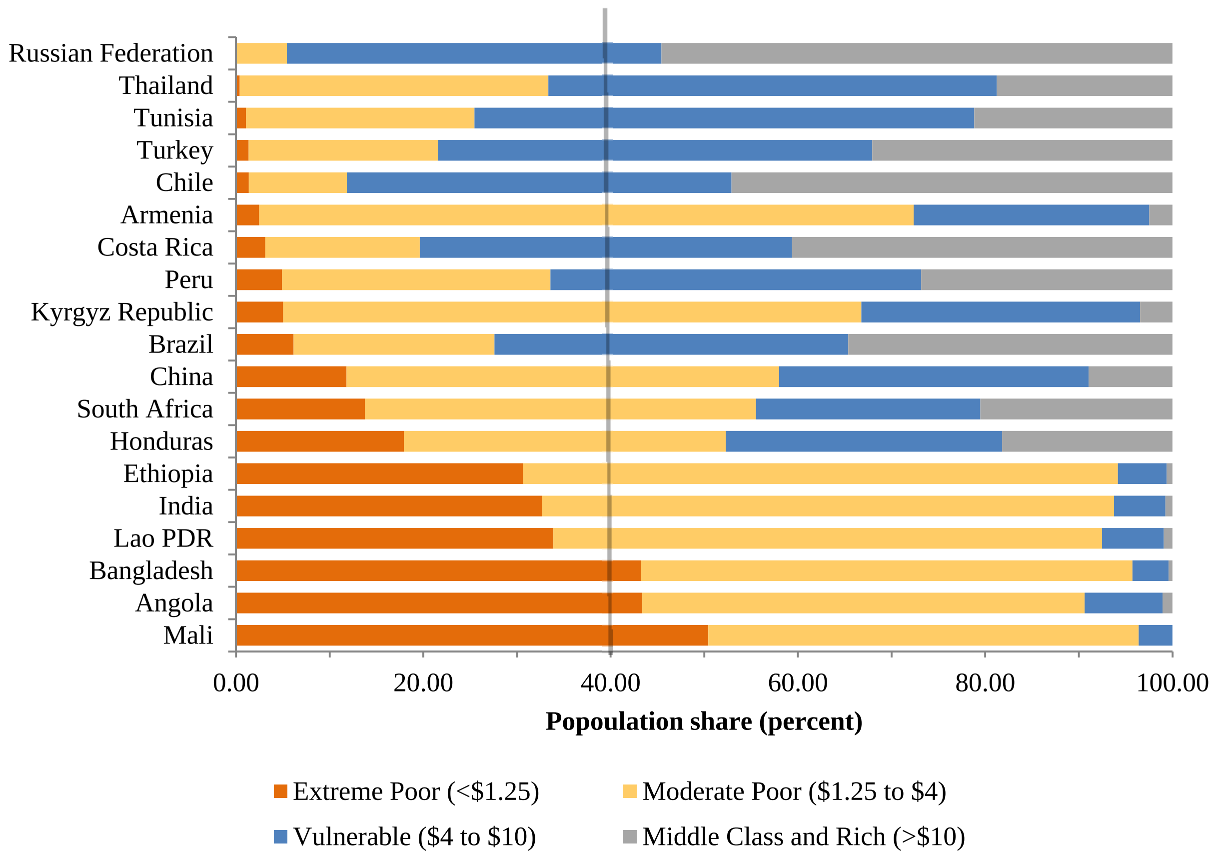
Note: Index of household consumption expenditure or income per capita in constant 2005 ppp dollar (earliest year=100)

18. Both the average income and the distribution of income within the bottom 40 percent vary greatly across countries. Figure 7 illustrates this point with the size of various income-based groups across a set of developing countries.[12] In some countries, like Angola, Bangladesh, and Mali, all households in the bottom 40 percent are among the extreme poor (using the international poverty line), whereas in other countries, like Ethiopia and India, 80 percent of those at the bottom 40 percent are extremely poor and the rest are moderately poor. In China, the bottom 40 percent are mostly among the moderately poor (with the rest falling within the extreme poor). By contrast, in some of the upper middle-income countries in Latin America and the Caribbean and in Europe and Central Asia, for example Chile and Russia, the large majority of individuals in the bottom 40 percent are in the group of the vulnerable: these are non-poor individuals with a high risk of falling back into poverty. These observations highlight the great

range of incomes and the different meaning that the bottom 40 percent constitutes across the world.

Figure 7 The bottom 40 percent can encompass various income groups across countries

Bottom 40 percent across income groups



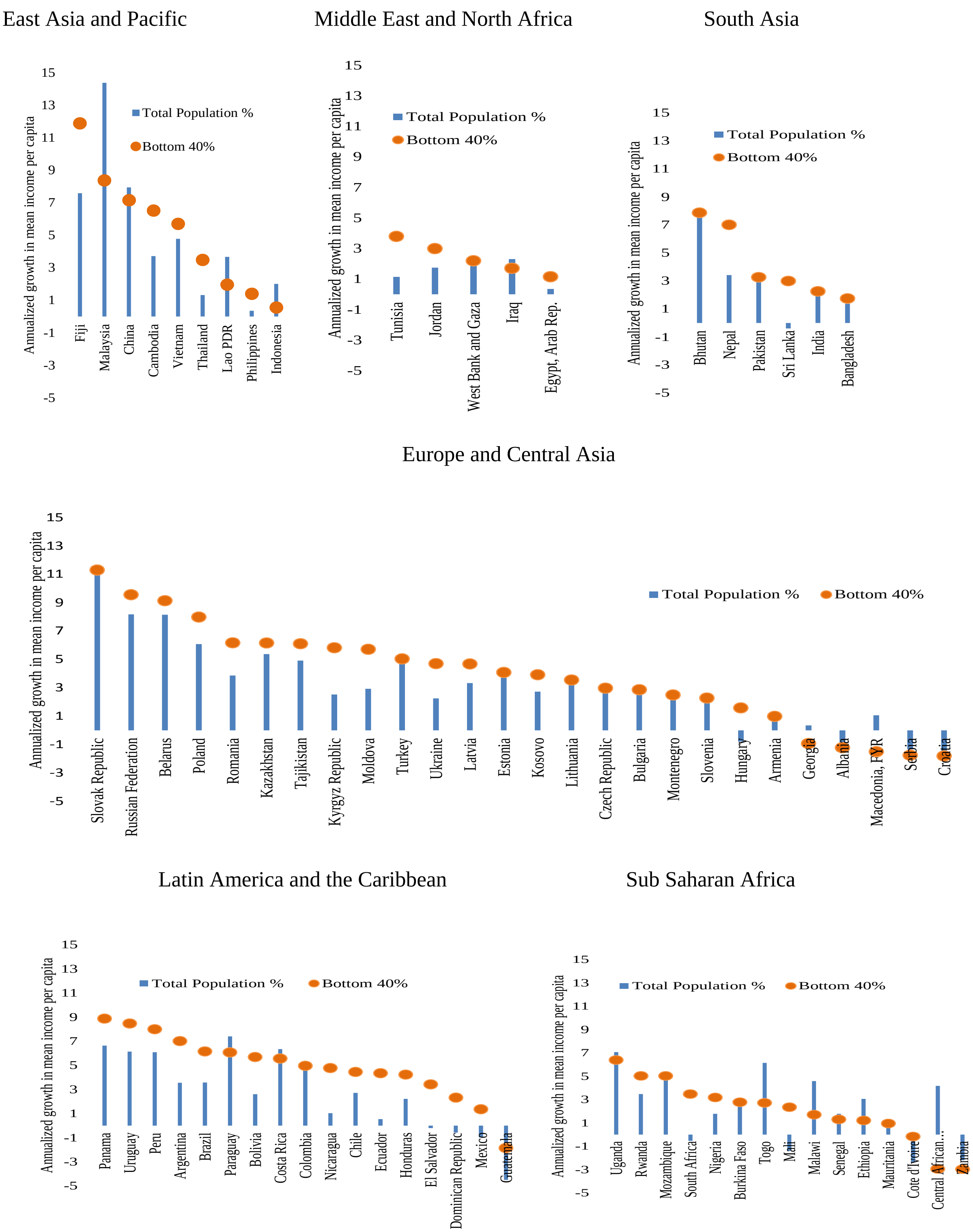
Source: Authors compilation based on data from the World Bank PovcalNet database (latest version August 8, 2014). It is the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

Note: Data are for latest year available from PovcalNet.

19. Recent trends in shared prosperity have been broadly positive. The incomes of the bottom 40 percent increased, in all but 9 countries of a sample of 78 developing countries (figure 8). Where possible an annual growth rate was calculated for the latest five year period within a ten year time span, 2002 to 2012. There is considerable variation across countries. In 7 countries[13] the bottom 40 percent experienced annual growth rates of more than 8 percent, while in 9 countries, the income or consumption of the bottom 40 percent declined over the period (figure 0.2).[14][15]

Figure 8 Shared prosperity by country[16]

Annualized growth in mean income/consumption per capita a five year period between 2002-12[17]



Source: World Bank staff calculations based on PovcalNet.

20. Cross-country comparisons should be made with caution. For example, the growth rate of the bottom 40 percent, for the same period, in Nicaragua was 4.7 percent (per year), while in China, it was higher (7.2 percent). Did China performed better during this period with the bottom 40 percent? At first look, that would seem to be happening. However, it is not obvious whose performance was better. Overall growth in China for the total population was 7.9 percent, while in Nicaragua it was 1.0 percent. A literal interpretation of the shared prosperity goal would suggest that China did a better job at boosting shared prosperity, since income growth of the bottom 40 percent was higher. However income growth for the bottom 40 percent of Nicaragua was almost 4 times higher that of its national average, while in China, despite the gains of the bottom 40 percent and a remarkable overall growth rate, growth of the bottom 40 percent has lagged behind the national average.

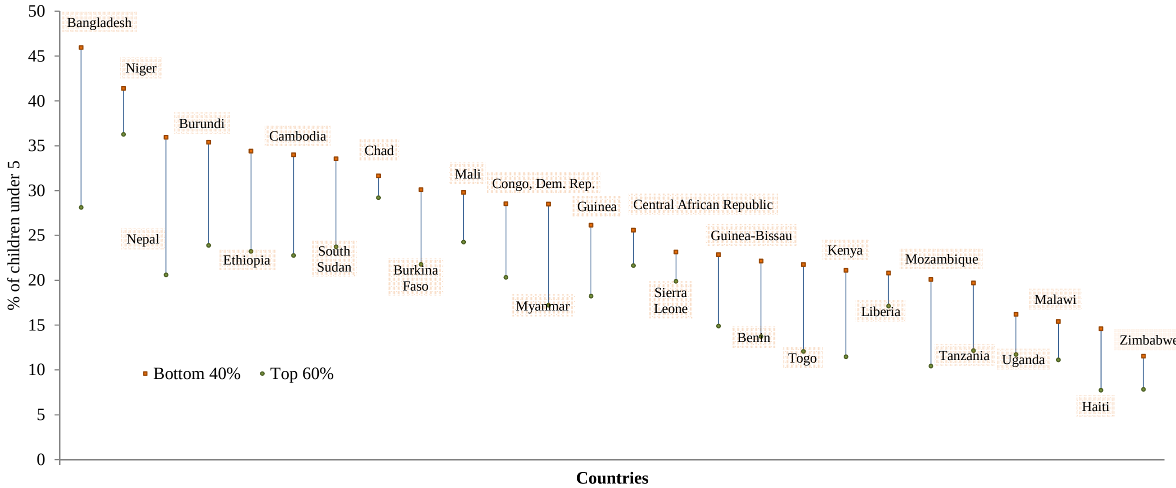
MDG outcomes for the bottom 40 percent

21. Monitoring progress on the income growth of the bottom 40 percent can usefully be complemented with monitoring progress in non-income related indicators such as the MDGs.[18] While incomes of the bottom 40 percent have increased as much as (or more than) the average for many countries, education and health indicators are lagging. Households in the bottom 40 percent have much lower levels of welfare, as measured by the MDG indicators, than are enjoyed by households in the top 60 percent. For example, young children in the poorest households are 2-3 times more likely to be malnourished as those in the highest wealth quintile. Figure 9 shows the difference between the share of underweight children in the bottom 40 percent and the top 60 percent of wealth quintile. [19] The situation is better in education, in that groups such as the poor and girls have tended to benefit more than the better off from gains in educational attainment. For example, increases in primary enrollment benefited mostly the poor, as the better off children were already enrolled. But enrollment beyond primary school remains an issue, especially for the most disadvantaged groups. Another example is access to sanitation; Figure 10 shows the difference between access to an improved sanitation source in the bottom 40 percent and top 60 percent of wealth quintile.

22. Based on over 160 Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) covering 65 countries, the poorest 40 percent are worse off than the richest 60 percent for many of the MDGs. For access to an improved sanitation source, the outcome for the bottom 40 percent is well behind that of the top 60 percent in a majority of countries. The poor are also less well served regarding access to, and usage of, many health services and interventions. In some countries access to care and health outcomes for the poor have even deteriorated in absolute terms. This is the case for stunting in a third of countries, underweight status in a fourth of countries, and access to maternal and child health services in a fifth of countries. Infant and child mortality have not improved for the poor in a tenth of countries (Wagstaff 2014). See also chapter 4.

Figure 9 Prevalence of underweight children is significantly higher among the bottom 40 percent in low-income countries

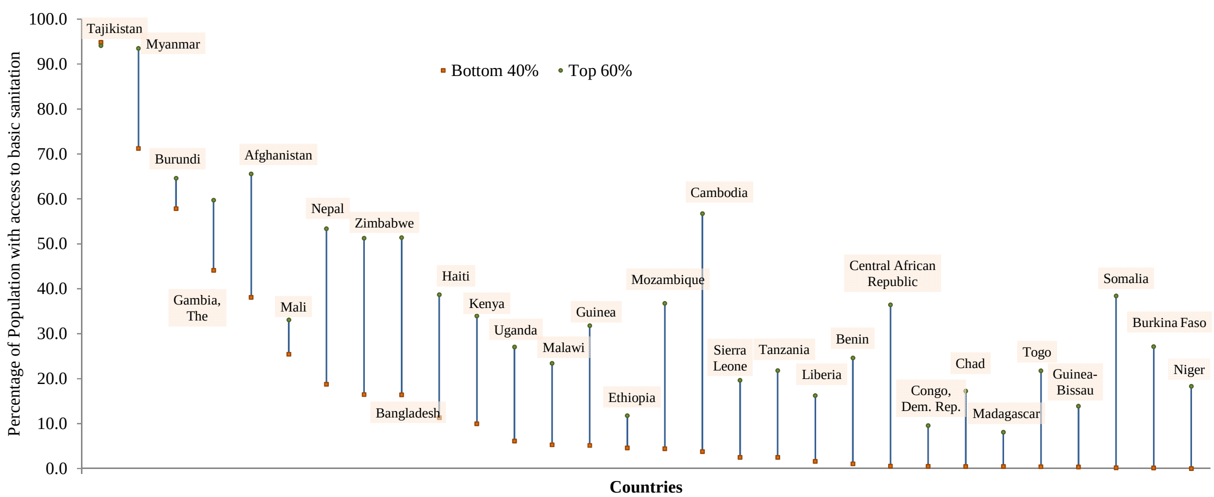
Prevalence of underweight by income category (% of children under age 5) for low-income countries (most recent year from 2005-2012)



Source: World Bank staff calculations based on Health Nutrition and Population Statistics by Wealth Quintile, World Bank, 2014[20]

Figure 10 Access to improved sanitation for people in the bottom 40 percent is significantly worse than the rates in the top 60 percent.

Access to imporved sanitation for low- income countries (most recent year from 2005-2012)



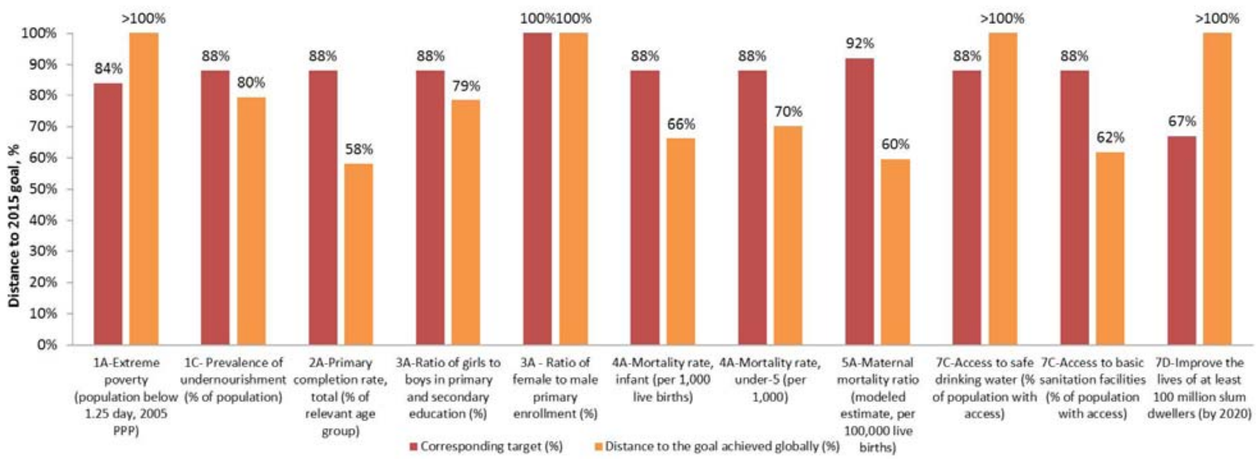
Source: World Bank staff calculations based on WHO/Unicef Joint Monitoring Program for Water Supply and Sanitation 2014.[21]

Progress toward the MDGs

23. The target year of 2015 for the Millennium Development Goals (MDGs) is fast approaching. One important aspect of the MDGs has been their focus on measuring and monitoring progress. In the past quarter century, progress toward the MDGs has been varied across targets and regions. Estimates for the developing world indicate that the targets for extreme poverty reduction (MDG 1.a), access to safe drinking water (MDG 7.c) and improving the lives of at least 100 million slum dwellers (MDG 7.d) have been reached ahead of the 2015 deadline (figure 11). Progress on gender equality in primary and secondary education is projected to meet the target by 2015, although gender disparity is more prevalent in higher levels of education.

Figure 11 Global progress toward achieving the MDGs has been uneven

Distance to 2015 goal (%)



Source: World Bank staff calculations based on data from the World Development Indicators database.

Note: A value of 100 percent means that the respective MDG has been reached. "Corresponding target" indicates progress currently needed to reach the goal by 2015. "Latest available value" denotes current progress as illustrated by the most recent available data: extreme poverty, 2011; primary completion rate, total, 2012; ratio of girls to boys in primary and secondary education, 2012; mortality rate, infants, 2012; mortality rate, children under 5, 2012; maternal mortality ratio, 2013; improved water source, 2012; improved sanitation facilities, 2012.

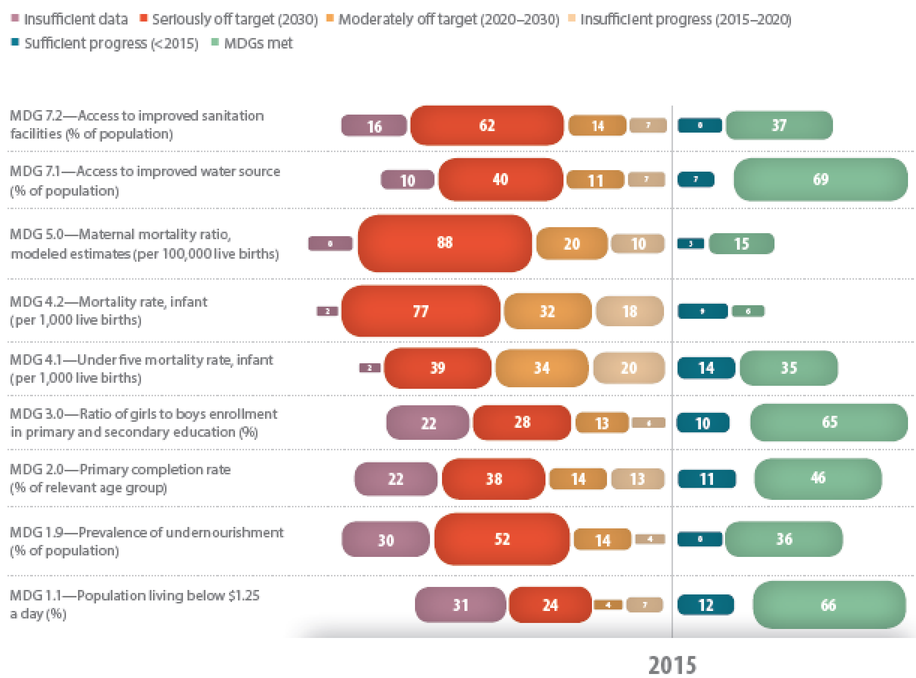
24. On the other hand, progress on the remaining MDGs has been lagging, especially for education and health-related MDGs. Specifically, the primary completion rate reached 90 percent by 2011, but progress is slightly off track to meet the target of a universal completion rate by 2015. Progress toward MDGs related to infant, child and maternal mortality (MDGs 4a and 5a), and to a lesser extent access to basic sanitation (MDG 7c), is lagging, and these goals will not be achieved without rapid acceleration toward the finish line.

25. Progress toward attainment of the MDGs at the country level continues to show large diversity, but more and more countries are crossing the finish line for various MDGs (figure 12). Even though hardly more than half of the countries are expected to achieve each MDG, there is significant progress at the country level compared to what was reported in last year's GMR. For example, current estimates indicate that 76 countries are expected to meet MDG 7c (access to an

improved water source), 8 countries more than last year's estimate. The same is true for many of the other MDGs. However, MDG 4a (infant mortality) and MDG 5a (maternal mortality) are exceptions, as the poor progress reported last year (only 18 and 26 countries were expected to reach the MDG 4a and MDG 5a goals, respectively) has deteriorated further (now only 15 and 18 countries, respectively, are expected to achieve these goals). A concerted effort by governments in collaboration with UN agencies, multilateral development banks, and other donors is needed to provide technical advice and financing to these countries to assist in the attainment of these clearly difficult to reach MDGs (for detailed progress on the MDGs, see Annex on MDGs).

Figure 12 Extent of progress toward achieving the MDGs, by number of countries

Progress toward achieving the MDGs by number of countries



Source: WDI and GMR team estimates.

Note: Progress is based on extrapolation of latest five-year annual growth rates for each country, except for MDG5, which uses the last three years. Sufficient progress indicates that an extrapolation of the last observed data point with the growth rate over the last observable five-year period shows that the MDG can be attained. Insufficient progress is defined as being able to meet the MDG between 2016 and 2020. Moderately off target indicates that the MDG can be met between 2020 and 2030. Seriously off target indicates that the MDG will not even be met by 2030. Insufficient data points to the fact that not enough data points are available to estimate progress or that the MDG's starting value is missing (except for MDG2 and MDG3).
In the poverty target, 11 out of the 66 countries that have met the target have less than 2% of people living below $1.25 a day.

Data and measurement challenges for the two World Bank goals

26. Reliable, frequent and good quality data is vital for measuring poverty and shared prosperity. There are numerous data and measurement challenges in assessing progress toward

attaining the two World Bank goals of ending extreme poverty and promoting shared prosperity. The challenges arise from the characteristics and scope of the indicators chosen to measure progress towards these goals. The poverty indicator is global, derived by estimating the number of poor people in every country, and it requires several different and complementary data sources. The shared prosperity indicator, on the other hand, is country specific, is not aggregated globally, and requires additional data. And, importantly, the quality of these indicators is directly related to the capacity of the statistical systems in the poorest countries.

27. Population data from censuses are essential to estimate the poverty rate (box 1). It would be difficult to measure the population of a country by relying on sample-based household surveys. The quality of census data is critical. If census data are not of good quality or obsolete they are likely to produce poor quality survey weights or an outdated sampling frame, failing to represent important groups or areas and giving rise to errors.

Box 1 Census Data

Census data is the primary source of sampling frames and benchmark statistics for household surveys (United Nations Statistics Division, 1984 and 2008). At the World Bank, population statistics are based on the biennial World Population Prospects (WPP) issued by UN Population Division, and other information including latest census reports from national statistical offices, feed into the World Development Indicators (WDI), and act as the baseline for official regional and global poverty estimates.

In developing countries, where census data are often not available, obsolete or outdated, or unreliable, demographic models and complementary data such as surveys, population registrars, or administrative records, combined with indirect estimation techniques (Moultrie and others 2013) are often the only option to provide consistent population counts by country and region (United Nations 2014). Maintaining reliable, frequent, and well-functioning census systems is important to reduce reliance on modeling and estimation approaches to determining population levels.

Source: World Bank 2014c

28. Considerable work is required to ensure that cross-country comparisons are valid. Countries differ in minimum needs, context, data collection and estimation approaches; thus arriving at consistent data on poverty counts is challenging. One issue is the need for data on inflation to adjust for the difference in the cost of living across countries, for which national income accounts (NIA) estimates of real growth and consumer price index (CPI) estimates of the change in price levels are used.

29. Another issue is determining the local currency level of consumption or income that is consistent with the international poverty line in US dollars. The ppp index numbers from the International Comparison Program (ICP) are used to convert between local currencies and dollars, since they adjust consumption and income levels for differences in the cost of living across countries. Global poverty estimates are sensitive to errors in ppp indices; the release of new data on ppp's can change our understanding of global poverty.

30. Estimating levels of poverty and changes in shared prosperity across countries for any particular year requires data for that year. However, in any given year no more than 50 countries may generate household survey data. Thus prior-year estimates for many countries have to be brought up to date to produce a global figure for each year. Since growth is a primary source of poverty reduction, the World Bank uses growth rates and inflation from the national income accounts to estimate household consumption or income in future (or past) years, which introduces some uncertainty about the accuracy of time series estimates. Such adjustments are

necessary for both estimates of shared prosperity, which is calculated based on data in real terms (World Bank 2014b) and poverty, which uses data on inflation to calculate poverty lines.

31. Comparisons of poverty and shared prosperity can be highly sensitive to measures of inflation, and the available inflation data are not always appropriate for measuring the real incomes of the poor. For example, data on prices in urban areas may not reflect price changes in rural areas. The bundles of goods used to calculate price indices do not always reflect either average consumption patterns or the consumption of the poor. And changes in relative prices over time can impair the accuracy of price indices used to calculate changes in the real value of household consumption.

Notes

[1] Chapter 2 of the Policy Research Report (PRR) (World Bank 2014c) sets out the World Bank approach to measuring global poverty in more detail. See Ravallion, Chen, and Sangraula 2009 for a fuller description of how the $1.25 per day international poverty line was derived.

[2] All regional and global poverty estimates in this chapter are based on an internal working version of the World Bank's PovcalNet database, with data as of August 2014.

[3] Data on income and consumption are collected in nominal terms, in local currency. CPI data (along with ppp exchange rates) are then used to calculate income and consumption levels in ppp dollars of 2005, which are the basis of poverty estimates. If inflation for a given year is revised downwards, then household income for that year in 2005 ppp dollars will be revised upwards, and the estimated poverty rate will fall. Such revisions can be substantial. For example, the 2010 CPI of the Democratic Republic of the Congo was revised downwards from 240 (2005=100) to 170, resulting in a substantial increase in estimated real household incomes and thus a decline in poverty rates.

[4] The source of poverty projections is PovcalNet. The underlying growth projections used come from the reference scenario discussed below. PovcalNet is the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

[5] The statistic for 2030 is 0.09 for EAP. It has been rounded off to 0.1 in the table.

[6] See the Policy Research Report: Poverty and Shared Prosperity, (World Bank 2014c) for a detailed description.

[7] Note that in these countries, the underlying data are less than perfectly reliable and may be shown, with future work, to have inaccuracies that merit correction and revision.

[8] These countries are Benin, Burundi, the Central African Republic, Comoros, the Democratic Republic of Congo, Republic of Congo, Cote d'Ivoire, Gambia, Guinea-Bissau, Haiti, Kenya, Madagascar, Malawi, Mali, Niger, Nigeria, Rwanda, Sierra Leone, Swaziland, Sao Tome and Principe, Togo, and Zambia.

[9] These are Benin, Burundi, the Central African Republic, Comoros, the Democratic Republic of Congo, Cote d'Ivoire, Gambia, Guinea-Bissau, Guinea, Haiti, Liberia, Madagascar, Malawi, Mali, Swaziland, Togo, and Zambia.

[10] For more alternative scenarios refer to Policy Research Report (World Bank 2014c).

[11] See the Policy Research Report, (World Bank 2014c) for a detailed description

[12] These groups are: the extreme poor as defined by the World Bank's international poverty line; the "moderate poor", who live on between $1.25 and $4 a day; the "vulnerable" who live on between $4 and $10 a day; and the middle class and rich who live on more than $10 a day – all measured at 20005 constant ppp. The concept of people living between $4 and $10 a day being considered vulnerable is based on evidence that a considerable share of households above a given poverty line is usually vulnerable to falling below that line over time. See Ferreira and others (2012) and Birdsall and others (2014).

[13] These countries are Fiji, Slovak Republic, the Russian Federation, Belarus, Panama, Uruguay, and Malaysia.

[14] These countries are Côte d'Ivoire, Georgia, Albania, Macedonia, Serbia, Croatia, Guatemala, Central African Republic, and Zambia.

[15] Given the sensitivity of the shared prosperity indicator and extreme poverty estimates to differences in the source and time interval of data used, some caution in making cross-country comparisons is needed. Another concern is that some countries measure shared prosperity and extreme poverty with income data, while others measure it with consumption data. This creates another complication in interpretation of results when comparing countries. See Policy Research Report (World Bank 2014c) for a detailed description.

[16] The comparability of numbers on shared prosperity across countries is strictly around time periods and there are limits to comparability, since household surveys are infrequent in most countries and are not aligned across countries in terms of timing. Consequently, comparisons across countries or over time should be made with a high degree of caution.

[17] Growth rates in GDSP are computed as annualized average growth rate in per capita real income (or consumption) over a roughly 5-year period during circa 2002-2012, where only those countries with surveys that meet the following criteria are included: (i) The latest household survey year for a country (year T1) is no older than 2009, (ii) The initial year (year T0) is selected as close to (T1-5) as possible, with a bandwidth of +/- 2 years; thus the gap between initial and final survey years would range between 3 to 7 years.

[18] A note of caution about the data for the bottom 40 percent using surveys: national level data for the MDG indicators do not always come straight from surveys (for example Primary Completion Rate, Child Mortality, HIV, Water and Sanitation). Therefore, data for the bottom 40 percent and national data are not comparable.

[19] The bottom 40 percent and top 60 percent classifications are done using asset indices (the base for Demographic and Health Surveys). Estimating the same bottom 40 percent and top 60 percent using consumption estimates from household budget surveys can give different results (though similar trends would be expected). The bottom 40 percent is an average of the first and second quintiles, and it would be different from the average of the bottom 40 percent from the micro datasets (due to use of weights)

[19] The bottom 40 percent and top 60 percent classifications are done using asset indices.

[21] Data for the bottom 40 and top 60 percent on Water and Sanitation should not be directly compared to those published in the JMP 2014 report for which rural and urban but not national wealth quintiles were reported.

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Chapter 1 Ending Poverty and Sharing Prosperity*

1.1 While there is no blueprint for 'ending poverty and sharing prosperity,' economic growth, its inclusiveness and sustainability are the rudimentary elements of any conceptual framework used to achieve the WBG's twin goals. This chapter provides a brief introduction to these elements. More detailed discussions on the ingredients of each element follow in the individual chapters of the Report. The key messages of this chapter are:

i. While economic growth is essential for poverty reduction, even very rapid growth in developing countries will not be sufficient to reduce the global poverty rate below 3 percent by 2030, without complementary policies to assist the poor.

ii. In all countries but even more so in developing economies, economic growth is more effective in fostering poverty reduction and broad based prosperity if the pattern of growth is more labor intensive. Consequently, the sectoral composition of growth matters for poverty alleviation, with the largest contributions from unskilled labor-intensive sectors.

iii. Since labor earnings account for most of the income of poor households, inclusive growth requires providing equal opportunities for the poor of which building their human capital is a critical component so that they can access better jobs and other income-generating activities.

iv. Well-designed safety nets can play a critical role in building human capital and protecting the income and assets of the poor in the face of adverse shocks.

v. Sustainable poverty reduction and shared prosperity require adequate investments in preserving environmental and other natural assets, particularly as the poor are especially vulnerable to environmental degradation.

1.2 Without preempting the in-depth discussion in the later chapters, the remaining sections of this Chapter introduce the thematic focus and set the stage for the remainder of the Report where policies that affect these elements are discussed. The next section will discuss the challenge of ending poverty through growth alone. The following section notes that the inclusiveness of growth requires jobs and a social contract. The fourth section will elaborate on the role that jobs play in alleviating poverty, and the jobs challenge in natural resource-based countries, and fragile and conflict-affected states. How human capital accumulation can shape the equality of opportunities that are a part of a social contract will be discussed in the fifth section. This section will also focus on the implications of inclusive growth for bridging the gender gap. Section VI will focus on safety nets – the other critical ingredient of a social

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* All regional and global poverty estimates in this chapter are based on an internal working version of the World Bank's PovcalNet database, with data as of August 2014. While every effort was made to use the most up-to-date data available, the estimates presented in this report should be seen as approximate; the official global and regional poverty estimates will be published in the final publication of the Global Monitoring Report. Concurrent with the publication of the Global Monitoring Report, the World Bank's PovcalNet website will be updated.

contract. The impact of environmental degradation on the poor and the sustainability of growth are discussed in the final section.

Ending extreme poverty will not be easy

1.3 First and foremost, growth is central to poverty reduction but growth rates have to be adequate to rapidly reduce poverty and eliminate it by 2030. The drivers of growth include, among many others, human capital, financial inclusion, natural and physical capital, trade, governance and institutions, and the business climate. Policies that can deliver high and sustained growth, driven by a combination of public and private investments, are discussed in box 1.1.

1.4 Focusing on eradicating extreme poverty by accelerating the rate of growth alone by 2030 will not be easy, especially if the pattern of growth leads to increasing inequality. Unfortunately, income inequality is high and rising in many developing countries (Lakner and Milanovic 2013; Chen and Ravallion 2013; and Ravallion 2012). If this continues, the developing world will need to grow at an unprecedented, and virtually impossible, pace to achieve the 3 percent poverty target by 2030 (Yoshida, Uematsu and Sobrado 2014; World Bank 2014c).

Box 1.1 There are five common characteristics of a successful growth strategy

Figure B1.1 Common characteristics of high sustained growth

The five common characteristics of high, sustained growth that are identified by the Commission on Growth and Development in its Growth Report (2008) are also critical for high, inclusive and sustainable growth (figure B1.1).

Accumulation includes strong public investment, which can provide the infrastructure and skills required for rapid growth. Policies can encourage *innovation*, which includes the imitation of technologies used elsewhere, to help an economy to learn to do new things—venturing into unfamiliar export industries for example—and to do things in new ways. In any successful period of growth, relative prices need to guide decisions, such as attracting investment into certain industries, deterring it from others. Consequently, the third set of policies concerns the *allocation* of capital and, especially, labor. These microeconomic processes cannot unfold if they are rudely interrupted by debt crises or wild fluctuations in the general price level. The fourth group of policies therefore needs to ensure *stabilization* of the macro economy, to safeguard against slumps, insolvency, and runaway inflation. The commission also recommends a set of policies to promote *inclusion*. The commissioners prize equity and equality of opportunity for their own sake. But they also recognize that if a growth strategy brings all classes and regions of a society along with it, no group will seek to derail it.

High, sustained growth requires high rates of investment in physical and human capital. If countries with sustained, high-growth cases are any guide, it appears that overall investment rates in physical capital of 25 percent of GDP or above are needed, counting both public and private expenditures. High-growth countries often devoted at least another 7–8 percent of GDP to current expenditures supporting education, training, and health (also counting public and private spending), although this is not treated as investment in the national accounts. However, these high investment rates need to be complemented by policies achieving the other characteristics given in the Commission's Report.

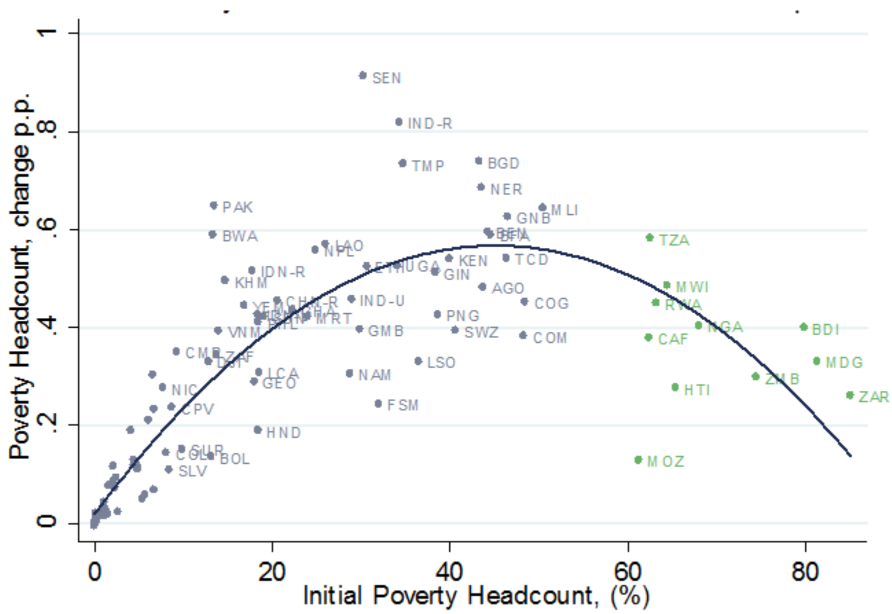
Source: Commission on Growth and Development, 2008.

1.5 Even though, historical data shows that the contribution of changes in inequality on extreme poverty reduction is limited (Kraay 2006), going forward implementing policies that influence the pattern of growth such that it leads to a decline in income inequality can be critical to ending poverty by 2030. For example, a decline in inequality played an important role in reducing poverty in Latin America (World Bank 2014). Even though poverty and inequality remain pervasive in Latin America, inequality began to fall in the early 2000s, in tandem with a period of accelerated economic growth. The average decline in inequality reflected substantial heterogeneity among countries, including better-targeted social safety net programs, a shrinking wage gap between skilled and low-skilled workers (López-Calva and Lustig 2010), demographic changes and greater female labor force participation (Gray Molina and Yañez 2009 —for Bolivia), realignments after the structural reforms of the 1990s (Ebherhard and Engel 2009 —for Chile), favorable international markets with high commodity prices in the second half of the 2000s (Ferreira et al 2008 —for Brazil), and a more active role in the labor market where governments took a more pro-union stance and raised minimum wages and pensions (Gasparini and Lustig 2011).

1.6 Improving the distribution of income and access to services for the poor also may contribute to overall growth. More equality in income distribution appears to be correlated with longer growth spells (Berg and Ostry 2011, Ostry, Berg, and Tsangarides 2014). Ensuring equal opportunity promotes social mobility and enhances economic dynamism and prosperity for the economy as a whole over the long term (Narayan, Saavedra-Chanduvi, and Tiwari 2014). Inequality of opportunity in education for children seems to have a negative impact on per capita income (Molina, Narayan and Saavedra-Chanduvi 2011), and inequality in health has a negative impact on economic growth, perhaps by reducing labor productivity (Grimm 2011).

1.7 Even if income distribution is unchanged, the poverty-reducing potential of growth declines as poverty falls. This makes it more difficult to achieve the poverty target going forward. There can be several reasons for this. It may happen partly because the majority of the population is typically concentrated at the middle of the income distribution, with much thinner tails representing the poorest households at one end and the relatively rich or non-poor at the other. After poverty reduction has reached the mass of people concentrated in the middle of the income distribution, poverty reduction will increasingly reach fewer people, even if the pace of growth remains unchanged (World Bank 2014c). Thus the impact of growth on poverty reduction is greatest in countries where the extreme poverty line is close to the peak of a country's income distribution, usually when the headcount rate is around 35 to 50 percent. In figure 1.1, countries plotted using the green color can expect that a continuation of growth will increase the impact of growth on extreme poverty reduction; while countries plotted using the blue color will face a declining impact of continued growth on their extreme poverty headcount.

Figure 1.1 **Decrease in headcount poverty caused by 1% increase in household's income/consumption (2010)**



Source: GMR team calculations using PovcalNet, the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

1.8 Growth may also have a declining impact on poverty reduction because the remaining poor face significant barriers to raising their income. For example, they may be members of disadvantaged groups that are subject to religious or ethnic discrimination that excludes them from labor or credit markets. They may reside in remote, or fragile and conflict-affected, areas where they are unable to participate in the broader growth process and benefit from it. Or they may lack the requisite human capital to obtain higher-productivity jobs, or the financial capital to invest in productive activities.

1.9 Unevenness in the rate of poverty reduction across population groups, for example defined by location or ethnic identity, is often associated with the existence of poverty traps, or self-reinforcing mechanisms that prevent the poor from escaping poverty. The empirical evidence on poverty traps is weak. However, the clearest example concerns people trapped in low-productivity locations, such as remote rural regions or low productivity countries (Kraay and McKenzie 2014), as in the case of poor farmers in remote areas of rural China (Jalan and Ravallion 2002). Vietnam, where aggregate poverty fell from around 47 percent in 1999 to 15 percent in 2009, but the spatial concentration of poverty actually increased in some districts, is a telling illustration (Lanjouw, Marra, and Nguyen 2013). Countries that are prone to violence or conflict present a unique set of challenges to achieving inclusive growth and poverty reduction (box 1.2).

Box 1.2 Fragility and violence: a threat to progress toward the twin goals

With the current reduction of poverty across the world, the poor will be increasingly concentrated in fragile and post-conflict situations

An estimated 446 million people live in, fragile and conflict-affected states (FCS)[1] (WDI 2014). These states are poorer, have slower growth rates, and higher population growth rates than other countries. Recent research has identified the stark relationship between fragility and poverty (Collier 2007) and drawn attention to the repeated cycles of violence that pervade FCS (World Bank 2011). Chronic insecurity due to such violence is one of the biggest threats to development in the 21st century.

The average prevalence of extreme poverty in fragile states is 40.2 percent, well over two and a half times that of the global average.[2] While global poverty has declined sharply in non-fragile states, there has been little progress in fragile states (Kharas and Rogerson 2012). The poor are increasingly, and disproportionally located in fragile states, and this trend will continue given current economic and demographic conditions. By 2015, it is estimated that one in five people in extreme poverty will live in fragile and conflict affected countries. Burt, Hughes, and Milante (2014) estimate that the average rate of extreme poverty in fragile states will still be 30.2 percent in 2030, in a 'business as usual scenario' based on current conditions and trends. At the same time, a new wave of civil conflicts is threatening development outcomes. The number of conflicts has increased recently, reversing a period of decline in the post-Cold War era. Overcoming the challenge of successful post-conflict economic revitalization will be essential to reach the World Bank twin goals by 2030.

Growth over 1960-2009 in fragile states displayed high and persistent volatility, and the growth gap between fragile and non-fragile states has increased markedly since the mid-1990s (Berg and Ostry 2011). The effects of shocks on output levels tend to be stronger, and more likely to have a lasting impact, than in non-fragile states. Overall, the environment for sustained, shared growth in FCS is less favorable, and the vulnerability to macro-economic shocks more marked, than in non- fragile states.

Fragile states' structural characteristics reinforce their exposure to macroeconomic vulnerability and their weak resilience. Poor access to energy, finance, assets and markets, weak governance, lack of fiscal space, poor human capital and infrastructure, financial exclusion, high inequality, and high poverty rates result in low yields in agriculture, pervasive informality, underdevelopment of the manufacturing sector, a lack of inter-sectoral domestic linkages, and a lack of connectivity with regional and global trade. One important challenge for fragile states is to ensure that the increasing number of youths entering the job market are employed and thus help generate more rapid growth, rather than remaining unemployed and likely to resort to violence. For example, a survey of young militia members revealed that 40 percent joined such organizations to escape unemployment, while only 13 percent did so for ideological reasons (World Bank 2011).

The growing concentration of the poor in impoverished, conflict-prone countries could make it impossible to reach the goal of eradicating poverty.

Source: World Bank Staff.

1.10 The focus of policies to achieve the twin goals depends critically on country circumstances. In a country afflicted by economic stagnation or slow growth, and where extreme poverty is pervasive, the principal avenue for improving welfare is to accelerate economic growth. In a country where extreme poverty is not widespread, eradicating extreme poverty may require more focus on complementary policies to improve the situation of the remaining poor living in remote locations or in difficult circumstances. The balance between the challenges of enhancing economic growth and lack of inclusion depends on the country context.

Ingredients of inclusive growth: jobs and a social contract

1.11 Jobs are the main channel of transmission from growth to the incomes of the less well-off and an important ingredient of the inclusiveness of growth. The quantity and "quality" of jobs matter for inclusiveness. Growth can lead to broad-based prosperity if the growth pattern generates more and better quality jobs and higher earnings for all segments of the population. Unfortunately, not everyone living in extreme poverty has a job.

1.12 Even if extreme poverty were eradicated, the fight against it would be only half won if the less well-off and their children continue to have living standards that are vastly inferior to those of the better-off. For example, they live shorter and less healthy lives; they are primary schooled but do not have the opportunity to leverage their education to improve their living standards; and, they cannot count on a future where their children will enjoy a livelihood that is better than theirs. The fight against poverty is not complete and sustainable without a healthy and stable social contract that makes growth inclusive and allows for upward mobility.

1.13 There are two ingredients of a social contract: equality of opportunity, or leveling the playing field, and social protection or safety nets that help to consolidate gains from growth and ensure they reach the less well-off directly. A healthy and stable social contract ensures that growth is inclusive of the poorer segments of society. "Growing evidence suggests that improving access for all and reducing inequality of opportunities— particularly those related to human capital development of children—are not only about "fairness" and building a "just society", but also about realizing a society's aspirations of economic prosperity," (Narayan, Saavedra-Chanduvi and Tiwari 2013). A social contract requires some degree of societal consensus over the basic principles of the operation and role of the state vis-à-vis the private sector and citizens. Some of the key elements that can be used to characterize the nature of a social contract are the structure of taxation and social expenditures, the performance of the state in using revenues to deliver and regulate the provision of public goods, and the structure and effectiveness of the social protection systems (Saavedra and Tommasi 2007).

1.14 An efficient social contract for promoting shared prosperity must include investments and building of institutions to continually improve opportunities for all citizens in developed and developing countries. This Report focuses on human capital, especially early childhood development as the main lever for nurturing the equality of opportunity for the poor in all countries. It also proposes the use of well-designed safety nets to protect the vulnerable against extreme deprivation and shocks. Safety nets are not just about transferring resources in cash or kind from one segment of the society to another at a point of time, but more about investing in improving the capabilities of people over time and across generations. An effective social contract is about creating a virtuous, self-sustaining cycle – leveraging economic growth to improve human capabilities, which in turn feeds back to growth, and so on (Narayan, Saavedra-Chanduvi and Tiwari 2013).

Good jobs are essential to poverty reduction

1.15 Labor earnings are the largest source of income for the poor and those at the bottom 40 percent of the income distribution (WDR 2013). In a decomposition of the effect of growth on poverty, labor earnings strongly dominate the effects of other sources of income, underscoring the centrality of inclusive, broad-based growth that generates household income through jobs (Yoshida, Uematsu, and Sobrado 2014). However, the quantity and quality of jobs for the poor also reflects the demand for labor by firms, the determinants of which are discussed in box 1.3.

Box 1.3 Factors that shape labor demand

Firms' hiring decisions shape labor demand. According to classical economic theory, firms will hire an additional worker as long as the increase in revenue generated by the worker exceeds the cost to the firm (the worker's wage and benefits, plus hiring costs). The extra value that a worker generates depends on technology, access to physical capital, level of skill and relevant training, the firm's access to infrastructure (such as power) and markets, etc. Uncertainty about the future can also significantly affect the demand for labor, in particular when it is difficult to lay off workers in case of negative economic developments (e.g. lower demand and prices for the firm's products).

Effective government policies and institutions have enormous implications for firms' demand for labor. Efficient and well-regulated financial markets can ensure that firms have the resources required for expansion, thus increasing opportunities for employment. Efficient provision of infrastructure improves the productivity of workers, and thus the demand for workers. For example, workers are more productive if they can use machinery that requires electricity to operate, or can have access to essential inputs that depend on effective roads and ports for delivery. Moreover, reducing the price of essential infrastructure services may allow firms to expand their operations. Effective regulations and institutions can reduce the costs and uncertainty facing businesses, while still protecting the public interest. For example, less corrupt and more efficient administration of licensing practices can make it easier to begin and operate a business, and thus hire more workers, while still imposing necessary restrictions to protect the environment and ensure public safety.

Government policy also affects the cost of workers, and thus firms' demand. The compensation that has to be paid to a worker will be influenced by taxes and labor regulations, among other things. To the extent that government policies increase labor costs in ways that the worker perceives as a benefit (e.g., health insurance, pension benefits), the impact on the overall labor market may be limited. On the other hand, regulations can raise firms' labor costs in ways that workers do not perceive as providing comparable benefits, for example taxes on labor earnings to finance insolvent or unreliable social security systems. Such policies can create a disincentive for employment that affects both firms and workers.

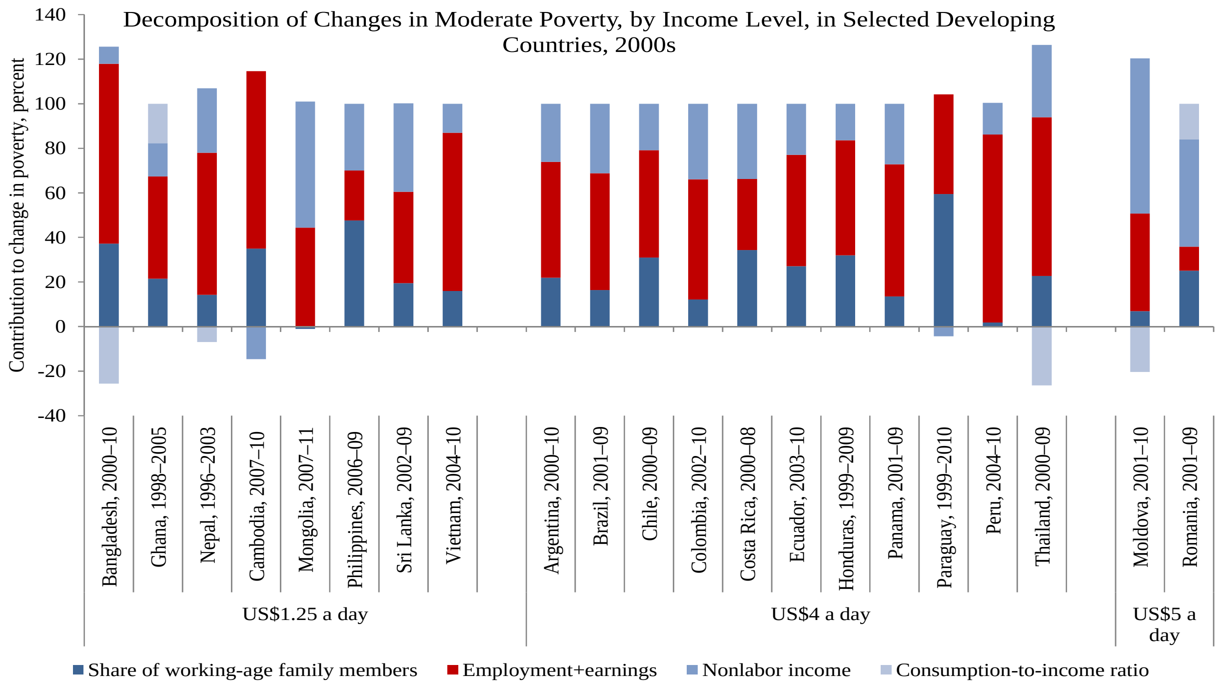
Labor standards, such as minimum wages, leave requirements, limitations on firms' ability to fire, and severance payments requirements, can be a double-edged sword. Such requirements can protect workers against arbitrary treatment, increase workers' bargaining power against firms, and improve the quality of jobs. However, they also can reduce firms' demand for workers in the short run and thus boost unemployment. In many countries, strict labor standards have limited firms' willingness to hire 'on the books', thus creating a permanent underclass of informal sector workers who fail to benefit from these protections, are paid low and sometimes uncertain wages, and are engaged by small-scale (and thus often inefficient) firms with limited access to credit or markets.

Evaluating the impact of policies on firms' demand for labor requires a comprehensive view of the effects. For example, lower taxes might improve firms' profitability and thus facilitate expansion and higher employment. However, lower taxes might also result in less public financing available for infrastructure, or other worthwhile investments that could benefit firms. Additionally, regulations that help to improve working conditions (for example, rules governing safety) may raise costs but also reduce absenteeism due to accidents, thus making employees more productive and increasing profitability, resulting in job growth. Finally, workers are also often the people who purchase the goods produced by firms, so that policies that result in higher wages and employment are likely to increase aggregate demand, producing a positive cycle of effects on employment.

Source: IFC 2013.

1.16 In a study of 21 developing countries, labor income growth (including growth of employment and of earnings per worker) contributed the most to poverty reduction (figure 1.2) (Inchauste and Saavedra-Chanduvi 2014). Labor income accounted for more than half of the reduction in poverty in 12 countries, and more than 40 percent in another 6. Increases in earnings per worker were more important in reducing poverty than increases in employment. The role of non-labor income, such as government spending on subsidies and transfers, as well as private transfers, in poverty reduction was relatively small in most countries in the sample (except for Moldova, Mongolia and Romania).

Figure 1.2 **Decomposition of changes in moderate poverty, by income level, in selected developing countries, 2000s**



Source: Inchauste and J. Saavedra-Chanduvi, (2014 forthcoming, p. 4). Data from Socio-Economic Database for Latin America and the Caribbean (SEDLAC), various years. Data from Food and Agriculture Organization (FAO) and national household surveys.

Note: "Moderate" poverty refers to the international poverty line that is closest to the country's moderate poverty rate (in some cases $1.25 a day; in others, $2.50; and in still others $4 to $5 per day). "Employment + earnings" refers to the combined change in employment and earnings per working-age adult (ages 15–64 years). "Nonlabor income" refers to public and private transfers (including remittances), pensions, capital, and other nonlabor income. Changes in the "consumption-to-income ratio" capture changes in savings patterns of households as well as measurement errors in household consumption and income. Consumption-based measures of poverty are used in Bangladesh, Ghana, Moldova, Nepal, Peru, Romania, and Thailand; otherwise income-based measures are used.

1.17 The sectoral composition of growth is an important determinant of the availability of jobs for the poor, and thus the impact of growth on poverty reduction (Loayza and Raddatz 2010). The impact of growth on poverty reduction varies from sector to sector and there is a systematic pattern to this variation. Sectors that are more labor intensive (in relation to their size) tend to have stronger effects on poverty alleviation. Thus, agriculture is the most poverty-reducing sector, followed by construction, and manufacturing; while mining, utilities, and services by themselves do not seem to help poverty reduction.

1.18 Even small investments in human capital can have a major impact on poverty reduction. East Asian, and more recently South Asian, economies lifted millions of people out of poverty through the creation of better paying jobs in light manufacturing and services. The vast majority of the poor factory workers did not have to acquire sophisticated technical skills to become significantly more productive. Typically, poor workers with basic education could markedly improve their earnings after 2-4 weeks of training in the simple manual skills required for factory work. These skills could then be perfected on the factory floor through repetition. For example, even relatively simple tasks such as cutting the same sleeve for a T-shirt over and over again require some learning which can result in higher wages. In the least productive factories producing cheap polo shirts for export, the premium on relatively skilled jobs that require a few weeks of training on the shop floor is 31 percent in China, 53 percent in Vietnam, and 42 percent in Ethiopia. Similarly, in the least productive firms that produce the cheapest wood chairs for export, the premium is 86 percent in China, 113 percent in Vietnam and 119 percent in Ethiopia (Dinh, Palmade, Chandra and Cossar 2012). The role of skills in improving the efficiency of the entrepreneurs in even the least productive firms is likewise significant.

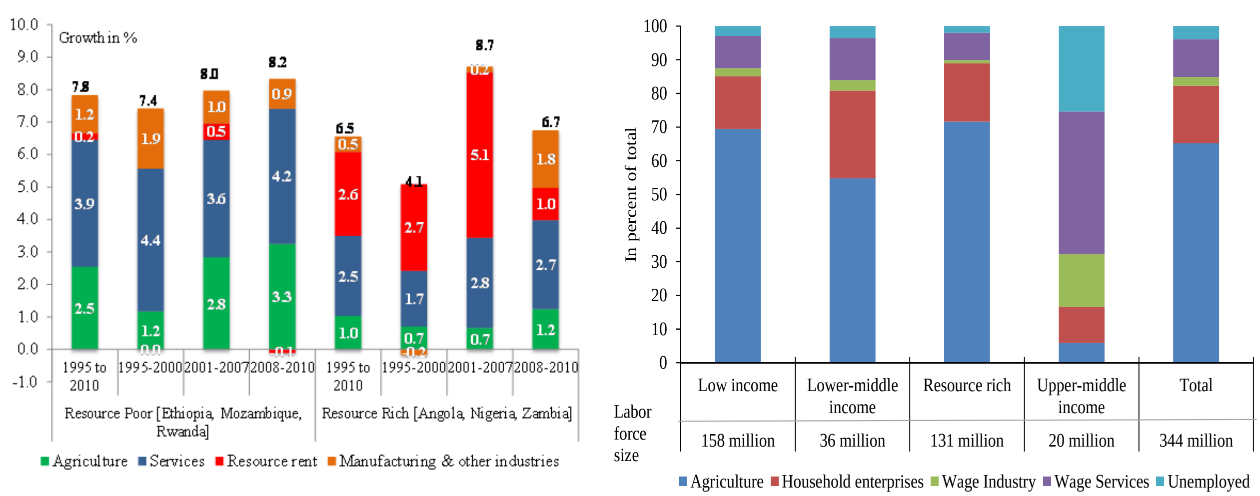
1.19 Economies where the relatively capital-intensive mineral sector dominates economic activity tend to have higher levels of inequality, as measured by the Gini coefficient (Africa Pulse 2013). In sub-Saharan Africa, dependence on the exploitation of mineral resources contributed to growth but limited the availability of jobs in tradable sectors, forcing the majority of low-skilled workers to rely on low productivity jobs in agriculture (70 percent of the 131 million labor force participants in resource-rich countries worked in agriculture—figure 1.3). A one percent rise in consumption is estimated to reduce poverty in sub-Saharan Africa by only one third compared to the rest of the world. This difference was in part driven by dependence on relatively capital-intensive production of minerals (Christiensen, Chuhan-Pole, and Sanoh 2013).

1.20 By contrast, many economies dependent on labor-intensive manufacturing have achieved rapid declines in poverty. For example, the pattern of structural change in Asia beginning in the 1990s fostered the movement of labor from low-productivity sectors, such as agriculture, into higher-productivity manufacturing and services, boosting economy-wide productivity and wages, which reduced poverty at a spectacular rate.

Figure 1.3 In Sub-Saharan Africa, natural resource generated high growth but not jobs

Resource rents are the main drivers of growth

Agriculture is the largest generator of jobs, but they are low wage jobs



Source: Fox, Haines, Muñoz and Thomas (2013), and Africa Pulse, Volume 7, (2013).

1.21 The preceding discussion underlines the importance of inclusive growth supported by a social contract that allows upward mobility to achieving the twin goals. Inclusive growth policies should focus on fostering income-earning opportunities that are accessible to the poor, helping to improve their human capital, and protecting the poor through social safety nets. Promoting gender equality is particularly effective in boosting shared prosperity and reducing poverty (box 1.4).

Box 1.4 Gender equality helps to make growth more inclusive

When women can develop their full labor market potential, economies grow (Loko and Diouf 2009 and Dollar and Gatti 1999).

Gender equality can help companies improve labor productivity (Barsh and Yee 2012 - Cornell Center for Advanced Human Resource Studies (CAHRS) 2011 and Klasen 1999) and can raise female labor force participation and thus the supply of workers. For example, Steinberg and Nakane (2012) estimate that raising Japan's relatively low female labor force participation ratio to the average G7 level (excluding Italy and Japan) would increase per capita GDP by 4 percent (Elborgh et al 2013). Overall, 48 percent of women's productive potential globally is unutilized, compared to 22 percent of men's (World Bank's Gender at Work report). And when the income of the woman rises relatively to the man in a household, spending spending on food, health and education rise, investments in children are greater, there is more use of prenatal care, and women's risk of domestic violence is lower (Beegle, Goldstein, and Rosas 2011).

Conversely, growth can stimulate gender equality (Duflo 2012). Higher incomes can enable poor households to invest equally in girls and boys, and higher tax revenues can support improved maternal and child health care. However, growth does not always improve gender equality (e.g. growth has had little impact on the gender wage gap in poorer countries), and the nature of the growth strategy matters (trade liberalization has led to an increase in female labor force participation rates relative to male - Kabeer and Natali 2013). WDR 2012 provides a framework for linking the functioning of households, markets and institutions, and thus their contribution to growth and shared prosperity, to gender inequality (e.g. in health and education, economic opportunity, and voice and agency).

Shared prosperity requires that all people have the opportunity to realize their potential and participate fully in all aspects of life (World Bank 2014). It can be ensured by improving women's ability to make decisions about their lives and act on them:

- Control over land and housing can increase self-esteem, economic opportunities, mobility, and decision-making power. In Vietnam, women with a joint title are more aware of legal issues, have more say in the use and disposition of land, and are more likely to earn independent incomes than those who are not on the title.
- Increasing women's participation in public decision-making can improve social norms and investments in public services. In India, a law reserving a share of government offices for women has improved parents' aspirations for their daughters, as well as the aspirations of girls themselves (World Bank 2014).

Policies and public action can lift constraints and enhance agency. Women's economic opportunities and agency-meaning the capacity to make decisions about one's own life and act on them to achieve a desired outcome, could be increased through improving education and training, making tax rules more equitable (e.g. replacing family income with individual income taxation), using social protection programs to tackle regressive gender norms, working with men and boys to promote men's role as gender-equitable caregivers, and more generally through laws prohibiting discrimination. For example, several new constitutions during the last decade, including in Kosovo and Tunisia, embody principles of nondiscrimination and gender equality. Further efforts to gain equality for women could play an important role in spurring development.

Source: World Bank Staff.

Building the human capital of the poor fosters equality of opportunity

1.22 Efforts to improve the human capital of the poor are particularly critical in the first years of life. Universal access to early childhood development programs that provide health services, nutrition, and education is essential to ensure widespread improvements in human capital and increased economic productivity. Failing to ensure broad access to early child development services has significant costs for the economic and social development of the less well-off in the short, medium, and long terms (Wodon 2014). Moreover, lost opportunities during childhood often cannot be compensated for later. Child malnutrition, for example, can generate life-long learning and health difficulties and lead to lower productivity and earnings (Alderman et al. 2006; Hoddinot et al. 2008; Currie and Thomas 1999; and Case and Paxson 2006).

1.23 While early childhood is the most critical age, improving human capital is a life-long process. Achieving a productive workforce requires ensuring that all students learn job-relevant skills that employers demand, encouraging entrepreneurship and innovation, and matching the supply of skills with demand. These challenges are important for both rich and poor countries, although to some extent the policies and emphasis differ according to country income. The economic benefits and appropriate policies to improve the role of human capital in ending poverty and promoting shared prosperity, with a particular focus on early childhood development programs, are discussed in chapters 3 and 4 for developed and developing countries, respectively.

Social safety nets can build human capital and protect the poor

1.24 Safety nets are critical for ending extreme poverty and boosting shared prosperity (Fiszbein, Kanbur, and Yemstov 2014). Safety nets can protect the poorest and most vulnerable from the effects of shocks, such as the spikes in food and fuel prices in 2008 and 2011, the earthquake in Haiti and floods in Pakistan in 2010, and the drought in the Horn of Africa that began in 2011. Safety nets also can contribute to economic growth by protecting the assets of the poor (for example, by enabling households to avoid selling livestock when hit by declines in income), provide infrastructure and services to poor communities, and help to stabilize aggregate demand, thus improving social cohesion and making growth-enhancing reforms politically feasible.

1.25 The evidence is particularly strong for the positive impact of safety net programs on human capital. Income support can help poor households finance the costs of keeping their children in school, both direct charges such as school fees and the income lost because children are studying rather than working. Facilitating access to health services and proper nutrition can help ensure that children are able to learn. Conditional cash transfer programs that provide incentives for school attendance and health care take up can be particularly effective in building human capital. The economic benefits of, and appropriate policies for, safety nets are discussed in chapters 3 and 4 for developed and developing countries, respectively.

Poverty reduction must be sustainable

1.26 Sustainability has several dimensions: fiscal, social, and environmental. Each of these areas makes a contribution to the sustainability of growth and development. Fiscal sustainability refers to whether, and at what cost, the government can finance its expenditures, including debt service. Social sustainability examines the social relationships, interactions, and institutions that affect, and are affected by, development. Each society has some form of social contract; a sustainable social contract creates a virtuous, self-sustaining cycle, leveraging economic growth to improve human capabilities and welfare, which in turn feeds back to growth, and so on

(Narayan, Saavedra-Chanduvi, and Tiwari 2014). Finally, environmental sustainability analyzes how our natural assets, e.g., land, water and air, are affected by development today and in the future, with particular emphasis on preserving the capability of the environment to support human life.

1.27 Each dimension of sustainability has implications for growth and thus poverty reduction and shared prosperity. Fiscal policy is the primary tool by which governments affect the income distribution in both rich and poor countries mainly through expenditure policies and design of social safety nets (box 1.5). Furthermore, fiscal policy choices have a significant bearing on environmental outcomes (as discussed also in Chapter 4). Enhancing social sustainability by providing the public goods required to nurture an "equal opportunity society", such that it contributes to the productive potential of every individual regardless of the disadvantages s/he is born with, will promote sustainable growth and development. Indeed, over the long term, such a society would also promote social mobility, reduce income inequality, and enhance economic dynamism and prosperity for the economy as a whole (Narayan, Saavedra-Chanduvi, and Tiwari 2014).

Box 1.5 Fiscal policy and its potential impact on growth and shared prosperity

Government policy can have an enormous impact on income distribution and the poor. Public sector expenditure priorities should be directed toward areas of interest to the poor (for example, high quality primary education) and not to areas that mainly benefit higher-income households (for example, energy subsidies).

Recent analysis shows how countries can use fiscal policy to address inequality in an efficient manner (Ostry et al. 2014). More unequal countries tend to redistribute more and there is little evidence that moderate redistribution impacts growth negatively. Also, lower inequality is found to be robustly correlated with faster and more durable growth for a given level of redistribution over the medium to long term.

Redistributive fiscal policies affect private decisions on whether to work, save, and invest, and hence affect growth. High taxes may lower growth by reducing work effort, but may also finance expenditures that are critical to growth. In some instances there may be no trade-off between growth and inequality. For example, a well-designed social safety net can encourage risk taking and increase investment returns. Fiscal redistribution toward the poor can also enable the poor to invest in education that in turn enhances growth. Regression-based models suggest that a greater reliance on income taxes and higher spending on social benefits reduces inequality (Chu, Davoodi, and Gupta 2004; Niehues 2010; Ospina 2010; Martinez-Vazquez, Vulovic and Moreno-Dodson 2012; Muinelo-Gallo and Roca-Sagles 2013; and Woo et al. 2013).

Fiscal policy has played a significant role in lowering inequality in advanced economies. For instance, in 2005, the average Gini coefficient for disposable income was 29 percent, compared to 43 percent before the effects of government tax and spending policies are taken into account (Paulus et al. 2009 and Caminada et al. 2012). On the expenditure side, most of the impact of government policy on inequality was achieved through transfers. On the tax side, personal income taxes were the more important factor that reduced inequality. However, such point-in-time estimates overstate the redistributive impact of fiscal policy over a typical household's lifetime. Young households with children may receive transfers paid for with high taxes on higher-earning, middle-aged households, and may in turn pay higher taxes and receive fewer transfers when they are middle aged.

Much less evidence is available on the distributional incidence of fiscal policy in developing countries, where tax revenues are only in the range of 15-20 percent of GDP (compared to over 30 percent of GDP in high income economies). Lower tax to GDP ratios limit the scope for social spending to obtain a more equitable distribution of income. Recent evidence from Latin America (mostly middle-income emerging market countries) shows that the tax and transfer systems lowered the Gini coefficient by just 3 percentage points, from 53 percent to 50 percent for 2009 (Lustig, Pessino and Scott 2013).

Governments need to evaluate the impact of the full range of policies, including taxes, expenditures, and regulatory interventions, on income distribution, including in periods of fiscal consolidation. Insofar as labor market regulations (such as minimum wage rules) affect equity, the combined effect of these regulations and the fiscal policy options must be analyzed jointly to ensure that equity objectives are achieved at least cost. Thus, governments need to consider the impact of the full range of policies, including taxes, expenditures, and regulatory interventions, on income distribution.

Source: IMF staff.

1.28 Environmental degradation and resource depletion at the national and global level, particularly climate change, tend to affect the poor more than higher-income groups (Barbier 2012; Barrett et al. 2011; and Sunderlin et al. 2008). Many poor people live in ecologically fragile areas while depending on environmental goods and services for their livelihoods, a combination that can ensnare them in poverty traps (Barbier 2012; Barrett et al. 2011; Sunderlin et al. 2008). Household surveys reveal that in many contexts more than 20 percent of the income of the rural poor is drawn from ecosystem goods and services. Environmental challenges also can indirectly affect the poor and less well-off by undermining sustainable growth. Preserving environmental assets (often referred to as natural capital) is critical to growth, but many of the goods and services provided by natural capital (e.g. clean air and water) are not reflected in market prices. Thus the economic role of natural capital is widely undervalued (The Economics of Ecosystems and Biodiversity (TEEB) 2010). Environmental sustainability, and the implications for poverty and shared prosperity, is of paramount importance in both high income and developing countries. Environmental sustainability issues of particular importance in high income countries are discussed in chapter 3, whereas environmental issues of more importance to developing countries are discussed in Chapter 4.

Notes

[1] FCS countries from the FY15 Harmonized List of Fragile and Conflict-Affected Situations.
[2] PovcalNet is the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

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Chapter 2 Global macroeconomic performance and outlook[1]

2.1 Chapter 2 reviews recent developments and short-term prospects for the global economy, and examines the main risks facing recovery from the Great Recession. Rapid growth in the international economy is critical to support growth in developing countries. The key message are:

i. The global economy is expected to strengthen to 4 percent growth in 2015. The advanced economies will grow by more than 2 percent for the first time since 2010. Growth in emerging market and developing countries will also pick up to 5 percent. Downside risks to this outlook include geopolitical risks from ongoing political tensions in Eastern Europe and the Middle East.

ii. Growth in emerging market and developing countries group will be robust in 2015. However, there are large differences across regions and a number of countries continue to be negatively affected by political turmoil. Growth will take place against the background of relatively stable prices in most countries.

iii. Low-income developing countries are continuing to record strong growth, but remain vulnerable to external shocks notably those that work through weakened demand for commodities (as would occur, for example, were there a protracted slowdown in emerging market economies). The impact of specific shocks on individual countries would vary markedly, depending on country characteristics including export composition and size of available macroeconomic buffers.

2.2 The next section discusses recent trends and short-term prospects for the global economy, including advanced economies and emerging market and developing countries, as well as the principal risks to this forecast. Section 3 provides a broad outline of macroeconomic policies in the two groups of countries. Section 4 focuses on the quality of macroeconomic policies in low-income countries. And section 5 considers the vulnerabilities to the medium-term outlook for low-income countries.

Recent developments and short-term prospects

2.3 In 2013, advanced economies (AE) and emerging market and developing countries (EMDC) grew 1.3 percent and 4.7 percent respectively (table 2.1).[2] For both country groupings this marked the third year of declining growth after the strong rebound from the Great Recession. In consequence, global growth has gradually slowed from 5.4 percent in 2010 to 3.2 percent in 2013. This slowing of growth has taken place in an environment of low inflation and sluggish international trade.

Table 2.1 Global Output

Annual percent change

	2008	2009	2010	2011	2012	2013	Projections 2014	Projections 2015
World	**3.0**	**0.0**	**5.4**	**4.1**	**3.5**	**3.2**	**3.4**	**4.0**
Advanced Economies	0.1	-3.4	3.1	1.7	1.4	1.3	1.8	2.4
Emerging Market and Developing Countries	5.8	3.1	7.4	6.1	5.1	4.7	4.6	5.2
Commonwealth of Independent States	5.4	-6.2	5.0	4.8	3.4	2.2	0.9	2.1
Emerging and Developing Asia	7.1	7.5	9.6	7.7	6.7	6.6	6.4	6.7
Emerging and Developing Europe	3.2	-3.6	4.7	5.5	1.4	2.8	2.7	2.9
Middle East, North Africa, Afghanistan, and Pakistan	5.2	2.5	5.1	4.0	4.9	2.5	3.1	4.8
Latin America and the Caribbean	4.0	-1.3	6.0	4.5	2.9	2.6	2.0	2.6
Sub-Saharan Africa	5.7	3.3	5.9	4.9	5.1	5.4	5.4	5.8
Low-Income Developing Countries	5.6	5.4	6.6	5.1	5.8	6.3	6.2	6.5
Emerging Market Countries	5.8	2.9	7.5	6.2	5.1	4.6	4.4	5.1
Fragile States	4.3	4.5	5.1	1.0	15.0	3.6	3.8	9.3
Small States	4.1	0.6	2.9	3.6	2.8	2.2	3.1	2.6

Source: World Economic Outlook, data as July 2014.

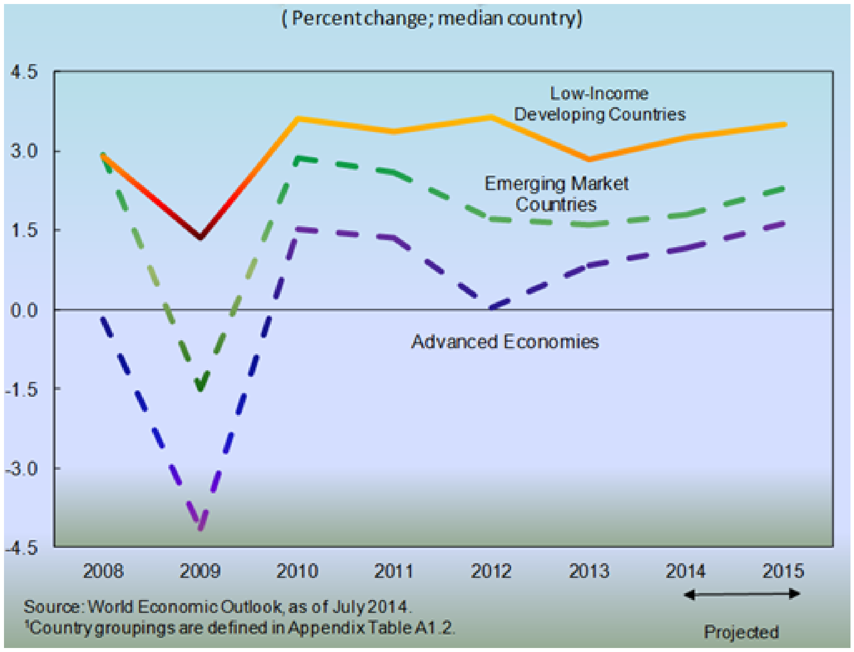
Note: Country groupings are defined in Appendix Table A1.2.

2.4 The slowdown in growth in the AE in 2013 was on account of lower growth in the United States, where fiscal consolidation weighed on demand. In most other AE growth picked up. The euro area emerged from recession as private domestic demand strengthened albeit unevenly across countries and sectors. In other countries growth was supported by easier credit conditions and increased confidence. Growth slowed in 2013 relatively faster in the EMDC than in the AE reflecting tepid growth across the Middle East and North Africa as well as in the Commonwealth of Independent States. In many countries in these regions growth was held back by weak investments and political tensions exacerbated in some instances also by declines in oil production. Bucking the trend, growth in low-income developing countries (LIDC) accelerated to above 6 percent owing to improved agricultural production and natural resource and infrastructure investments.

2.5 Whereas average growth in AE and LIDC in 2013 was in line with what had been projected in the GMR 2013, growth in emerging market countries fell short of what had been foreseen (an outcome of 4.6 percent versus a projected 5.2 percent). The forecast errors were particularly large for some countries in the Middle East, North Africa and the Commonwealth of Independent States.

2.6 The global economy is expected to strengthen in the run-up to the end of the MDG monitoring period in 2015. The pick-up in global growth will be in both the AE and EMDC, but growth in the latter group will continue to be significantly larger than in the former group. In 2015, overall global growth is expected to be 4 percent as AE grow 2 percent, emerging market countries 5 percent and LIDC 6-7 percent. Recent average growth in fragile states has been very volatile owing to large swings in oil production in Libya; excluding Libya, 6½ percent growth in fragile states is expected in 2015 up from 5 percent in 2013. In the context of rising global growth, per capita income is expected to increase in most countries (figure 2.1).

Figure 2.1 GDP per capita growth



2.7 The better outlook for growth in 2015 is to a great extent driven by higher growth in the United States and the euro area. Growth will be supported by accommodative monetary policies and a recovering housing sector; a tapering off of fiscal consolidation will also help. Growth in the euro area will also be underpinned by improved confidence and a recovering banking sector.

2.8 The growth slowdown in the EMDC should come to an end in 2014, and a significant pick up is expected for 2015. Growth will benefit from higher export demand to AE as well as the normalization of economic activity in countries in the Middle East, North Africa, and the Commonwealth of Independent States. Growth in India will benefit from higher investments and confidence following the elections.

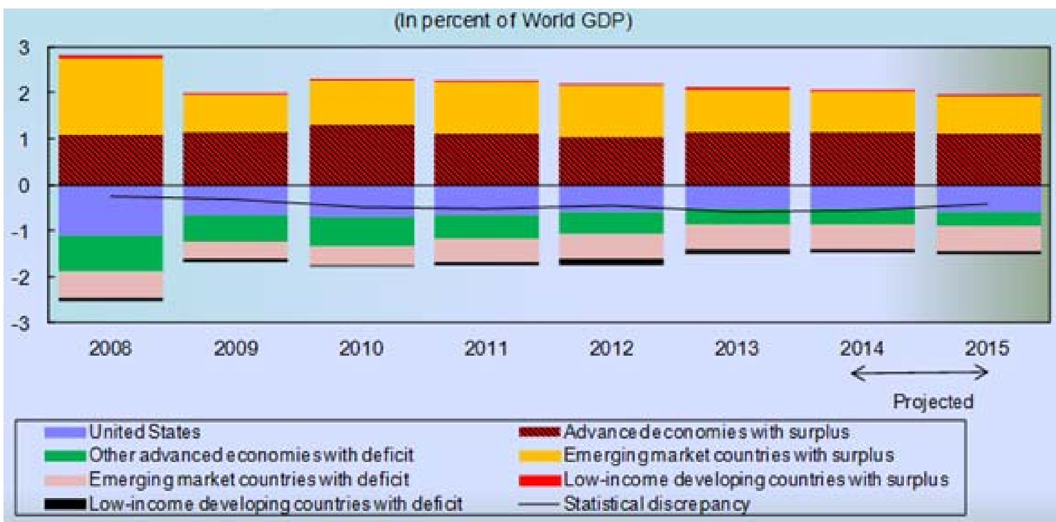
2.9 There are several downside risks to these projections. In AE, there is a risk that the current very low inflation becomes entrenched especially in the context of an adverse shock to growth. If very low inflation were to take hold, there could be an additional impact on growth and private and public debt burdens would become more onerous. Another possible risk to the outlook in AE is reform fatigue. If there is little tangible progress toward addressing vulnerabilities in the financial sector and bringing down the high levels of unemployment, the political consensus on pursuing reforms could be undermined, which in turn could lead to a loss of market confidence.

2.10 Downside risks in EMDC include those relating to how private investments and durable consumption may be impacted by a higher cost of capital. An unexpectedly rapid normalization of monetary policy in the United States could lead to financial sector stress with knock-on effects on growth. The Ebola virus has caused a severe health crisis in West Africa. This crisis could worsen or spread to neighboring countries, many of whom would be ill-equipped to confront it.

2.11 Geopolitical risks are also on the rise. Political tensions in some countries—for example, in Iraq, Syria or Ukraine—could deepen with negative economic consequences for neighboring countries and beyond. Were a widening of hostilities in Iraq to lead to a halt in oil production in that country, international oil prices could quickly shoot up with knock-on effects on global growth prospects if such higher prices were to be sustained.

2.12 In the years leading up to the Great Recession, global current account imbalances widened gradually by 1 percent of global GDP to reach close to 3 percent of global GDP. The Great Recession proved these larger imbalances unsustainable: as the crisis hit the current account deficits in the United States and some smaller advanced economies narrowed sharply as did the surpluses in emerging market capital exporting countries (figure 2.2). From 2009 onwards, the global current account imbalances have remained relatively constant at close to 2 percent of global GDP and no major shifts are projected for the period ahead.

Figure 2.2 Global current account imbalances



Source: World Economic Outlook as of July 2014.

Note: Country groupings are defined in Appendix Table A1.2.

2.13 Strong domestic government revenue mobilization is key to EMDC having the resources needed to address their development challenges, including enhancing infrastructure provision and achieving the MDG. In that regard, the global Great Recession was a major setback as the recession led to a 3 percentage points of GDP drop in revenues (table 2.2). Since then only a third of this revenue loss has been recovered and there is no prospect for a further recovery through 2015.

Table 2.2 **General government revenue excluding grants**

Weighted averages, percent of GDP

	2008	2009	2010	2011	2012	2013	Projections 2014	Projections 2015
Emerging Market and Developing Countries	**29**	**26**	**26**	**28**	**28**	**27**	**27**	**27**
Commonwealth of Independent States	39	35	35	37	37	36	36	35
Emerging and Developing Asia	20	20	20	21	22	22	22	22
Emerging and Developing Europe	36	35	35	37	36	37	36	36
Latin America and the Caribbean	30	28	29	30	30	30	30	30
Middle East, North Africa, Afghanistan, and Pakistan	41	31	33	34	37	35	34	33
Sub-Saharan Africa	25	21	21	24	23	21	21	21
Low-Income Developing Countries	21	17	18	20	19	17	18	18
Emerging Market Countries	30	26	27	28	28	28	27	27
Fragile States	36	28	31	30	36	32	29	31
Small States	32	29	28	34	33	32	32	32

Source: World Economic Outlook, data as of July 2014.

Note: Country groupings are defined in Appendix Table A1.2.

2.14 External resources are also of paramount importance if the developing world is to achieve the MDG. As with domestic revenues, the Great Recession negatively affected capital inflows into developing countries, but average flows have remained fairly constant since then (table 2.3). Capital inflows are critical to LIDC; relative to GDP, these countries receive net inflows that are about three times that of emerging market countries. Fragile states and small states also receive significant inflows relative to these countries' GDP level.

2.15 For the second year in a row, world trade was subdued in 2013 reflecting low economic growth and stable traded goods prices. In AE, there was no change in the value of trade (exports and imports of goods and services in U.S. dollar terms) from 2011 to 2013. Over the same two year period, trade in EMDC rose by just 8 percent. Against the background of broadly stable prices of traded goods and services, a modest uptick in world trade is expected through 2015 as global growth strengthens. Commodity prices—which were on a roller coaster during the Great Recession—trended slightly lower during 2013 and the first half of 2014 (figure 2.3). The expectation is that stable or slightly lower prices will be maintained through the end of 2015 although were geopolitical risks to materialize international oil prices in particular could easily spike.

Table 2.3 **Net financial flows**

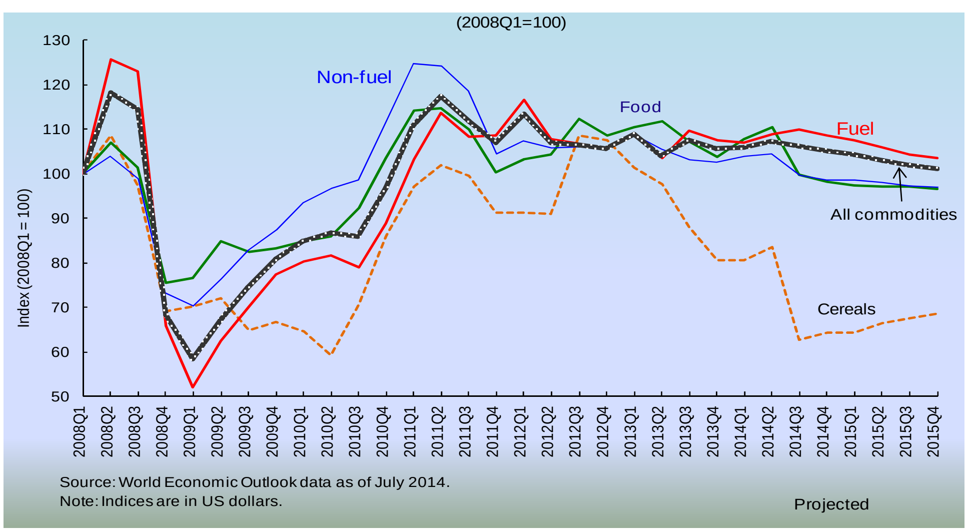
Percent of GDP[2]

	2008	2009	2010	2011	2012	2013	Projections 2014	2015
Emerging Market Countries	**8.0**	**8.3**	**7.0**	**6.4**	**5.8**	**5.7**	**5.1**	**5.3**
Private capital flows, net	4.1	1.8	1.8	2.1	1.6	1.6	1.5	1.8
Of which: private direct investment	-5.3	-4.5	-3.7	-3.2	-3.1	-3.2	-3.1	-3.4
Private portfolio flows	-1.1	-1.2	-0.5	-0.3	0.3	0.0	0.0	-0.1
Private current transfers	2.3	2.1	2.1	2.1	2.0	1.9	1.9	1.8
Official capital flows and transfers (net)	1.6	4.4	3.2	2.2	2.3	2.2	1.7	1.7
Memorandum item:								
Change in reserve assets (–, accumulation)	-2.6	-2.1	-1.5	-1.5	-1.3	-1.0	-0.3	-0.3
Low-Income Developing Countries	**17.1**	**14.0**	**12.7**	**16.6**	**17.1**	**15.8**	**16.2**	**16.1**
Private capital flows, net	4.4	2.0	3.1	3.6	4.4	3.5	3.5	3.9
Of which: private direct investment	-5.9	-4.7	-5.6	-6.8	-6.7	-5.9	-5.2	-5.8
Private portfolio flows	-0.2	-0.3	0.0	-0.1	0.0	-0.2	-0.2	-0.4
Private current transfers	6.3	5.8	5.7	6.0	6.3	6.1	6.0	6.0
Official capital flows and transfers (net)	6.4	6.2	3.9	7.0	6.5	6.2	6.7	6.2
Memorandum item:								
Change in reserve assets (–, accumulation)	-1.7	-2.3	-1.7	-2.2	-1.4	-0.7	-1.1	-1.4
Fragile States	**16.2**	**14.7**	**11.9**	**17.4**	**16.3**	**15.1**	**14.9**	**13.6**
Private capital flows, net	3.9	2.2	3.2	3.5	2.7	2.3	2.4	1.8
Of which: private direct investment	-3.6	-3.8	-4.9	-4.3	-3.6	-3.0	-2.9	-3.1
Private portfolio flows	-0.5	-0.3	-0.3	-0.4	-0.3	-0.2	-0.3	-0.3
Private current transfers	4.4	4.3	4.0	4.2	4.5	4.2	4.0	4.0
Official capital flows and transfers (net)	7.9	8.2	4.7	9.8	9.1	8.7	8.5	7.8
Memorandum item:								
Change in reserve assets (–, accumulation)	-2.9	-2.6	-1.2	-2.6	-1.4	-0.8	0.9	0.0
Small States	**14.4**	**15.1**	**15.0**	**13.5**	**11.9**	**11.5**	**11.4**	**11.4**
Private capital flows, net	5.0	3.2	3.7	3.6	2.1	1.8	2.4	2.2
Of which: private direct investment	-9.8	-7.8	-7.7	-5.6	-5.6	-5.7	-5.6	-5.9
Private portfolio flows	-2.0	-2.0	-1.8	-1.2	-0.9	-1.2	-1.0	-1.0
Private current transfers	1.8	1.9	1.9	1.9	2.0	1.7	1.6	1.6
Official capital flows and transfers (net)	7.6	10.0	9.5	8.0	7.8	8.0	7.4	7.6
Memorandum item:								
Change in reserve assets (–, accumulation)	-1.9	-2.5	-1.0	-1.1	-1.2	-2.2	-0.5	-0.4

Source: World Economic Outlook as of July 2014.

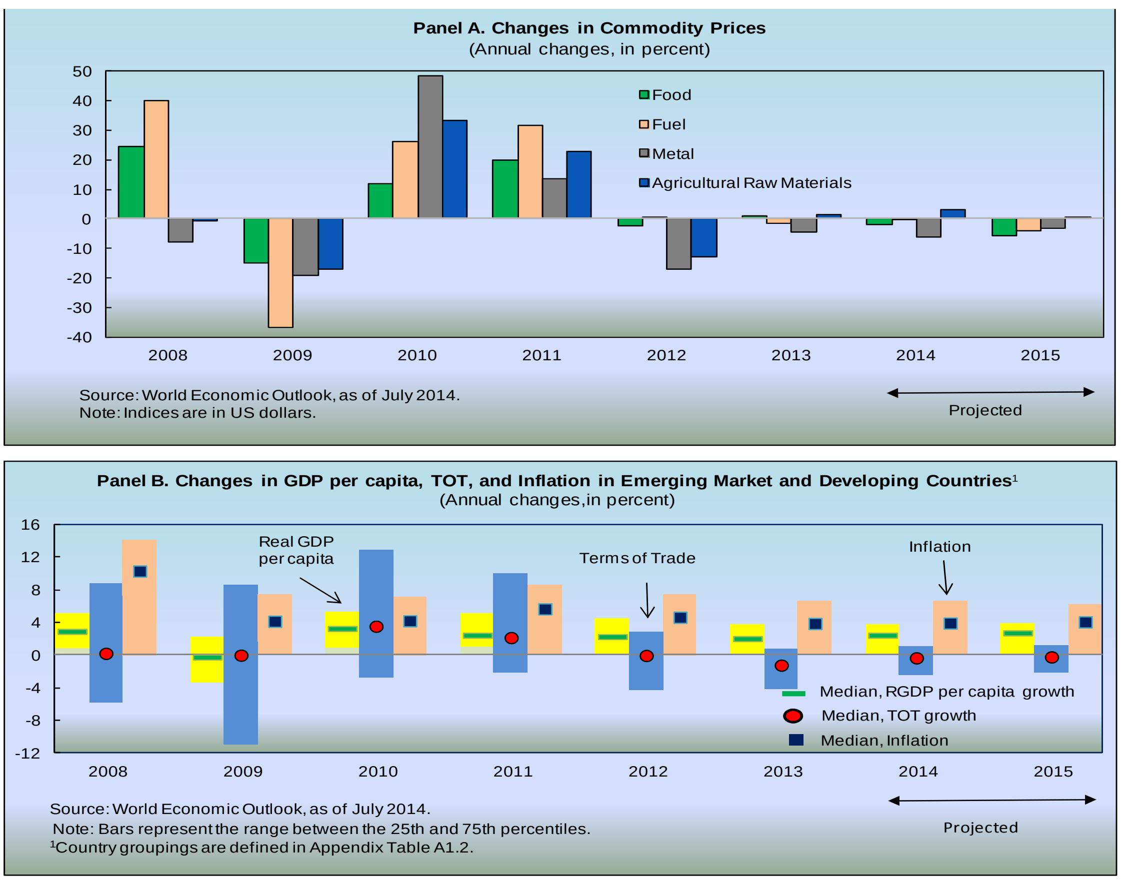
Note: Country groupings are defined in Appendix Table A1.2.
Equally weighed.

Figure 2.3 **Commodity price indexes**



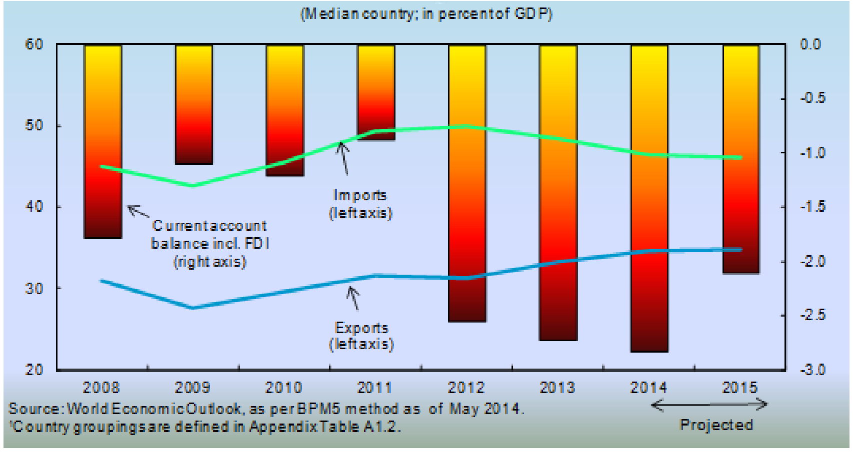
2.16 In the developing world commodity price changes impact households and firms to a far greater extent than in advanced economies. In poorer countries tradable goods—including, importantly, food—constitute a larger share of the consumption basket. Many poorer countries are also dependent on the exports of a few commodities or need to import grains and other critical commodities. As the prices of such export or import commodities change so does real income. Price changes for petroleum products can also have broad-based and important effects on living standards in importing countries. EMDC both import and export commodities, but on average these countries tend to benefit from higher commodity prices (figure 2.4). Higher commodity prices in 2010 and 2011 were associated with terms of trade gains for the majority of EMDC. As commodity prices weakened in 2012 and 2013, these terms of trade gains were eroded. While the terms of trade are expected to remain fairly constant through 2015, in the majority of EMDC terms of trade will fall rather than increase.

Figure 2.4 Changes in commodity prices and changes in GDP per capita, terms of trade and inflation in emerging markets and developing countries



2.17 The typical low-income developing country is well integrated into the world economy with imports and exports shares of GDP of about 45 and 35 percent respectively (figure 2.5). The current account deficit (defined here as net of foreign direct investments to focus attention on the residual deficit) for the typical LIDC has increased from around 1 percent of GDP in 2009-11 to 2-3 percent thereafter.

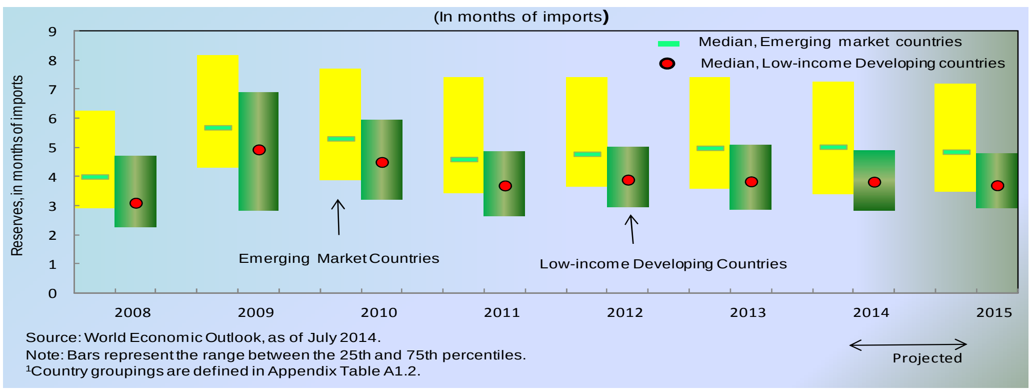
Figure 2.5 **Low-income developing countries - imports, exports, and current account balance including FDI**



Source: World Economic Outlook, as per BPM5 method as of May 2014.
[1]Country groupings are defined in Appendix Table A1.2.

2.18 Official reserves, in months of imports—a standard measure of reserve coverage in both emerging market countries and low-income developing countries—changed little in 2013 and are expected to remain relatively stable through 2015 (figure 2.6). The typical emerging market country holds somewhat larger reserves than the typical low-income developing country. About a quarter of LIDC hold reserves of less than 3 months of imports. These countries are highly vulnerable to external shocks.

Figure 2.6 **Official reserves**



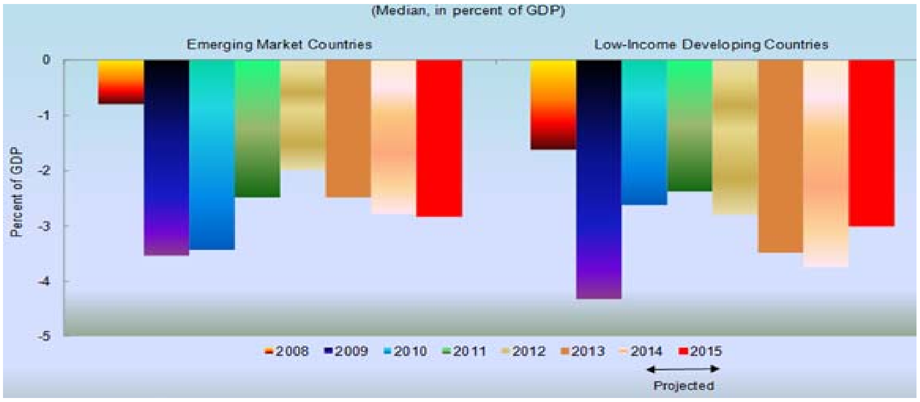
Source: World Economic Outlook, as of July 2014.
Note: Bars represent the range between the 25th and 75th percentiles.
[1]Country groupings are defined in Appendix Table A1.2.

Macroeconomic policies

2.19 In the aftermath of the Great Recession, the feeble recovery in AE have been supported by a macroeconomic policy stance that has underpinned demand and private sector confidence while at the same time contained risks in the financial sector and to medium term fiscal sustainability. In 2013, AEs average fiscal deficit dropped sharply falling to below 5 percent of GDP. As fiscal accounts improved, monetary policy easing was maintained against the background of well-anchored inflation expectations and continued low inflation. A further tightening of fiscal policies in AE is projected to take place in 2014 and 2015.

2.20 The fiscal deficit in 2013 in both the typical emerging market country and low-income developing country widened (figure 2.7). Thus, further progress toward rebuilding the fiscal buffers that were put to such good use during the Great Recession has stalled. Four years after the crisis less than half of this buffer has been reconstituted and there is no prospect for any further improvement through 2015. The widening fiscal deficit in a typical LIDC is reflected in part in the widening of the external current account deficit (see figure 2.5).

Figure 2.7 Fiscal deficit

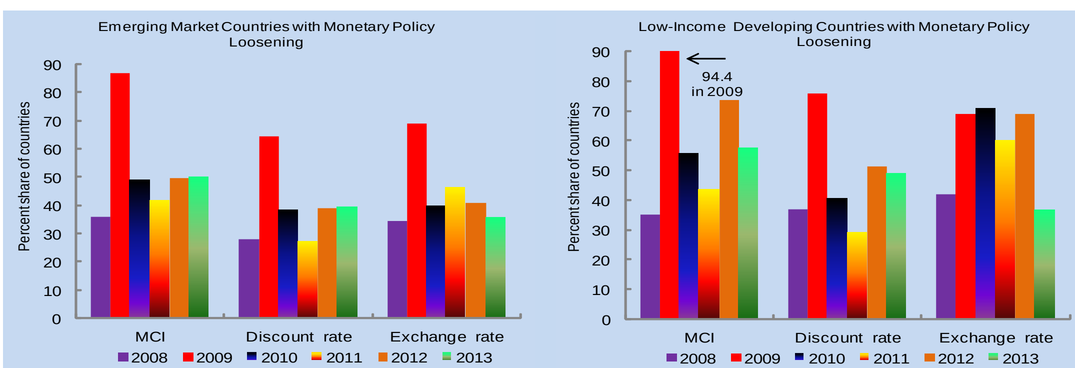


Source: World Economic Outlook as of July 2014.

Notes: (i) General government balance (net lending/ net borrowing) as defined by IMF Government Finance Statistics Manual 2001.
(ii) Country groupings are defined in Appendix Table A1.2.

2.21 About half of all EMDC loosened monetary policy in 2013 with the other half tightening their policies (figure 2.8). Relatively more LIDC than emerging market countries loosened monetary policies, but the difference between the two groups was not large. In LIDC, there was a relatively greater reliance on monetary policy loosening in the form of a lowering of short term interest rates rather than allowing for a depreciation of the exchange rate. Against the background of these policy measures, monetary aggregates continued to grow faster than nominal GDP in emerging market countries (figure 2.9).

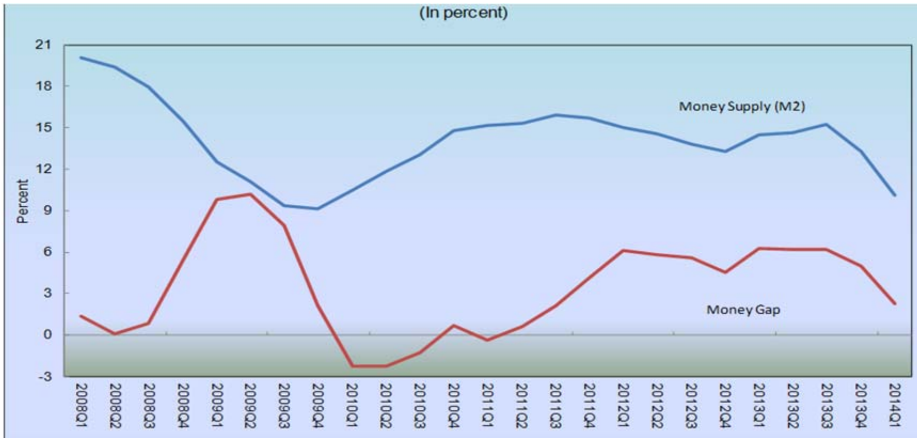
Figure 2.8 Monetary policy loosening



Source: International Financial Statistics as of July 2014.

Notes: (i) Monetary policy loosening in based on Monetary Conditions Index (MCI) calculations. MCI is a linear combination of nominal short-term interest rates and the nominal effective exchange rate (with one-third weight for the latter).
(ii) Country groupings are defined in Appendix Table A1.2.

Figure 2.9 **Average year-on-year growth in money and the money- gap in emerging market countries**

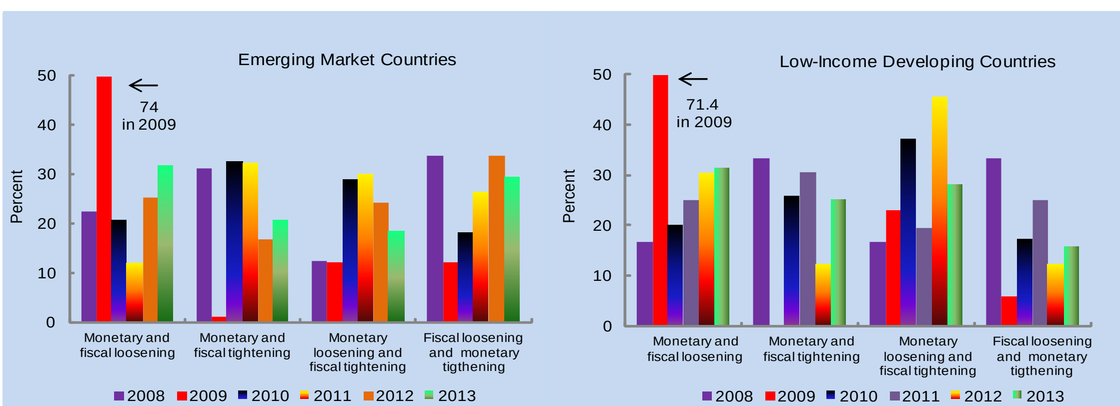


Source: International Financial Statistics as of July 2014.

Notes: (i) The money gap is the difference between year-on-year growth rates of M2 and nominal GDP. The sample includes emerging market economies that have data on both for the whole sample period shown.
(ii) Country groupings are defined in Appendix Table A1.2.

2.22 In 2013, about a third of both emerging market countries and LIDC loosened macroeconomic policies; i.e., they loosened both fiscal and monetary policies (figure 2.10). In contrast, more LIDC than emerging market countries tightened macroeconomic policies. About half of all emerging market countries and LIDC changed the policy mix by simultaneously tightening and loosening policies. Among these countries, emerging market countries were more likely to loosen fiscal policy and tighten monetary policy than the other way around. Among LIDC, more countries loosened monetary policy and tightened fiscal policy than the other way around.

Figure 2.10 **Macroeconomic policy mix**



Source: International Financial Statistics as of July 2014.

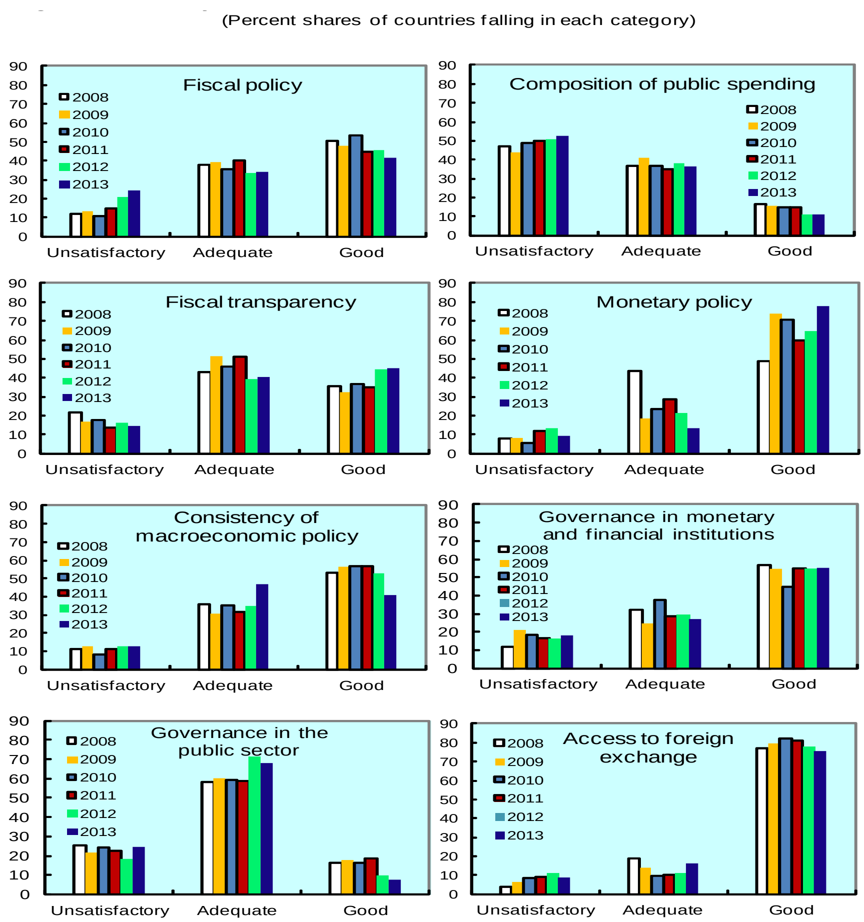
Notes: (i) Country groupings are defined in Appendix Table A1.2.
(ii) Fiscal conditions are defined based on annual change in government balance (net lending/ net borrowing) as a percent of GDP in 2008, 2009, 2010, 2011, 2012, and 2013. Monetary conditions are based on the change in the MCI; changes are calculated Q4 over Q4. MCI is a linear combination of nominal short-term interest rates and the nominal effective exchange rate (with a one-third weight for the latter).

Quality of macroeconomic policies in low-income countries

2.23 In order to gain a better perspective on the quality of macroeconomic policies in low-income countries, IMF country desks in these countries are surveyed about their assessment about the quality of countries' economic policies.[3] In the period leading up to the Great Recession, the quality of economic policies greatly improved especially in countries in Sub-Saharan Africa. Subsequently, the assessments have fluctuated with no clear trend.

2.24 The survey results for 2013 suggest a deterioration in the quality of policies as compared with 2012 (figure 2.11). Fiscal policy is the area of most concern with the number of countries with unsatisfactory fiscal policy now exceeding 20 percent (the number has increased for four years in a row). An appropriate composition of public spending is key to achieving the MGDs, but in more than half of countries surveyed the composition of public spending is considered unsatisfactory.

Figure 2.11 Quality of macroeconomic policies in Low-Income Countries, 2008-13



Source: IMF staff estimates, as of July 2014.

Notes: (i) IDA-eligible countries.

2.25 In contrast, less concern is raised about monetary policy implementation. For the overwhelming number of countries, monetary policy implementation and access to foreign exchange are rated as good. Governance in monetary and financial institutions—which is mostly rated as good or as adequate—is assessed as being of a higher quality than governance in the broader public sector.

Shifting medium term vulnerabilities for low income developing countries[4]

2.26 The low income developing countries are not only the most vulnerable countries; they are also the countries that are most challenged in meeting the MDGs. The 60 LIDC account for about one-fifth of the world's population, but their share in global PPP-weighted GDP is only 3½ percent. The LIDC share many common development characteristics, but they are quite diverse across other important dimensions, such macroeconomic and political fragility, financial market access, and export structure. Overall, the outlook for growth in the LIDC is very positive with expected average annual growth of above to 6 percent through 2019.

2.27 The medium term outlook for LIDC is for resilient growth to continue over the medium term at around the current level of 6 percent. This strong growth is expected to take place together with low inflation and in the context of relatively stable moderate fiscal and external deficits (figure 2.12). While the outlook is benign, LIDC face critical challenges arising from softer commodity prices, moderating FDI and external aid inflows.

2.28 While LIDC grow resiliently on average, the LIDC are very vulnerable countries and when hit by negative shocks these countries often find it challenging to muster the necessary resources with which to overcome these shocks. An analytical framework underlying the vulnerability assessment for LIDCs was simulated to assess the impact of substantial and protracted slowdown in major emerging markets (EM), including China on the LIDCs (figure 2.13). Under this scenario, trend growth is lower as a result of weaker-than-expected productive capacity and human capital. Global growth would be lower than the baseline projection by 1/2 percentage point during 2014-16. The weaker global growth would result in a marked reduction in the demand for commodities, producing lower oil and non-oil commodity prices.

2.29 This scenario would impact negatively on growth performance in LIDCs. The slowdown in economic activity emanates from depressed demand for LIDCs' exports, lower remittances and FDI inflows. Fragile states, frontier economies and commodity exporters would be affected differently, with countries with stronger trade ties with emerging markets experiencing pronounced decline in exports. The cumulative output contraction during 2014-16 is estimated at percentage points for a median LIDC.

2.30 Fiscal and external buffers in LIDCs would deteriorate, as output loss accumulates over time. Fiscal balances in a median LIDC would deteriorate by 1.8 percentage points of GDP during 2014-18, with debt ratios higher than the baseline by 4.3 percentage points. In addition, current account position would worsen by 5.1 percentage points, leading to an erosion of external buffers. Absent domestic policy adjustment, the potential cumulative additional external financing need during 2014–18 is estimated at US$72 billion. Incorporating fiscal adjustments, on the other hand, would reduce the scale of financing needed to handle this shock to US$61 billion.

Figure 2.12 **Selected macroeconomic indicators**

Low-Income Developing Countries, 2000-19

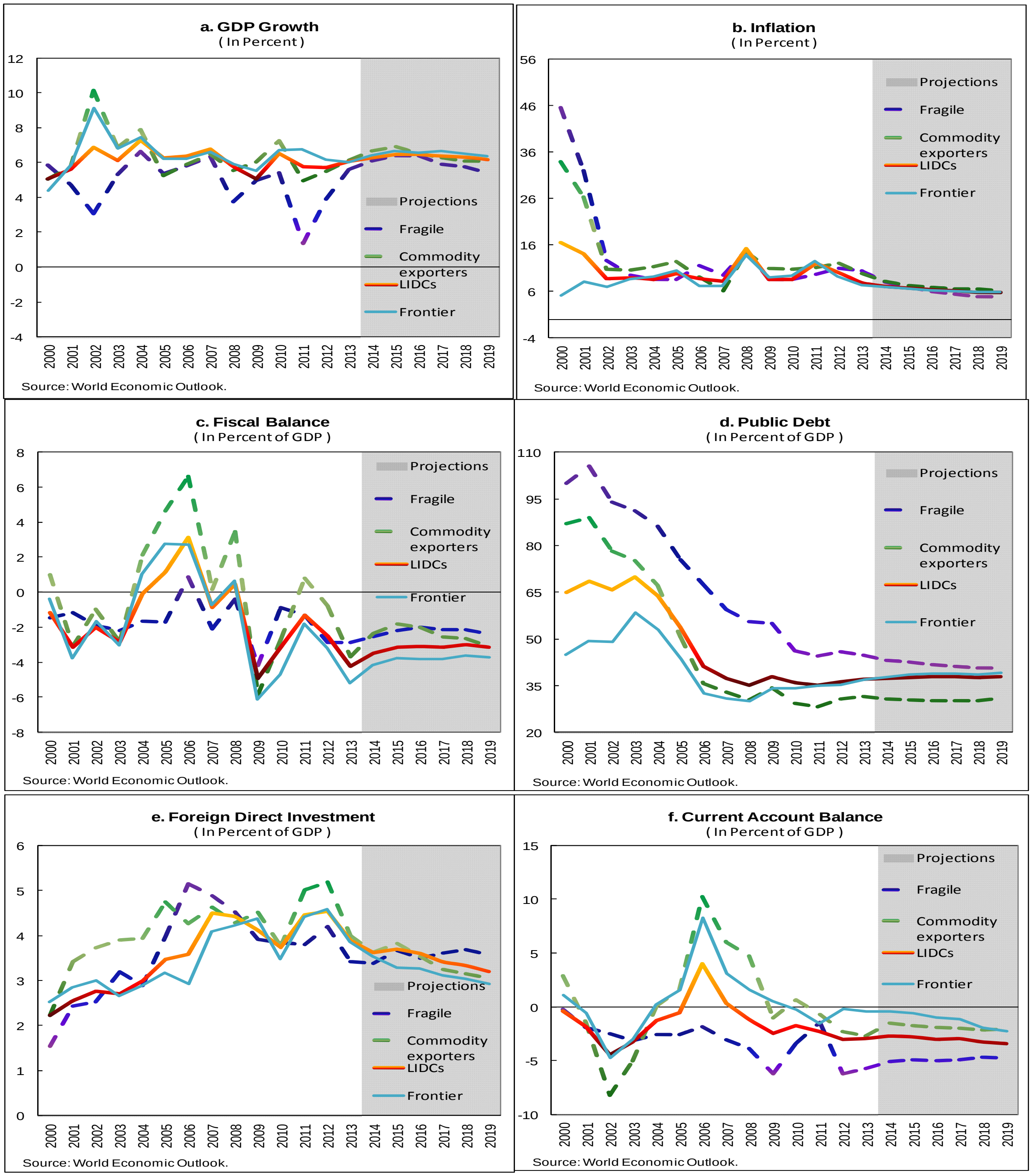
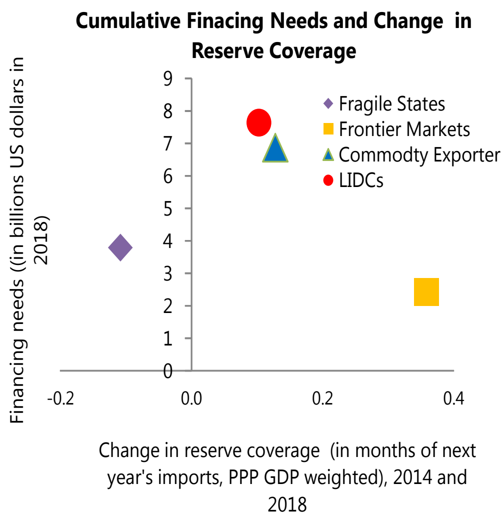
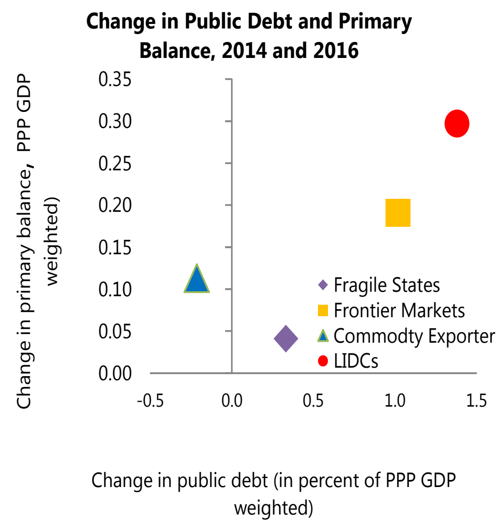


Figure 2.13 **Low-income developing countries - impact of protracted slowdown in EM**





Source: World Economic Outlook.

2.31 An escalation of geopolitical tensions would have a significant but less severe impact overall on LIDCs than EM slowdown, but with important differences across subgroups. The key transmission channels would be through the impact of this shock on commodity prices, trade and remittances. While oil exporters would benefit, other commodity exporters and those with strong exports links to most affected EMs and advanced economies would be negatively affected under this shock. LIDCs that have the closest links to the region, be it the Middle East or Russia, are also disproportionately affected, in particular through their reliance on remittances.

2.32 The impact of an asynchronous normalization of monetary policies in advanced economies would only have a very limited impact on most LIDCs. However, frontier markets could prove an important exception to this rule. Relative to other LIDCs, they are more exposed to the transmission of global financial shocks and their relatively more developed domestic financial markets imply a greater potential for adverse feedback loops on the real economy.

2.33 In managing a response to potential global shocks (especially the one relating to substantial and protracted slowdown in major emerging markets), rebuilding fiscal buffers should go hand in hand with the utilization of other available policy levers. LIDCs with monetary autonomy and a flexible exchange rate have additional policy tools to handle external shocks. Structural reforms can also play a role in limiting vulnerabilities in LIDCs:

- The appropriate balance (and timing) of policy adjustment versus higher external financing depends on both country circumstances and the availability of such financing. Of particular importance will be the need to provide assistance to countries that are highly vulnerable and have limited alternative financing options, particularly fragile states. It would be particularly desirable to provide such financial support in the form of grants to limit the build-up of public debt and mitigate fiscal vulnerabilities.

- For countries with insufficient fiscal space or access to financing at concessional terms, fiscal adjustment is likely to be needed. Where fiscal adjustment is undertaken, it should be implemented in a manner that safeguards priority spending, such as infrastructure and poverty-related spending. Countries with moderate debt levels and adequate space to borrow domestically without disrupting credit markets have more room for fiscal maneuver, but will still likely need to pursue some degree of fiscal consolidation.

- LIDCs with monetary autonomy and a flexible exchange rate have additional policy tools to handle external shocks. Deploying such policies where available could mitigate the impact of shocks and limit further the additional financing needs. With inflation well-contained and falling in most LIDCs, monetary easing can be deployed to support demand without destabilizing price movements and expectations. Exchange rate depreciation also offers scope for accommodating external shocks without suffering sizeable output losses, particularly in larger countries where inflation pass-through is more likely to be modest.

2.34 There are several key measures that policy makers can deploy overtime to limit vulnerabilities in LIDCs:

- Improvements in the composition of public spending—such as the phasing out of universal energy subsidies, while implementing appropriately targeted social safety nets—can support more inclusive growth by generating fiscal space to ease the trade-offs between priority spending and strengthening fiscal positions. Similarly, well-designed tax reforms and strengthened tax administration will expand revenue bases and hence ease difficult fiscal trade-offs.

- Commodity exporters (and especially countries that are heavily dependent on natural resource revenues and exports) can address the key source of domestic vulnerability—resource revenue volatility—by building an adequately-resourced stabilization fund in the "good years" to avoid the need for procyclical fiscal adjustments that would amplify the negative macroeconomic and social impact of volatile swings in commodity prices.

- Frontier market economies in LIDCs that have attracted potentially volatile foreign portfolio investment into domestic capital markets face a new source of vulnerability. Managing this new risk requires accumulating higher levels of foreign reserves, but also strengthening oversight of domestic financial markets and institutions.

- Strengthening institutional capacity is also critical to enhance the resilience of LICs, especially in fragile states. Coordinated support for capacity-building from both multilateral agencies and bilateral donors is needed to strengthen those government functions that underpin resilience—including revenue collection, public financial management, debt management, and financial sector supervision.

- Increasing resilience through economic diversification is key for countries that have highly concentrated export sectors. LIDCs should promote progress in structural reforms that enhance long-term resilience to shocks. These would include productivity-enhancing infrastructure spending and investments in improving human capital, including in health and education.

Notes

[1] This draft chapter draws on the July 2014 update of the IMF's *World Economic Outlook (WEO)*. The final text will incorporate the revised projections included in the October 2014 *World Economic Outlook*.

[2] The classification of countries follows the one used in the IMF's *World Economic Outlook*. Emerging market and developing countries are those countries that are not designated as advanced. Low-income developing countries are countries eligible for IMF's concessional financial assistance with a per capita Gross National Income (measured according to the World Bank's *Atlas* method) in 2011 of below twice IDA's effective operational cut-off level, and Zimbabwe. Other emerging market and developing countries are considered emerging market countries. Small states are emerging market and developing countries with a population of less than 1.5 million. Fragile states are countries included in the World Bank's list of Fragile and Conflict-Affected States as of July 2014. Appendix Table A1.2 includes the list of all countries and the groupings to which they belong.

[3] Each low-income country has been assessed according to a common set of criteria. For example, a country's quality of fiscal policy is assessed by considering its fiscal deficit and the sustainability of its public debt (a country with a large fiscal deficit and an unsustainable level of public debt would be judged to have an unsatisfactory fiscal policy. The assessment has been carried out annually since 2003.

[4] In this section fragile states are defined to also include Malawi, Nepal, and the Republic of Congo. Commodity exporters are fuel exporters and primary commodity exporters as defined in WEO. Frontier markets are 14 low income countries whose financial system share similar characteristics with those of emerging market countries (Bangladesh, Bolivia, Côte d'Ivoire, Ghana, Kenya, Mongolia, Mozambique, Nigeria, Papua New Guinea, Senegal, Tanzania, Uganda, Vietnam, and Zambia).

Chapter 3 Inclusive and sustainable growth in high-income countries

3.1 Inequality in high-income OECD economies has reached levels unprecedented in the post-World War II period. This chapter analyzes the determinants of growth and inequality in these countries, and how improvements in policies affecting labor utilization and productivity could make growth more inclusive and sustainable. The main messages are:

i. Pro-growth policies that foster greater labor utilization could reduce poverty levels in high-income OECD countries. However, pro-growth policies that boost technological progress, which tends to favor high-skilled workers, should not unduly harm poorer, low-skilled workers.

ii. Investments in human capital are necessary to promote equality of opportunity, particularly through raising pre-school enrolment among disadvantaged households and ensuring educational attainment up to at least lower-secondary level. Increasing the flexibility of labor markets needs to be balanced with programs, such as unemployment benefits, that protect workers, but not jobs.

iii. The distributional implications of environmental policies to support sustainability vary across groups and can have beneficial or adverse effects on equity and labor earnings. Policies to encourage agricultural production can exacerbate off-farm pollution and lead to less efficient use of water, since water charges for farmers rarely reflect real scarcity or environmental costs.

iv. Sustainability requires policies to reduce polluting or resource-intensive production and consumption. Fostering labor force skills that enable the adoption of resource-efficient, sustainable processes and technologies by businesses is a central pillar of the transition to low-carbon economies.

3.2 This chapter begins by providing an overview of trends in growth and income distribution in high-income countries, and the main drivers of inequality across incomes and non-income dimensions of well-being. The next section reviews policies to strengthen labor utilization and productivity, including their implications for growth and income distribution and the need in some cases to compensate groups adversely affected. The final section considers the sustainability of growth, most critically the efforts required to achieve zero net emissions from fossil fuel combustion by the second half of this century.

Trends in growth and income distribution in high-income countries

3.3 Several high-income countries[1] have been facing slow growth and high unemployment since the crisis, while at the same time witnessing a gradual, long-term deterioration in the distribution of income. In particular:

- The global crisis has taken its toll on potential growth in several countries, essentially due to lower capital intensity in production, and persistently high unemployment, which risks becoming structural in nature, as the long-term unemployment fall in inactivity altogether. Recent OECD estimates put the permanent GDP loss associated with the crisis at about three percentage points on average across the OECD.[2]

- Unemployment has reached close to 49 million people in the OECD area as a whole, or about 7.9 percent of the labor force. The youth unemployment rate has increased from 12 percent in 2000 to 16.3 percent in 2012. In addition, there are nearly 8 million youth in OECD countries that are neither employed nor enrolled in education nor training.

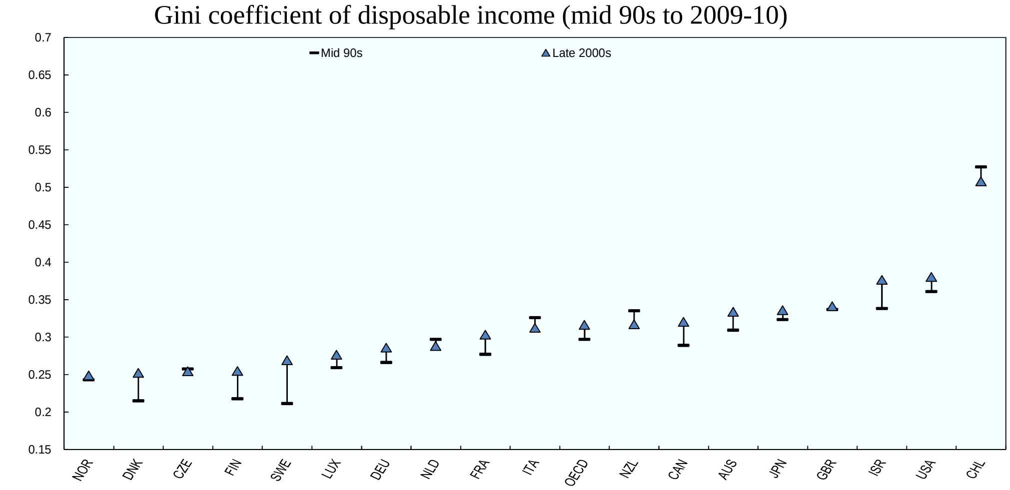
- The distribution of income has also deteriorated in the vast majority of high-income countries: the average income of the richest 10 percent of the population is now about 9.5 times that of the poorest 10 percent, as opposed to 7 times 25 years ago (figure 3.1). In Israel and the United States the income gap can reach 14 to 1, whereas in Chile the income gap is even higher, at 27 to 1.

- Income inequalities have been exacerbated by the post-crisis recession. In France, Greece, Ireland, Italy, Slovak Republic, Sweden and Spain, the crisis even partly or fully reversed the improvements that were observed between the mid-1990s and 2007.[3] Perhaps most strikingly, income inequality is increasing even in traditionally egalitarian high-income stalwarts like Denmark, Germany, and Sweden.

- A growing concentration of income among the top-income earners is among the key drivers of rising inequality in many high-income countries. In the United States 47 percent of total income growth over 1976-2007 went to the top 1 percent, in Canada it was 37 percent, and the figure stood at around 20 percent in Australia, New Zealand, and the United Kingdom.[4]

3.4 Beyond shared prosperity, the other of the World Bank Group's twin goals, reducing extreme poverty by 2030, has largely been achieved in advanced economies. Absolute poverty[5] has trended down over the last 20 years and has been almost eradicated in many high-income OECD countries. However, similarly to income inequality, relative poverty as measured by the median household disposable income has been rising in many high-income countries (figure 3.2).[6] At present, 11 percent of the OECD population lives in relative poverty, with rates significantly higher not only in countries such as Israel, but also in Japan and the United States. The elderly bereaved, children and youth are the most affected. Employment considerably reduces the poverty risk, but does not solve all problems. On average, in-work poverty affects 8 percent of the workforce.

Figure 3.1 Trends in income inequality in high-income OECD countries[7]

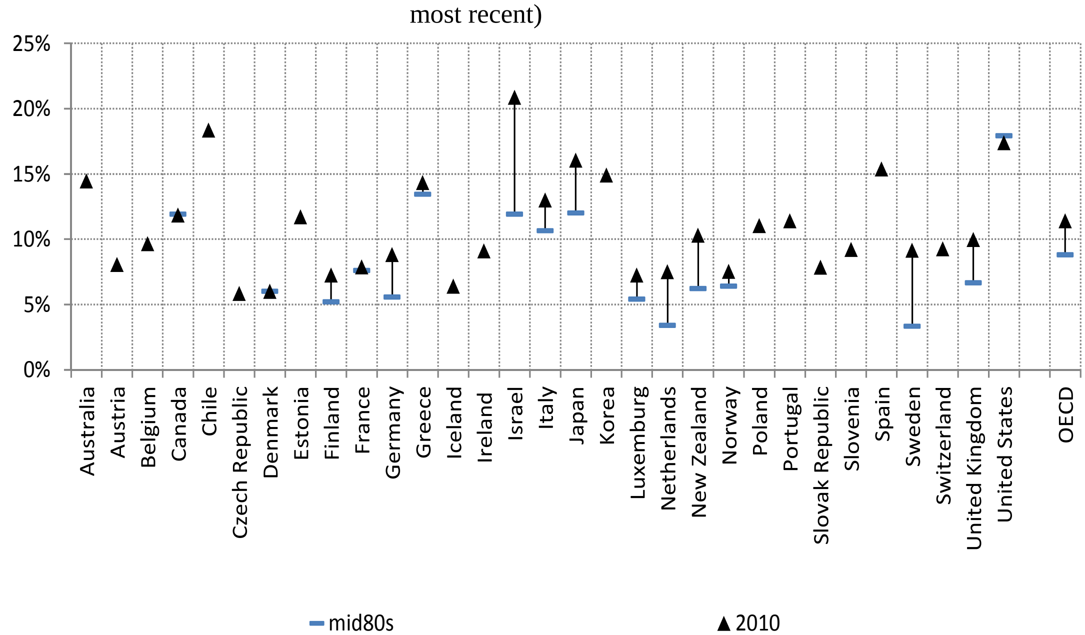


Source: OECD Income Distribution Database (www.oecd.org/social/inequality.htm), OECD, Paris.

Note: Income inequality is measured by the Gini coefficient based on equalized household disposable income (after taxes and transfers for total population). Data refer to 1992 for Czech Republic.

Figure 3.2 Relative poverty in high-income OECD countries

Income poverty rates (percent of population with income below 50 percent of the median), mid-1980s and 2010 (or most recent)



Source: OECD Income Distribution Database, www.oecd.org/social/inequality.htm.

Note: Mid 1980s numbers computed within interval 1983-1987 and data for last year refer to 2010 except for Chile (2011), Japan, New Zealand and Switzerland (2009). Relative poverty is defined as the share of persons with income below 50 percent of the median for their country.

Main drivers of income inequalities

3.5 In high-income countries, the single most important driver of rising income inequality has been greater dispersion in wages and salaries between high and low-skilled workers. Earnings account for about three quarters of household income among the working-age population.[8] Regulatory reforms in labor and product markets and institutional changes, which have led to increased competition and greater flexibility in product and labor markets, have increased employment opportunities but also contributed to greater wage inequality. On top of this, unionization has fallen in most high-income OECD countries and employment protection legislation (EPL) has been reduced. Tax-benefits systems have also become less redistributive in many countries since the mid-1990s, which has meant that they no longer have the same corrective impact on pre-tax inequalities. Finally, changes in working conditions have contributed to rising earnings inequality. In many countries, there has been an increase in the prevalence of part-time and atypical labor contracts, as well as a reduction in the coverage of collective-bargaining arrangements.

3.6 OECD analysis suggests that the impact of globalization on inequality is less pronounced than is often thought. Rather, a greater impact has come from technological progress, which has been much more beneficial to higher-skilled workers. The impact of technology has increased wage dispersion by allowing those with the relevant skills, such as ICT or financial services professionals, to benefit from significant income gains whilst lower-skilled individuals have fallen behind. As a result, the earnings gap between high and low-skilled workers has grown. In some countries including the United States, skill-based technical change induced a shift in labor demand towards higher skills. Yet, the supply of such individuals has not kept pace with rising demand, as indicated by the slowing growth of tertiary educational attainment.[9]

3.7 Rising shares of non-wage income from capital have also increased household income inequality. Capital income inequality has increased more than earnings inequality in most high-income countries. But, at around 7 percent, the share of capital income in total household income still remains modest on average, although richer individuals tend to receive a larger share of their income from capital. In Canada, France, Italy, Spain, and the United States, the five high-income OECD countries for which data are available, the share of capital income (excluding capital gains) is largest for the top 0.01 percent. In Canada this group receives about 20 percent of their income from capital, whereas in France they receive almost 60 percent.[10] Wealth-to-income ratios have risen sharply in high-income OECD countries since the mid-20th century. The challenge this trend poses for policymaking is that wealth is transmitted across generations, perpetuating inequalities in both wealth and the incomes derived from it.

Inequalities in non-income outcomes

3.8 Inequality is multidimensional and goes beyond income, affecting opportunities. Rising inequality in income is often accompanied by growing exclusion in the labor market, lower intergenerational social mobility, and greater polarization in educational and health outcomes. Access to quality jobs is also unequal, perpetuating income discrepancies. Not only are the youth, the low-skilled, immigrants and other disadvantaged groups currently facing relatively higher unemployment rates, but many of them when in employment are subjected to non-standard work arrangements, such as involuntary part-time or temporary jobs and self-employment. These jobs now account for about one-third of total employment across OECD countries.

3.9 Rising income inequality is also accompanied by greater polarization in educational outcomes perpetuating a vicious circle of exclusion and inequality. In high-income countries in the OECD area, adults aged 25-64 with tertiary education have lower unemployment rates than those with at most upper-secondary education, who in turn have lower unemployment rates than those with less than secondary education. Tertiary-educated adults are more likely than others to be in the labor force in the first place, and to earn higher salaries, enjoy good health and live longer. Poorer students struggle to compete with their wealthier class-mates and go on to lower levels of educational attainment, lower salaries and shorter lives.

3.10 Large income inequalities also impact on the health status of the different socio-economic groups which tend to be more exposed to environmental degradation. Data from 14 OECD countries (including Hungary) show for instance that on average people with better education live 6 years longer than their poorly educated peers.[11] In the United States, in 2008, the well-educated white males were expected to live 14 years longer than the worst-educated African-Americans.[12] The impact of environmental conditions on health is also largely unequal. Poor, young, and elderly individuals stand at greater risk from environmental degradation than the remainder of the population due to a combination of higher susceptibility and greater exposure. People with lower incomes, are more likely to live in environmentally distressed areas and thus be subjected to pollution and other environmental hazards. Short term effects of high PM_{10} concentration appear to be largely restricted to people of low socio-economic status, living in dense urban areas.[13]

Capturing the multidimensional aspect of inequality

3.11 Addressing the different aspects of inequalities and their impacts on different population group matters for policy design and implementation. In this respect, the notion of multidimensional living standards is particularly useful, because it combines income and non-income outcomes in a single measure that can be computed for different social groups (box 3.1).

Box 3.1 The concept of multidimensional living standards

Multidimensional living standards are a particularly useful tool for policy analysts, combining income and non-income dimensions into a single measure that can be used to compare outcomes for different social groups over a selected period of time. It also focuses on households as the unit of observation, rather than production, as in the case of GDP.

Multidimensional living standards can be computed for different segments of the distribution of outcomes, such as the mean, median or particular percentiles. By focusing on households with incomes at the median of the distribution, the computation of multidimensional living standards sheds light on the performance of the "middle class", which is of particular relevance in the high-income countries. By focusing on the 40th percentile, the computation of multidimensional living standards can inform the debate about how policies can contribute to attainment of the *World Bank's Shared Prosperity* objective.

An exercise carried out for selected high-income countries in the OECD area focuses on 3 dimensions: risk of unemployment and health status as the non-income dimensions, and household disposable income as the income dimension. Accounting for health status implicitly picks up some of the detrimental effects of exposure to pollution, just as accounting for income picks up some of the beneficial effects of education. This creates a channel through which environmental outcomes and policies can be taken into account in the framework.

The exercise could be generalised to include additional dimensions (e.g. education, environment) or to focus on broader set of social groups to better capture the notion of Inclusive Growth in a larger group of low and middle-income countries.

The notion of multidimensional living standards is part and parcel of the OECD analysis of the policy drivers of Inclusive Growth, which can be defined as a rise in the multidimensional living standards of a target income group in society (also referred to as "representative" household).

Source: Romina Boarini, Luiz de Mello, Alain de Serres, Fabrice Murtin, and Paul Schreyer (2014), "Report on the OECD Framework for Inclusive Growth" (Technical document prepared for the 2014 MCM).

3.12 An illustrative exercise has been carried out for OECD countries during the pre and post-crisis periods.[14] On the basis of the three selected dimensions (income, jobs and health), it appears that:

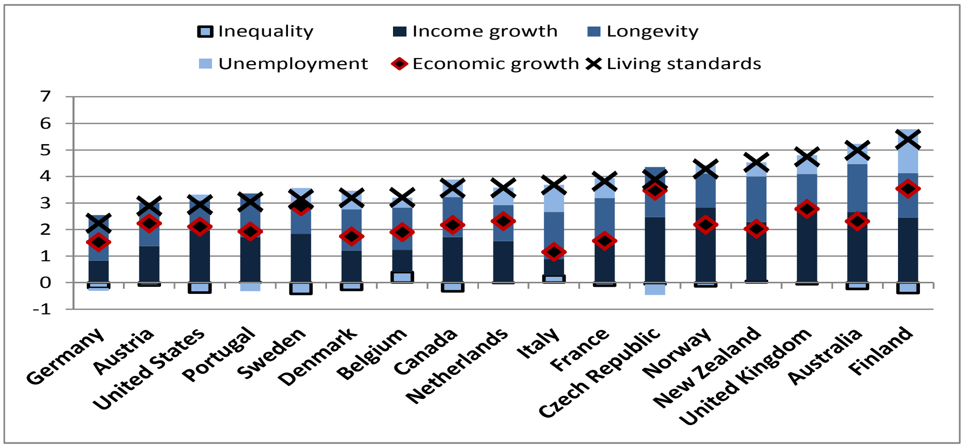
- Over the decade running up to the crisis, multidimensional living standards rose faster than GDP per capita in the high-income OECD countries. This is essentially due to rising household incomes and falling unemployment as a result of robust GDP growth, but also owing to improvements in health conditions, which have been associated with rising longevity (figure 3.3). The cross-country correlation between growth rates of GDP per capita and multidimensional living standards is positive but with large variance across countries.[15]

- Growth in multidimensional living standards varies among social groups. Multidimensional living standards of the average household rose faster than GDP per capita before the crisis (1995-2007) (3.9 percent per year in average vs. 2.3 percent), and in some countries like Denmark, Finland, Sweden and the United States, it was also significantly different than for those with incomes close to the median or at the lower deciles of the distribution. For instance, among these four countries, multidimensional living standards grew only by respectively 3 percent and 2.7 percent among households from the bottom 40 percent and bottom decile of the income distribution, versus 3.7 percent and 4 percent for the median and average households.

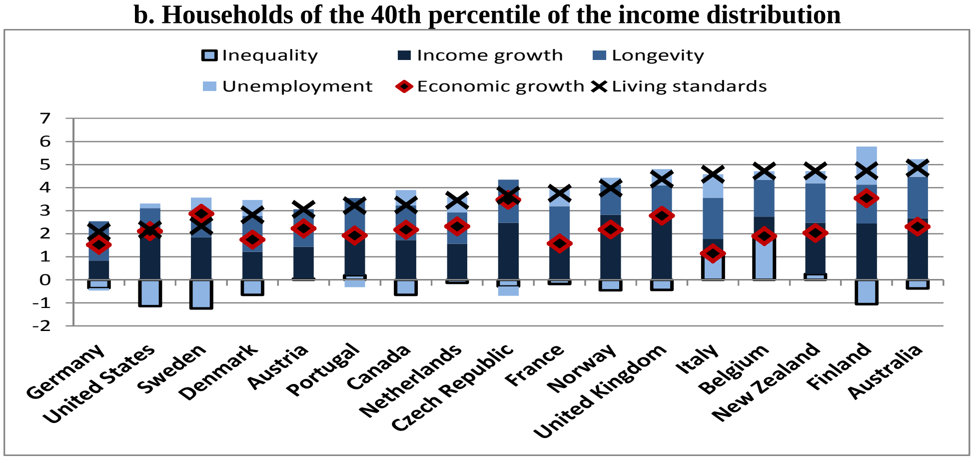
3.13 The results show that growth remains a powerful driver for increased living standards but does not automatically translate into shared benefits for all segments of the population. Addressing the "inclusiveness of growth" has become a key objective for many high-income countries all the more as a growing body of evidence shows that over the longer term inequality hurts economic growth and makes it less sustainable (Berg and Ostry 2011, Ostry, Berg, and Tsangarides 2014). In that regard, recent OECD estimates indicate that, on average, a one Gini point increase in income inequality lowers yearly GDP per capita growth by around 0.2 percentage points. Ostry, Berg, and Tsangarides demonstrate an association between inequality and growth of a similar magnitude based on a broader sample of countries.[16]

Figure 3.3 Growth in multidimensional living standards before the crisis, 1995-2007

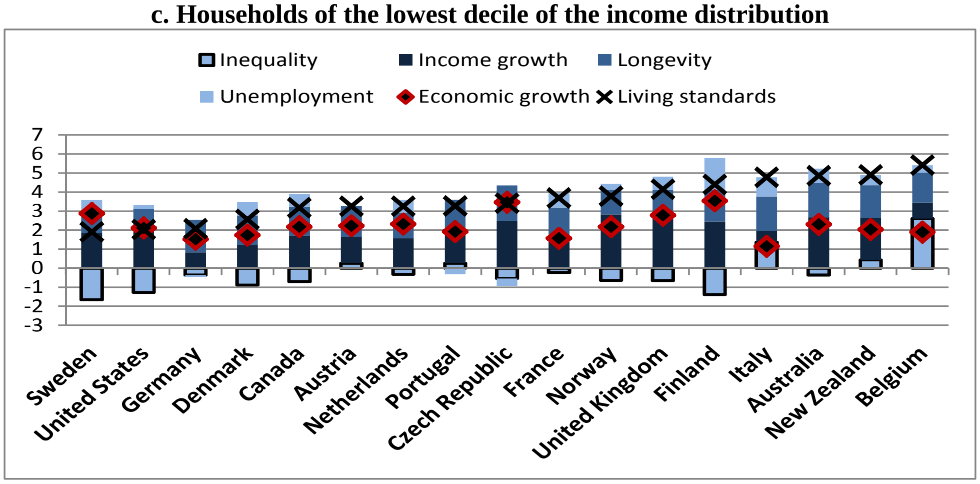
a. Median household income



b. Households of the 40th percentile of the income distribution



c. Households of the lowest decile of the income distribution



Source: OECD calculations based on OECD Annual National Accounts, OECD Income Distribution Database and OECD Health Data Base.

The inclusiveness of growth

The role of structural reforms

3.14 Structural reforms are the primary tool for enhancing the economy's growth potential. Pro-growth (supply-side) policies aim primarily at removing obstacles to greater labor utilization, through labor force participation and/or hours worked, and/or enhancing labor productivity. While there is much room in many countries for catching up to the levels of income per capita of the best performers, in other countries it is lower productivity per hour worked that explains the bulk of the remaining gap in relative living standards (figure 3.4).

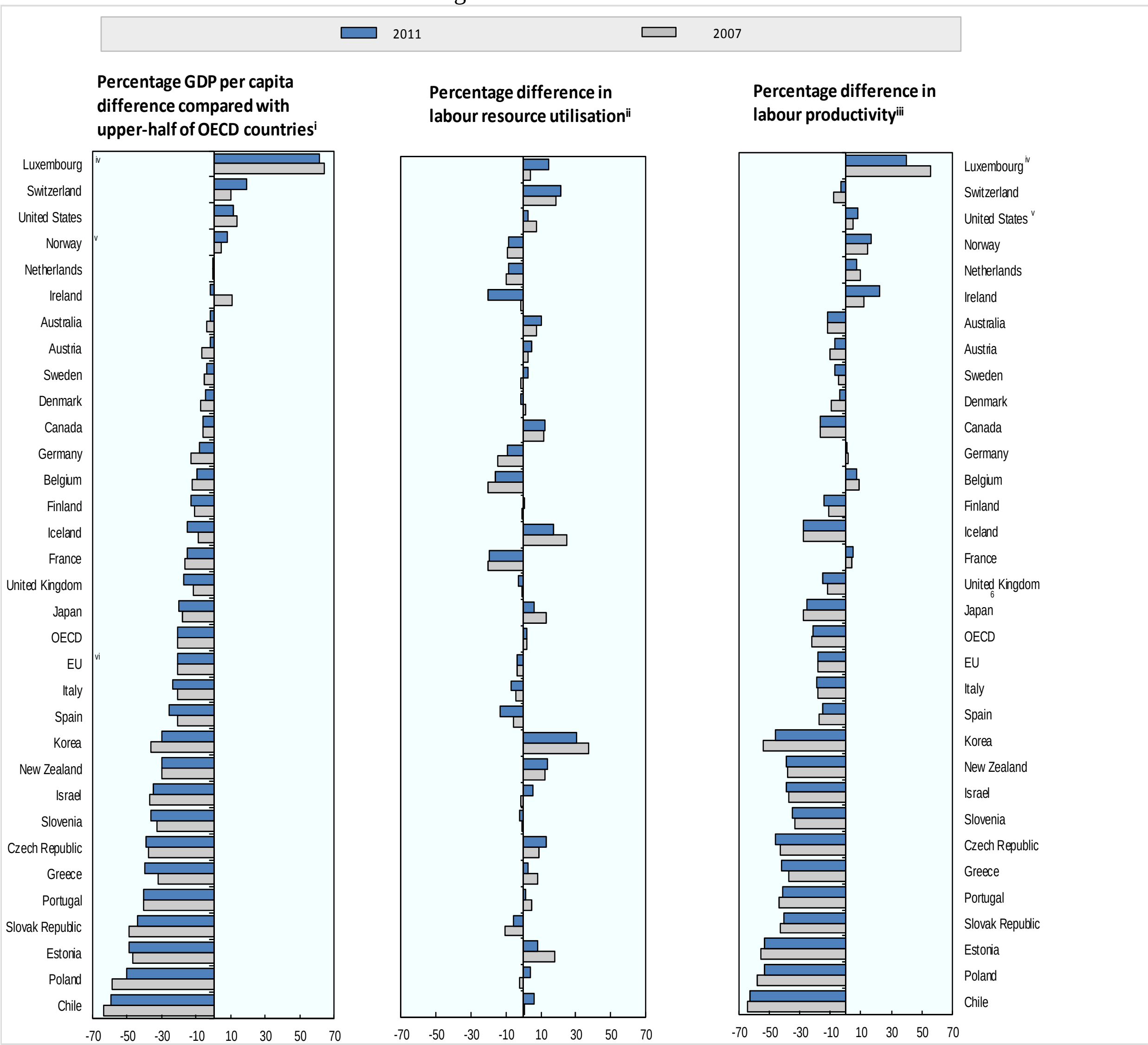
3.15 Pro-growth policies cover a variety of policy domains. On the one hand, policies in the areas of education and skills, innovation and product market regulation are central to efforts to raise *labor productivity* and the overall efficiency of the economy. On the other hand, reforms to tax-benefit systems, unemployment insurance and active labor market policies, as well as pension and health care systems, for example, can do much to remove obstacles to greater *labor utilization* and disincentives to the participation of groups with weak attachment to the labor force, such as migrants, youth and women. Of course, interventions in different policy domains may complement each other, acting to boost labor productivity at the same time as encouraging a more effective utilization of labor. Efforts to improve the business environment, by reducing red tape and opening up protected sectors to competition, have the advantage of unlocking opportunities for investment and improving the overall efficiency of the economy.

3.16 There may be trade-offs between pro-growth and pro-inclusiveness policies, which need to be considered. For instance:

- A reduction in the level of protection of permanent jobs helps to reduce labor market duality but can disproportionately affect low-wage earners.
- Reducing the legal extension of collective wage agreements might lower labor costs and promote employment, which is good for growth, but it might also contribute to widening wage dispersion, which is undesirable from the point of view of inclusiveness.
- Shifting the tax structure away from direct taxes (labor and corporate income taxes) towards consumption, environment and property provides incentives to work and can encourage employment but may raise equity concerns at the same time.
- Greater competition in product markets can do much to encourage innovation and entrepreneurship, but it can also raise inequality to the extent that technological progress favors high-skilled workers.

Figure 3.4 **Large differences in income per capita are mostly accounted for by productivity gaps**

High-income OECD countries



Source: OECD National Accounts Statistics (Database); OECD (2012), OECD Economic Outlook No. 92: Statistics and Projections (Database); OECD, Employment Outlook (Database).

Notes: i. Compared to the simple average of the 17 OECD countries with highest GDP per capita in 2011 and 2007, based on 2011 and 2007 purchasing power parities (PPPs). The sum of the percentage difference in labour resource utilisation and labour productivity do not add up exactly to the GDP per capita difference since the decomposition is multiplicative.

ii. Labour resource utilisation is measured as the total number of hours worked per capita.

iii. Labour productivity is measured as GDP per hour worked.

iv. In the case of Luxembourg, the population is augmented by the number of cross-border workers in order to take into account their contribution to GDP.

v. Data refer to GDP for mainland Norway which excludes petroleum production and shipping. While total GDP overestimates the sustainable income potential, mainland GDP slightly underestimates it since returns on the financial assets held by the petroleum fund abroad are not included.

vi. Average of European Union countries in the OECD.

3.17 In a number of areas, there is clear evidence that policies designed to reduce inequality can also boost growth. The clearest example is education. In high-income OECD countries, there are signs that the completion of secondary and tertiary education can actually boost income. Addressing inequalities in both access to, and quality of, education can be expected to help lower inequality in labor income. Policies that address impediments to labor market participation, for instance by improvements in the access to childcare for women, or those that ensure a smooth transition from school to work, could lead to more equal labor market outcomes while boosting long-run growth.

3.18 Equally important is the recognition of the distributional effects of pro-growth structural policies. In other words, by affecting the utilization and productivity of labor, supply-side policies are likely to influence the way in which the benefits and rewards of growth are shared among the different social groups. For example, initiatives aimed primarily at enhancing the performance of students and facilitating their transition from school to work allows them to compete for better paying jobs and, depending on how they affect disadvantaged groups, may have an impact on the distribution of labor income. Reforms to tax-benefit systems can help to remove obstacles to labor force participation (e.g., reducing the tax burden on the income of second earners), which is supportive of growth, and improve the earnings prospects of otherwise discouraged workers.

3.19 Pro-growth structural reforms can also affect the distribution of non-income outcomes, including skills and education, employment, health or environment. For instance, an increase in non-standard employment, such as involuntary part-time or temporary jobs, can lower job quality, in particular for low-skilled workers. It can also increase job strain, adversely impact mental health, and reduce worker capacity to connect to social and professional networks. These trade-offs are also important to address as inequality goes far beyond income disparities. Some population groups, particularly the less educated and low-income individuals, live shorter lives, are less active in political activities, have greater health problems and children with lower performance at school. Disadvantaged population groups are also more exposed to insecurity, crime and environmental degradation.[17]

Strengthening productivity

Education and skills

3.20 Investing in human capital is essential to promote equality of opportunity and sustain economic growth. A broad range of actions can make education policy more growth-friendly and pro-inclusive.

3.21 First, education is more effective the earlier it starts. The *OECD's Programme for International Student Assessment* (PISA) shows that children who have enrolled in pre-school education perform better throughout their educational life and tend to be better integrated socially. Disadvantaged students tend to have less access to pre-primary education, but some countries manage to avoid this situation. For example, Estonia, Hong Kong SAR, China, Iceland, Japan, and Republic of Korea, have smaller-than-average enrolment gaps between socio-economic backgrounds for pre-primary school education. More investment to increase pre-school enrolment among economically and socially deprived households should therefore be a priority. The provision of childcare services can provide parents with young children the care support they need to work, whilst also providing safe environments for preschoolers to learn and develop.

3.22 Second, raising educational attainment up to at least lower-secondary level is likely to reduce income inequality. OECD analysis shows that reaching at least secondary-level education boosts an individual's employment prospects, and moreover, raising the share of workers with upper-secondary education is associated with a decline in earnings inequality.[18] In the OECD approximately 20 percent of young adults leave school before finishing upper-secondary education, dramatically increasing their risk of unemployment, poverty and social exclusion. Several policies can help prevent failure and promote completion of secondary education. For instance, early tracking (at the lower-secondary level), which discourages students and encourages early drop-out, should be avoided. School choice should also be managed to avoid socio-economic segregation, and upper-secondary pathways need to be designed to encourage completion by allowing two-way passage between different streams, and ensure that completed secondary schooling leads to academic or VET qualification.

3.23 Third, education policies need to improve low-performing schools and classrooms by offering a quality learning experience for the most disadvantaged. Low-performing schools often lack the capacity or support to improve. In order to support their efforts policy should focus on strengthening and supporting academic leadership by providing good working conditions, systemic support, full teacher training, and incentives for staff. Disadvantaged schools also need to focus on prioritizing the development of positive teacher-student and peer relationships, ensuring that effective classroom learning strategies and diagnostic tools are in place (i.e. data information systems) to identify struggling students and the factors of learning disruptions. These strategies have been employed in Japan and the Republic of Korea, where successful teachers and principals are often reassigned to different schools, fostering more equal distribution of the most capable teachers and school leaders. In Finnish schools specially-trained teachers are assigned to support struggling students who are at risk of dropping out, whereas in Canada, equal or greater educational resources are targeted at disadvantaged immigrant students to boost their performance.[19]

3.24 Although skills are a powerful determinant of employability, many advanced economies face a mismatch between the supply of workers' qualifications and the demands of employers.[20] Student choices account for many different considerations; labor market prospects and needs compete with personal interests and social stereotypes. Most developed economies face shortages in the STEM disciplines (science, technology, engineering and mathematics) and many countries take initiatives to stimulate young people – especially girls and young women – to study STEM subjects. The *OECD Survey of Adult Skills* (PIAAC) also points to the existence of significant mismatches between skills and their use at work, particularly for some socio-demographic groups. Skills-use indicators show that more proficient workers often use their skills at work less intensively than less proficient workers. Over-qualification is particularly common among foreign-born workers and those employed in small establishments, in part-time jobs or on fixed-term contracts. Over-qualification has a significant impact on wages, even after adjusting for proficiency, implying a "waste" of human capital, since over-qualified workers tend to under-use their skills.

3.25 Ensuring that the workforce has ample opportunity to upgrade its skills bestows benefits on the wider economy, and underscores equality of opportunity. Reinforcing the skills of the workforce, and enabling skill progression by creating structured pathways for skills development, is essential to buttress the business environment and help all individuals to take advantage of technological innovation and liberalizing reforms, which otherwise negatively affect the low-skilled (box. 3.2). To enable successful up-skilling, governments need to focus on creating clear and well-structured learning pathways that contain a greater degree of flexibility for adult learners. In Belgium (Flanders) centers for adult education facilitate the participation of working adults with flexible modular provision of programs,[21] and flexible access in Denmark ensures that in any given year around 40 percent of adults participate in formal and/or non-formal education.[22] Policy makers also need to ensure that learning pathways lead to higher-level vocational qualifications for graduates of the initial vocational system. This approach has been successful in Iceland, where graduate apprentices learn how to run their own businesses after a certain period of work, through the master craftsman examination.[23]

3.26 More generally, systematic efforts are needed to support professional training with tertiary-academic-education, and to enhance the status of vocational education and training. Such systematic approaches have been effective in the United Kingdom, where after two-year foundational (vocational) degrees students can progress to an honors degree (normally three years full-time) through an additional year of full-time study, or two years part-time. In 2007-08, 59 percent of full-time and 42 percent of part-time students pursuing a foundation degree went on to study for an honors degree in 2008-09.[24] In Austria, vocational training is held in high esteem and there is a clear pathway from vocational to tertiary education. In total around 27 percent of upper secondary students enroll in a vocational college (Berufsbildende höhere Schule), and after 5 years study they are granted a vocational diploma and the "*Reifeprüfung*", which qualifies them to enter university.[25]

Box 3.2 Innovation and product market regulations: how do they interact with inequalities?

Innovation is the key driver of productivity enhancement and economic growth over the longer term, but it can also accentuate income disparities. The potential for technology to exacerbate inequalities, as the benefits of technological progress accrue mainly to the highly-skilled, is well documented. This is also the case when policies focus strongly on supporting leading businesses ("islands of excellence") to the detriment of innovations that are most adapted to the needs and conditions of technological slow-starters. To ensure that the gains from innovation are shared in a more inclusive manner, policy should seek to remove obstacles to the adoption and diffusion of innovation and technology, such as the regulatory environment in product and capital markets. There is also scope to pursue a better balance between allocating tax incentives that typically accrue to large firms which invest heavily on R&D and providing support to smaller business. Often, one of the biggest drags on innovation is the limited access that start-ups have to capital, but governments can play a role in ensuring that small innovative firms have sufficient access to finance and the ability to tap into knowledge networks.

Relaxing anti-competitive product market regulation spurs economic growth mainly through productivity gains, but also via stronger employment, at least in the longer run. However, the positive effect on employment may be, at least partially, offset by higher wage dispersion. This is because more intense product market competition tends to reduce the bargaining power of workers and hence the economic rents which in part accrue to employees in protected sectors. In turn, the effect on labour income inequality depends on the relative wage position of the reformed sector. Recent OECD analysis shows that lowering regulatory barriers to competition would indeed be associated with more wage dispersion and hence higher earnings inequality, in particular in the lower half of the wage distribution (Braconier and Ruiz Valenzuela 2014).

Yet, another recent OECD analysis found evidence that reducing regulatory barriers to competition boost household disposable income across the distribution, but with stronger gains at the low end of the distribution, pointing to equalising effects (Causa, de Serres and Ruiz, 2014). Together, these findings suggest that employment gains from stronger product market competition more than compensate for the increases in wage dispersion. Hence, reforms of product market regulations can boost household incomes and reduce income inequality, pointing to potential policy synergies between efficiency and equity objectives.

Source: Causa, O., N. Ruiz and A. de Serres (2014), "Can growth-enhancing policies lift all boats ? A preliminary analysis based on household disposable incomes", OECD Economics Department Working Papers, OECD Publishing, Paris, forthcoming; Braconier, H. and J. Ruiz Valenzuela (2014), "Gross earning inequalities in OECD countries and major non-member economies: Determinants and future scenarios", OECD Economics Department Working Papers No. 1139, OECD Publishing, Paris.

Strengthening labor utilization

Flexibility vs. security

3.27 To make labor market policies more growth-friendly and inclusive, policy makers must strike a balance between providing the flexibility required by employers and the need to protect workers against adverse income shocks. Reductions in the level of protection of permanent jobs can reduce labor market duality, making it easier for vulnerable and less experienced workers to find jobs. In the wake of the euro-zone crisis several Southern Euro-area countries have embarked on reform programs to address different aspects of employment protection legislation. The Spanish government has pursued clarification of dismissal criteria and in Portugal there has been a decrease in severance pay, whereas in Italy measures have been implemented to reduce number of forced reinstatement cases for dismissed workers.

3.28 Reducing the duration of unemployment benefits and options for early retirement, whilst strengthening job-search activities for the unemployed, can boost labor market participation rates for the most disadvantaged and prompt stronger economic growth. The 2002-05 'Hartz reforms' in Germany reduced the maximum duration of unemployment insurance benefits, closed options for early retirement, lowered employer social security contributions and increased the scope for the use of temporary contracts. The results was a 6 percentage point decline, from over 11.3 percent to 5.5 percent, in the harmonized unemployment rate between 2005-12 and a more than 3 percentage point increase in labor force participation.[26] Apart from a slight reversal in the first half of 2009, these trends continued during the global financial crisis. However, the success of the German 'Hartz reforms' came at a cost to social equity, with in-work poverty and earnings inequality increasing, largely thanks to the growth in marginal employment or work in fixed-term or temporary contracts. The challenge for governments is to ensure that high-flexibility in hiring and firing is accompanied by extended coverage of unemployment benefits and measures to boost replacement rates and effective activation policies (box 3.3).

3.29 Governments are challenged with providing levels of wage flexibility that are conducive to strong economic performance and low unemployment, whilst limiting in-work poverty and the rise in earnings inequality. Reforms to the negotiation of collective bargaining agreements can help to strike a balance between flexibility and security. In Spain policy actions have focused on amending collective bargaining to give priority to firm-level wage agreements over sectoral ones, whereas in France a 'job safeguarding agreement' enabled employers to negotiate individually with the unions concerning the adjustment of working hours and wages to reduce potential lay-offs. Policy makers must set the minimum wage at a level that provides adequate income for the lowest paid individuals, whilst also ensuring that it is not set too high so as to disincentivize the employment of youth and low-skilled workers. They can also develop measures to increase job quality and the employability of youth and the low-skilled, through effective employment counselling, job-search assistance, and temporary hiring subsidies. Finally, they can also implement more targeted policies to fight in-work poverty by implementing in-work benefit schemes such as the U.S. Earned Income Tax Credit.

Box 3.3 "Flexicurity": the case of Denmark

The Danish labour market is characterised by a high degree of what is often referred to as "*flexicurity*". The term denotes the co-existence of flexibility, in the form of low adjustment costs for both employers and employees, and security, which is a by-product of Denmark's developed social safety net, ensuring high coverage and replacement rates. The principal aim of *flexicurity* is to promote employment security over job security, meaning workers are protected, rather than their jobs. Consequently, employers benefit from all the advantages of a flexible labour force, while at the same time employees can take comfort in a robust social safety net applied in conjunction with active labour market policies.

Employing flexible rules for hiring and firing makes it easier for Danish employers to dismiss employees during downturns and to take on more staff during periods of growth. This strong degree of flexibility is evidenced by the fact that around 25 percent of Danish private-sector workers change jobs each year. Adjustment costs in Denmark are traditionally low for both employers and employees, because social benefits (i.e. pensions, healthcare) are not tied to the employer and unemployment benefits are set at a comparatively high level for those over 25 (up to 90 percent for the lowest paid workers) and have a comparably long duration (2 years in any 3 year period).

Since the 1990s the *flexicurity* system has placed increasing emphasis on activation policies, which further reduce employee's adjustment costs and mitigate the disincentive effects of the unemployment insurance system. In percentage terms, Denmark now spends more than any other OECD country, in the region of 1.5 percent of GDP, on active labour policy measures. This ensures that an effective system is in place to offer guidance alongside employment or education opportunities to the unemployed. Reform has also led to the earlier introduction and greater concentration of activation measures. In addition to the increased emphasis placed on activation policies in the labour market, the reform programmes which began in the mid-1990s have also seen a steady reduction in the maximum duration of unemployment benefits. Prior to the early 1990s, an insured worker who met the eligibility requirements could expect to receive benefits indefinitely, provided that they complied with the requirements imposed by the system. Following a number of reforms in subsequent years the maximum period for which benefits can be drawn now rests at 2 years in any 3 year period.

In the wake of the crisis, the 'flex' part of flexicurity has been performing well. Exit rates out of unemployment have declined, but a large proportion of the jobless still manage to find employment quickly. As far as security is concerned, earnings losses associated with plant closures or major worker displacements seem to have been relatively small from an international perspective, but this is likely due to the compressed Danish wage structure. On the whole, the programme of reforms undertaken in the mid-90s, aimed at reducing income security elements whilst also increasing the emphasis on activation, seems to have led to a decline in earnings losses associated with unemployment, although it remains to be seen whether this trend will continue in a prolonged period of low-growth.

Source: Eriksson, T. (2012), "Flexicurity and the Economic Crisis 2008-2009: Evidence from Denmark", OECD Social, Employment and Migration Working Papers, No. 139, OECD Publishing; http://denmark.dk/en/society/welfare/flexicurity.

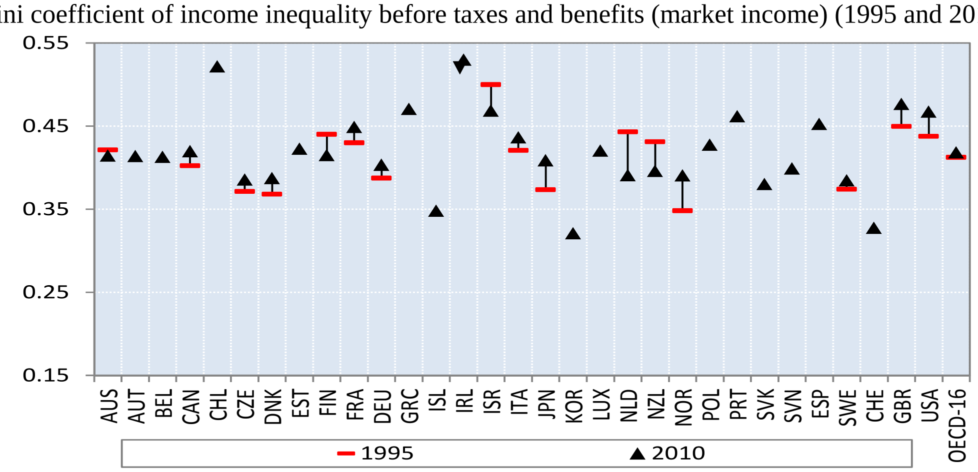
3.30 Effective social protection systems are important for inclusive labor markets, but governments also need to promote access to productive and rewarding work. The challenge is how to design policies at the lowest costs to efficiency. One way of achieving this objective is by means-testing of family benefits with stronger links to work, and intensify the use of active labor market programs (IMF 2014). It is fundamental that social protection systems operate in tandem with employment policies by focusing on, for example, social benefits that are employment-related or pension reforms that raise effective retirement ages and are accompanied by measures to promote the employment of older workers. There is also sufficient scope to introduce childcare or educational reforms, such as with the move towards provision of early childhood education in Australia and the United Kingdom and the provision of subsidies to childcare in the Republic of Korea. In Denmark reforms have focused on redirecting spending on social assistance to youth education programs, with the 2013 reform of Danish social assistance aiming to help youth with low educational attainment escape from the inactivity trap).

Redistribution through tax-benefit systems

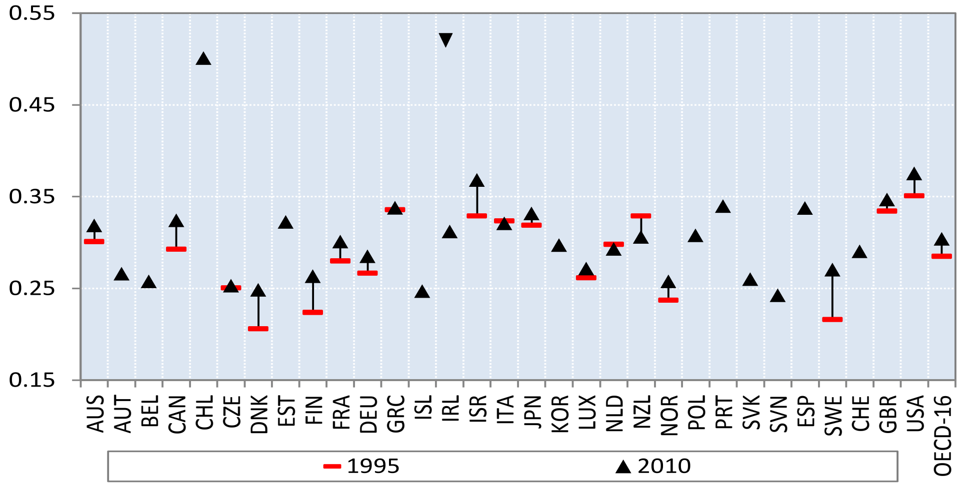
3.31 Fiscal policies, through the tax-benefit system, have a profound effect on the distribution of income and non-income outcomes. Transfers and public spending can increase opportunities for upward social mobility, provide social safety nets, and build more inclusive social infrastructure; financing social protection systems that help individuals and households to manage a range of issues from disability to unemployment. In high and upper-middle-income economies, tax-benefit systems have been the main instrument to mitigate inequality of market income. At the end of the 2000s income inequality amongst the working age population was, on average, 25 percent lower after taxes and transfers had been applied (Joumard, Pisu and Bloch, 2012). About two-thirds of the redistribution resulted from cash transfers to targeted households in the form of child allowances, public pensions and the like, and one third the result of progressive tax schedules. However, despite their pre-dominance as instruments for tackling market income inequalities, it is important that policy makers acknowledge that tax-benefit systems have become less effective at fulfilling this task than in the past (figure 3.5).

Figure 3.5 Although less redistributive, tax and benefit systems still have a sizeable redistributive impact in high-income OECD countries

Gini coefficient of income inequality before taxes and benefits (market income) (1995 and 2010)



Gini coefficient of income inequality after taxes and benefits (disposable income) (1995 and 2010)



Source: OECD Income Distribution Database.

Note: Data refer to the working-age population. Incomes refer to household equalized incomes.1995 refers to 1994 for Greece, United Kingdom and to 1996 for Czech Republic, France, Luxembourg. 2010 refers to 2009 for Japan, New Zealand and Switzerland and to 2011 for Chile.

3.32 Several countries are reforming their tax and transfer systems to improve their redistributive impact. In many high-income OECD countries governments have sufficient scope to raise marginal tax rates on high incomes, eliminate or scale back tax deductions which tend to benefit high earners disproportionally, increase tax rates on income from capital and immovable property, and impose higher rates of taxes and duties on intergenerational transfers of wealth. Additional revenue mobilization may also be possible through a more efficient international tax framework that closes gaps in compliance (IMF 2013). Taking action on tax evasion and avoidance can also help ensure that governments raise sufficient funds to target towards social ends. Some countries have introduced base broadening measures (Australia, Austria, Denmark, the Netherlands), or a reduction in tax credits (United Kingdom), whilst others have introduced measures that will reduce the PIT tax base through tax credits. Encouraging intergenerational social mobility and equality of opportunity also means taxing capital gains on bequeathed assets at standard rates, and the replacement of estate taxes with inheritance taxes. Protecting the redistributive role of the tax-benefits system is becoming more challenging over the medium term in the high-debt, high-income economies, calling for better targeted fiscal policies. There is a lot of scope for improving the provision of cost-effective social protection in a fiscally sustainable manner in many countries (box 3.4).

Box 3.4 Improving targeting and efficiency of social programs to preserve the tax-benefit systems

Better targeting of fiscal policies can ensure that social protection continues to be an effective driver of equity, whilst remaining on a financially sustainable footing. A number of countries have engaged in reforms that simplify a myriad of social benefit programmes in order to focus on key target groups, lower administrative costs and increase take-up. The United Kingdom, for instance, is currently implementing a reform aiming to bring together 6 different means-tested transfer programmes into a single Universal Credit, aiming to make the transfer system more efficient and user-friendly.

Several high-income OECD countries are also engaged in important reforms of disability benefits that will increase cost effectiveness and better target resources to those most in need. Australia, the Netherlands, Switzerland, United

Kingdom, and the Nordic countries have all recently introduced reforms to give passive disability benefits a more active focus with a stronger re-employment perspective. Thus far, structural reforms of disability benefits have focussed on: introducing stronger gate-keeping mechanisms, time-limiting benefits, and reassessing the eligibility of existing recipients. These measures have, on the whole, managed to avert the risk of the long-term unemployed drifting onto disability benefits. Consequently, reforming countries have largely been able to put disability benefit claims on a declining trend. By contrast, other countries that have failed to reform disability benefit now face mounting beneficiary rates, which may eventually threaten the affordability of the entire system. For instance, in Estonia and the United States they have risen by over 10 percent.

Source: OECD (2010), Sickness, Disability and Work: Breaking the Barriers. A Synthesis of Findings across OECD Countries, OECD Publishing, Paris; OECD Social Benefit Recipients Database, forthcoming; The crisis and its aftermath: A 'stress test' for societies and for social policies", in: Society at a Glance 2014: OECD Social Indicators.

Assessing the combined effects of structural reforms on different social groups

3.33 It is important to assess the distributional effects of pro-growth structural reforms among different social groups, not only for the "average" household. GDP per capita and average household disposable incomes tend to move in parallel, at least over sufficiently long periods. But specific pro-growth structural policies affect GDP per capita and household income differently, with different effects for different social groups along the distribution of income. A better understanding of these different effects, as well as of the "winners" and "losers", of reforms helps policymakers maximize synergies and design compensatory measures when trade-offs are present.

3.34 Empirical analysis for high-income countries in the OECD area shows that specific pro-growth reforms indeed affect social groups differently.[27] Attention is focused on the effects of a set of stylized structural reforms on households with incomes at the mean, median and lowest decile of the income distribution. The key findings are as follows:

- Reforms to reduce barriers to competition in product markets, ease job protection, and lower the tax burden on labor income can lift the incomes of the lower-middle class by more than they do GDP per capita and average incomes.

- However, shifting the tax burden from income to property and consumption, and boosting ICT investment can lift the incomes of the lower-middle class by less than it does GDP per capita.

- A tightening of unemployment benefits for the long-term unemployed, if implemented without a strengthening of job-search support and other activation programmes, may lead to a decline in the income of the lower-middle class, even if it boosts average income.

- Reforms to promote exports and inward FDI can lift the income of the lower-middle class and the poor by more than they do GDP per capita, while outward FDI can reduce the income of households at the lower end of the distribution.

The Sustainability of Growth

The case for green growth

3.35 Current growth models are environmentally unsustainable, which may ultimately act to undermine economic performance**.** Climate change will have serious consequences for the long-term global economic outlook whereas it is projected that unabated climate change could dampen world GDP in 2060 by 0.7 percent to 2.5 percent.[28] There is also increasing evidence that environmental degradation and over-use of resources will have damaging effects on economic and social sustainability. The OECD's work on green growth has been helping governments to identify and implement policies that maximize synergies between growth and environmental objectives (box 3.5).

Box 3.5 Green growth in high-income OECD countries

The framework of the OECD Green Growth Strategy provides a lens for looking at growth and identifying mutually reinforcing aspects of economic and environmental policy. It recognises the full value of natural capital as a factor of production along with other commodities and services. It focuses on cost-effective ways of attenuating environmental pressures to achieve a transition towards new patterns of growth that will avoid crossing critical local, regional and global environmental thresholds. Two broad sets of policies are essential elements in any green growth strategy:

- The first set consists of broad framework policies that mutually reinforce economic growth and the conservation of natural capital. These include core fiscal and regulatory settings such as tax and competition policy which, if well designed and executed, maximise the efficient allocation of resources. This is the familiar agenda of economic policy with the added realisation that it can be as good for the environment as for the economy. Innovation policies should be added to this set as well.
- The second set includes policies providing incentives to use natural resources efficiently and making pollution more expensive. These policies include a mix of price-based instruments, for instance environmentally related taxes and removal of environmentally harmful subsidies, and non-market instruments such as regulations, technology support policies and voluntary approaches.

There has been increasing demand for policy guidance focused on translating green growth into practice, and for drawing lessons learned as implementation efforts progress. Government efforts to transition to greener growth have intensified in both OECD and partner countries. The European Union's Resource Efficiency Strategy, for example, is seen as a key tool to change the use of resources to improve the resilience of our environment, societies and economies, and to stay within the ecological boundaries of the planet. Republic of Republic of Korea is using the green growth approach to modernise its industrial sector, the United States' green growth policies emphasise the strategic advantages of technology leadership, and China's 12th 5-year Plan focuses on green development. Similar efforts are also happening at the city level, with Amsterdam and Copenhagen using green growth policies as lever to increase their attractiveness.

Distributional impact of environmental and green growth policies

3.36 Policies to tackle environmental challenges can have beneficial effects on equity, employment and income, but they can also exacerbate social challenges. The distributional impacts of environmental policies occur at different scales, including between countries, regions, sectors and groups in society.[29] Governments need to carefully assess the impacts of new policy actions, and can put in place measures to ameliorate negative effects and enhance the positive ones. Therefore a good understanding of what influences people's behavior is needed when developing a policy mix that promotes greener lifestyles while taking social considerations into account (box 3.6).

Box 3.6 The right policy responses need to take people's preferences into account

Not all households have identical preferences and assuming that this is the case can lead to misguided policy conclusions. A recent OECD survey of 12,000 households in 11 countries sheds light on how people value environmental, social and economic concerns. The right financial incentives can influence environment-friendly choices. However, what households and governments identify as the "best" policies does not always coincide. OECD evidence indicates that some of the most cost-effective environmental policies from a public policy perspective (e.g. unit-based charges for waste generation and higher fuel taxes) garner less public support relative to other policies.

OECD analysis suggests that the justification and motivation for policies may not be properly communicated to the public, which can lead to misunderstanding about the aims and rationale of the policy. Another reason is that, although a proposed policy may be efficient economy-wide (e.g. full-cost recovery water pricing), unaddressed distributional issues (e.g. affordability of water bills for poor large families) or a perception that these are insufficiently addressed can lead to public opposition. Stimulating desirable behavioural changes ultimately requires a mix of instruments coherently implemented across policy areas. In areas such as energy and water, the provision of services and infrastructure can be an important complement. And for specific groups of households that cannot afford to take up greener practices, a mix of policies including targeted transfers and safety-net instruments could be envisaged.

Source: OECD (2013), Greening Household Behaviour: Overview from the 2011 Survey, OECD Publishing, Paris; OECD (2013), Water Security for Better Lives, OECD Studies on Water, OECD Publishing; OECD (2011), Greening Household Behaviour: The Role of Public Policy, OECD Publishing, Paris.

3.37 Introducing or increasing environmentally related taxes and charges, or removing subsidies, can ensure that prices reflect the full environmental and social costs of resource usage, but can also have a regressive impact. In addition, some high-income countries, for example in Europe, impose high energy taxes measured as percentage of GDP, but those are often not that well-targeted from an environmental perspective as taxes on residential electricity consumption and vehicle ownership have limited effects on emissions. An environmentally friendly policy, such as instigating full-cost recovery water pricing, may be efficient at an economy-wide level, but it can also engender negative distributional consequences, in this instance rendering water bills for poorer families unaffordable. Environmentally harmful subsidies also act as a barrier to green growth and hinder social equity. Energy subsidies total US$ 55-90 billion per year in OECD countries,[30] and while they have often been designed to alleviate poverty, they overwhelmingly benefit wealthier households that consume more energy.

3.38 Agricultural supports can also have a negative impact upon the pursuit of greener and more inclusive growth. Government policies to support agricultural output often encourage production and lead to less efficient use of water, not to mention exacerbating off-farm pollution. Water charges for farmers rarely reflect real scarcity or environmental costs. For example, in Greece and Italy, irrigation water is subsidized in that farmers do not pay the full cost of the service. Also, price supports often benefit richer farmers at the expense of poorer agricultural workers. The potentially negative environmental and distributive effects of agricultural support based on prices and output levels have been recognized in recent years, and there has been a concerted effort across the OECD to reduce them. Between 1995 and 2011 support based on prices and output levels fell from a 74 percent share of agricultural subsidies to 50 percent.[31] However, those support mechanisms with the greatest environmental potential still only account for a small share of the total support to agricultural producers, standing at around 8 percent in 2011.

3.39 Government failure to calibrate for the distributional effects of environmental policies can lead to public opposition to environmentally necessary and economically sensible measures. It is therefore essential to ensure that policies geared towards creating greener, more sustainable, economic growth are themselves politically sustainable, in the sense that their effects on equity are acceptable to a broad coalition of the population. For this reason, it is important that governments recognize that the distributional impacts of environmental policies occur at different levels; between countries, regions, sectors and groups in different societies. A full assessment of the income distributional effects of environmental policies will have to include indirect effects, such as price increases on taxed products, employment effects of using environmental tax revenues, and the resultant environmental benefits.

3.40 Governments must carefully assess the impacts of policy actions, putting in place measures to compensate for negative effects and reinforce positive actions. This can be achieved through re-cycling the revenue streams raised by environmental levies, or saved by the removal of harmful subsidies, towards ends which target social equity. Using resources from reduced energy subsidies to better target support directly to low-income households can benefit the poor, and at a much lower cost to the government budget than costly and harmful subsidies.

3.41 Progress is also being made in the agriculture sector to improve the cost-effectiveness of policy support. In OECD countries, the support to agriculture is increasingly aimed at raising farm income with less production-distorting and potentially less environmentally damaging effects.[32] Although OECD countries have made a concerted effort to reduce the agricultural support based on prices and output levels (from 74 percent to 50 percent over 1995/97 to 2009/11), the potentially most environmentally beneficial support accounts for a small share of the total support to agricultural producers (8 percent in 2009/11).[33] More efforts are needed to strengthen cross-compliance requiring farmers to meet specific environmental conditions as an alternative to price support measures, which provide income transfers to farmers without any environmental conditions. In relation to the reform of agricultural subsidies, this entails moving further away from price or output based support mechanisms, making greater efforts to strengthen cross-compliance measures which require farmers to meet specific environmental targets.

3.42 Coherence between energy, agriculture and water policies is essential if governments are to meet a diverse range of societal goals whilst not damaging the water resource base. It is crucial to avoid unnecessary resource competition between households, farmers, industry, and energy suppliers. Such resource competition can have a negative impact on equity, leading to depleted supplies, higher prices, increased flood risks from changes in land use patterns, and exacerbated water pollution. It is also import to boost efficiency and avoid wastage due to aging, leaky infrastructure. Inadequate urban drainage is a major problem in many OECD countries, leading to high volumes of polluted run-off flooding streets and the environment. Questions also remain about the affordability of water prices and charges for low-income households in a number of OECD countries. For example, the Flanders Region of Belgium has designed a water tariff system that addresses affordability, by allocating 15 cubic meters of 'free' water per year for each inhabitant.

3.43 Maximizing access to safe water for social equity requires innovative approaches to financing. Despite the reforms away from subsidized water to pricing based on supply costs and the subsequent improvements in economic efficiency, water tariffs in many cases in the OECD remain both inefficient and inequitable. A greater emphasis on equity and efficiency is required to cover the maintenance and expansion costs for infrastructure and water treatment. Scarcity pricing in combination with 'social tariffs' that take into account household income and size, are viable policy options to manage water security and increase efficiency, whilst addressing equity concerns. Governments can also endeavor to explore innovative water governance models that promote equity by more effectively engaging water users and stakeholders, boosting environmental quality by ensuring smart regulation of water services, and facilitating co-operation between cities and surrounding rural areas.

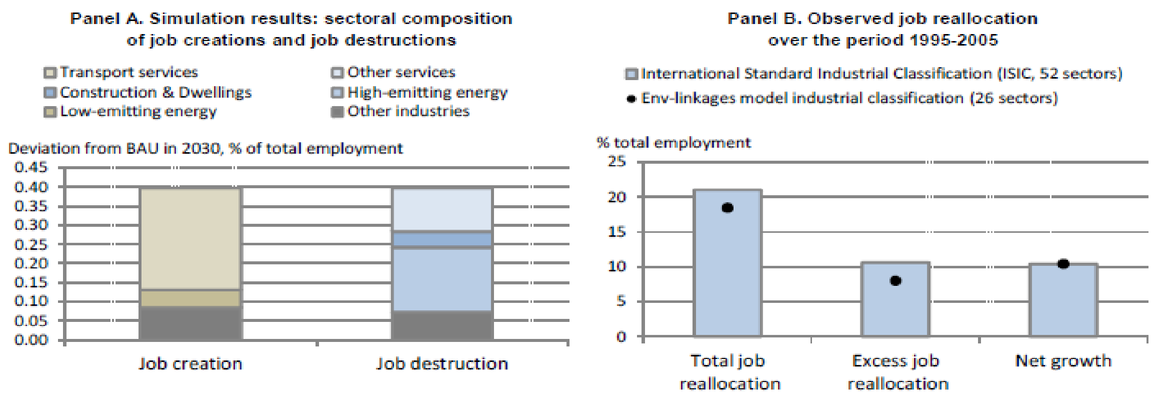
3.44 Green growth policies are primarily designed to substitute away from polluting or resource intensive production and consumption. New opportunities for workers may arise from green growth policies, but also new risks that could undermine political support for green growth policies. Accordingly, labor market and skills policy should also seek to maximize the benefits of green growth for workers while assuring that unavoidable adjustment costs are shared fairly. To this end, green growth policies can usefully complement the role of macroeconomic and structural reform policies in achieving employment goals and efficient resource allocation.

3.45 Labor market and skills policy should seek to maximize the benefits of green growth for workers. The development of labor force skills that enable the adoption of resource-efficient, sustainable processes and technologies by businesses is a central pillar of the transition to low-carbon economies. Measures to expand the green skill-base can also ensure that individuals from all segments of society are able to capitalize on all the social, environmental and economic benefits that this brings. Policy makers will need to ensure that policies across a broad range of sectors share common direction and co-ordination, so that effective skills development and training strategies can be implemented. The development of green skills needs to be integrated into wider training and skills development policy, with agreement among institutions to a focus on transversal skills in resource efficiency rather than on the skills required by specific green occupations. This focus would require the broader involvement of all the relevant actors; including employers, workers, unions, industry associations, educational institutions and governments at local, regional and national levels.

3.46 Governments can accelerate the participation of market actors in the provision of skills by providing clear and transparent signals to investors. This will give private actors clear indications about the direction of policy, which will inform investment decisions, creating more resilient sectors that can withstand the eventual withdrawal of public support. Developing green skills is part of a broader challenge to increase the strategic management capabilities of SMEs, which have limited awareness of their needs and options in terms of green skill development. In a similar vein, businesses' research and development activities need to broaden out to encompass a broader range of skills, and benefit a wider range of the population, as to date they have largely focused on the skills-related needs of a small number of high-technology occupations and a few niche industries. Investment in research and development need to scale up as the transition unfolds new challenges for inclusive economic growth and sustainable employment.

3.47 The overall net impact on employment of transitioning to low carbon economies is likely to be low, but measures should be put in place to ensure that unavoidable adjustment costs are shared out fairly. The quality of labor market institutions and the redistribution of revenues from carbon taxes or auctioned tradable emission permits will be key factors in determining the overall effect on employment (figure 3.6). Revenue recycling instruments can mitigate distorting taxes on labor income through a double dividend effect. Under such circumstances it is conceivable that shifting the tax burden from workers to pollution could affect employment, while improving the environment. More generally, mitigation policy is likely to have a limited impact on real GDP in OECD countries (by less than 0.5 percent) and modest deviations in employment levels (0.2 percent-1.6 percent) from baseline levels in 2030, depending on assumed labor market rigidities.[34]

Figure 3.6 Change in sectoral composition of employment, OECD



a) High-emitting energy sector: Coal, Crude oil, Gas, Petroleum and coal products, Fossil fuel based electricity.

b) Low-emitting energy sector: Hydro and geothermal electricity, Nuclear power, Solar and wind electricity, combustible renewables and waste electricity.

c) Definitions: *Total job reallocation* = sum of job creation and job destruction; *Absolute net growth* = absolute value of net employment growth (defined as the difference between job creation and job destruction); *Excess job reallocation* = difference between total job reallocation and absolute net growth.

Source: OECD (2011), "Employment Impacts of Climate Change Mitigation Policies in OECD: A General-Equilibrium Perspective", OECD Environment Working Papers, No. 32, OECD Publishing.

3.48 Green growth policies can boost equity at the urban level. Green growth policies have great potential to bolster employment and innovation in metropolitan areas. Taking an integrated approach to land-use, transport and economic development planning at the local level can lead to greener and more equitable outcomes. Local governments can put in place measures to ensure access to comprehensive public transportation networks, which benefit the environment by reducing vehicle pollution, and promote inclusiveness by increasing access to labor market and educational opportunities for people from disadvantaged areas. Policies at the city-level can also focus on the construction of environmentally responsible social housing, as a means of ensuring that green growth policy in the building sector contributes to greater social balance. New eco-neighborhood for instance have been open to criticism for an excessively isolated approach (lack of contacts with the existing city) and the effects of gentrification that often go hand-in-hand with their inclusion in the city.[35] There is also sufficient scope for energy retrofitting projects to focus on disadvantaged neighborhoods, which would lower energy costs for residents and reduce energy usage.

Notes

[1] This chapter will focus on the high-income countries in the OECD area. According to the World Bank classification, all OECD countries are high-income countries with the exception of Hungary, Mexico and Turkey, which are classified by the World Bank as upper-middle income countries.
[2] OECD (2013), *OECD Economic Outlook*, June 2013.
[3] OECD (2013), "Crisis squeezes income and puts pressure on inequality and poverty, OECD publishing, Paris" (www.oecd.org/social/inequality.htm), for more information.
[4] OECD (2014), *Trends in Top Incomes and their Taxation*, OECD Publishing, Paris.
[5] As defined by the World Bank as poverty threshold of USD 1.25 a day for low-income countries and US$ 2 day for middle-income countries.
[6] OECD (2013a), *Crisis squeezes income and puts pressure on inequality and poverty*, OECD publishing and OECD (2013), *Splitting the Bill: How income is being Distributed during the Crisis?*
[7] In this and all following charts the 'OECD' measure on the x-axis refers to the average of all 34 OECD countries for which data is available, including when possible – as in the case of Figure 1.- the three upper-middle-income countries which are OECD members.
[8] OECD (2011), Divided We Stand, OECD publishing, Paris.
[9] Denk, O. et al. (2013), "Inequality and poverty in the United States: Public policies for inclusive growth", OECD Economics Department Working Papers, No. 1052, OECD Publishing, Paris.
[10] OECD, (2014), *Trends in Top Incomes and their Taxation*.
[11] OECD (2013), *Health at a Glance 2013*: OECD Indicators, OECD Publishing Paris.
[12] OECD (2014), *United States Tackling High Inequalities Creating Opportunities for All,* OECD Publishing Paris.
[13] Gwynn, R.C. and G.D. Thurston (2001), "The Burden of Air Pollution: Impacts Among Racial Minorities", *Environmental Health Perspectives,* Vol. 109, (Suppl. 4), August 2001.
[14] The representative household is the median household, and equivalent income for health reflects the monetized value of differences in outcomes relative to the sample's reference country with highest life expectancy: Japan. For the jobs dimension, absence of unemployment has been taken as the reference value. Equivalent income then presents the loss in multidimensional living standards that a representative household in a particular country suffers by experiencing unemployment, an unequal distribution of household income, and shorter longevity than the reference country.
[15] In particular, only 38 percent of the variance in cross-country changes in multidimensional living standards can be statistically explained by GDP growth. Data is based on 18 OECD countries and cover the period 1995-2007. Countries include -Australia, Austria, Belgium, Canada, Czech Republic, Germany, Denmark, Finland, France, United Kingdom, Hungary, Italy, Netherlands, Norway, New Zealand, Portugal, Sweden and United States.
[16] F. Cingano, "Inequality, social mobility and growth – Evidence from OECD countries", forthcoming.
[17] OECD (2013) *How is Life? Measuring Well-Being*, OECD publishing.
[18] Fournier, J.-M. and I. Koske (2012), "Less income inequality and more growth—are they compatible? Part 7. The drivers of labor earnings inequality – an analysis based on conditional and unconditional quantile regressions", OECD Economics Department Working Papers, No. 930, OECD Publishing, Paris.
[19] Cheung, Ji Eun, How can education help tackle rising income inequality? Education today, OECD April 2012.
[20] OECD (2013), *OECD Skills Outlook 2013: First Results from the Survey of Adult Skills*, OECD Publishing, Paris.
[21] Flemish Department of Education and Training (2013), Vocational Education and Training in Flanders, Country Background Report, OECD review of Post-secondary Vocational Education and Training.
[22] OECD (2011), **Education at a Glance 2011: OECD Indicators,** OECD Publishing, Paris.
[23] Musset P. and R. Castañeda Valle (2013), A Skills beyond School Commentary on Iceland, OECD Reviews of Vocational Education and Training, OECD. www.oecd.org/edu/skills-beyond-school/ASkillsBeyondSchoolCommentaryOnIceland.pdf .
[24] (CEDEFOP (2009), Professionalising Career Guidance: Practitioner Competences and Qualification Routes in Europe, Office for Official Publications of the European Communities, Luxembourg.
[25] Musset P., et al. (2013), *A Skills beyond School Review of Austria*, OECD Reviews of Vocational Education and Training, OECD Publishing. doi: http://dx.doi.org/10.1787/9789264200418-en.
[26] OECD (2014), *All on Board: Making Inclusive Growth Happen*, OECD Publishing Paris.
[27] This analysis shows that different policy actions that are known to have a positive effect on GDP per capita growth and average incomes over the longer term may nevertheless have a different, less favorable, effect on

specific social groups Romina Boarini, Luiz de Mello, Alain de Serres, Fabrice Murtin, and Paul Schreyer (2014), "Report on the OECD Framework for Inclusive Growth" (Technical document prepared for the 2014 MCM).

[28] OECD (2014), New Approaches to Economic Challenges: Synthesis; OECD (2014), OECD@100: Policies for a Shifting World.

[29] .OECD (2012), OECD Environmental Outlook to 2050: The Consequences of Inaction, OECD Publishing.

[30] OECD (2013), Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels, OECD Publishing.

[31] OECD (2013), OECD Green Growth Studies Policy Instruments to Support Green Growth in Agriculture, OECD publishing.

[32] OECD (2013), Policy Instruments to Support Green Growth in Agriculture**,** OECD Green Growth Studies, OECD Publishing.

[33] Ibid.

[34] OECD (2013), OECD Green Growth Studies Policy Instruments to Support Green Growth in Agriculture, OECD publishing

[35] Kamal-Chaoui, L. and M. Plouin (2012), "Cities and Green Growth : Case Study of Paris/Ile-de-France Region", OECD Regional Development Working Papers, No.2012/02, OECD Publishing, Paris

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Chapter 4 Human capital, safety nets and green growth in developing countries

4.1 Growth is critical to reduce poverty and boost shared prosperity, but it needs to be accompanied by complementary policy actions to reach the remaining extreme poor. This chapter considers how growth can be made more inclusive and sustainable. The key messages are:

i. Investments in young children that reach the most disadvantaged groups (including girls) are critical to address inequality and break the inter-generational transmission of poverty. Strong education systems require clear learning standards, good teachers, adequate resources, and a proper regulatory environment.

ii. As countries become richer and move up the value-added chain, the demand for higher productivity, high-level cognitive and behavioral skills increases. Building job-relevant skills is critical for a person to participate in the rise in incomes.

iii. Well-designed social safety nets can assist the poor and vulnerable, redistribute the gains from growth, and contribute to higher growth, by enhancing the ability of the poor and ultimately their children to contribute to, and benefit from, economic development.

iv. Eradicating extreme poverty will require increased resources, as the costs of safety net programs tend to rise as poverty declines and the remaining poor become harder to reach. Money for this expansion could be found by minimizing poorly targeted subsidy programs, such as fuel subsidies or other economy wide social programs.

v. Environmental degradation affects the poor directly and indirectly through the impact on sustainable growth. Many poor countries are experiencing high rates of depletion of per capita wealth (which includes capital stocks, natural resources and human capital), mainly driven by the depletion of natural resources.

vi. A country's natural resources need to be managed in a way that maintains their ability to generate income and welfare in the future. Developing countries face acute environmental challenges that are likely to constrain poverty reduction and growth. Addressing one such challenge, water stress and variability, will require policies that improve water management and governance.

vii. The poor face the greatest burden from the effects of climate change. Urgent policy actions at the global and national level are needed to strengthen climate and disaster resilience and to reduce carbon emissions. Coordinated green growth strategies could address climate change without undermining growth. While some green growth measures help the poor, others may require compensatory policies to limit any adverse impact.

4.2 The next section discusses the role of human capital and how well-designed interventions and effective service delivery systems in the social sectors, and in particular in education and nutrition, can make a major difference towards reaching the WBG twin goals and the MDGs. Section 3 provides an overview of safety net programs and their role in alleviating extreme poverty and boosting shared prosperity. The final section discusses why progress in poverty reduction will not be sustainable if the environmental consequences of development are not taken into account.

Building human capital and educational challenges

4.3 Sustainable growth requires improving the relative incomes of the bottom 40 percent and reducing extreme poverty. The principal means of achieving these goals is to improve the productivity and skills of poor workers through investments in human capital, starting from an early age. This reasoning was at the core of the MDGs. But while substantial progress has been achieved towards many of the MDG targets, large differences in achievement remain between countries, and between individuals and households within countries according to characteristics such as location, gender or wealth.

4.4 Research suggests that for many indicators, the poorest 40 percent have been making less progress than the richest 60 percent. For example, progress in child malnutrition and mortality among the poor is lagging behind that of the non-poor in a majority of countries (Wagstaff, 2014 and Report Card). The situation is better in education, in that groups such as the poor and girls have tended to benefit more than the better off from gains in education attainment, especially at the primary level where better off children tend already to be enrolled. But enrollment beyond primary school remains an issue, and limited progress seems to have been achieved in terms of learning, especially for disadvantaged groups. In addition, many among the extreme poor still remain out of school. They are also much more likely to suffer from poor health outcomes.

4.5 The fact that the extreme poor and vulnerable, defined for simplicity as the bottom 40 percent of the population, are lagging behind is not inevitable. Well-designed interventions and effective service delivery systems in education, health, nutrition and population, and social protection can make a major difference towards the goals of eliminating extreme poverty and achieving shared prosperity, especially when investments begin at a young age. Investments in a child's earliest years present a unique window of opportunity to address inequality, break the inter-generational transmission of poverty, and improve a wide range of outcomes later in life. Investments in early childhood development, as well as during a child's school years and in her youth, are critical to building shared prosperity and reducing poverty.

4.6 Investments in human capital improve the ability of individuals to be productive workers. Skills are at the core of improving individuals' employment outcomes and increasing countries' productivity and growth. Many developing countries face serious demographic challenges, ranging from a "youth bulge" of new job seekers in Africa and the Middle East, to shrinking labor forces in Eastern Europe and Central and East Asia. Employing all workers, and enabling them to work at their highest possible productivity level, is vital. And while insufficient demand for workers remains a problem in many parts of the developing world, persistently high unemployment rates are partly a function of skills mismatches, the result of workers inadequately equipped for the demands of employers. This is sometimes because workers lack enough years of education, but it can also be because the education and training that they did receive did not provide the skills that employers want. Low returns to work effort—from some forms of self-employment as well as wage work—may be due to inadequate demand for high-productivity work or insufficient complementary factors such as technology and infrastructure. But low skill levels associated with low-income work are also responsible.

4.7 As countries become richer and move up the value-added production ladder, the skills demanded change and the role of bottlenecks in constraining growth becomes clearer. Increasingly, labor productivity depends on high-level cognitive skills (such as analysis, problem solving, and communication) and behavioral skills (such as discipline and work effort). These higher productivity skills are what employers now demand. Evidence from the United States shows that, as economies develop the demand for interactive and analytical skills in the workplace increases steeply and continually, while that for manual and routine cognitive skills falls. There is also evidence that as middle-income countries become richer, more employers consider skills an important constraint on business development. In this context, it is indispensable to have comprehensive and adaptive systems to build skills.

4.8 After providing an update on some of the MDG targets, especially in terms of inequality in outcomes, this section relies on the STEP framework (box 4.1) to identify some of the policies and programs that countries could implement to invest in their workers' skills. The framework consists in five steps, corresponding to different stages in the formative years of workers (figure 4.1). For the first step, which corresponds to the early childhood development (ECD) period, the chapter identifies five packages of essential interventions and services, as well as four principles that can help countries design and implement strong ECD policies and programs. Next, the section discusses more briefly the four other steps in investing in a productive workforce: ensuring that all students learn, building job-relevant skills that employers demand, encouraging entrepreneurship and innovation, and matching the supply of skills with demand.

Box 4.1. The STEP Framework is a useful guide to how to promote skills

Improving workers' skills is critical to development. The World Bank (2011c) has developed a simple conceptual framework—Skills Toward Employment and Productivity (STEP) that can help policymakers, analysts, and researchers design systems to impart skills that enhance productivity and growth.

Pulling together what is known about the elements of a successful skills development strategy, it can guide the preparation of diagnostic work on skills, and subsequently the design of policies across sectors to create productive employment and promote economic growth. The framework includes five steps (see figure 4.1):

Step 1. Getting children off to the right start—by developing the technical, cognitive, and behavioral skills conducive to high productivity and flexibility in the work environment through early child development (ECD), emphasizing nutrition, stimulation, and basic cognitive skills. Research shows that the handicaps built early in life are difficult if not impossible to remedy later in life and that effective ECD programs can have a very high payoff.

Step 2. Ensuring that all students learn—by building stronger systems with clear learning standards, good teachers, adequate resources, and a proper regulatory environment. Lessons from research and ground experience indicate that key decisions about education systems involve how much autonomy to allow and to whom, accountability from whom and for what, and how to assess performance and results.

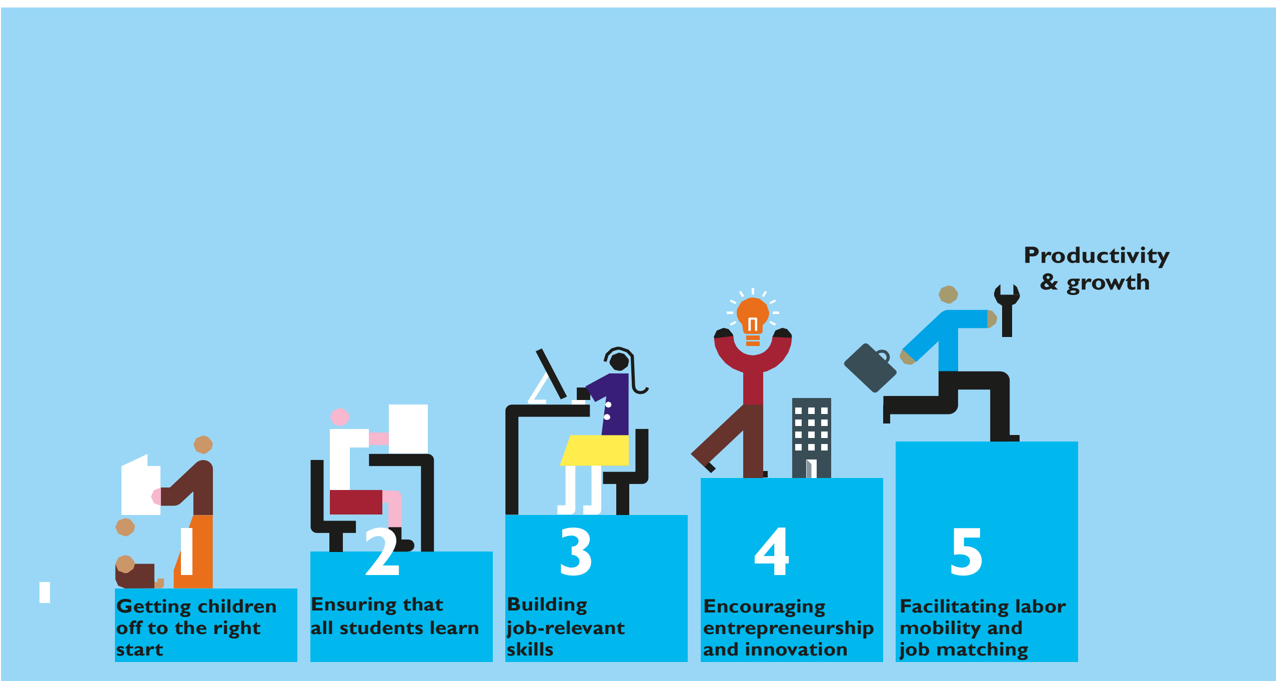
Step 3. Building job-relevant skills that employers demand—by developing the right incentive framework for both pre-employment and on-the-job training programs and institutions (including higher education). There is accumulating experience showing how public and private efforts can be combined to achieve more relevant and responsive training systems.

Step 4. Encouraging entrepreneurship and innovation—by creating an environment that encourages investments in knowledge and creativity. Emerging evidence shows this demands innovation-specific skills (which can be built starting early in life) and investments to help connecting people with ideas (through collaboration between universities and private companies) as well as risk management tools that facilitate innovation.

Step 5. Matching the supply of skills with the demand— by moving toward more flexible, efficient, and secure labor markets. Avoiding rigid job protection regulations while strengthening income protection systems, complemented by efforts to provide information and intermediation services to workers and firms, is the final complementary step transforming skills into actual employment and productivity.

The STEP framework is not a blueprint for reform or a fixed set of recommendations for countries to follow. It is a framework that can help countries understand the challenges they face in building the skills needed for growth and productivity and find the solutions that work in their own environments. It is also a call for a comprehensive approach that resists the temptation of believing that single-focus solutions can address the skill gaps. The value of each individual step is well known to researchers and policymakers; the contribution of the STEP framework is to emphasize that building effective skills for employment and productivity needs to harness the synergies among these various steps. This chapter builds on the STEP framework to discuss some of the policies that countries can adopt to invest in skills.

Figure 4.1 The STEP framework shows that skills needed to raise productivity and economic growth require a sequenced combination of education, training, and labor market activities



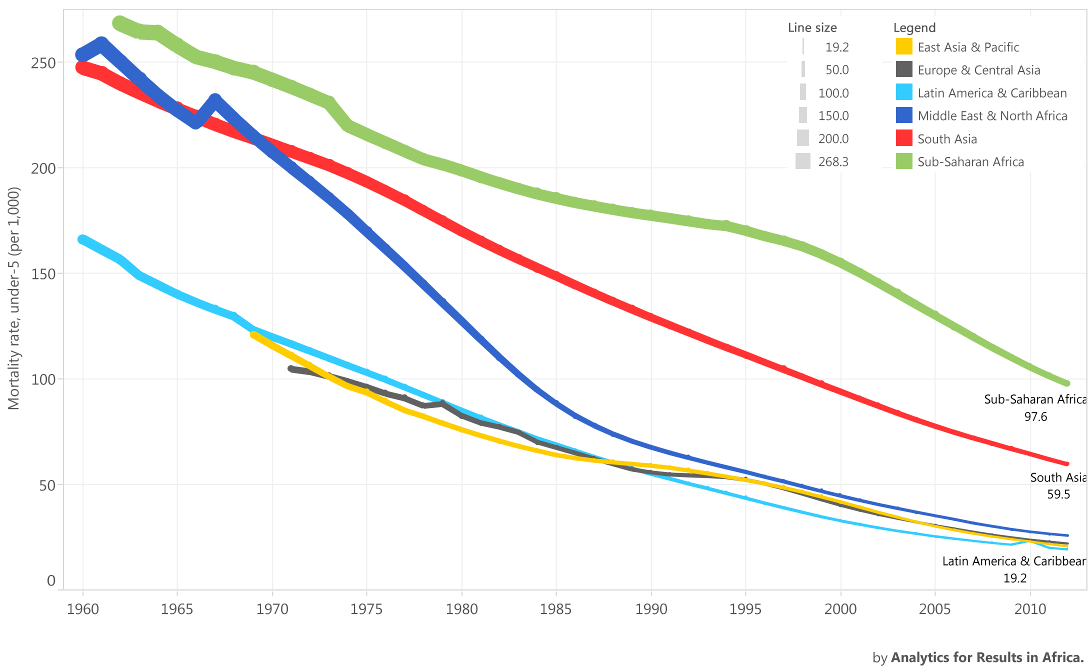
Source: World Bank (2011c).

Investing early: ensuring child survival and early childhood development

4.9 Significant progress has been made toward many of the health MDGs. Child mortality (figure 4.2 and figure 4.3) was halved, from 90 deaths per 1000 live births in 1990 to 48 deaths in 2012 (according to UN Inter-Agency Group for Child Mortality Estimation). Some of the largest gains in absolute terms were achieved in sub-Saharan Africa and South Asia. In sub-Saharan Africa, the child mortality rate dropped from 177 to 98, while in South Asia it fell from 129 to about 60. While more progress is necessary achieved to reduce child mortality by the MDG target of two-thirds, many countries have achieved large gains.

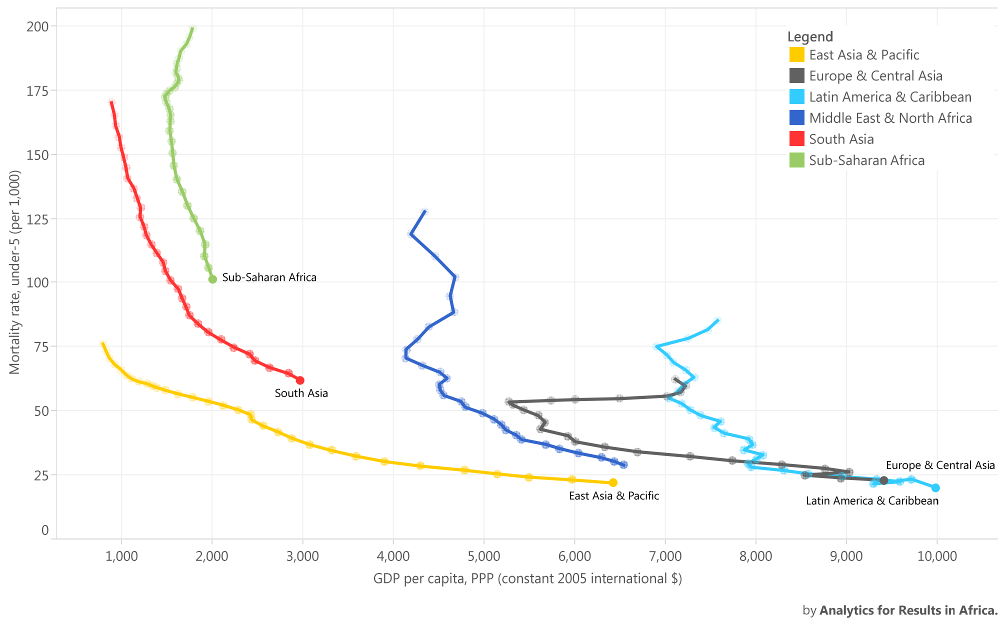
4.10 The near-halving of child mortality in sub-Saharan Africa from 1990 to 2012 far outpaced the 30 percent rise in per capita GDP (in constant 2005 international ppp dollars). This may indicate that beyond broad-based growth, specific interventions and policies can make a major difference in reducing child mortality.

Figure 4.2. Trend in child mortality over time



Source: World Bank's Indicator database.

Figure 4.3 **Trends in child mortality and GDP per capita**



Source: World Bank's Indicator database.

4.11 At the same time, despite overall progress, large differences remain within most countries between richer and poorer households, and between urban and rural ones. Child mortality rates remain much higher for children living in households in the bottom quintile of wealth (often also in the next two quintiles) than in households in the top two quintiles. In addition, although mortality rates are typically decreasing across all quintiles in most countries, in a number of countries gains by the poor have been weaker. This is in part because healthcare utilization is often higher among the relatively well-off, in part due to the lack of affordability of care for the poor and the fact that healthcare provision is weaker in rural and remote areas than in wealthier urban areas. There are exceptions to this rule; for example, immunization campaigns often reach many, if not most, of the poor. But for many other types of services, care may remain out of reach for the poor, due to lack of either accessibility or affordability.

4.12 To what extent has inequality in health outcomes and the use of healthcare services changed over time? Relatively few studies have compared the progress of different groups within the population (for example, ranked by wealth quintiles) towards the MDG targets. Exceptions include Victora et al. (2012), who looked at inequalities in selected maternal and child health indicators for 35 countries between 1990 and 2007, and Suzuki et al. (2012), who used data from the DHS Statcompiler to compare indicators for poor and non-poor households. More recently, Wagstaff et al. (2014) use data from 160 DHS and MICS surveys for 65 countries to assess whether the poorest 40 percent of the population have benefitted as much as the upper 60 percent from gains in health-related MDGs. They find that regardless of the MDG indicator used, in many countries the poorest 40 percent have made less progress than the richest 60 percent.

4.13 In reaching this conclusion, Wagstaff et al. focus on: (1) child malnutrition using anthropometric measures of underweight and stunting among children up to five years (MDG1); (2) infant and child mortality rates, the share of one year old children immunized against measles, and the share of children fully immunized (MDG4); (3) maternal mortality and universal access to reproductive health, as proxied by the share of births of mothers aged 15-49 attended by skilled health personnel, the contraceptive prevalence rate, and the rate of antenatal care coverage (MDG5); and (4) health indicators for communicable diseases, including HIV prevalence, condom use at last high risk sex, and use of bednets.

4.14 As shown in table 4.1, for many indicators the poorest 40 percent have made less progress than the richest 60 percent. For child malnutrition and child mortality, the progress among the poor is lagging behind that of the non-poor in a majority of countries. The poor are also making slower progress towards access to and usage of many health services and interventions. In some countries, access to care and health outcomes for the poor have even deteriorated in absolute terms. This is the case for stunting in a third of countries, underweight status in a fourth of countries, and access to maternal and child health services in a fifth of countries. Infant and child mortality have not improved for the poor in a tenth of countries.

Table 4.1 Comparative progress towards the health MDGs by quintiles of wealth

	Percentage of countries with average annual improvements among poorest 40 percent	Percentage of countries with widening inequalities	Percentage of countries with narrowing inequalities	Number of countries with at least two periods of data
Underweight	74.1 percent	53.7 percent	46.3 percent	54
Stunting	64.2 percent	54.7 percent	45.3 percent	53
Infant mortality	92.7 percent	48.8 percent	51.2 percent	41
Under five mortality	87.5 percent	53.7 percent	46.3 percent	41
Measles immunization	78.1 percent	26.6 percent	73.3 percent	64
Full immunization	76.7 percent	30.0 percent	70.0 percent	60
Antenatal care	78.0 percent	19.5 percent	80.5 percent	41
Skilled birth attendance	80.5 percent	31.7 percent	68.3 percent	41
Contraceptive use	55.3 percent	44.7 percent	55.3 percent	38
HIV prevalence	55.6 percent	66.7 percent	33.3 percent	9
Condom use	100 percent	6.7 percent	93.3 percent	15
Bednet use	73.9 percent	30.4 percent	69.6 percent	23

Source: Wagstaff et al. (2014) using DHS and MICS surveys, 1990-2011.

4.15 Effective policies and programs can improve the access of the poor to health services and improve health outcomes. Targeted interventions in poor areas—such as that of Muso, a nonprofit organization in Mali (box 4.2) can make a major difference in healthcare utilization and thereby outcomes for the poor. Muso focuses in part on fighting malaria, an illness to which roughly 3.3 billion people, or half of the world's population, are vulnerable. Every year some 216 million cases of malaria occur and 665,000 people die from those episodes. Many of those deaths occur among children under five. More generally, more than 6 million children under five die every year worldwide from malaria and other curable diseases. Many of these illnesses can easily be prevented through simple tools such as bednets or easily treated by oral medications at home if caught early. But because most children who die from malaria die within 48 hours of symptom onset, speed matters in providing treatment. Proactive healthcare can save children's life, as the four-step, low-cost but effective model adopted by Muso in Mali demonstrates.

Box 4.2 Innovative delivery systems can limit child deaths from malaria

Malaria is an important cause of child deaths in developing countries, but many deaths from malaria are preventable. The Muso program, which contributed to a fall in child mortality by a factor of ten in Yirimadjo, Mali, provides an important example of success.

Djeneba lives in Yirimadjo, a community in Mali. Today she goes to school but in 2009 her life was threatened. She started getting high fevers but her parents did not have enough money to pay for care. They tried to break the fever by bathing her in herbal remedies and buying unregulated pharmaceuticals but the fevers persisted and became increasingly severe. Fortunately Yirimadjo was served by (Project) Muso. Sira, one of the community health workers trained by Muso became aware of Djeneba's situation after one particularly nasty fever, and wrapped Djeneba in wet towels to stabilize her fever. She sent Djeneba by ambulance to a large hospital in the capital city of Bamako where she received comprehensive treatment. During the ride Djeneba lost consciousness and was diagnosed with advanced cerebral malaria. But after three weeks and lifesaving medication she was released happy and healthy. Sira's diligence saved Djeneba's life.

Muso is on the frontlines of providing timely, proactive health care to poor, hard-to-reach populations in Mali. The group works in communities through a four-step approach. The first step consists of mobilizing the existing health care delivery system. This includes selecting, training, employing and supervising local individuals who go door-to-door and identify children sick with malaria and other illnesses. These community health workers diagnose malaria in the household and treat simple cases. When care is needed from a doctor, they refer patients to government health centers. The second phase consists of removing barriers that prevent people from accessing care when needed. Many families do not have enough money to pay for hospital fees or get there in time for treatment. By eliminating user fees, Muso ensures that even the poorest can benefit from life-saving comprehensive and universal care, whether at home, in community health centers, or in referral hospitals. The third step consists of creating rapid referral networks by training communities in identifying health risks, prioritizing rapid treatment, and navigating the health system. These networks are essential for community organizers, religious leaders, and educators to help families in need and bring children and adults suffering from malaria to community health workers or to centers where care is provided. The fourth, and final, step consists of clinical capacity building. As Muso removes access barriers to achieve universal health coverage, it also reinforces the ability of the public sector to provide quality care to its patients. This includes expanding infrastructure and training providers.

How do we know that Muso is successful? The child mortality rate in Yirimadjo, Mali fell from 15.5 percent to 1.7 percent three years after the launch of the Muso model (Johnson et al. 2013). Because the study was not based on a randomized controlled trial, but on repeated samplings of cross-section data in Muso's area of intervention, one should be cautious in assigning causality. Still, the results are very encouraging and the Muso team recently received two global awards. The 2013 GSK Global Healthcare Innovation Award recognized Muso as one of five effective new models for better chances of child survival. And the Caplow Children's Prize named Muso one of eight finalists for its global award that identifies high-impact new models for saving children's lives. Interestingly, while Muso has been working closely with Mali's Ministry of Health, most of its funding comes from private donors and foundations, including two grants received in recent years from the Rotary Foundation. The Muso experience provides hope that concerted improvements in the quality of health services and increases in poor people's access could drastically reduce deaths from malaria.

Source: Wodon et al. (2014); see also Johnson et al. (2013).

4.16 Inequalities in access to early childhood development interventions will continue to affect many disadvantaged children throughout their lives. This is obvious in the case of early health outcomes such as child malnutrition, infant and child mortality, access to reproductive health and maternal mortality, immunization rates, and communicable diseases that affect young children. Poor nutrition and disease at a very young age can have life-long implications for educational attainment and adult earnings, since children's ability to learn is affected by the development of their brain in the first 1,000 days of life. Also critical are access to preschool and a good transition to primary school.

4.17 What can countries do to reduce inequalities early in life and enable young children to reach their full potential? Recent brain research suggests the need for holistic approaches to learning, growth, and development based on the recognition that young children's physical and intellectual well-being, as well as their socio-emotional and cognitive development, is all interrelated (Shankoff et al. 2012). To fully benefit from future opportunities in life and become productive members of society, by the end of early childhood young children must be: healthy and well-nourished; securely attached to caregivers; able to interact positively with families, teachers and peers; able to communicate in their native language; and ready to learn throughout primary school (Naudeau et al. 2011).

4.18 A growing body of literature demonstrates that the returns on investments in young children are substantial, particularly when compared to investments made at later stages in life. By contrast, failure to invest can lead to long-term and often irreversible costs, for the children, their families, their communities, and society at large. New biological and social science research provides a wealth of evidence on innovative strategies that can promote optimal child growth and development. Programs in low- and middle-income countries that combine services (such as nutrition and psychosocial stimulation) can have large beneficial effects (Naudeau et al. 2011). But most countries fall short in their delivery of essential services for young children and their families.

4.19 Early Childhood Development (ECD) programs provide a comprehensive approach to a child's growth and development, addressing health, nutritional, socio-emotional, cognitive, and linguistic needs.[1] ECD services are provided to pregnant and lactating mothers, as well as young children and their families, from pregnancy through the child's entry to primary school. Despite the obvious need for such services, investments in ECD are inadequate in most countries. In part this reflects a lack of resources. In addition, there is still a lack of understanding in many countries of the requirements and optimal design of ECD programs, which can be highly complex and involve several sectors.

4.20 Several development agencies have introduced frameworks to address the holistic needs of young children. UNICEF focuses on key areas of intervention for ECD, including basic health, nutrition, HIV/AIDS, education, and protection services. The World Health Organization (WHO) has established specific guidelines to improve health outcomes at each developmental phase, including pregnancy, postnatal, baby, infant, and young child healthcare. The Partnership for Maternal, Newborn and Child Health (PMNCH), led by the WHO and Aga Khan University, provides policy-makers with specific information on the essential health interventions to address the main causes of maternal, newborn, and child deaths. The World Bank's Early Childhood Development Guide for Policy Dialogue and Project Preparation underlines strategic entry points for effective ECD program implementation. These include center-based programs, home-based programs, and conditional cash transfer and communication and media campaigns targeting families with young children.

4.21 A recent document published by the World Bank (Denboba et al. 2014) complements these existing frameworks and provides a pathway of basic integrated services and key principles to help policymakers and practitioners think about how to effectively invest in ECD. This document identifies 25 key interventions for young children through five packages of services: (i) a family support package that should be provided throughout the ECD period, (ii) a pregnancy package, (iii) a birth package (from birth to six months), (iv) a child health and development package, and (v) a preschool package. These interventions can generate very high returns (box 4.3). The 25 key interventions needed in different sectors at different stages in a child's life are summarized in and elaborated below.

Box 4.3 The returns to investments in young children are large

Research suggests that the interventions in the five packages identified in this chapter tend to have high benefits at relatively low cost.

Family package: In Africa and Asia, access to safe water can have a 3.4:1 benefit-to-cost ratio and adequate sanitation can have a 4-7:1 benefit-to-cost ratio (Rijsberman & Swane, 2012). In Africa, Europe, South America and Southeast Asia, food fortification with iron and other micronutrients can have a benefit-to-cost ratio as high as 37:1 (Horton, 1992). Estimates from Africa, East Asia and the Pacific, and South Asia indicate that salt iodization can have a benefit-to-cost ratio as high as 30:1 (Horton, 2008). In these same regions, vitamin A can cost $3-16 per DALY[2] saved (Ching et al. 2000; Fiedler 2000; Horton & Ross 2003).

Pregnancy package: Iron supplementation for pregnant mothers cost from $66 (African sub-region with very high adult and high child mortality) to $115 (Southeast Asian sub-region with high rates of adult and child mortality) per DALY saved (Baltussen, Knai, Sharan 2004).

Birth package: In South Asia and Sub-Saharan Africa, a package of maternal and neonatal health packages costs $3,337-$6,129 per death averted and $92-$148 per DALY saved (Laxminarayan, Chow, Shahid-Salles, 2006). Breastfeeding promotion programs, which can prevent diarrhea, cost $527-$2,000 per DALY saved (ibid).

Child Health & Development Package: Immunizations can have a benefit-to-cost ratio up to 20:1 (Barninghausen et al. 2009). In Tanzania, zinc supplementation for diarrhea management may cost $73 per DALY saved (Robberstad et al. 2004). Estimates from Africa, East Asia and the Pacific, and South Asia indicate that optimal feeding may cost $500-$1,000 per DALY saved (Horton et al. 2010) and deworming can have a benefit-to-cost ratio as high as 6:1 (Horton et al. 2008).

Preschool package: Increasing preschool enrollment to 50 percent of all children in low- and middle-come countries could result in lifetime earnings gains from $14-$34 billon (Engle et al. 2011). High quality ECD programs targeting vulnerable groups in the United States have an annual rate of return of 7-16 percent (Rolnick & Grunewald 2007; Heckman et al. 2009).

Children are our most precious resource. Investing in their future is beneficial, both in human and economic terms.

Source: Denboba et al. (2014).

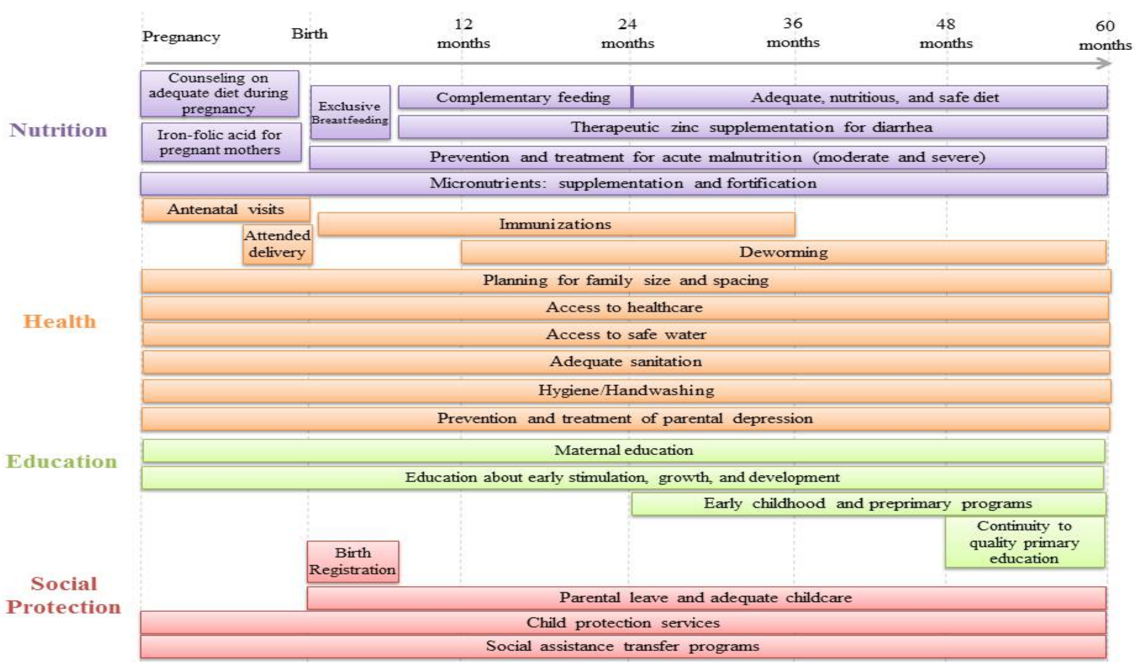
Family Support Package

4.22 The family is the first and most effective support system to ensure young children's healthy growth and development. While a range of ECD interventions are age-specific, many others are necessary throughout the early years (table 4.4). Based on a two-generation approach, which focuses on creating opportunities for and addressing the needs of parents and children, the family support package provides clusters of services, including: (1) maternal education; (2) planning for family size and spacing; (3) education about early stimulation, growth, and development; (4) social assistance transfer programs; (5) prevention and treatment of maternal depression; (6) parental leave and adequate child care; (7) child protection services and provision of health, nutrition, and sanitation facilities for families: (8) access to health care; (9) micronutrient supplementation and fortification; (10) access to safe water; (11) adequate sanitation; and (12) hand washing education.

Pregnancy Package

4.23 The pregnancy package includes key services from conception to birth aimed at reducing the risks of maternal and neonatal mortality, anemia, and low birth weight: (13) prenatal care; (14) iron and folic acid supplementation for pregnant mothers; and (15) counseling on adequate diets for pregnant mothers.

Table 4.4 25 Key Interventions for young children and families



Source: Denboba et al. (2014).

Birth Package

4.24 The birth package provides services aimed at reducing the risks of morbidity and mortality of mothers and newborns, and improving health during the critical development period from birth to 6 months: (16) skilled attendance at delivery; (17) birth registration; and (18) exclusive breastfeeding.

Child Health and Development Package

4.25 The child health and development package covers the period from birth to 5-6 years, aimed at reducing the risks of stunted growth, anemia, impaired cognitive development, and child mortality: (19) immunizations; (20) adequate, nutritious, and safe diet; (21) therapeutic zinc supplementation for diarrhea; (22) prevention and treatment of acute malnutrition; and (23) deworming.

Preschool Package

4.26 Quality improvement in early primary grades can improve learning outcomes, school attendance, pass rates, and promotions, while reducing dropout and repetition rates. Well-trained and experienced teachers in the early grades of primary school can help close the readiness gaps that many young children face. The preschool package consists of two main interventions: (24) pre-primary education or pre-schools; and (25) continuity through primary education (smooth transition into formal schooling) (box 4.4).

4.27 In addition to key interventions, countries should be mindful of four policy principles in establishing ECD systems: (1) prepare a multi-sectoral ECD diagnostic and strategy; (2) implement widely through effective coordination mechanisms; (3) create synergies and cost savings among interventions; and (4) monitor, evaluate, and scale up successful interventions.

ECD Diagnostic and Strategy

4.28 Countries need to build an ECD strategy from the ground up by conducting a diagnostic of existing ECD programs and policies in order to identify gaps. The World Bank's Systems Approach for Better Education Results (SABER) ECD tool can inform such diagnostics. On the basis of the ECD diagnostic and taking into account costs and available funding, countries should prioritize interventions with three considerations in mind: (i) start early – interventions during the first 1,000 days have lifelong impacts on a child's ability to grow, learn, and rise out of poverty; (ii) address risk factors for poor growth and development – four key risk factors affecting at least 20-25 percent of infants and young children in developing countries are stunting and wasting, inadequate cognitive stimulation, iodine deficiency, and iron-deficiency anemia; and (iii) target the most vulnerable – while a system providing universal coverage for ECD interventions is ideal, countries facing budget constraints should first target the most vulnerable.

Coordination and Wide Implementation

4.29 Given that children's growth and development cannot be adequately addressed through interventions in a single sector, the ECD policy framework must involve multiple ministries and agencies. Coordination must be maintained both horizontally between sectors and vertically between the central government and local authorities. Institutional arrangements may vary, but each country must take a pragmatic approach to work through existing entry points. Clear roles and responsibilities are important to avoid inefficiencies and duplication.

Integrated Services

4.30 Delivering appropriate packages of ECD interventions requires taking advantage of every contact with mothers and young children, and building synergies between various types of interventions. Integrated ECD interventions that address multiple needs of young children are likely to yield the greatest results. For example, cognitive benefits tend to be larger when stimulation or learning components are provided along with education or economic assistance, rather than separately. Providing services together, or at least as the same location, can help reduce unit costs, for example by reducing the time and travel costs needed to reach beneficiaries. Synergies through integrated service delivery are particularly important in contexts where mothers and young children are difficult to reach (for example, because they live in remote areas).

Monitoring, Evaluation, and Scaling Up

4.31 Comprehensive monitoring and evaluation (M&E) systems help track ECD investments and assess performance, thereby supporting effective program management and policymaking. Countries should collect high-quality data across sectors on young children's needs, their access to ECD services, the delivery and performance of those services, and the results of ECD investments. Monitoring systems should include data from multiple sources, including household and child surveys and national administrative data. Integrated systems that track vulnerable children are especially useful to promote effective targeting, referrals, and follow-up and to provide the data required for evaluation.

Box 4.4 Preschool education can improve skills and encourage primary school attendance

A program in Mozambique has demonstrated the feasibility and value of preschool for poor children.

Under the shade of a spreading mafura tree, preschool teacher Carmelina Alberto Makuite places three bottle caps in the sand and asks her class of 30 to count. "Um! Dois! Três!." Her 3- to 5-year-old students shout, showing off not only budding mathematics skills but newly acquired Portuguese—the language of instruction in Mozambique and a change from the Changana dialect spoken at home. The morning's lesson has pre-schoolers in remote Mahuntsane village—a 4-hour drive northeast of the capital Maputo—learning numbers, days of the week, and body parts, as well as answering questions after the teacher reads a Portuguese story about a spider and a dog. The skills the children learn here—cognitive, linguistic, socio-emotional and physical—are critical for long-term healthy development and will give them a strong start when they reach first grade.

Mahuntsane's preschool is part of a pilot program, begun in 2008 by the nongovernmental organization Save the Children, to strengthen early childhood development in 30 villages in rural Gaza Province. The program's success—demonstrated by a rigorous impact evaluation—attracted support from the Ministry of Education, which is now scaling up the initiative across 600 communities in five provinces, to reach 84,000 young children. The World Bank's Fund for the Poorest (IDA) is providing support for the scale-up through a $40 million education policy loan, which also finances capacity and knowledge building activities for government agencies and key stakeholders to ensure sustainability. The government kicked off the scale-up project earlier this year, and participating communities have already been identified.

The pilot managed by Save the Children helps young children in poor communities—some of them orphaned due to AIDS, many with fathers away working in South African mines—overcome the developmental gaps often associated with poverty. In addition to the preschools, a parenting component provides information about how to promote hygiene, health, adequate nutrition, and early stimulation for children under age 3. The program is unique in that it requires community investment in the preschools: parents and community members agree to provide space, labor, and, in some cases, materials to build classrooms, and community committees select local teachers and manage the schools.

Save the Children designed the preschool curriculum and provides ongoing training to teachers. In the first two years of the program, the organization paid teachers a small stipend of $10 per month; the total cost of running the program was $2.47 per child per month. Many communities eventually assumed responsibility for teacher fees and school maintenance themselves, with each household contributing between 0.50 and 0.80 U.S. cents per month. Some of the preschools have closed in the last year or two due to parents' inability to pay teachers, but community members say they plan to restart the schools as soon as the government is able to pay the stipends of community teachers as part of the scale-up.

The model is a success story. An impact evaluation of the pilot program, funded in part by the World Bank-hosted Strategic Impact Evaluation Fund, found that participating children showed a 12 percent increase over children in a control group in performing tasks related to memory, ability to sort and classify objects, and ability to count to 20. The preschool children were also likelier to begin primary school at age 6, and their older siblings were likelier to attend school.

The preschools have proven to be a lifeline in villages like Mahuntsane, where parents spend their days in the fields, harvesting maize, rice and manioc, often leaving young children unsupervised or in the care of an older sibling. Few children in low-income countries have an opportunity to attend preschool. Only 4 percent of children in Mozambique are enrolled in preschool of any kind, and most of these are from wealthier, urban families. But this is now changing.

Source: World Bank 2011a.

Improving education attainment and learning

4.32 Investments in ECD are crucial to help children get off to the right start. But in order to enable them to grow, it is also important to ensure that they learn as students, and acquire skills that lead to productive jobs. This section discusses some of the challenges to improving education attainment and learning – the second step in the overall STEP framework.

Raising education attainment

4.33 Low- and middle-income countries have achieved substantial progress toward the education goals. In the last two decades, large gains have been made towards ensuring universal primary education and eliminating persistent gender inequalities. The number of out-of-school girls at the primary level has been cut in half since 1999, and two-thirds of developing countries have reached gender parity in primary education. In over one-third of these countries, girls outnumber boys in secondary education.

4.34 At the same time, according to data from the World Bank and UNESCO, 57 million children remain out of primary school today, half in sub-Saharan Africa and a fifth in South Asia. Many of these children may be missing out on their chance for an education simply because they are female, or are from poor households, or live in remote areas (UNESCO 2010), and such disparities are even more important beyond primary education. Armed conflict compounds these multiple sources of disadvantage, and states suffering (or emerging) from pervasive armed conflict have some of the world's worst indicators for education (UNESCO 2011). In South Sudan alone, until recently one million children remained out of school—even as enrollment in primary school increased by 700,000 between 2005 and 2009 (World Bank 2012c). Moreover, while students may be entering primary school, they are not always completing the cycle. African countries in particular suffer from some of the lowest primary completion rates in the world: two thirds of sub-Saharan African countries have primary completion rates of less than 80 percent. Other countries with higher primary completion rates but large out-of-school youth populations in absolute numbers also warrant attention.

4.35 While the MDG target relates to the completion of primary education, in many countries completing primary education is no longer sufficient to escape poverty or at least vulnerability. It is therefore important to consider disparities between household groups in the completion of secondary education. A sample of 31 low- and lower middle-income African and South Asian countries showed very large differences in secondary education completion by wealth quintile. On average across countries, a child in the top quintile is 25 times more likely to complete secondary school than a child in the bottom quintile (ratio of 0.041 of poorest quintile to richest quintile in table 4.3). An urban child is almost five times more likely to complete secondary education than a rural child. And a boy is 1.55 times more likely than a girl to complete secondary school. In other words, despite progress, major inequalities persist between groups within countries.

Table 4.3 Ratio of secondary school completion rates for girls versus boys

	Number of countries	Mean value
	Gender ratio	
All countries	31	64.5 percent
Low income	19	54.7 percent
Lower middle income	10	75.9 percent
	Rural to urban Ratio	
All countries	31	21.4 percent
Low income	19	15.6 percent
Lower middle income	10	31.9 percent
	Quintile 1 to Quintile 5 Ratio	
All countries	31	4.1 percent
Low income	19	1.7 percent
Lower middle income	10	7.8 percent

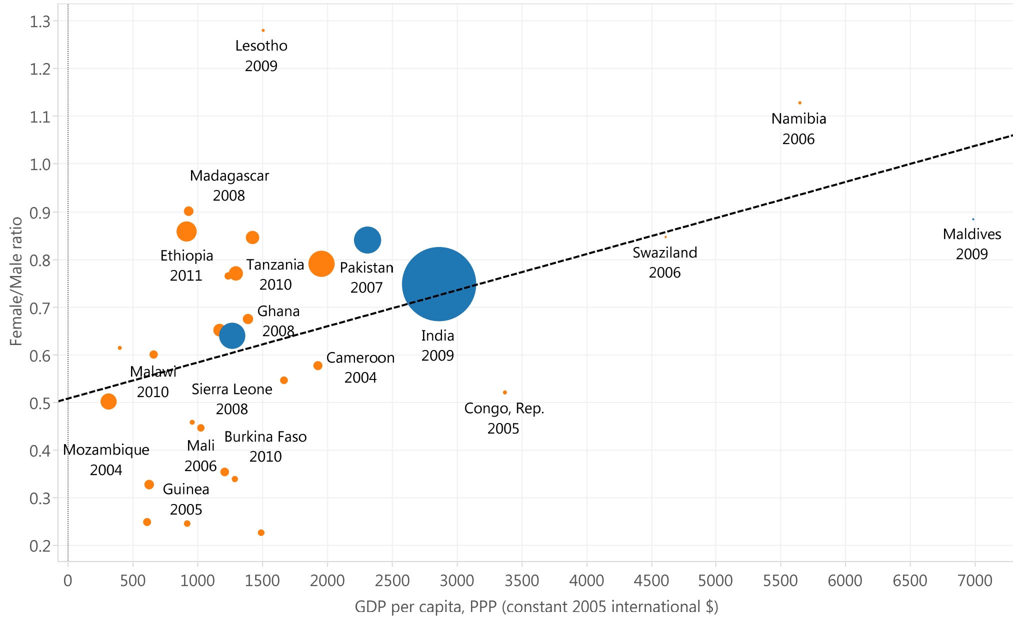
Source: Nguyen and Wodon (2014b).

4.36 Figure 4.5 provides a graphical display of these ratios. Countries are ranked on the horizontal axis according to their level of GDP per capita in purchasing power parity terms. Gaps in secondary school completion by gender (ratio of the completion rates for girls and boys), location (ratio of the completion rates for rural versus urban areas), and wealth (ratio of the completion rates for children in the bottom versus the top quintiles of wealth) are displayed on the vertical axis. The sizes of the dots in the figures represent the size of the countries' population. Data are provided for sub-Saharan countries in orange and South Asian countries in blue.

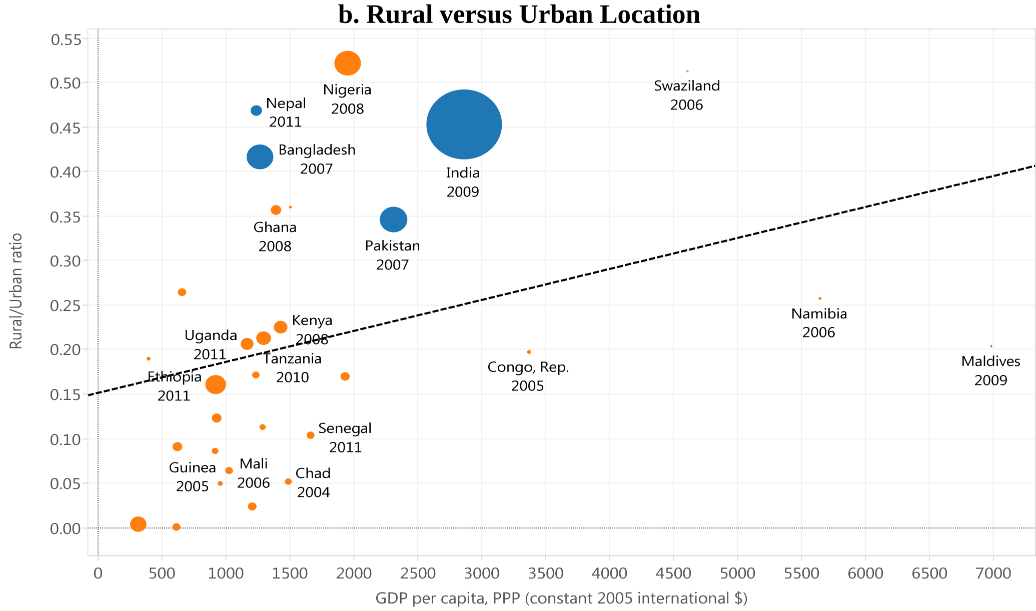
4.37 A few points are worth highlighting. First, the lines showing the relationship between educational disparities and per capita income in the three figures have very different intercepts with the y axis, with the lowest intercept for disparities by wealth quintiles, followed by disparities by location and finally disparities by gender. This echoes the fact that disparities are larger according to wealth, then location, and then gender. Second, the slopes of the lines of best fit are all positive, suggesting that economic development reduces disparities. Yet while average income has some explanatory power, there is a lot of variation in ratios among countries at similar income levels, suggesting that the broader development context (including conflict) as well as education policies and programs can make a major difference in reducing such disparities.

Figure 4.5 **Ratio of secondary school completion rates**

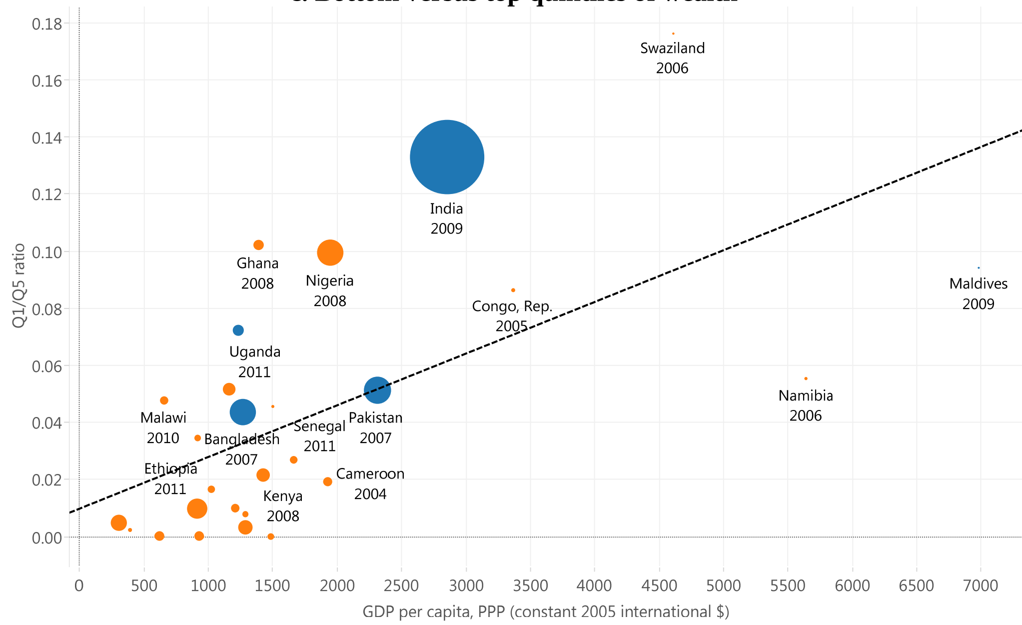
a. Gender



b. Rural versus Urban Location



c. Bottom versus top quintiles of wealth



Source: Nguyen and Wodon (2014b).

4.38 A simple decomposition analysis can be used to determine the relative contribution of disparities at different educational levels to these huge differences in secondary school completion rates. Nguyen and Wodon (2014b) express the ratio of secondary school completion between girls and boys, urban and rural locations and the bottom and top quintiles as the product of six corresponding ratios for: (1) students starting primary school, (2) completing primary school conditioned on starting primary school, (3) transitioning to junior high school conditioned on completing primary school, (4) completing junior high school conditioned on starting that cycle, (5) transitioning to senior high school conditioned on completing junior high school, and (6) completing senior high school conditioned on starting that cycle.

4.39 The decomposition helps in assessing exactly where disparities in attainment occur. Because the decomposition is multiplicative, the factor that contributes the most to disparities for each category is the one with smallest ratio. Differences in the share of girls and boys who start primary school matter the most in determining gender differences in the completion of secondary school. In the case of location and wealth, gaps in the completion of secondary schools tend to matter more, but differences in the share of students who start and complete primary school also matter. If the analysis is conducted in terms of the completion of basic education – which often corresponds to nine years of schooling – then the inequalities in starting and completing primary schools would matter even more. Thus disparities at an early age in starting and completing primary school contribute in a major way to disparities in educational attainment at higher levels of schooling (box 4.5). If one were to consider disparities in learning as well, apart from disparities in attainment, disadvantage at an early age contributes even more to disparities later in life – because the children and communities that suffer the greatest access gaps also tend to learn more slowly during the years of schooling that they do receive (see section on Improving Learning and Skills below).

Box 4.5 Eliminating school fees in Burundi increased access to primary education

It has long been recognized that the direct costs of schooling, as well as the opportunity costs associated with schooling, prevent many poor households from sending their children to school. This is especially the case in sub-Saharan Africa. Several African governments, for example in Ethiopia, Kenya, Malawi, Tanzania, Uganda, and Zambia, have eliminated user fees to improve school attendance. However, this policy has had mixed results.

In Burundi, following two decades of conflict and after a process of reconciliation that lasted several years, the newly elected President declared in 2005 that primary education in public schools would be provided for free. The policy became effective starting with the 2005-06 school year. The elimination of user fees led to a dramatic increase in enrollment. The gross primary enrollment rate jumped from 81.6 percent in 2004-2005 to 101.3 percent in 2005-2006, and continued to increase thereafter to reach 130.4 percent in 2008-2009. The gender parity index in primary education also increased from 0.86 in 2005-2006 to 0.95 in 2008-2009, suggesting faster gains in enrollment for girls than for boys.

The increase in enrollment appears to have particularly benefited children in poor households. According to the QUIBB (*Questionnaire Unifié des Indicateurs de Base)* survey, 41.4 percent of the poorest (bottom quintile) households report that if school fees had still been charged, some of their children who were enrolled in primary school at the time of the survey would have stayed at home. This share falls to 13.1 percent for the richest (top quintile) households.

A profile of newly enrolled children shows that the impact of free education was stronger for (1) younger children (6 to 11 year-olds and 12 to 15 year-olds as compared to older children aged 15 to 18), since the elimination of user fees concerned public primary schools only; (2) children who did not work, although it should be noted that the decision to work depends on the decision to enroll in school; (3) rural children; (4) children belonging to poorer households as already mentioned; (5) children belonging to households where at least one member of the family was handicapped; (6) children from households where the household head had a lower level of education; and (7) children from households where the head worked in agriculture (as opposed to industry or services). By contrast, the elimination of user fees had little difference in impact according to whether the child was displaced due to the war, the sex of the head of household or his/her marital status, the sex of the child, whether or not the child was an orphan, and the distance of the child from schools. While free primary education was a pro-poor measure, it needed to be accompanied by an expansion of the supply of education, which took a few years to take place.

Source: Someiller and Q. Wodon (2014).

Improving learning and skills[3]

4.40 Despite substantial gains in educational attainment, the level of learning among developing country youths remains alarmingly low (World Bank 2011a, UNESCO, 2013). More than 30 percent of youths who had completed six years of schooling in Mali, and 50 percent in Kenya, could not read a simple sentence. In Peru, only about 50 percent of children in grade 2 could read at all (Crouch 2006). Numeracy skills are also low: only half of grade 3 students in Pakistan could answer very basic multiplication questions (World Bank 2011a), and 74 percent of grade 6 students in Mozambique did not possess basic numeracy skills (King and Reinikka 2012). International student assessments at the junior secondary school level such as PISA (Program for International Student Assessment) and TIMSS (Trends in International Mathematics and Science Study) suggest that even middle-income countries with high enrollment rates in basic education, such as Colombia, Indonesia, and Thailand, fare poorly in terms of basic mathematics competency (World Bank 2011a). Disparities in achievement also exist within countries, with learning levels often especially low among hard-to-reach and disadvantaged groups. Thus students in both low-income and middle-income countries face serious achievement challenges.

4.41 Low achievement can have devastating implications for employment prospects (Jimenez et al. 2012). A diploma can expand employment opportunities, but ultimately a person's knowledge, skills, and competencies will determine his or her productivity and ability to adapt to a dynamic labor market. High youth unemployment rates in many countries in part reflect the failure to learn basic skills and a mismatch between educational curricula and the demands of the labor market (for example, low enrollments in fields such as science, technology, engineering, and mathematics, especially for women—World Bank 2011b). In India, for instance, because many university and college graduates are poorly trained, firms in the software, banking, pharmaceuticals, and retail sectors are increasingly designing their own training programs—and even building their own campuses to train future recruits (Wadhwa et al. 2008). Yet, if workers do not possess the basic skills that are demanded—the 3 Rs as well as "soft" skills—training programs within firms may provide only limited benefits. More importantly, they will likely favor only those who are better off.

4.42 There are three major impediments to improving educational attainment and learning in developing countries. First, education involves both out-of-pocket costs and opportunity costs for households. In household surveys, parents routinely emphasize costs as a reason for a lack of satisfaction with their child's education, or for their children having dropped out of school or never enrolled (Wodon 2014a). While many developing countries have eliminated user fees for public primary school (and in some cases at the junior high level), sometimes with very large effects on education attainment (box 4.5 for a case study on Burundi), costs remain burdensome for education levels beyond that. In the absence of effective student grant and loan programs, young people are often left to finance their post-junior high school education and training with their own resources. Even when senior high schools and universities are heavily subsidized, the opportunity cost of the time spent in school by youth may be large. The role of both out-of-pocket and opportunity costs in driving youth away from schools is probably the main reason why conditional cash transfer programs have been so successful and popular (Fiszbein et al. 2009). At the same time it should be recognized that there is a strong case for financing tertiary education from tuition fees as much of the benefit from tertiary education accrues to graduates in the form of higher earnings and other non-monetary benefits (IMF, 2014). Increasing private financing also allows tertiary education to expand without increasing public spending. Income-contingent student loans could be expanded to ensure that middle- and low-income households maintain access to tertiary education while fees are raised.

4.43 Second, education expenditures are often inefficient, and many school inputs make only a small difference in achievement (Hanushek 1986, 2010 and Hanushek and Woessmann 2011). Inputs are not irrelevant: school resources are positively associated with educational attainment, achievement and earnings (Card and Krueger 1996; Greenwald et al. 1996; Baker 2012). However, while some basic inputs, including the availability of desks, teachers' knowledge of their subjects, and teachers' attendance, can significantly improve learning, many school expenditures have only a limited impact (Glewwe et al. 2011). The literature on so-called education production functions—which relates learning performance to school inputs—suggests that more inputs do not necessarily lead to better outcomes. While recognizing that teacher quality matters, Hanushek suggests that teacher quality is often not related to pay or formal qualifications. In developing countries, the marginal productivity of inputs related to teachers has long been shown to be low as compared to that of other inputs (Pritchett and Filmer 1999). In any event, family background and peers (which are difficult to affect through policy) can have a greater impact on educational achievement than school inputs, for example as documented by the Coleman Report in the United States (Coleman et al. 1966). Thus simply increasing public funding for education will not guarantee improved learning.

4.44 Second-chance programs for youth who either never enrolled in, or dropped out of, school provide one example of the challenges involved in expenditures on education. Some of these programs, such as literacy courses, equivalency degree programs, and vocational courses, can make a major difference for their beneficiaries. One survey for sub-Saharan Africa identified 154 such programs in 39 countries, serving 3.5 million children in 2006. While substantial, this coverage remains small in comparison to the 52 million African youths who were out of school in 2009 (DeStefano et al. 2006). Furthermore, some second-chance programs have not been successful (there is a lot of heterogeneity in the quality of these programs) and, as is the case with other programs that benefit disadvantaged populations, they often suffer from limited political and financial support. In order to be successful, these programs must establish stronger links both back to the formal education system and forward to jobs (Jimenez et al. 2012).

4.45 Third, cultural factors also play a role in limiting education opportunities, especially for girls. Child marriage, which is in part related to cultural or religious practices (Brown 2012), substantially reduces the likelihood that girls will be literate or that they will complete secondary school (Field and Ambrus 2009; Nguyen and Wodon 2014d, 2014e). The incidence of child marriage is declining, but only slowly. Of women born between 1985 and 1989, the share married before the age of 18 was almost half in South Asia, 38.5 percent in sub-Saharan Africa, and 31.5 percent in the Middle East and North Africa (Nguyen and Wodon 2014c, based on data from 60 Demographic and Health Surveys).

4.46 While child marriage has deep roots in traditional society, policy can make a difference. Laws prohibiting marriage below 18 years of age, while necessary, are often not enforced (Wodon 2014b). Conditional cash transfer programs can encourage households to keep girls in school and ease some of the pressures for early marriage. One innovative approach is to provide transfers conditional on girls not getting married: the Berhane Hewan pilot program in rural Ethiopia presented a pregnant ewe to the girl and her family on graduation (Erulkar and Muthengi 2009). Other education interventions, such as improving school proximity (especially for secondary schools), providing public transportation to schools, ensuring access to water in schools, and, perhaps most importantly, enhancing the quality of schooling to improve incentives for girls to enroll, may also have beneficial, though indirect, effects on child marriage. Successful interventions against child marriage, as in other areas where educational policy touches on religion and culture (for example instruction on sexual and reproductive health), should involve a dialogue with religious and community leaders who have a great deal of influence on those issues.

4.47 While describing a comprehensive blueprint for strengthening education attainment and achievement in developing countries is beyond the scope of this document, here we present two complementary approaches to the main elements of educational reform. The first (World Bank 2011a) emphasizes the need to invest early, through early childhood development programs, including in nutrition, stimulation and basic skills (discussed above); invest smartly by establishing strong education systems with clear learning standards, good teachers, adequate resources, and a proper regulatory environment; and invest for all to better reach disadvantaged groups, including girls. The second (Jimenez et al. 2012) emphasizes the need for a comprehensive approach at all educational levels. Learning takes place throughout life, so reforms must cover all levels of education (from early childhood and primary education to post-primary education and beyond) and involve the private sector, supported by teacher accountability and measurable results, information on the benefits of education, and rigorous evaluation.

4.48 One clear priority is to develop better curricula to help students acquire job-relevant skills that employers demand. Countries should orient their education systems more directly on closing skills gaps, responding to labor market signals, and promoting knowledge-based capabilities in order to ease the school-to-work transition (Wang 2012). Pre-employment and on-the-job training—including classroom instruction, apprenticeship arrangements, or internships—can also help, as can second-chance and non-formal learning opportunities (Jimenez et al. 2012). Surveys such as the Skills toward Employment and Productivity (STEP) measurement survey can help shed light on existing skills gaps and mismatches, covering cognitive and technical skills as well as behavioral and social skills (Banerji et al. 2010).

4.49 Though it has yet to be evaluated, a program in El Salvador is empowering women through training modules that enhance beneficiaries' basic technical skills, including innovative "life skills" training that aims to increase their employability over the medium term. Whereas some seek training primarily related to textile production and computer skills, many others focus their training on less traditional skills, including those that often can be used for self-employment such as baking, cooking, and cosmetics (World Bank 2011b). Investments such as these are not only likely to be beneficial for participants' employment opportunities, but also are likely to help confront social norms and discrimination that marginalize certain groups within society.

4.50 Reforms must engage all stakeholders in the education system, and lead to a more coordinated and flexible network of public and private providers, as well as formal and informal programs. After all, governments are not the only—or necessarily the best—providers of education services (Barrera-Osorio et al. 2009; Wodon 2014a). Moreover, it is important to ensure that youth are able to make effective use of the knowledge, skills, and competencies that they gain in the classroom by establishing clear linkages from the education system to the labor market. By focusing on the education system as a whole rather than each individual part, reforms can better respond to the challenges youth around the world face today.

4.51 While more inputs, such as school buildings, textbooks, and trained teachers and professors, are needed and can be strategic investments, they need to be used effectively. Schools and teachers need to be held accountable for results, with learning measured and monitored on a regular basis, especially to improve learning outcomes for all students, and not just the smartest or most privileged.

4.52 Students need more information to make good educational decisions. Simply providing young people with information on the benefits of education can significantly extend their time in school. For example, in the Dominican Republic, eighth-graders who were shown data on the earnings of high school graduates were more likely to enroll in secondary education than those who did not receive this information (Jensen 2010). In addition, second-chance and informal education opportunities need to be expanded to help those who dropped out of school get back on track.

4.53 Conducting rigorous impact evaluations is essential to make social spending more effective and efficient. For example, recent evaluations have shown that compulsory schooling laws may increase attainment, and that merit scholarships for girls and conditional cash transfers reduce the likelihood of dropping out. Among second-chance programs, the Jóvenes program in Latin America has shown positive results in leading young people back into the labor market in a cost-effective way (World Bank 2006 and Attanasio et al. 2011).

4.54 Finally, it is important to recognize that improving education is not only about earning a better living. A good job can also foster feelings of empowerment and even happiness (World Bank 2012b). Beyond being vital for livelihood, employment is instrumental in reconnecting youth with society, in enabling them to participate and be recognized, and in building trust in institutions. And it is fundamental for enabling young people to develop their leadership potential and to believe in themselves. A recent impact evaluation found that a World Bank project in Liberia on the school-to-work transition of adolescent girls generated gains not only in employment and earnings, but also in how the girls felt about themselves and their ability to work and interact with others, including people they did not know, and to feel in control of their life and more outgoing (Lundberg et al. 2012).

4.55 Thus education programs should provide students with the values and skills that not only translate into to success in the labor market, but also enable them to live healthier and more fulfilling lives. Major benefits can arise from acquiring non-cognitive skills, as well as skills related to hygiene and good health behaviors. It also makes sense to consider ethics and values in the education curriculum. Investments in innovative programs in areas such as these can play an important role in shaping character and thereby in providing benefits not only for individual students, but also for their community and for society at large. Whether these policies will help reduce inequality or not depends on the interactions between changes in demography, improvements in education, and change in labor markets (box 4.6), but they will clearly help eliminate extreme poverty.

Box 4.6 Effective education is critical to reaping the demographic dividend

Absorbing the ongoing surge in new workers in the context of increasing productivity will require raising education attainment and achievement.

In East Asia, growing shares of working age populations in the 1960s and 1970s helped raise growth rates (Bloom and Williamson 1998; Bloom et al., 2000). Demographic change has the potential to boost growth and prosperity, but only with proper investments in education. Estimates for Africa suggest that demographic changes could account for 11 to 15 percent of GDP growth in the region in 2011-30 (Ahmed et al., 2014).

As the population ages, younger, better-educated cohorts enter the workforce and older, usually less educated cohorts leave. This affects global poverty and inequality through multiple channels. First, if the supply of skilled labor supply grows faster than the supply of unskilled labor, then the wages of skilled workers would grow more slowly than the wages of unskilled workers.[4] Second, if workers migrate from rural to urban sectors, the urban premium on wages will be dampened. Third, due to rural-urban migration, low-skilled workers will move from low-wage activities in sectors like agriculture to higher-wage activities in urban areas (e.g. manufacturing and services). Fourth, as incomes rise over time the demand for skilled-intensive products (selected services sectors and high-end manufacturing) rises, with the higher demand for such goods putting upward pressure on the wages of skilled labor.[5] The interaction of these factors can lead to either increasing or decreasing inequality, with results varying by groups, between groups, and for the population as a whole.

Using a global general equilibrium model (LINKAGE) linked to a global micro-simulation model (GIDD) with household data for over 130 countries, Bussolo et al. (2014) illustrate the cross-country heterogeneity in poverty and inequality progress arising from changes in demographics and average education of the working age population. According to United Nations demographic projections (UN 2013), the world's labor force will likely grow by 22.8 percent between 2007 and 2030, with half of this growth due to skilled labor supply growth and 84 percent of skilled labor supply growth coming from developing countries. A 'business as usual' scenario suggests that global inequality will likely shrink, although effects will vary by country. The key driver of changes in inequality is the demographic effect, but changes in income distributions also depend on the reallocation effect from interactions between supply and demand for skilled and unskilled labor. As a result of these interactions, inequality is predicted to rise in Ethiopia, to be stable in Mexico, and to fall Turkey (box table B4.6.1). While all three countries experience the demographics-driven acceleration in skilled labor supply, the skill premium and urban premium evolve in different ways in each economy, and this, in turn, affects the forecast for inequality.

Thus, while improving educational outcomes is obviously important for benefiting from the increased supply of new workers, the implications for income distribution of changes in demographics, education, and broader economic forces are difficult to predict.

Box Table B4.6.1 Inequality by country

Country	2007	Demographic	2030	Changes		
				Demographic	Reallocation	2030-2007
	I	II	III	IV	V	VI
Ethiopia	0.472	0.567	0.513	0.095	-0.054	0.041
Mexico	0.486	0.513	0.488	0.027	-0.026	0.001
Turkey	0.375	0.377	0.360	0.002	-0.018	-0.015

Source: Bussolo et al. (2014).

Skills, innovation, and labor markets

The importance of skills

4.56 The last three steps in the STEP framework – which will be discussed more briefly - advocate promoting skills, entrepreneurship and innovation, and matching the supply of skills with the demand by moving toward more flexible, efficient, and secure labor markets. Enterprise surveys by the World Bank since 2000 in some 90 countries—several covered by repeated surveys— suggest that skills constraints impede firm performance, particularly in more dynamic environments (World Bank 2011c) The share of firms worried about inadequate worker education and skills averages about 25 percent in the organization for Economic Cooperation and Development and in Europe and Central Asia, 40 percent in sub-Saharan Africa, and 50 percent in East Asia and the Pacific. Even in Europe and Central Asia, where the countries have enjoyed a legacy of high skill endowments, the great majority of firms surveyed in 2008 considered deficits in education and skills to be a major or severe constraint (Mitra et al. 2009).

4.57 Skills bottlenecks are likely to worsen in the coming years. According to the enterprise surveys, employer complaints about skills are more often voiced by firms that are newer, faster-growing, more outwardly oriented, and more eager to move up the technology ladder. In Turkey, employers in small and medium enterprises—even in the more labor- intensive sectors such as furniture, food processing, textiles, and clothing—cite the inadequacy of skills at all levels as a key constraint on their capacity to acquire and use new and more advanced technology (World Bank 2009). In Vietnam a sustained shift in employment from agriculture to manufacturing, coupled with capital accumulation and skills-biased technological change, fueled a strong demand for workers with higher skills—those produced through a university education—and raised the return to tertiary education to 10 percent in 2004, far above that at all other levels of education (World Bank 2008).

4.58 In low-income economies, which are often dominated by agriculture and the informal economy, skill constraints are one reason for persistent low productivity and earnings. The situation is especially dire in sub-Saharan Africa, as rapid population growth pushes farmers into less productive lands and accelerates migration to the cities, where new arrivals outpace new jobs. Ethiopia, Kenya, Uganda, and Rwanda are trying to raise productivity through higher value agricultural exports, such as cut flowers, horticultural produce, processed fish, and specialized coffees. But inadequacies in a range of skills— technical, scientific, managerial, and entrepreneurial— impede progress up the value chain and reduce the potential for pursuing newer and more lucrative opportunities (such as biofuels, medicinal plants, green technology). In urban areas, the majority of people in low-income countries and sizable shares in lower middle-income countries, particularly in the Middle East, make a living in low-skilled and low-paid jobs, if they have one. Many of them find themselves in precarious situations, with few opportunities to upgrade or expand their competencies. Their skill deficit adds to other constraints that keep productivity low and incomes low and unpredictable.

4.59 Addressing skills bottlenecks can raise firm productivity and workers' wages. In Britain, Mexico, and Malaysia longitudinal surveys of firms have established a causal link between investing in training and firm productivity. Moreover, firms in Malaysia and Mexico that trained their employees repeatedly enjoyed faster productivity growth than firms that either did not train or invested only in one-off training, particularly when the firms also invested in new technology. Evidence from cross-sectional data for a larger set of countries is consistent with these findings, though the estimates are less robust because the better firms are also more likely to train, which makes it difficult to isolate the impact of training.

4.60 Evidence of the impact of training on individuals' employability and productivity is also encouraging, if somewhat tentative because of data limitations. Labor force surveys reveal that the returns to training can be positive and statistically significant, averaging about 8 percent in India (2004) and Pakistan (2004), 17 percent in Sri Lanka (2002), 10–13 percent in Singapore (1998), about 12.5 percent in Rwanda (1999-2001), and 8–14 percent in Tanzania (1997-2000). A 2005 survey in India demonstrates that being fluent in English, a business language, increased men's hourly wages by 34 percent relative to those who speak no English, as high as the return to completing secondary school and half the return to completing an undergraduate degree. Being able to speak a little English raised wages by 13 percent. Elsewhere, youth training and employment programs are being launched in several African countries, among them the Uganda Youth opportunities Program. Groups of 15–30 youths were selected through a random process with input from community leaders and given grants for each group to purchase vocational training and equipment to operate in their chosen trade. The early results suggest that the approach has, among other positive outcomes, led to a 150 percent increase in the probability of working in the trade, a 135 percent increase in hours worked, and an 18 percent increase in last week's and last month's income.

4.61 At the level of the enterprise, the ability to "learn" is essential for innovation. Enterprise learning or "absorptive capacity" refers to an enterprise's ability to understand, adapt and use technologies, which in turn depends on the ability of individuals within the enterprise—workers, managers, owners and entrepreneurs—to do so. This in turn puts a premium on the appropriate early general education of individuals, TVET (technical and vocational education and training through initial apprenticeships, qualification training for particular job profiles, and technical skills upgrading), and labor market intermediation services that align TVET with employers' needs and raise the likelihood of good matches (including information on the availability and relevance of technical education coupled with career guidance, public-private partnerships to identify enterprise skills needs within a job competencies and certification framework, and job search and matching facilitation). To boost shared prosperity, these human capital support services should be targeted towards lower-income individuals: as Piketty (2014) recognizes, "over a long period of time, the main force in favor of greater equality has been the diffusion of knowledge and skills [but] the principal force for convergence [of wealth]—the diffusion of knowledge—is only partly natural and spontaneous. It also depends in large part on educational and TVET policies."

4.62 Based on an analysis of more than 100 education-to-employment initiatives from 25 countries (selected on the basis of their creativity and effectiveness), and a survey of youth, education providers, and employers in nine countries that are diverse in geography and socioeconomic context (Brazil, Germany, India, Mexico, Morocco, Saudi Arabia, Turkey, the United Kingdom and the United States), Mourshed et al. (2012) argue that a big part of the skills policy solution is to oblige educators to step into employers' shoes and employers' to step into educators', and students to move between the two – by reinventing TVET and on-the-job training, supported by PPPs. Private and public sector institutions are coming up with ideas to improve vocational training, with agreements between private sector employers and community colleges pulling the educational curriculum towards market needs. Recent examples include:

- Korea has created a network of vocational schools, labeling students as "young meisters" in order to counteract the country's obsession with academic laurels (from the German for 'master craftsmen');
- China Vocational Training Holdings specializes in matching students with jobs in the Chinese car industry by keeping masses of data on both students and companies;
- Mozilla (creator of the Firefox web browser) has created an "open badges initiative" that allows people to get recognition for programming skills (highlighting the importance of certification to signal quality of training);
- IL&FS Skills gives Indian students a job guarantee if they finish its courses, with training contracts helping to deal with poaching externality (Almeida, Behrman, and Robalino, 2012).

4.63 Box 4.7 highlights a few recent policy approaches that have the potential of tilting TVET and intermediation services towards poor people.

Box 4.7 Innovative policy approaches have improved TVET and intermediation services

Training and employment services can help improve workers' and firms' productivity. The following are three examples of innovative approaches:

In Brazil, PRONATEC (National Technical Education and Employment Program) was created in 2011 to coordinate, organize policies, and expand funding/enrollments in TVET programs (Almeida et al., 2014). The agency has several programs. PRONATEC-MDS subsidizes training for members of the national registry of the poor and vulnerable. Other PRONATEC resources are targeted at the unemployed or public schools students. PRONATEC has also created *Bolsa-Formação* through which it offers free technical education to low-income students enrolled in public secondary schools, as well as short-duration training programs for vulnerable social groups through all three major training networks. Silva et al. (2014) show that returns to training are high but heterogeneous across types of employing firm (higher for larger firms), location (higher in municipalities with large firms), and training course (higher for longer-duration courses).

Colombia's Labor Observatory for Education was established in 2005. The Observatory is an internet-accessible information system that provides details on the graduation, employment rates, time to first job, employment location and average salary of students from various educational institutions, disseminating information about education and employment demand (including programs with high and low employment demand). The Observatory also provides survey data on graduates' (among others') work conditions and their evolving level of satisfaction with the received training. An employer survey covers labor competencies, difficulties in hiring graduates, and their level of proficiency relative to the needs of the enterprise. The Observatory's work is complemented by an ongoing "Challenge Your Knowledge" campaign for two-way global academic and scientific collaboration.

Through Industry Skills Councils, employers in Chile inform government, schools, and trainees about occupations and skills sets in demand. Employer-defined occupational standards determine how providers organize vocational training programs and benchmarks against which trainees are certified. The Councils identify strategic long-term and short-term gaps, often with public support to fill them. For example, when confronted with training gaps in the mining sector, a six-month study led to the approval by the Ministry of Labor of $15 million to train workers for entry level and maintenance occupations.

These examples illustrate the substantial efforts involved in, and potentially high returns from, TVET and intermediation services.

Source: based on Almeida, Amaral and de Felicio (2014) for Brazil; Araneda (2013) for Colombia and Dutz and Sharma (2012) and OECD (2013) for Chile.

Social safety nets, poverty reduction and human capital

4.64 There is an increased recognition that sustained growth has pulled people out of poverty and into the middle class in many countries, but that economic progress has yet to reach many who face persistent poverty and the risk of exclusion due to lack of employment opportunities, disability, discrimination, and/or illness. Moreover, many more are vulnerable to economic shocks, natural disasters, and political or other crises. Without a social safety net (box 4.8), many people are likely to lose hope of escaping poverty and to have themselves or their children become malnourished and potentially suffer irreversible damage.

Box 4.8 Social safety nets come in many different forms

Social safety nets (SSNs) are non-contributory transfer programs that target the poor and vulnerable and are designed to reduce poverty and inequality, enable better human capital investments, improve social risk management, and offer social protection. They are part of a wider collection of social protection policies that constitute a typical poverty reduction strategy, and are often implemented alongside measures such as contributory social insurance, social investments in health and education, land redistribution, and microfinance.

Social safety nets, in addition to managing risks, are expected to address issues of inequality and poverty. The main goals of the safety nets include increasing incomes of the poor, enabling households to manage risk efficiently, investing in human and physical capital, and facilitating reforms in the social sectors and other areas.

Social safety nets can be categorized by the kind of benefit (cash or in-kind) and program requirements (conditional or unconditional). Combining these two classifications, social safety nets can be conditional cash transfers, unconditional cash transfers, conditional in-kind transfers, and unconditional in-kind transfers, which with public works programs come to five kinds of social safety nets.

Cash	Unconditional Cash Transfers	Conditional Cash Transfers	Public Works
In-kind	Unconditional in-kind Transfers	Conditional in-kind transfers	
	Unconditional	Conditional	Public Works

Conditional cash transfers (CCTs) provide cash to participants upon their fulfillment of a set of conditions or co-responsibilities, such as ensuring a minimum level of school attendance by children, undertaking regular visits to health facilities, or attending skills training programs. Conditional cash transfers also include school stipend programs, for example Mexico's Oportunidades program.

Unconditional cash transfers (UCTs) provide cash without particular co-responsibilities. Examples include various cash transfer programs targeted to particular categories of people, such as the elderly (also known as "social pensions") or orphan children. The Hunger Safety Net Program in Kenya is one example.

Conditional in-kind transfers (CITs) provide in-kind benefits to participants upon their fulfillment of the kinds of conditions listed under conditional cash transfers. Typical examples include school feeding programs that provide on-site meals to children in schools, such as Brazil's Programa Nacional de Alimentacao Escola. Sometimes these programs also provide "take-home" food rations for children's families.

Unconditional in-kind transfers (UITs) distribute food, vouchers, or other in-kind transfers without any form of conditionality or co-responsibility. Examples include the provision of fortified food supplements for malnourished pregnant women and children. The Public Food Distribution System in Bangladesh is an example of an unconditional in-kind transfer program.

Public works programs (PWs) provide employment in activities, such as building or rehabilitating community assets and public infrastructure that require manual labor. Some programs provide seasonal, labor-intensive employment for poor and food-insecure populations. Public works implemented under the Productive Safety Net Program in Ethiopia is an illustration.

Social safety nets can thus be structured to meet different goals, for example encourage particular behaviors or serve particular groups of recipients, and generate different kinds of benefits, for example income support for households or public works for communities.

Source: Adapted from Grosh et al. (2008) and World Bank (2012b).

4.65 Social safety nets are critical for poverty reduction and boosting shared prosperity (Fiszbein, Kanbur and Yemstov 2014). The most obvious case for safety nets occurs in crises, when the less well-off have the fewest resources to see them through. Safety nets can protect the poorest and most vulnerable from the effects of shocks, such as the spikes in food and fuel prices in 2008 and 2011, the earthquake in Haiti, and floods in Pakistan in 2010. Safety nets often have a dual objective of directly alleviating poverty through transfers to the poor and of triggering higher income growth for the poor. Safety nets can produce an impressive array of positive and productive effects, ranging from increased schooling to investments in household enterprises to reduced risky behaviors among teens. Many evaluations have found that some social safety net programs reduce poverty. For example, the World Bank's Policy Research Report 2009 concluded that conditional cash transfer programs (CCTs) generally help reduce national poverty and the poverty gap. CCTs had a particularly large impact on poverty in Mexico and Brazil (box 4.9).

Box 4.9 The Bolsa Familia program shows how attaching conditions to benefits can improve development outcomes

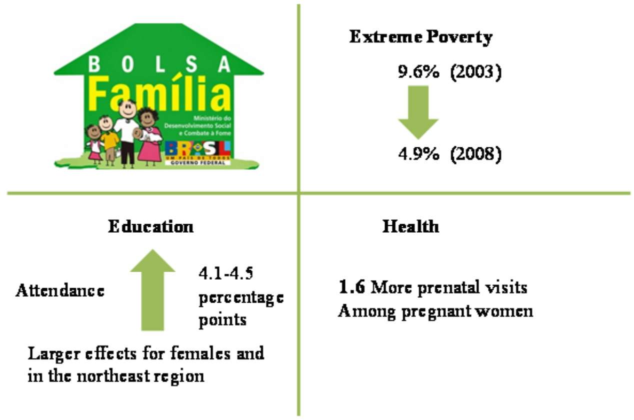
Conditional cash transfer programs attempt to help poor people in ways that encourage improvements in their health and education. Bolsa Familia is a CCT program that provides income support to poor families conditional on steps by the family to improve the education and health status of their children. Similar to the Millennium Development Goals, the program focuses on the long-term benefits of improved education and health services, rather than concentrating only on short-term income objectives.

Bolsa Familia started in 2004 and expanded quickly. The program already reaches 14.1 million families and more than 50 million people—25 percent of the Brazilian population. Poor families with children receive an average of R$150.00 (about $75) in direct transfers. In return, they commit to keeping their children in school and taking them for regular health checkups.

A number of studies show the positive impact of the program (box figure 4.9.1). Extreme poverty in Brazil declined by 9.6 percent in 2003 to 4.9 percent in 2008, and an attribution analysis finds that about 35 percent of that reduction is due to the program (Soares 2012). Another study finds that the program contributed to an increase in school attendance, with much larger effects for females and in the poorer northeast region. On health, the evidence indicates that the program results in pregnant women having more prenatal visits with health care professionals (De Brauw and others 2012).

Bolsa Familia has reached a high percentage of the extreme poor (68 percent) and a large share of the moderate poor (90 percent of those in the poorest two quintiles), while promoting human capital investment in children and youth, at a moderate fiscal cost. Bolsa Familia, and CCTs in general, demonstrate a promising approach to the delivery of social services required to achieve targets such as those set forth in the MDGs.

Box Figure 4.9.1 Bolsa Familia and extreme poverty, education and health



Sources: Soares 2012 (poverty), De Brauw and others 2012 (education and health), World Bank 2013 (Brazil Country Program Evaluation FY 2004-22: Evaluation of the World Bank Group Program)
https://ieg.worldbankgroup.org/Data/reports/brazil_cpe_1.pdf

The role of social safety nets in ending poverty

4.66 More than 1 billion beneficiaries are currently covered by social safety nets (World Bank 2014b), but only 345 million of the 1 billion extreme poor are covered (figure 4.6). Lack of resources is one reason that social safety nets fail to cover all of the extreme poor. In addition, many programs do not target income poverty, but rather address priorities such as improving nutrition, providing old age security, or protecting orphans.

4.67 The extent to which social safety net programs reach the extreme poor varies by country income. In low-income countries and lower middle-income countries, about a quarter of the extreme poor are covered by social safety nets, compared to almost 45 percent in upper middle-income countries.[6] Geographically, Latin America and Caribbean has the highest coverage rate (53 percent), Europe and Central Asia the second (50 percent), with South Asia (25 percent) and sub-Saharan Africa (20 percent) lagging behind. In low-income countries, social safety nets would have to at least double in size to reach all of the extreme poor.

Figure 4.6 **Over 1 billion people covered by social safety nets (2010)**

Source: Poverty data are from the World Bank POVCALNET, program number of beneficiaries from Atlas of Social Protection - Indicators of Resilience and Equity and different data sources (Annex 2), Population is from World Bank Development Indicators 2014. PovcalNet is the on-line tool for poverty measurement developed by the Development Research Group of the World Bank. See http://iresearch.worldbank.org/PovcalNet/index.htm for additional information and data.

4.68 Eliminating extreme poverty will require an increase in the resources devoted to social safety nets. The level of benefits under social safety net programs in developing countries averaged 23 percent of the income (or consumption) of the poor. However, according to the World Bank's data on global poverty, the average level of consumption among the poor in the developing world is 34.8 percent below the 1.25/day poverty line. Hence, the average size of social safety net benefits that reach the poor is well below the resources needed to close the poverty gap.

4.69 The adequacy of transfers differs markedly across regions. The share of social safety nets in beneficiaries' consumption ranges from a low of 5 percent in the Middle East and North Africa and sub-Saharan Africa to 20–30 percent in Europe and Central Asia and Latin America and the Caribbean. There is a negative relationship between the share of social safety nets in consumption and the size of need. In Europe and Central Asia, the increase in consumption required to raise a poor person to above the poverty line averages 20–25 percent, similar to the current share of social safety nets in consumption. By contrast, in African countries the poor require an average increase of 40-50 percent of consumption to reach above the poverty line, or 8-10 times the current size of safety nets.

4.70 The form of social safety net program differs by country income. Most upper middle-income countries have unconditional cash transfer programs, while most conditional cash transfers are in middle-income countries, whereas public works tend to be in low-income and lower middle-income countries. Significantly, over 90 percent of low-income countries have at least one in-kind transfer program, but this share falls to below 40 percent in upper middle-income countries.

Social safety nets and shared prosperity

4.71 Safety nets can also contribute to inclusiveness of growth and thus shared prosperity. When well designed, social protection can redistribute some of the gains from growth as well as contribute to higher growth (IEG 2011, Barreintos and Scott 2008; and Alderman and Yemtsov 2012). This is achieved through three channels. At the individual or household level, safety nets can protect assets—especially human capital, the main productive asset of the poor—contributing to higher lifetime earnings. At the community level, social protection can provide new infrastructure and increased demand, with positive spillovers from beneficiaries to non-beneficiaries. And at the economy level, social protection can stabilize aggregate macroeconomic demand, improving social cohesion and making growth-enhancing reforms politically feasible. Reforms can entail an overhaul of inefficient and inequitable subsidies and labor market reforms that refocus interventions from job protection to more efficient and direct protection of workers.

4.72 The evidence is particularly strong for the positive impact of safety net programs on human capital. For example, participants in conditional cash transfer programs in Colombia and Mexico have achieved sustained income gains after leaving the programs (IEG 2011). In Malawi, the Dowa Emergency Cash Transfer increased local incomes by $2–$2.25 for each $1 transferred by the program. In South Africa, cash transfers make finding new work more feasible, as recipients can afford bus fares, work clothes, and funds for moving to urban areas. There is evidence for the benefits of community projects, as well. The public works component of Ethiopia's Productive Safety Net Program rehabilitated more than 167,000 hectares of land and 275,000 kilometers of stone and soil bund embankments, all of which will mitigate the effects of future droughts (Subbarao et al. 2013). In Malawi, extended labor-intensive public works increased the country's GDP by 0.34 percent in 2004 at a cost of 0.2 percent (Ardington et al. 2009).

4.73 Safety nets have direct implications for shared prosperity. They can preserve prospects for growth by preventing irreparable damage to human livelihoods and human capital during systemic crises. For example, public works programs protected families from starvation in Ethiopia, school feeding programs let poor families keep their children in school in Nicaragua, and cash transfers prevented child malnutrition in El Salvador (de Brauw, and Peterman, 2011). By providing the support to prevent families from falling into poverty when they face chronic deprivation or household-specific shocks (such as the illness or death of a breadwinner, an accident or disability, or loss of a job), safety nets can break the cycle of poverty that ravages families across generations. They also protect the poor against downside risks by providing them with the same opportunity to engage in higher risk, higher return activities as more prosperous people enjoy.

4.74 Safety nets are most needed in low-income countries where crises can inflict permanent harm on people's health, education, and capacity to support themselves. Infants who lived through the drought in Zimbabwe in the early 2000s, without social safety net support, had significantly lower height during adolescence, delayed school enrollment, and reduced grade completion rates (equivalent to a 7 percent loss in lifetime earnings), compared to infants who benefited from safety net programs (Alderman et al 2006). In 2005, Ethiopia launched the Productive Safety Net Program to create a predictable safety net for chronically poor households. The program has proven to be an effective means of responding to shocks. In 2008, the government scaled-up the program to provide additional transfers to 4.4 million program participants who were being hurt by the food, fuel, and financial crisis and local drought. The government scaled up the program again in 2011 in response to severe droughts in the Horn of Africa, averting the famine and destitution that unfolded in neighboring countries that did not have a safety net in place.

4.75 Given the multi-sectoral nature of social protection, governments are increasingly establishing mechanisms and bodies to enhance coordination across institutions, ministries and functions. Social safety net programs, particularly conditional transfers, often involve several ministries and sectors in program implementation. Intra-governmental coordination is also critical in responding to crises (box 4.10) and in ensuring consistency between social safety nets and insurance. A number of "second-generation" issues are also being tackled, such as deeper integration of institutional and administrative platforms for social safety nets and social insurance. These issues are being addressed, for example, in China, Georgia, Kazakhstan and Turkey. In Turkey, households applying for social assistance are automatically registered into the Turkish Labor Institution database via the Social Assistance Information System (SAIS).

Box 4.10 Effective fiscal policy enabled Latvia to cope with the financial crisis better than the Ukraine did

Latvia and the Ukraine were both substantially affected by the financial crisis: GDP contracted in Latvia by 17 percent and in the Ukraine by 15 percent, both countries' labor markets were hit hard, and from 2007 to 2009 fiscal balances deteriorated by 7 percent of GDP in Latvia and 4 percent of GDP in the Ukraine.

Initially, Latvia's social benefits system appeared much less prepared for a crisis than the Ukraine's in terms of the composition of programs and pre-crisis performance. The Ukraine operated a well-targeted last resort social assistant (LRSA) program (albeit with low coverage), in addition to unemployment benefits and a means-tested child allowance program with large-scale coverage. Prior to the crisis, Latvia spent only 0.8 percent of its GDP on safety nets (excluding unemployment benefits, which constituted another 0.35 percent), while in 2008 the Ukraine spent 2 percent of GDP.

In the event, however, Latvia's response to the crisis exceeded expectations. After an initial time lag, unemployment and social assistance benefits responded robustly to the increased number of claims, and this expansion has been sustained during the crisis. On the other hand, the initial expansion of unemployment benefits was not sustained in the Ukraine, as fiscal pressures led the government to tighten the eligibility criteria. Moreover, Ukraine's LRSA program continued its long-term decline in coverage.

The superior performance of Latvia's social benefits system was due to the provision of increased fiscal resources (facilitated by reforms to stabilize and reorient expenditures) and improvements in safety net programs. One important change was a central government commitment to finance 50 percent of local expenditures on the Guaranteed Minimum Income Program.[7] These reforms enabled the government to increase the coverage of the Guaranteed Minimum Income Program and to introduce a Public Works program. In contrast, the Ukraine continued to allocate a large share of social benefit spending (65 percent in 2008) to non-means tested categorical programs, and failed to exploit opportunities to increase the effectiveness of safety nets by rationalizing expenditures and consolidating benefits.

Source: ECA Social Safety Nets publication 2013.

4.76 Many social safety net programs could benefit by steps to reduce administrative costs and improve efficiency. Consolidation of small programs into larger ones using new ICT applications have created opportunities to re-engineer and upgrade traditional systems, reduce administrative costs, and empower beneficiaries. In some cases, biometric identification or other new technologies have been used in the delivery of social programs on a large scale. For example, in India the introduction of a unique, official identity number (the Aadhar program, a universal identity program) aims to improve the delivery of government services, reduce fraud and corruption, facilitate robust voting processes, and to improve security. ICT has the potential to be a powerful tool in the fight against global poverty and in boosting shared prosperity. However, the benefits of new ICT applications are not automatic and its impact not as yet complete or fully understood.[8]

4.77 Database management is an important area where administrative costs could be reduced. Many countries maintain multiple "parallel" databases of potential beneficiaries for different social protection programs. Multiple and fragmented registries may increase the cost to both governments and households due to multiple data collection and enrollment efforts, introduce inconsistencies across programs in definitions of poverty and related concepts, and result in multiple and incompatible programs that "don't talk to each other." Robust social registries can be used to link programs across sectors. For example, conditional cash transfer programs in Ghana (LEAP) and the Philippines (Pantawid) were linked to health insurance programs, and Brazil's Bolsa Familia beneficiaries were provided access to tertiary education and to health services in rural areas. Another example of an improved management information system is the one developed and implemented in Colombia (box 4.11).

Box 4.11 Centralizing information helped Colombia improve social services

The provision of various government services in Colombia has long been hampered by the failure to establish a centralized database on beneficiaries. The Registro Unico de Afiliados (RUAF) was enacted in 2003 under the Ministry of Social Protection to address this issue. RUAF was initially designed to end the recurrent problems created by the decentralization and disarticulation of SPS beneficiary information.

RUAF is the central repository that integrates data from different institutions dealing with social programs delivery (in 2009 it consolidated information from 10 institutions and 49 programs, including SISBEN data), where each program has to upload their beneficiary caseload information periodically to RUAF. This requires the coordination and commitment of the institutions, given that the data upload is not conducted automatically or simultaneously by all stakeholders. All database integration is done through the Sistema Integral de Informacion de la Proteccion Social (SISPRO), which is an IT platform that manages information on program beneficiaries and service providers. In total, SISPRO includes 6 databases: NADE (online information of births and deaths), PAI (Immunization Program), SIHO (Information System of Public Hospitals), RIPS (Information System of Health Providers), PILA (Planilla Integrada de Liquidacion de Aportes), and most importantly, RUAF. SISPRO validates and reconciles beneficiary records to ensure that data of individuals match and that a unique record of benefits per beneficiary is generated. This is needed because as of today, applicants still register in different program offices at different times, and SISPRO consolidates the information.

This system holds the potential for reducing the administrative overload in the provision of services and improving the enforcement of eligibility requirements.

Source: The State of Social Safety Nets World Bank 2014b

4.78 Identifying and efficiently reaching the remaining extreme poor through social safety nets remains a formidable challenge in many countries, which will require both increased resources and improved targeting. Targeting the poor is difficult, but essential. Limited fiscal resources impose a tradeoff between maximizing coverage and providing social transfers at a level that has a significant impact on the welfare of beneficiaries (ODI 2009). Many of the neediest live in remote, rural and/or fragile and conflict affected areas, and governments have only a limited capacity to identify and reach them (World Bank 2011).

4.79 Many programs base targeting on some indicator of household welfare, including income, consumption, or assets. While this can help limit program benefits to the poor, means-tested programs also have high administrative costs. Grosh et al. (2008) assess the costs of means-testing and proxy means-testing in eight middle-income countries in Latin America, Central Asia and Eastern Europe. They find that targeting costs on average about 4 percent of total program costs, ranges from about 25 to 75 percent of total administrative costs, and in absolute terms costs $8 or less per beneficiary in all but one case. Evidence regarding means-testing in low-income countries is limited but it is clear that the balance of costs associated with means-testing in middle-income countries is different in low income contexts (ODI 2009).

4.80 Another approach to improving targeting is to design programs so that those in need of assistance are encouraged to apply for benefits, while discouraging those who are relatively less in need. A classic example of self-targeting is a workfare program. Ideally, workfare programs provide low-wage employment in the construction of productive infrastructure (e.g. rural roads). The low wage rate discourages workers who can find better income opportunities elsewhere, so that the non-poor will rarely want to participate (Ravallion 2008). Workfare programs have been widely used in crises and across developed and developing countries. However, these programs cannot assist labor-constrained households.

4.81 Many countries spend a surprisingly large amount on poorly targeted, loosely coordinated, temporary programs of limited effectiveness. The same amount spent on a consolidated, efficient, and permanent safety net would achieve much better results. Food and fuel subsidies are a major culprit. Sub-Saharan African countries spend more than 2 percent of their GDP on fuel subsidies—several times what they spend on safety nets. East Asian and South Asian countries spend at about the same level on their fuel subsidies, and countries in Latin America, Eastern Europe and Central Asia, and the Middle East and North Africa spend even more (Coady et al. 2010). It is politically difficult to reduce spending on general and popular price subsidies, but having credible safety nets in place (including poverty-targeted fee waivers or discounts) that protect part of the population makes it easier.

4.82 Energy subsidies have wide-ranging consequences. They may be put in place for noble purposes—for example, to protect consumers against high prices—but they crowd out other much-needed public spending and depress private investment. Subsidies mostly accrue to higher income groups. They encourage excessive energy consumption, reduce incentives for investment in renewable energy and accelerate the depletion of natural resources (box 4.12). Globally, subsidies for fossil fuels represent a huge, wasteful and regressive expenditure. Reducing fossil fuel subsidies would not only free resources for more efficient and equitable safety net programs, but would also reduce pollution and help limit climate change, thus contributing to sustainability (see next section).

Box 4.12 The global magnitude of energy subsidies is huge

Energy subsidies are highly unequal, detrimental to growth and the environment, and absorb large amount of fiscal revenues.

The recent years' surge in international energy prices, combined with incomplete pass-through to domestic prices, has once again raised questions about government intervention in energy markets. The macroeconomic, environmental, and equity implications of governments' energy policies is explored in a recent study (IMF, 2013). Data on subsidies for petroleum products in 176 countries, for natural gas and coal products in 56 countries, and for electricity in 77 countries were combined to provide a global picture of the extent to which energy products are subsidized. While the estimates are tentative, the global estimate is most likely a lower bound, given the lack of data from many countries.

The global pretax level of energy subsidies is significant and follows closely that of international energy prices. In 2011, global pre-tax subsidies amounted to $492 billion (0.7 percent of world GDP or over 2 percent of total government revenues). Petroleum and electricity subsidies accounted for about 45 percent and 30 percent of the total, respectively. These pre-tax subsidies are concentrated in emerging market and developing countries, with oil exporters having the largest subsidies. On a post-tax basis (including estimates of what taxes should be to also offset negative externalities), a global estimate for energy subsidies in 2001 is $2.0 trillion (about 2.9 percent of world GDP or 8.5 percent of total government revenue). On a tax-inclusive basis, virtually all countries in the world (including 34 advanced economies) subsidize domestic energy consumption.

These energy subsidies affect growth negatively through various channels, beyond their adverse impact on the fiscal accounts (Kumar and Woo, 2010). Subsidies can discourage investments in the energy sector, crowd out other public growth-enhancing spending (many countries spent more on energy subsidies than on health and education), and create incentives for smuggling (in 2011, 80 percent of gasoline consumed in Benin was smuggled from Nigeria).

Energy subsidies are also highly inequitable. On average, the richest 20 percent of households in low- and middle-income countries capture six times more in fuel subsidies than the poorest 20 percent (Arze del Granado et al. 2012). Natural gas and electricity subsidies have also been found to be inequitable, with the poorest 20 percent of households receiving just 10 percent of those subsidies. Furthermore, a removal of energy subsidies would generate substantial environmental and health benefits, in that it could lead to a 13 percent decrease in global energy-related CO_2 emissions as well as a similar decrease in SO_2 emissions and other local pollutants.

Thus, the removal of energy subsidies would provide enormous benefits in terms of fiscal solvency, environmental sustainability, and income distribution.

Source: IMF staff.

4.83 Some of the poorest countries waste considerable resources on ill-conceived subsidy programs. For example, Senegal responded to several adverse shocks by extending general price subsidies on key staples such as rice, wheat, and milk, and on fuel and electricity. These policies have been expensive, their cost rising from 0.5 percent of GDP to 3 percent to 4 percent, and much of the benefit goes to people who are not poor. By comparison, the IMF has estimated that a comprehensive conditional cash transfer program would cost Senegal around 1 percent of GDP (IEG, 2011a). In Burkina Faso, total spending on safety net programs averaged 0.6 percent of GDP over 2005–09 and reached almost 1 percent of GDP in 2010. This is comparable to, or more than, the share of GDP that Brazil, Colombia, and India spend on one of their more tightly focused and effective safety net programs. Burkina Faso's resources were thinly spread across many different programs, including fuel subsidies that went almost exclusively to well-off people (IEG, 2011a).

4.84 Governments must carefully assess the impacts of policy actions, putting in place measures to compensate for negative effects and reinforce positive actions. This can be achieved through re-cycling the revenue streams raised by environmental levies, or saved by the removal of harmful subsidies, towards ends which target social equity. For example, Indonesia implemented two large fuel-price hikes in 2005 to ease fiscal pressures of fuel subsidies. The price of diesel fuel doubled and that of kerosene nearly tripled. To mitigate the impact of the reform on the poor, the price increases were accompanied by a number of welfare programs, such as cash transfers to low-income individuals (about 30 percent of the population) and improved health services. The reduction in fossil-fuel subsidies saved the government USD 4.5 billion in 2005 and a further USD 10 billion in 2006. The associated cash-transfer program cost about USD 2.3 billion in addition to administrative costs. In 2008 the government also stopped providing subsidies to large industrial electricity consumers and announced the gradual phasing out of subsidized fuel to private cars. However, subsidies were provided to public transport and motorcycles. Diesel and LPG prices were increased by more than 20% during the same year, with cash transfers and other social programs mitigating the impact on low-income households.

4.85 Jordan is another example of a country that has succeeded in implementing fuel subsidy changes and reforms. Since 2005, fossil fuel subsidies in Jordan have fluctuated by an order of magnitude from year to year. Fuel subsidies accounted for 5.6 percent of GDP (USD 707 million) in 2005, dipping to 0.3 percent of the GDP (USD 61 million) in 2009, only to rise again to 2.4 percent of GDP (USD 714 million) in 2011 (World Bank 2013). The government removed subsidies from all fuels except LPG in Feb 2008 and adopted a monthly price adjustment mechanism. Subsequently, gasoline, kerosene, and diesel prices were raised in Dec 2010 and adjustments in prices stopped in Jan 2011. In May 2011, an expert panel recommended smart cards for subsidized goods instead of price subsidies. The replacement of price regulations by automatic monthly adjustments of domestic fuel prices, reflecting international prices, resulted in generating substantial savings for the government. The success of the fuel subsidy phase out in Jordan was due to a combination of prior experience with food subsidy reform of the 1990s, a large public communication campaign and stakeholder engagement, and introduction of wide-ranging compensation packages to prevent increases in poverty (World Bank 2012). Using revenues from reduced energy subsidies to better target support directly to low-income households can benefit the poor, and at a much lower cost to the government budget than costly and harmful subsidies.

Sustainability and environmental challenges

4.86 Ending poverty and achieving shared prosperity will require not only ensuring more inclusive growth, but also addressing the risks to sustainable economic growth, income distribution, and poverty reduction that could compromise a country’s ability to reach its poorest people over the medium (till 2030) and long term (beyond 2030). Poverty and growth policies should be aligned with economic sustainability (maintaining productive capital and keeping debts at a manageable level), social sustainability (securing political and social stability), and environmental sustainability (addressing environmental challenges). This chapter focuses on environmental sustainability, which is becoming increasingly challenging in a world of planetary boundaries and finite natural resources.

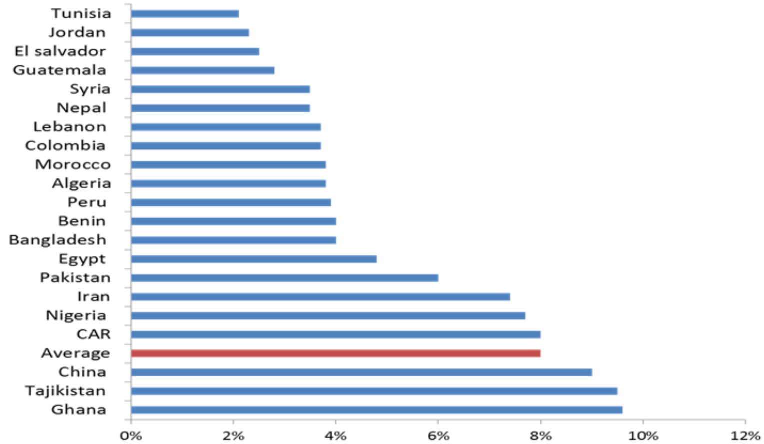
4.87 Environmental challenges—such as resource depletion, water risks and climate change—are often not factored into economic decision-making. Degradation of ecosystems occurs as negative externality, whereby their costs are not reflected in market prices (e.g. pollution). Similarly, many of the ecosystem goods and services represent public goods at local (e.g. access to clean water), national (e.g. disaster protection) or even global level (e.g. climate regulation) that are not traded at markets. And in the presence of weak property rights, many natural resources form common goods and no one can be excluded from using them (e.g. timber, fishing stocks and grazing grounds). These characteristics result in the so-called 'tragedy of the commons' causing ecosystem degradation, under provision of ecosystem goods and services and an overuse of natural resources, which can become a main constraint for improving the economic welfare for future generations.

4.88 Properly managing natural capital also requires an appropriate macroeconomic policy framework (IMF 2012a). Given pressing social demands, it is understandable that resource discoveries in poor countries give rise to an immediate increase in consumption, but care must be taken to avoid boom-bust cycles and ensure that a high proportion of resource revenues go to savings and efficient domestic investments. It is also important that fiscal regimes for extractive industries be designed in such a manner that the net present value of government revenue is maximized (IMF 2012b). The tax regime should also be designed with a view to making tax administration and compliance as simple as possible.

4.89 Where environmental challenges are extremely costly, policy interventions are economically justified. In a sample of 20 countries representing about 40 percent of the population in developing countries, the costs of environmental degradation are between 3 percent and 10 percent of the country's GDP (figure 4.7). In Ghana, for example, unsustainable management of forests and land resources (at a cost of 6 percent of GDP) and health costs related to water supply and sanitation (2.2 percent) and indoor and outdoor air pollution (1.4 percent) total 9.6 percent of GDP (World Bank 2007a). In China, energy and mineral depletion (3.1 percent), air and water pollution damages (3.8 percent), soil nutrient depletion (1 percent), and carbon dioxide damages (1 percent) amount to 9 percent of GDP (World Bank and DRC 2012). Yet environmental degradation does not only have macro-economic impacts, but can only affect the poor.

4.90 Environmental challenges can affect poverty and shared prosperity through three channels (figure 4.8). First, they can directly affect the poor and the bottom 40 percent of the income distribution. Many poor people – especially those in rural areas - live in ecologically fragile areas while depending on ecosystem goods and services for their livelihoods, a combination that can snare them in poverty traps (Barbier 2010; Barrett et al. 2011; Sunderlin et al. 2008; and Angelsen et al. 2014). Second, environmental challenges can have an indirect impact on poverty by undermining sustainable growth. For example, preserving natural capital is critical to future prosperity, and climate change can reduce growth prospects (Stern 2007; TEEB 2010; and World Bank 2011a). Third, environmental policies and institutions needed to tackle environmental challenges can have similar impacts when they affect the poor and bottom 40 percent directly or when they affect growth (Dercon 2014; World Bank 2012a; and Hallegatte et al. 2013a).

Figure 4.7 Environmental degradation in developing countries is costly

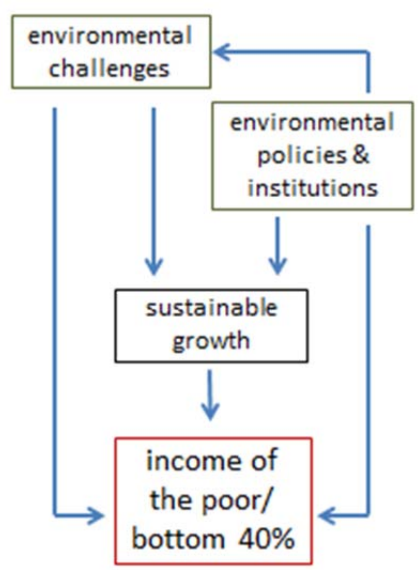


Source: World Bank 2012a.
Note: Cost of environmental degradation expressed as a percentage of GDP equivalent.

Sustainability at the national level

4.91 Countries manage a portfolio of productive assets—produced, human, and natural capital—that represents a country's total wealth and its ability to sustain income levels and achieve the well-being of its people in the future. However, economic progress is often measured solely by GDP. And GDP does not take into account depreciation and depletion of wealth, and therefore does not provide an indication of whether growth is sustainable: an economy could appear to be growing in the near term by running down assets. Assessments of economic performance therefore needs to be based on both measures of annual growth (such as GDP) and measures of the comprehensive wealth of a country, which indicate whether that growth is sustainable in the long term.

Figure 4.8 The linkages between environmental challenges and poverty eradication and shared prosperity



4.92 Tracking progress toward sustainability requires measuring changes in natural capital in a wealth accounting framework (box 4.12). Comprehensive wealth will demonstrate the role of natural capital as a production factor and account for externalities related to the depletion and degradation of natural capital (Hallegatte et al. 2012).[9] Natural capital includes all environmental assets that provide renewable and nonrenewable natural resources (such as timber, minerals, and oil) as well as other ecosystem goods (such as water, food products, and medicine) and services (such as recreation, cultural values, flood protection, erosion control, and water filtration). Properly managing natural capital requires understanding its role generating sustainable economic growth.

Trends and drivers in wealth depletion

4.93 A country with continuously negative changes in wealth per capita is depleting the assets needed for generating future output and can be said to be on an unsustainable development path (Hamilton and Clemens 1999; Arrow et al. 2012). Change in wealth per capita captures the sustainability of a country's current pattern of generating economic growth and income by accounting for changes in produced, human, and natural capital as well as for the wealth-diluting effects of population growth (box 4.13). This metric can be used as a warning signal indicating threats to macro-level sustainability.

Box 4.13 Change in wealth per capita as a sustainability measure

Indicators of economic development, for example estimates of GDP or the stock of capital, provide only limited information on sustainability, because they do not take into account the availability or use of natural resources and human capital. By contrast, adjusted net savings or genuine savings, which measures capital investments adjusted for depreciation and resource depletion, can serve as a sustainability metric (Hamilton & Clemens 1999; Dasgupta & Maler 2000; Hamilton & Hartwick 2005). If adjusted net savings are negative, wealth is depleted and the ability to sustain consumption and welfare will be undermined. This touches upon the “Hartwick rule” that consumption can be maintained indefinitely if investments in capital equal the rate of depletion of finite resources (Hartwick 1977). Empirical data support this theory, finding that in developing countries adjusted net savings had a positive and significant impact on consumption changes in subsequent decades (Ferreira & Vincent 2005, World Bank 2006). Yet with a growing population, more capital is needed to keep wealth per capita constant so as to sustain per capita output and welfare levels (Arrow et al. 2003; Ferreira et al. 2008).

The metric “change in wealth per capita” extends the concept of adjusted net saving or genuine savings by factoring in population growth rates (World Bank 2006, 2011a). It is derived from standard national accounting measures of gross national savings by making four types of adjustments:

(i) Depreciation of physical capital measured by capital consumption of produced assets.

(ii) Human capital formation measured by current expenditures on education.

(iii) Depletion of natural capital including energy, minerals, and forest resources.

(iv) Wealth-diluting effects of population growth based on the additional savings needed to keep current tangible wealth per capita constant as population rises.

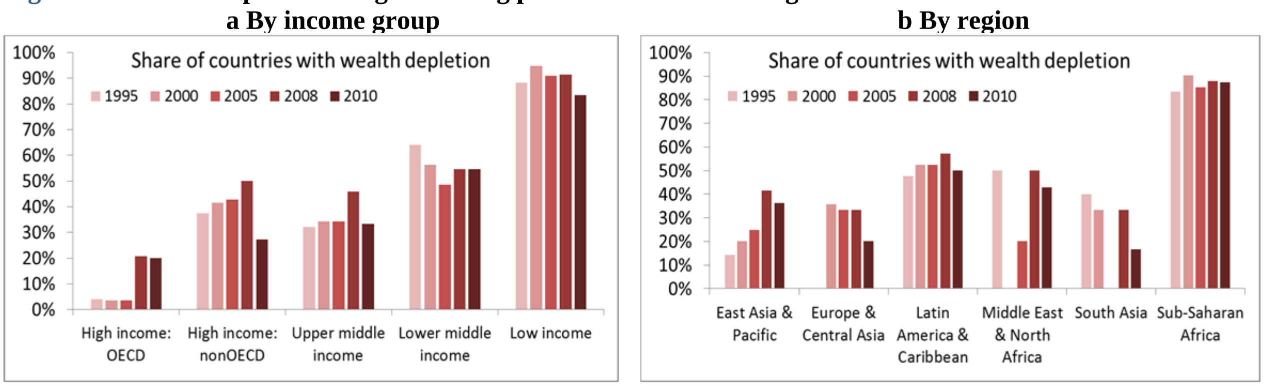
This metric offers important insights into how sustainably wealth is managed. Yet it is important to use complementary (also biophysical) indicators to reflect the multidimensionality of sustainability. First, aggregating changes in different capital stocks is based on the assumption that different forms of capital (human, physical, and natural) are substitutable. Yet different forms of capital are substitutable only up to a point. There can be critical forms of natural capital (say, clean air or climate regulation) that condition other production factors. Second, some of the components are measured imperfectly. Education expenditure is far from being a perfect measure for human capital formation, as it does not measure education outcomes, health impacts, or losses in human capital through migration or death. Furthermore, natural capital depletion includes natural resource use only. Not accounting for other forms of environmental degradation will overestimate change in wealth per capita. Work is ongoing to improve these components of the wealth metric.

Measuring per capita wealth poses substantial challenges, but is important to our understanding the sustainability of current economic policies and conditions.

Source: World bank staff

4.94 Poorer countries and regions struggle most with wealth depletion (figure 4.9). Half of developing countries have negative changes in wealth per capita, although there is considerable variation across regions. More than 80 percent of Sub-Saharan countries have depleted wealth in all years with data (1995, 2000, 2005, 2008 and 2010) compared with about 50 percent of Latin American countries.

Figure 4.9 Wealth depletion is higher among poorer countries and regions

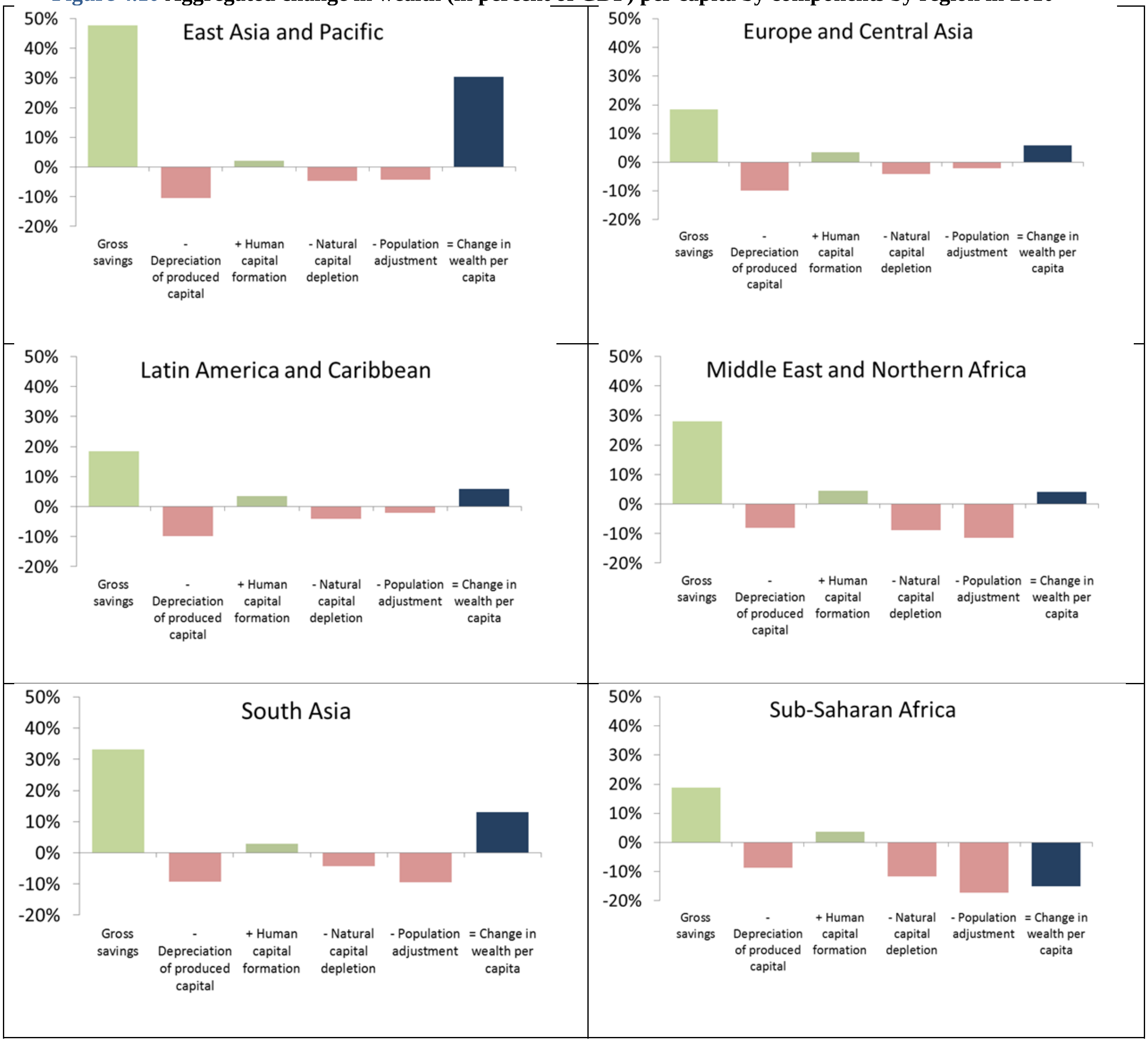


Source: World Bank staff estimates.

4.95 One of the main drivers of negative changes in wealth per capita is natural capital depletion. Negative changes could be caused either by dissaving (capital investments are lower than the rate of capital depreciation and depletion) or by wealth per capita growing more slowly than population (the savings do not keep up with population growth). In 2010, gross savings contribute most to the aggregate change in wealth per capita (19-48 percent of GDP per capita) followed by depreciation of produced capital (around 10 percent) and natural capital depletion varying between 4 percent in Europe and Central Asia and South Asia to 12 percent in Sub-Saharan Africa (figure 4.10). Using observations from all years in population growth rates and in natural capital depletion explain most of the variation in change in wealth per capita between countries and over time.

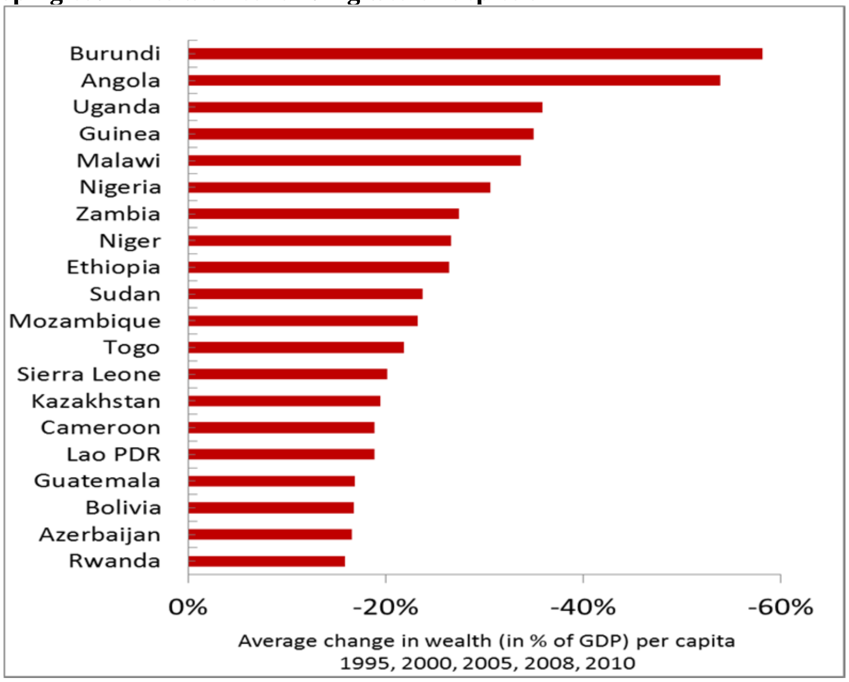
4.96 Some of the poorest countries are caught in an "unsustainability trap," leaving fewer and fewer assets for their growing future populations. Many countries have had negative changes in wealth in consecutive years so that wealth depletion in one year is not compensated by wealth accumulation in subsequent years. About a third of the developing countries have negative changes in wealth per capita in all observed years indicating continuing wealth depletion. Some have even been depleting on average between 15 percent and 60 percent of their GDP per year (figure 4.11). Most of these countries depend on natural resources, such as minerals and oil, for economic growth. This finding indicates that resource rents are not yet being reinvested in productive capital, so output levels will slump once resource stocks are exhausted.

Figure 4.10 Aggregated change in wealth (in percent of GDP) per capita by components by region in 2010



Source: World Bank staff estimates.

Figure 4.11 **Developing countries with continuing wealth depletion**



Source: World Bank staff estimates.

What countries can do about wealth depletion

4.97 One solution is to increase output with a given capital stock by boosting productivity growth. Total factor productivity determining on how effectively assets can be deployed for future output production determines welfare differences between countries (Basu et al. 2012). Yet, productivity levels in developing countries remain constrained by limited capacities to absorb new technologies and domestic distortions to competitiveness. Generally, productivity can be boosted by replacing run-down assets, investing in skills, adopting new technologies and improving legal and institutional frameworks that support innovation and competitiveness. While productivity growth will help, it will not be sufficient to compensate for continuing wealth depletion.

4.98 Wealth depleting countries also need to invest in productive capital to sustain current output levels. Countries can boost produced capital by improving the quality and lifespan of physical and built capital, including building more resilient infrastructure to avoid capital deterioration in case of extreme events. They can enhance human capital by investing in for example early child hood development and education in general (see earlier section on Education).

4.99 Countries can preserve and strengthen natural capital by managing natural resources sustainably. They can avoid overharvesting of timber or other renewable natural resources and other forms of degradation. Reforestation, as well as land and watershed restoration can result in more productive and resilient lands as well as increased household incomes, as seen in China's loss plateau program. Moreover, resource rich countries should reinvest rents from the use of non-renewable resources in building productive capital.

4.100 To the extent that natural resources are exhausted when they are exploited, these resources need to be transformed into a portfolio of other assets be they human capital, domestic public or private capital or foreign financial assets. Unfortunately, in many developing countries this is not happening (Bhattacharyya and Collier 2011)

4.101 Last but not least, managing population growth could reduce pressure on scarce resources. Family planning programs are effective in reducing fertility and can bring many benefits for poor countries (Das Gupta 2013).

4.102 Some assets play critical functions that cannot be replaced by others—or only up to a certain point, so that not all assets are perfectly substitutable. For example, water infrastructure such as dams, channels, and treatment plants can compensate for some losses in water quantity and quality from a degraded watershed. But beyond a certain level of degradation, the watershed may dry up or leave behind heavily polluted and salinized water, as in the Aral Sea, making technical solutions infeasible or extremely costly. Therefore, it is important to assess not only overall wealth, but also acute environmental challenges related to critical natural assets.

Acute environmental challenges: water–related risks and water management

4.103 Many countries face acute environmental challenges with immediate threats to poverty eradication and shared prosperity. These include the degradation and pollution of terrestrial and marine ecosystems and the depletion of natural resources from these ecosystems, such as timber, fish stocks and water with immediate impacts on the poor, who depend on these resources for their livelihoods.

4.104 Water provides essential social, economic, and ecological services and is vital to human well-being. Access to reliable, good quality water is fundamental to human health and productivity. Water resources further contribute to economic growth in key sectors, such as agriculture, energy, industry, and transport (UNWWAP 2012). Water-related pollution in urban areas and water-scarcity for agricultural production in rural areas are looming challenges for the world's poor. The vital role of water is acknowledged in the MDG for environmental sustainability, which includes a target "to halve, by 2015, the proportion of population without sustainable access to safe drinking water and basic sanitation."

4.105 While access to water is a precondition for poverty eradication, the quality and sustainability dimensions (the continuity and regularity of water flows) of service delivery remain largely unmeasured. Major progress has been made to improve access to improved water sources and sanitation facilities, but the poorest countries and the poor are still lagging behind. Yet water-related risks could undermine the sustainable service delivery of households and water supply to key sectors.

Exposure to water-related risks

4.106 Countries face a number of water related challenges that could constrain poverty eradication and economic growth. Water-related risks comprise water stress (such as inefficient use and over-extraction), water variability (seasonal and longer term variability in flows), and extreme water-related events (floods and droughts). Water stress arises if impacts of multiple users threaten the ability of water supply to meet water demand, including for the environment—given existing institutions (water allocation) and technologies (water treatment). Besides the quantitative dimension, water stress is also caused from pollution and other stressors.

4.107 Some regions face considerable water stress. In per capita terms, Middle East and North Africa and South Asia have with less than 1,700 cubic meters per person, the critical threshold for sufficient availability of renewable freshwater resources (table 4.4). In terms of physical water stress, a withdrawal rate of more than 20 percent of renewable water resources represents substantial pressure and more than 40 percent is critical (FAO 2011). By this definition, the Middle East and North Africa, Europe and Central Asia, and South Asia regions all face significant water stress. In most of the countries in the Middle East and North Africa, freshwater withdrawals even exceed available renewable resources from rivers and aquifers. The resulting over-extraction of groundwater is undermining natural assets at rates equivalent to 1–2 percent of GDP every year (World Bank 2007b).

Table 4.4 Freshwater resources and withdrawals across regions in 2011

	Annual freshwater withdrawals				
	per capita (cubic meters)	total (percent of internal resources)	by sector (percent of total withdrawal)		
			industry	domestic	agriculture
East Asia and Pacific	4,438	11	16	10	73
Europe and Central Asia	2,744	35	20	10	70
Latin America and Caribbean	21,735	2	11	21	68
Middle East and North Africa	679	122	6	8	86
South Asia	1,217	52	2	7	91
Sub-Saharan Africa	4,391	3	4	12	84

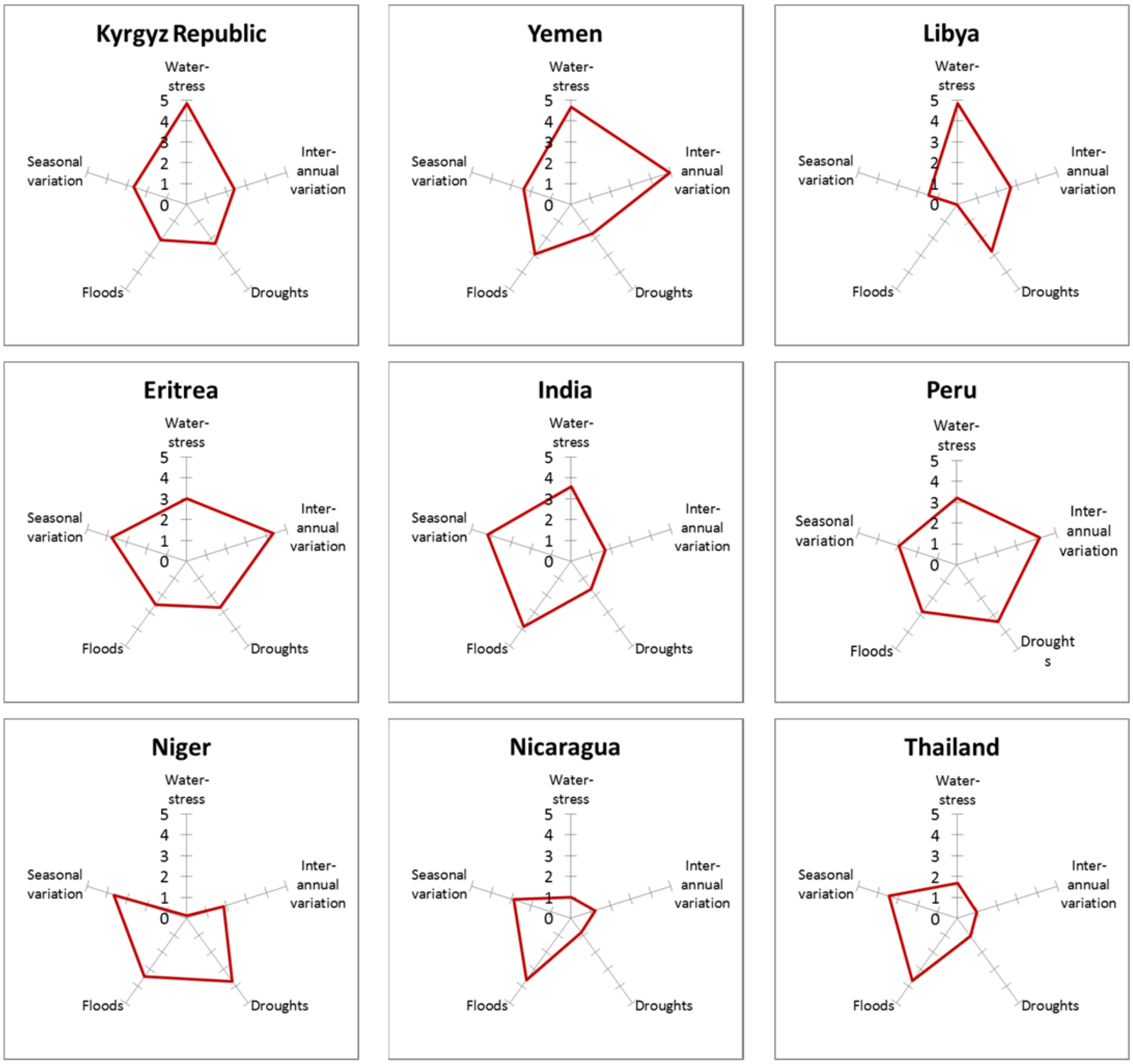
Source: WDI, 2014 based on Food and Agriculture Organization, AQUASTAT data.

4.108 Even water-abundant countries can face water-related risks due to the local and temporal dimensions of water supply and demand. Countries are exposed very differently to water stress measured as local water demand compared to available freshwater resources, interannual and seasonal water variability and the occurrence of floods and droughts (figure 4.12). Some countries with extremely high water stress, such as Kyrgyz Republic, Libya, and Yemen, face mostly medium levels of other water risks. In Eritrea, India and Peru, all types of water risks are high, while countries in Central America and East Asia face low water stress but high flooding risks.

Figure 4.12 Varying exposure to water-related challenges

An illustration from selected countries with varying degrees of water stress

Low income | Lower middle income | Upper middle income



Source: World Bank staff estimates based on World Resource Institute, Aqueduct data (Gassert et al., 2013).

Note: Water stress is based on total annual water withdrawals expressed as a percentage of the total annual available blue water. *Interannual variability* is based on the variation in water supply between years. *Droughts* is based on the average length of drought times the dryness of the droughts from 1901 to 2008. *Floods* is based on the number of floods recorded from 1985 to 2011. *Seasonal variation* is based on the variation in water supply between months of the year.
Scores indicate 0-1 = low, 1-2 = low to medium, 2-3 = medium to high, 3-4 = high and 4-5 extremely high risks as measured by water stress, variability or extreme events.

4.109 Agriculture is the sector most affected by water risks, but also contributing most to water stress. In all regions, agriculture withdraws by far the largest share of freshwater annually, at more than 68 percent (table 4.4). Even as growing demand from industries and municipalities increases competition for scarce water resources, irrigation withdrawals have more than doubled since 1960, leading to unprecedented impacts on water ecosystems (FAO 2011). In some basins in China and India, rivers no longer discharge to the sea, while irrigation withdrawals have shrunken major lakes, such as the Aral Sea in central Asia and Lake Chapala in Mexico. An estimated 25 percent of the world's agriculture is currently grown in areas of high water stress (FAO 2014).

4.110 Water stress will likely intensify as population growth and rising living standards increase the demand for water-intense food and energy products in what is known as the "water-food-energy" nexus. Population growth will take place in already water scarce areas of developing countries. In parallel, a shift towards water-intense energy sources (such as oil from tar sands and biofuels) further complicates water resource allocation. Climate change is a compounding factor of the water-food-energy nexus—likely to increase levels of water stress, but also water variability and the occurrence of water-related extreme events.

Policies to strengthen water management and governance

4.111 To reduce exposure to water-related risks, countries will need to implement policies to improve water management and governance. Water resources need to be distributed among competing uses in an efficient and flexible way with a holistic perspective, while controlling overuse and pollution (World Bank 2010). Increases in water productivity will be essential to keep up with growing demand, particularly in water-intensive sectors such as agriculture, but will require institutional arrangements.

4.112 Water can be allocated to key sectors and activities through fixed quotas, but quantitative allocations are most common. They are though challenging to implement. South Africa has one of the world's most advanced and integrated schemes, whereby: all users, such as municipal water utilities, agricultural irrigators, and owners of plantation forests, must register a license and pay for their water use—even for extraction from groundwater or river systems. The payments are used to fund water catchment management (World Bank 2010).

4.113 As water is almost always underpriced, there is little incentive to use this scare resource efficiently. Underpricing of water benefits mostly upper-income groups, as the poor still have limited or no access to water and sanitation. A few developing countries have managed to overcome the social and political challenges of pricing domestic water uses through strategic governance and private sector involvement. In the Philippines, public-private partnerships have developed affordable tariffs that have financed improved water infrastructure and better end user supply (Wolf 2008). In Colombia, residential tariffs were brought in line with cost-recovery levels in 2000, which led to a radical reduction in household water consumption, while subsidies keep water affordable for poor consumers (World Bank 2012a). Pricing is complex and often not very effective for irrigation, which uses a much larger share of water (World Bank 2010). One such complexity is that water use in agriculture and industry that leads to pollution is almost never internalized in its price.

4.114 Tradable water rights are another means of achieving more efficient water use and allocation (World Bank 2010). Such schemes are in place in Australia, Chile, South Africa, and the western United States. In some countries, informal water-trading arrangements exist. In Morocco, for example, farmers trade water based on customary practices (World Bank 2007b). Nonetheless, water trading can lead to overexploitation if water rights are not clearly defined, and total withdrawals are not regulated, as was seen in Yemen (World Bank 2007b). Building institutions needed for water trading can be a long and challenging process even in countries with good governance systems, such as Australia.

4.115 Water stress can also be reduced by investing in new technologies. Treatment of wastewater and desalinization can increase water availability in water-scarce areas. Technological solutions also play an important role for improving water distribution. Despite water scarcity, Tunisia has been able to withstand droughts without water rationing or external supplies due to a system of dams and conduits to transfer water between areas (World Bank, 2010). Water productivity in agriculture can be improved by fine-tuning irrigation scheduling, planting crops with a high crop-per-drop ratio, breeding plant varieties that make better use of rainwater, and applying special soil conservation techniques (FAO 2011). As people will feel climate impacts mainly through water, acute water challenges and the need for new technical solutions could be exacerbated in the future by climate change.

Future environmental challenges: climate change

4.116 Countries also face environmental risks which may not be acute, but become very important in the future – mainly due to climate change. The latest report of the Intergovernmental Panel on Climate Change (IPCC) concluded that global warming is unequivocal and that the largest contribution is from the human-caused increase in atmospheric concentrations of greenhouse gases, especially carbon dioxide emissions (IPCC 2013). While the impacts of climate change may be limited between now and 2030, the most severe climate impacts will be felt later in the century (IPCC 2014a).

4.117 In some locations the impacts of extreme events, such as heat waves, droughts, floods, cyclones, and wildfires are already demonstrating the vulnerability of human and natural systems to current climate variability and future changes (IPCC 2014a). While not all weather-related extreme events are linked to natural variability and cannot be fully attributed to climate change, global warming is increasing the frequency and intensity of hot days and warm spells, the intensity and duration of droughts, the frequency and intensity of heavy precipitation in some places; and sea level rise with severe repercussions for agricultural production, water stress, and coastal vulnerability (World Bank 2012b, 2013a; IPCC 2014a).

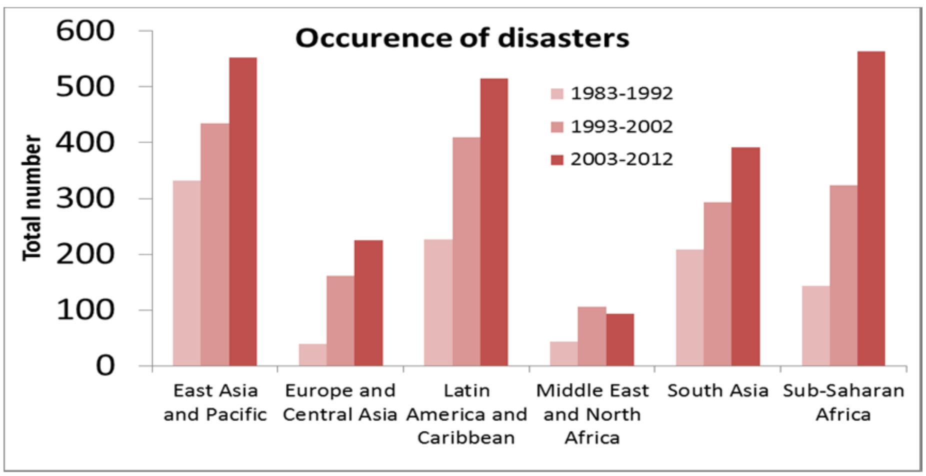
4.118 Urgent policy actions at the global and national level are needed to strengthen climate and disaster resilience by addressing the immediate risks from disasters and the long-run risks from climate change and to limit the risks of further climate change by decarbonizing economies. Climate-resilient and low-carbon development will play a critical role in achieving the goals of poverty eradication and shared prosperity in the long-term.

The poor are affected by natural disasters and climatic changes

4.119 The poor face significant risks from short-lived disasters and long-term climatic changes. These risks have three components: (i) hazard, or the physical events and trends and their physical impacts; (ii) exposure, or the presence of human or natural systems that could be affected by hazards; and (iii) vulnerability, or a system's susceptibility to or inability to cope with or adapt to the adverse effects (IPCC 2014a; World Bank 2013b). Climate impacts are the effects on human and natural systems resulting from the interaction of climate-related hazards with the vulnerability and exposure of human and natural systems (IPCC 2014a).

4.120 Projected environmental hazards are unequally distributed across regions, with many tropical and low-lying locations already acutely exposed (World Bank 2010, 2012b, 2013a; IPCC 2013). The world has experienced an upward trend in the number of weather-related natural disasters since 1980, causing total economic losses of about $3.2 trillion (Munich RE 2014). The incidence of disasters is growing quickly in the developing world (figure 4.13).

Figure 4.13 Occurrence of natural disasters is rising



Source: M-DAT OFDA/CRED International Disaster Database
Notes: Natural disasters include climatological droughts, extreme temperatures, wildfires, floods, mass movement wet and storms.

4.121 Disaster impacts are most severe in middle-income countries, as more physical assets are built in areas that are most exposed to weather hazards. For instance, large coastal cities, such as Guangzhou (China), Abidjan (Côte d'Ivoire), Guayaquil (Ecuador), Mumbai (India), Jakarta (Indonesia), and Ho Chi Minh City (Vietnam), could experience average losses from flooding by mid-century of more than a billion per year even if protection infrastructure is upgraded (Hallegatte et al. 2013b). In Thailand, the floods in 2011 alone caused losses of about $45 billion, or 13 percent of the country's GDP (World Bank 2012c). Besides physical damages and fatalities, natural disasters also result in indirect losses, such as loss of agricultural production, water scarcity, health impacts, loss of housing services, and negative impacts on investments and more generally development.

Box 4.14 The poor are vulnerable to the risk of flooding, and climate change will exacerbate this danger

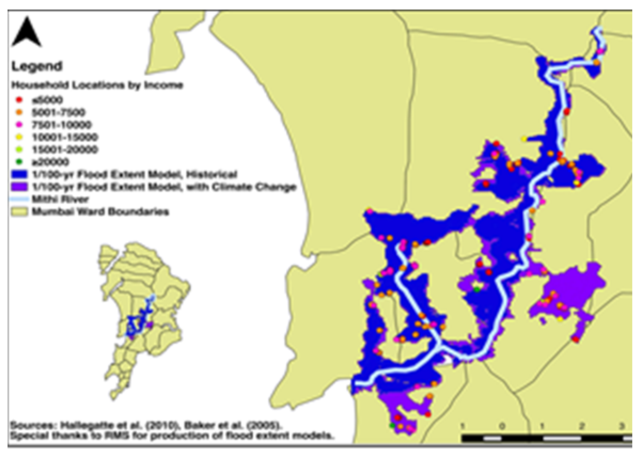
The Mithi River Basin in Mumbai, India provides a telling illustration of the risks of flooding to the poor. The Mithi River and its tributaries run from the center of Mumbai and empty west to the Indian Ocean and are prone to inland flooding from storms. Within this basin lie a dense population estimated at 1.5m and concentrated economic assets. Flood hazard, combined with high socio-economic exposure pose a major risk, evidenced from unprecedented floods in July 2005, which resulted in 500 fatalities and cost $2 billion.

New analyses examine household-level exposure of poor and non-poor to flood risk in the Mithi River Basin based on the spatial overlay of inland flood risk maps and location of households classified by incomes. Two flood maps are used – one based on historical data and one accounting for potential climate change impacts in the future, both for a 100-yr return period. These maps when overlayed with household location data show three interesting findings. First, under both scenarios, within flood extent areas, those in lower income levels are disproportionately exposed, with ¾ of exposed households reporting a monthly income of Rs. 7500 or less. Second, overall more households are likely to be exposed to flood risks under the climate change scenario. Third, the distribution of exposure is similar for both scenarios: additional exposure (of climate change) has the same distribution as today (see table below).

For disaster risk management, these results imply that targeting the poor is important, as these appear to be most exposed to flood risks and have less capacity to adapt. Although there are several caveats with this analysis (in particular, the representativeness of the household survey within the basin), the combination of hazard and population maps with income or consumption data, can provide important insights into the exposure of the poor and the targeting of resources for building climate and disaster resilience.

Households in flood extent by income level

Income (Rs./mo)	**percent of HH in Survey**	**percent Exposed historical**	**percent climate chai**
<5000	27 percent	44 percent	43 percent
5001-7500	28 percent	33 percent	34 percent
7501-10000	22 percent	16 percent	17 percent
10001-15000	12 percent	5 percent	5 percent
15001-20000	6 percent	1 percent	1 percent
>20000	6 percent	1 percent	1 percent
All	**100 percent n=4972**	**100 percent n=210**	**100 percent**



Source: Mook Bangalore.

Notes: Flood risk data comes from 2 maps of flood extent for a 1/100-year event based on historical records and a climate change scenario produced by RMS for Hallegatte et al. (2010) and Ranger et al. (2011) in a study funded by OECD. Data on household coordinate location is from a 2003-04 survey by Baker et al. (2005) of 5,000 households in the Greater Mumbai Region; we extract a subset of households in the flood extent area. In the survey, households were asked to report monthly income in Rs. per month in 6 categories, as described in the above table.

4.122 Even if aggregate economic damages are limited, the poor could be disproportionally affected. Often poor people are most exposed to natural hazards and climatic changes (box 4.14). Limited opportunities often force them to live in high-risk areas, such as on ecologically fragile agricultural lands, low-lying areas in river basins, and informal urban settlements, with poor quality housing and infrastructure and few if any government services. In addition the poor are often also the most vulnerable. Low incomes, few if any assets, weak social capital, and little access to information and new technologies limit their ability to cope with short-lived disasters and to adapt to long-term climatic changes (Skoufias 2013 and IPCC 2014a). The most vulnerable face deterioration of livelihoods, destruction of assets, persistent political and economic marginalization, food insecurity, declining work productivity and agricultural yields, and water stress, with varying impacts over the short to long term (IPCC 2014a).

4.123 Climate change will not only impose additional burdens on people who are already poor, but could also reduce growth thereby undermining shared prosperity. Most of these climate risks will materialize through the impacts on agricultural production (IPCC 2014a). In Bangladesh, climate variability is estimated to reduce long-term rice production by an average 7.4 percent each year through 2050, with the potential to lower GDP by an average of 1.15 percent each year (Yu et al. 2010). These macro-level impacts of reduced agricultural production will trigger down to the poor through more difficult access to food and greater price instability (IPCC 2014b). Net food consumers in urban areas could be most exposed through higher food prices, while agricultural producers could suffer from harvest losses but benefit from higher food prices (box 4.14). Whereas the poverty impacts until the mid of the 21st century could be limited, much larger impacts are expected in the long-run as more of the effects of climate changes emerge (Skoufias 2013).

Strengthening climate and disaster resilience

4.124 Investing in climate- and disaster-resilient development will enable vulnerable economies and poor people to better deal with the impacts of climate change. Resilience is the ability to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, generally by ensuring the preservation, restoration, or improvement of the essential structures and functions of a given system (IPCC 2014a). Although many of the tools for disaster risk management and climate adaptation are the same, better coordination between them is needed (World Bank 2013b). Core elements of disaster and climate resilience are knowledge creation and diffusion, protection and risk reduction, insurance (including financial and social protection), and preparedness and improvement in coping capacity (World Bank 2013c).

4.125 When properly identified, disaster risks can be reduced through comprehensive approaches, such as in Colombia (box 4.15). Exposure to hazards can be reduced by moving existing development to safer locations or by providing transport infrastructure and public services to attract future development in safe locations. People and assets can be protected by hard-infrastructure options, such as dams and sea walls. Often ecosystem-based adaptation provides a more cost-effective option, such as conserving mangroves and wetlands to reduce flood risks (World Bank 2009). Vulnerability can be decreased by making infrastructure more resistant to hazards. For example, Madagascar developed new safety codes for public buildings, transport, and irrigation infrastructure (World Bank 2013b). In rural areas, options to reduce livelihood vulnerability include the diversification of livelihoods, planting weather-resistant crops and building irrigation channels.

Box 4.15 Climate change will exacerbate extreme weather events, with dire consequences for the poor

The poor, who are relatively vulnerable to extreme weather events, will suffer as climate change increases their frequency and severity. Even though understanding the linkages between developing country poverty and climate change is crucial in formulating the most effective policy responses, there have been relatively few forward-looking analyses on this topic based on macro-micro simulations.

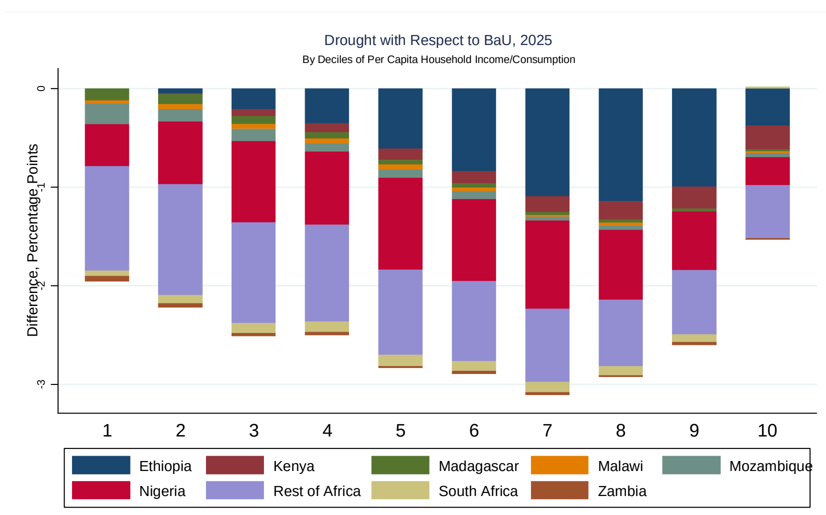
Ahmed et al. (2009) analyze the long term impact of three agricultural productivity stressors: wet, dry and hot weather extremes comparing historic data from 1971 to 2000 and simulations for 2071 to 2100 based on IPCC scenarios. The authors find that the occurrence of maximum extreme events increases throughout the world resulting in a decline in agricultural production and spikes in food prices. Changes in poverty due to climate extremes exhibit great heterogeneity across different segments of population and countries. The most vulnerable group is the urban group of labor-wage earners who are the most exposed to food price increases and registering an average increase of poverty of up to 30 percent. Agricultural households are the least affected by these weather shocks with an average increase of poverty of 9 percent.

Devarajan et. al. (2013) analyze the implications of future droughts for economic growth and poverty reduction in a large number of Sub-Saharan African countries till 2025 using a multi-country computable general equilibrium model and a micro-simulation model. Drought is modelled as a shock to productivity in agriculture which translates in an increase of food prices. The resulting loss in household consumption for Sub-Saharan Africa as a whole would amount to 2.3 percent in 2013. As agricultural output recovers by 2025, total Sub-Saharan Africa consumption would be still 1.2 percent lower than in the baseline. This results in significant losses for all households. By 2025 the income of the poorest 20 percent in Sub-Saharan Africa has declined by up to 2.5 percentage points. Households that are the most vulnerable to drought are entirely composed of urban households, characterized by low levels of and 36 percent of these households are headed by females. Households least vulnerable to drought are mostly rural (80 percent), well educated (over 56 percent have primary education) and only very few of them (2 percent) are female headed households.

Devarajan et. al. (2013) conclude that due to droughts the incidence of poverty (at ppp2$/a day) in Sub-Saharan Africa could be 1 percentage point higher in 2025. This relatively small impact on overall poverty number is due to the assumption of the temporary nature of a shock that only happens once.

If droughts become more frequent and intense as already observed, the poverty impacts will be much more severe.

Box Figure 4.15.1 Droughts affect households across different income deciles



Clearly, further analysis is required of the impact on the poor of the climate change-induced increase in severe weather events.

Source: Authors' simulations and calculations.
Note: The figure shows the percentage-point differences between the growth incidence curves of the Drought scenario relative to the Baseline.

4.126 Depending on needs and risk, countries should invest in preparedness for extreme events. For instance, to build climate resilience, Nepal created agriculture information management systems, Burkina Faso developed local contingency and emergency preparedness plans, including drills and simulation exercises, and Haiti has developed preparedness plans for evacuation and emergency shelters (World Bank 2013b). Burkina Faso implemented a publicly managed scheme to provide support to its cotton farmers, which provides compensation against volatility in climate. Early warning systems can minimize human causalities and economic losses by monitoring and forecasting weather, climate, and hydrologic events. In October 2013 after large investments in early warning and evacuation were made, Cyclone Phailin hit the coastline around Andhra Pradesh causing 38 deaths against 10,000 in 1999 when a similar event occurred[10] (box 4.16).

Box 4.16 Land use planning can reduce the impact of natural disasters

Coping with natural disasters in urban areas is a difficult challenge for developing countries, given their often fragile infrastructure and limited resources available for emergency assistance. Colombia is developing comprehensive approaches for disaster risk management built on investments in structural measures, risk assessments, early warning and emergency response, institutional support, and financial and fiscal measures at the national and municipal levels, as well as the organization of national and local entities for emergency response.

A key element of the strategy is integrated land use planning with a focus on prevention and decentralization. Since 1997, municipalities have been required to develop land use plans that consider the location of critical hazards and risk areas. As enforcement of building codes is weak, and retrofitting of existing buildings is costly and inefficient, resettlement of populations from high-risk areas is preferred if other risk mitigation options are more costly.

Bogota, for example, conducted studies to identify hazards and assess risks related to floods, landslides, and forest fires, as well as seismic microzoning. An integrated rehabilitation, reconstruction, and development plan was designed in 2005 for the high-risk and buffer zones identified in the studies. In high-risk areas, a three-stage plan was implemented to resettle population in safe areas: community engagement and awareness building, preparation for the move including a special housing subsidy, and monitoring and follow-up after resettlement. This approach was also applied in other Colombian cities. While it is difficult to safeguard areas against disasters, effective preparations can help limit the human costs.

Source: World Bank, 2013c.

4.127 Protection systems are vital to cope with extreme events and other climate-related shocks. Financial protection enables countries to mobilize financial resources in an emergency or even before an emergency, while social protection helps people reduce losses and recover (World Bank 2013b). Bangladesh's Char Livelihoods Programme combines safety-nets that cushion the program's beneficiaries against disaster impacts, while providing post-disaster relief and recovery (World Bank 2013d). The Productive Safety Net Program in Ethiopia protects assets and consumption during weather-related shocks (World Bank 2013c). Existing social safety nets can provide effective repose if they can target the most vulnerable to disasters and climate change and if they ensure scalability and flexibility (World Bank 2013d).

Box 4.17 Robust decision making strategies are helping Lima deal with the uncertainties of water management

The investment required for providing adequate levels of clean water in urban areas is subject to huge uncertainty. Many methods have been developed over the last half-century to help decision makers manage deep uncertainties and make investments that are robust to the unpredictable future (Bonzanigo and Kalra 2014). These methods seek to identify robust decisions – those that satisfy decision makers' objectives in many plausible futures, rather than being optimal in any single best estimate of the future (Lempert et al. 2013 and Kalra et al. 2014).

The World Bank is applying the Robust Decision Making (RDM) methodology to help SEDAPAL, Lima's water utility company to better understand the implications of uncertainty on water service delivery and to strategically analyze the robustness of potential investments. Metropolitan Lima is a city of nearly 10 million people. It has major water-related challenges, including: a desert location with virtually no rainfall; frequent water shortages combined with two million underserved urban poor in need of service expansion; a rapidly growing population; and highly uncertain climate change effects that will likely lead even worst water stress.

SEDAPAL has developed an ambitious thirty-year Master Plan to help address these challenges. The Plan involves new reservoirs, inter-basin transfers of water across the Andes, further groundwater extraction, new desalination plants, new water and wastewater treatment plants, and improvements to system operations and maintenance. RDM is used to better understand climate and development risks, prioritize and sequence investments, and identify no-regret investments.

Preliminary findings show that:

- Relative to today's water supply system, SEDAPAL's Master Plan significantly increases water reliability under a set of potential future scenarios, including climate-change and higher-than-expected demand.
- However, delays in the implementing the plan -- or even parts of the plan -- could seriously threaten Lima's water security.
- Some components of the Master Plan have a greater impact on future water reliability than others.
- Like any plan, the Master Plan cannot guarantee water security in every plausible future. Some combinations of plausible climate change and demand result in lower-than-desired water reliability, even with the Master Plan.

These "vulnerable conditions" provide a guide for SEDAPAL and other stakeholders to consider needed additional response options to further protect Lima against water shortage. It will also be important that sufficient financial resources are secured for the immediate implementation of the plan. The findings will inform future investment decision-making and establish innovative best practice for other Andean cities grappling with climate change.

Source: Laura Bonzanigo.

4.128 Implementing measures for climate- and disaster-resilient development has upfront costs, but the long-run benefits can be much higher (World Bank 2011b and World Bank 2013c). Modernizing meteorological and hydrological information services could require one-off investments of $1.5–$2 billion and some $400–$500 million annually for operation but could save an average of 23,000 lives a year and provide $3–$30 billion annually in economic benefits related to disaster reduction (Hallegatte 2012). Decision making about investments to address disaster- and climate-related risks involves uncertainty about the intensity, frequency, and timing of climate hazards (IPCC 2014b). Under "deep" uncertainty, traditional decision support tools that are built on prediction of the future (e.g. cost-benefit analyses) are difficult to apply and could produce misleading results so that new methods are needed to ensure robust decision-making (box 4.17).

Limiting the risk of further climate change

4.129 Mitigation is another way to reduce climate risks. Keeping temperature increases to no more than 2°C above pre-industrial levels (the 2°C target) will limit the long-term impacts and minimize the risk of dangerous climate change. Under current trends, global carbon dioxide emissions—one of the main human-made drivers of climate change—will be far above the level needed not to exceed the 2°C target (box 4.18). Consequently, urgent action is needed to curb emissions and to minimize the risks of dangerous climate change and the costs of climate mitigation and adaptation (IPCC 2014b).

Box 4.18 Efficient approaches to limiting climate change involve reducing the carbon intensity of new investment

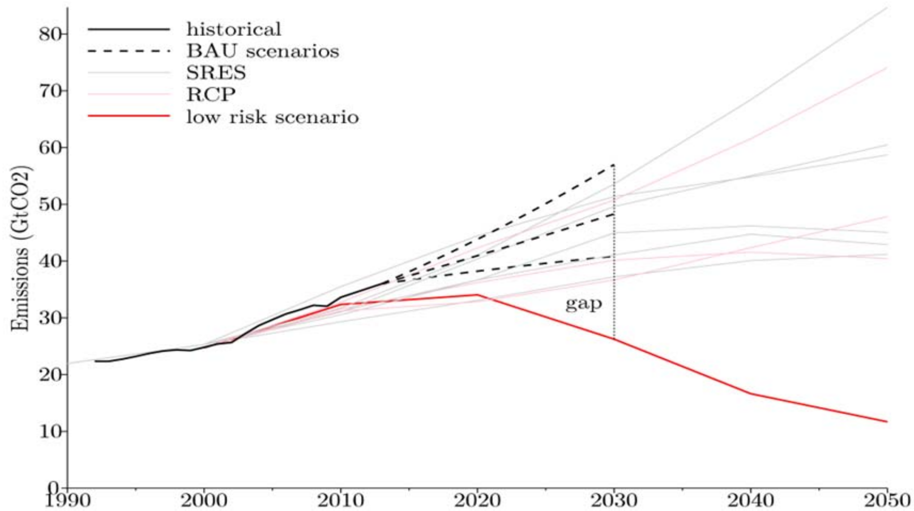
The world must avoid being locked into long-lived, expensive investments that produce excessive carbon emissions. The IPCC analyses an emission scenario in which carbon dioxide emissions, which account for 65 percent of greenhouse gases would peak in 2020 and then fall so as to maintain global temperature increases below 2C by the end of the century. This scenario has a total global carbon dioxide budget (total emissions) of 565 gigatons (Gt) till 2030 and 900 Gt till 2050. Staying within this budget before 2030 would keep us on track for preventing dangerous climate change but will require further reductions in emissions after 2030 and 2050.

Under business-as-usual the world would exceed its carbon budget before 2030 by 19 percent in a low GDP per capita growth scenario (1 percent a year) and by 39 percent in a high growth scenario (3 percent a year). Overshooting this much entails a high risk of not achieving the 2°C target and would require drastically reducing emissions after 2030. Strong efforts are thus needed to reduce the carbon intensity of global GDP in the next two decades to improve chances to stabilize climate change.

With growing population and a goal of raising per capita welfare, a drastic reduction in the carbon intensity of economic production is the only way to curb global emissions. A large amount of carbon dioxide emissions in the future are already locked in because they are embedded in installed capital (Davis et al. 2010; Davis & Socolow 2014). These committed emissions can be changed only if existing capital is replaced by new, lower-carbon installations. This is often not an option, especially in developing countries, which already face a large infrastructure finance deficit.

The size of these committed emissions depends on the life expectancy of capital. If existing coal power plants keep producing for the next 50–60 years and the rest of polluting capital for more than 15 years, the committed carbon budget till 2050 could be as high as 600 Gt. If coal power plants stay active only 20 years and the rest of polluting capital less than 10 years, committed emissions are only around 200Gt (Rozenberg et al 2014). For a global growth rate of per capita GDP of 1–3 percent a year, the average carbon intensity of new capital investments till 2050 needs to be in the range of 0.06–0.20 kilograms per dollar of GDP depending on the lifetime of existing capital (Rozenberg et al. 2014). In 2013 the carbon intensity of GDP was 0.48. In the best case scenario, therefore, the carbon intensity of new investments must be half of the average carbon intensity of existing capital to keep on track for avoiding dangerous climate change. Despite the uncertainty surrounding these calculations, it remains clear that the world needs to engage in massive reductions in the carbon intensity of capital to stay on the right track for achieving the 2°C target.

Box Figure 4.18.1 Under business-as-usual until 2030 carbon dioxide emissions will exceed those in a low-risk scenario



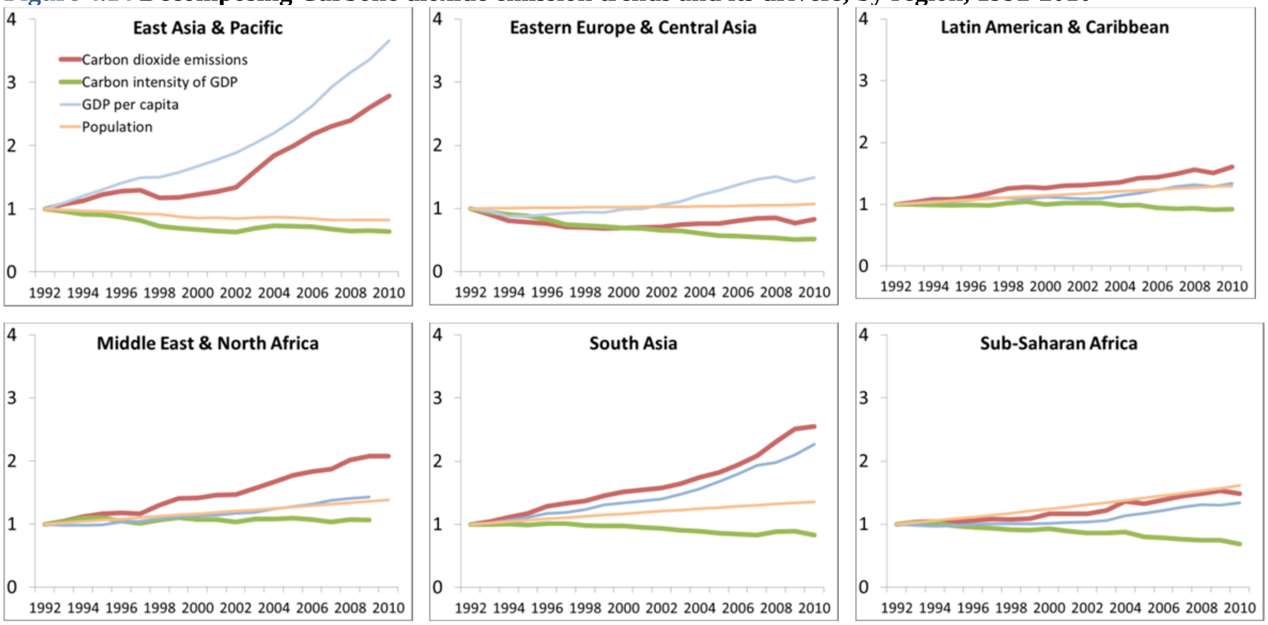
Source: WB staff estimates based on WDI data, and IPCC, 2013a and Julia Rozenbery

Notes: The continuous black line represents actual global CO2 emissions between 1990 and 2010.
The dashed black lines show projected emissions till 2030 assuming: (i) three GDP p.c. growth targets: low (1 percent p.a.), medium (2 percent p.a.), high (3 percent p.a.), (ii) population growth as per the UN median population scenario, (iii) constant CO2 intensity of energy as in 2000-1010, (iv) reduction in energy intensity as 1.2 percent p.a. as in 2005 and 2011.
The pink/grey trajectories are the Representative Concentrations Pathways (RCP)/Special Report on Emissions Scenarios (SRES) published by the IPCC in 2013/2000).
The red trajectory represents the low-risk emissions scenario consistent with a 50 percent likelihood of limiting global temperature increases to 2C by the end of the century.

4.130 For developing countries, a commitment to low-carbon development is important for avoiding lock-in effects. New investments in high-emitting infrastructure with long lifespans would commit countries to a high emissions pathway for years to come. Such lock-in could also become very costly in the future, for example, once the externalities of climate change are captured through a global carbon price. Moreover, low-carbon development can lead to local co-benefits, such as a reduction in short-term pollutions and energy bills (Deichmann and Zhang 2013) In some locations such as East Asia, air-pollution health co-benefits from climate change mitigation actions have been found to exceed their cost, making mitigation cost-effective even without accounting for environmental benefits (West et al. 2013).

4.131 As carbon dioxide emissions are linked to energy production and consumption, changes in emissions can be decomposed in population growth, and changes in GDP per capita, the carbon intensity of GDP (which includes both the energy intensity of GDP and the carbon intensity of energy) (Kaya 1990; Ang and Zhang 2000; Raupach et al. 2007). In all regions but Eastern Europe and Central Asia, carbon emissions have grown as reductions in the carbon intensity of growth could not compensate for higher emissions from the growth in GDP per capita (figure 4.14). South Asia and East Asia and the Pacific had the highest growth in carbon dioxide emissions, driven mainly by the growth of the Chinese and Indian economies.

Figure 4.14 Decomposing Carbone dioxide emission trends and its drivers, by region, 1992-2010



Source: WB staff, based on WDI data.

Note: All values are presented relative to the 1990 baseline year value.

4.132 When aiming for higher GDP per capita, the only way to reduce carbon dioxide emissions if population growth continues is by reducing the carbon intensity of GDP (box 4.18). Measures to decarbonize national economies include fuel switching (such as from high-emitting coal to lower-emitting natural gas), investments in low-carbon electricity (including renewable energy and carbon capture and storage), electrification (such as electric vehicles and heat pumps), energy efficiency investments (such as efficient lighting) and structural transformation towards low-energy sectors.

4.133 Decarbonizing national economies will require the right incentives such as carbon pricing through taxes and markets. China is implementing carbon markets across seven cities and provinces to pave the way for a national carbon market. South Africa is designing a carbon tax scheme to be implemented in 2015. In the Partnership for Market Readiness, a growing coalition of 30 developed and developing countries is working on solutions for carbon pricing. [11]

4.134 Regulatory approaches, like performance standards and carbon pricing are complements. Establishing performance standards for power generation, road transport, lighting, and appliances can strengthen incentives for lower-carbon technologies and plays an important transition role in the absence of carbon prices. Many countries already have performance standards for lighting and appliances, cars and other vehicles, and buildings. Performance standards, which affect long-lived equipment, commit the economy to reduced emissions over years or even decades.

4.135 Besides carbon dioxide emissions from the energy sector, emissions from changes in land use can be substantial, as for example in forest rich countries, such as Indonesia. To tackle this problem, an international mechanism is being set-up to provide developing countries with results-based payments for Reducing Emissions from Deforestation and Forest Degradation (REDD+). While a growing number of developing countries are preparing to participate in REDD+, Costa Rica is the first to receive large performance-based payments for conserving its forests, regenerating degraded lands, and scaling up agro-forestry systems for sustainable landscapes and livelihoods.[12] Such schemes can also help reduce poverty when poor land users benefit from these payments or in-kind services.

Policy action for inclusive green growth

4.136 Countries face multiple, interlinked environmental challenges that can be mutually reinforcing. For instance, water stress degrades natural capital; wealth depleting countries may find it difficult to invest in long-term climate solutions; and climate impacts exacerbate water stress and wealth depletion. In addition to the challenges discussed here, developing countries face a multitude of other environmental challenges, such as air pollution, land degradation and deforestation, loss of natural habitat and biodiversity, depletion of fish stocks, coastal vulnerabilities, and pollution of the ocean. Mismanaging these challenges could create a downward spiral of increasing environmental stress and depletion leading to an "unsustainability-trap."

Tailoring coordinated strategies for green growth

4.137 Through coordinated green growth strategies countries can tackle the challenges without undermining their growth potential. Inclusive green growth is a means of addressing these environmental challenges through improved management of the natural asset base, increased resource efficiency, and strengthened resilience while promoting sustainable growth and avoiding adverse impacts on the poor (World Bank 2012a). Green growth could require a set of options implemented in different sectors, like water, agriculture, energy and transport (box 4.19).

Box 4.19 Coping with climate change will require dramatic reform in FYR Macedonia

Macedonia is not prepared for climate change. A recent country green growth assessment for FYR Macedonia finds that the country falls short on air quality, productivity of natural resources it uses (especially scarce water), and the emissions intensity of production compared to other countries. Projected climate change will affect FYR Macedonia's economy, mainly via a direct shock to agriculture and associated spillovers on other sectors in the economy, and to a lesser extent due to losses caused by extreme weather events. Inefficient use of limited resources has resulted in water stress, energy insecurity, an energy demand-supply gap, soil fertility problems, dangerous levels of air pollution, and high emissions intensity of energy, industry and transport.

To tackle these challenges, the assessment formulates the following policy recommendations:

- The growing scarcity of water can be addressed by reducing inefficiencies through pricing and regulation of groundwater and through rehabilitation and maintenance of existing infrastructure and investment in more storage.

- An evolution in agriculture towards larger, more competitive, export-oriented farms will raise overall sector incomes while heightening resilience to a changing climate. Land consolidation, switching to high value crops, and farmer education campaigns, along with other efficiency improvements, will raise agricultural incomes and compensate for scarcer water.

- To reduce emissions from the energy sector and increase sector efficiency, lignite and oil need to be replaced with gas and renewables in the supply mix over the medium to long run while modernizing existing lignite plants in the short run. Energy efficiency can be increased by equipment replacement in industry, building retrofitting and introduction of new construction standards, higher efficiency household appliances, modern stoves for residential heating (as a short term measure), and improved heating, cooling and lighting in the non-residential sector.

- A cleaner transport system requires policies, such as pricing to reduce personal car use, and investment in transport infrastructure – especially in rail and public transport.

- Building more sustainable cities demands expansion of energy efficiency programs, investments in availability and quality of public transport systems, rehabilitation of water and wastewater networks and establishment of integrated regional waste management systems and usage of modern equipment and proper landfills in the solid waste sector.

- To make infrastructure more resilient to climate change, a mix of proactive and reactive infrastructure adaptation strategy is needed – with the proactive strategy required for urban drainage systems, health and education facilities and municipal buildings, and reactive strategy for roads, power, telecoms, water and sewer networks.

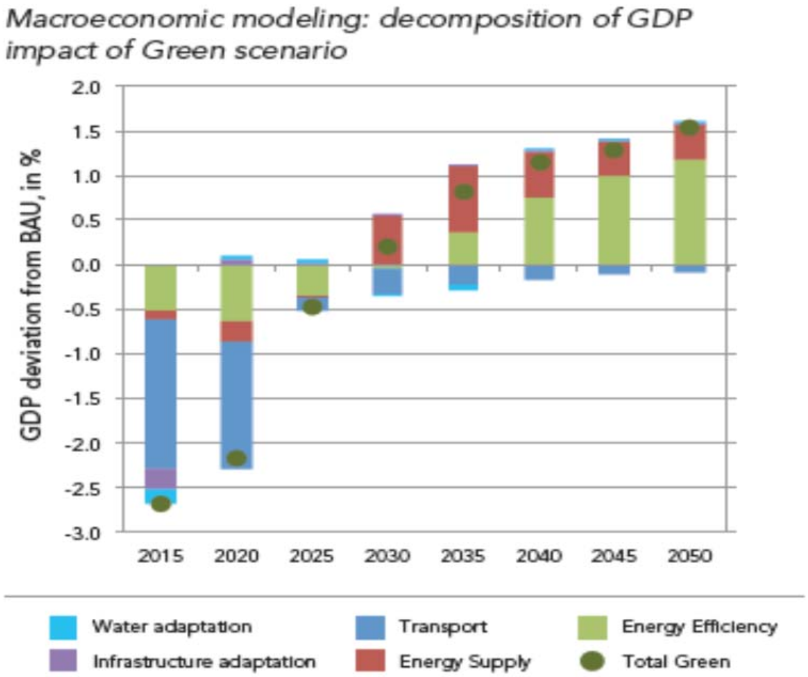
- Air pollution can be reduced by a switch from lignite to natural gas in the energy sector, through transport polices aimed at reducing pollution from the country's old and polluting vehicles, and through replacing old and inefficient stoves with modern ones.

While this program of reforms is ambitious, in their absence the future costs of environmental degradation in FYR Macedonia will be extremely high.

Source: World Bank 2014a.

4.138 Although green growth measures can bring enormous national and global benefits in the long-run, they can involve tradeoffs with immediate, local benefits. In FRY Macedonia, green growth measures would generate short-term losses to national income of more than two percent, but can boost GDP in the medium- to long-term - reaching 1.5 to 2 percent by 2050 (figure 4.15). Short-term costs are caused by high up-front capital investment (as in building infrastructure for renewable energy generation) or by actions that limit more financially profitable but unsustainable activities (such as conversion of natural forests into marginal agricultural lands).

Figure 4.15 **Greening of the Macedonian economy is costly but will increase GDP in the long-run**



Source: World Bank, 2014.

4.139 Urgent action is needed, and making the wrong decisions today could lock-economies onto unsustainable pathways. Priority should be to implement those options with the greatest urgency and the greatest local, immediate benefits (table 4.5, lower right quadrant). In many developing countries these could be actions that decrease energy costs, increase agricultural productivity, secures access to basic services and reduces disaster risks. In fast growing countries, like China, the direct economic and health benefits could make policy actions for low-carbon development particularly attractive, including the implementation of carbon markets (World Bank and DRC 2012). Measures that involve some tradeoffs with short-term local benefits tradeoffs (Table 4.5, higher left quadrant) can be equally urgent.

4.140 Most countries in the world use wasteful energy subsidies of which only a minor fraction accrues to the poor (IMF 2013 and Clements et al 2013). Global subsidies on petroleum products, electricity, natural gas, and coal was US$492 billion in 2011 (0.7 percent of global GDP). Considering also the negative externalities from energy consumption, global subsidies were of the order of US$2 trillion (2.9 percent of global GDP). Key elements of a successful subsidy reform include (1) appropriately phased price increases differentiated across different products, (2) improved efficiencies in state owned enterprises so as to reduce producer subsidies, (3) targeted mitigating measures to protect the poor, and (4) depolitizing energy pricing to avoid future subsidies to reemerge. Reforms that are comprehensive, well-articulated, and widely disseminated also generate the broad-based political support that makes the reforms sustainable. The study also quantified the extent to which energy subsidies represent a huge, wasteful, and regressive expenditure.

Establishing the right environmental policies and institutions

4.141 A combination of economic incentives, information and rules and regulations can set up the right enabling conditions for green growth (World Bank 2012a). Economic incentives can provide effective solutions, including price signals (taxes, subsidies) and quantity instruments (tradable permits), such as applied for carbon and water in a few developing countries. Information tools can influence economic actors, for instance through performance evaluation and rating programs, such as China's Green Watch Program, India's Green Rating project or Indonesia's Program for Pollution Control, Evaluation and Rating. Rules and regulations may be needed to enforce some green policies, such as performance standards and environmental norms. Brazil has been successful in halting deforestation and forest degradation through the enforcement of laws (Nepstad et al. 2014).

Table 4.5 Illustrative examples of green growth actions classified by potential urgency and trade-offs

Urgency Inertia and/or risk of lock in and irreversibility	Trade-offs between local, immediate benefits and global, long-term benefits	
	Higher trade-offs	Lower trade-offs
Lower (Action less urgent)	- Waste water regulation and treatment - Low carbon, high cost energy supply - Sustainable forest management - Water storage / management technologies - Water pricing and tradable water rights	- Drinking water and sanitation - Air pollution control - Low carbon, low cost energy supply - Reduction of loss in energy supply and food waste - Solid waste management - Restoration of degraded lands - Reinvest natural resource rents in productive capital - Early warning systems
Higher (action more urgent)	- Carbon pricing and emissions trading - Reducing deforestation and land degradation - Coastal zone and natural area protection - Fisheries catch management	- Energy efficiency performance standards - Climate resilient building norms -Climate resilient land use planning - Urban planning including low-emissions and safe transport systems - Integrated water reservoir and river basin management - Climate-smart, sustainable intensification of agriculture

Source: Adapted from World Bank, 2012a.

Note: The measures proposed in each of these boxes are illustrative only and cannot be generalized to all contexts. In particular, their characterization is location and project specific.

4.142 Implementing green growth processes at the speed and scale needed to achieve the desired effects cannot be done without supportive industrial policies and innovative technologies (World Bank 2012). Increasing productivity and resource and energy efficiency in order to tackle environmental challenges will require widely disseminating green technologies and promoting research and development to discover new technical solutions. Green industrial policies can support the development of green technologies and sectors (Hallegatte et al. 2013a).

Securing benefits for the poor

4.143 Strategies for green growth need to carefully consider the impacts on the poor and on shared prosperity. Just because the poor suffer disproportionally from environmental risks does not mean that they automatically benefit from green growth and environmental policies (World Bank 2012a). Whether green growth measures can be aligned with poverty reduction will depend on the effects on the prices of the consumption goods and assets that the poor depend on; demand for labor-intensive activities that enable poor people to leverage labor, their chief asset; impacts on agriculture and the informal sector, where most poor people are employed; and interactions with internal migration and urbanization as a means out of poverty (Dercon 2014).

4.144 Poor people can benefit from measures to achieve green growth. Urbanization allows large numbers of people to receive basic services while reducing pressure on the environment by concentrating people in a few places. In rural areas, payment for ecosystem services can incentivize environmental protection while rewarding those who take care of the environment—most often the poor. For example, the Brazilian Bolsa Floresta program rewards poor families for stopping deforestation on the condition that children are enrolled in school. Finally, some environmental protection activities are labor intensive, such as land restoration, selective logging for sustainable forest management, guides for eco-tourism resorts, and guards in protected areas, which tends to benefit the poor. South Africa's Working for Water Programs provided employment through the clearing of lands from invasive alien species to protect native biodiversity.

4.145 Where green growth would have negative impacts on the poor, complementary social policies are needed to off-set these impacts. Removing fossil fuel subsidies and increasing energy prices through carbon taxes are vital measures, but they can hurt the poor. Most green growth strategies are technology and capital-intensive, which will disfavor labor-based activities. In these cases, green industrial policies should provide temporary support to declining sectors and industries to mitigate negative social impacts, through safety nets and distributional policies (Hallegatte et al. 2013a).

4.146 In many circumstances, it will be difficult to reduce poverty with the same measures taken to tackle environmental challenges. Some measures, such as ending fossil fuel subsidies, bring significant environmental benefits and free enormous financial resources, which could be redistributed to the poor. For instance, the Islamic Republic of Iran offset the impacts of reducing fossil fuel subsidies with a cash-transfer program. But even green growth measures that aid the environment without freeing up resources for programs for the poor will ultimately improve conditions for the poor, who bear a disproportionate share of environmental risks.

Notes

[1] There are various definitions of ECD programs used in the literature.
[2] The disability-adjusted life year (DALY) is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death. It is estimated as the sum of the present value of future years of lifetime lost through premature mortality
[3] The analysis that follows is based on Dopart and Wodon (2012).
[4] Assuming no significant changes in the relative productivity of skilled and unskilled labor.
[5] The relatively faster growth of demand for skilled-intensive services and manufacturing is due to higher income elasticity of demand for these products. In most regions the skill intensity of financial and other services is twice as high as that of agriculture.
[6] Annex x provides the list of countries in each income group.
[7] Before the crisis, local governments financed 100 percent of the benefits under the GMI program. The decline in tax revenues during the crisis imposed considerable fiscal pressures on local governments, which are required to balance their budgets. Without central government support, the crisis would have required local governments to ration benefits severely, despite the rise in the threshold for program eligibility.
[8] The World Bank Group's 2016 World Development Report will be devoted to assembling the best available evidence on this critical topic.
[9] The UN Statistical Commission, through the System of Environmental and Economic Accounts, has established a set of standardized accounting rules and methodologies to produce statistics on the role of the environment in national economies.
[10] http://www.worldbank.org/en/news/feature/2013/10/17/india-cyclone-phailin-destruction-preparation.
[11] See http://www.thepmr.org/.
[12] http://www.worldbank.org/en/news/press-release/2013/09/10/creditos-por-reduccion-de-carbono.

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Goals and Targets from the Millennium Declaration*

MDG 1 Eradicate extreme poverty and hunger

TARGET 1.A Halve, between 1990 and 2015, the proportion of people whose income is less than US$1.25 a day.

TARGET 1.B Achieve full and productive employment and decent work for all, including women and young people.

TARGET 1.C Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

MDG 2 Achieve universal primary education

TARGET 2.A Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

MDG 3 Promote gender equality and empower women.

TARGET 3.A Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015.

MDG 4 Reduce child mortality

TARGET 4.A Reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate.

MDG 5 Improve maternal health

TARGET 5.A Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.

TARGET 5.B Achieve by 2015 universal access to reproductive health.

MDG 6 Combat HIV/AIDS, malaria, and other diseases

TARGET 6.A Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

TARGET 6.B Achieve by 2010 universal access to treatment for HIV/AIDS for all those who need it.

TARGET 6.C Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

MDG 7 Ensure environmental sustainability

TARGET 7.A Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.

TARGET 7.B Reduce biodiversity loss, achieving by 2010 a significant reduction in the rate of loss.

TARGET 7.C Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation.

TARGET 7.D Have achieved a significant improvement by 2020 in the lives of at least 100 million slum dwellers.

MDG 8 Develop a global partnership for development

TARGET 8.A Develop further an open, rule-based, predictable,

nondiscriminatory trading and financial system (including a commitment to good governance, development, and poverty reduction, nationally and internationally).

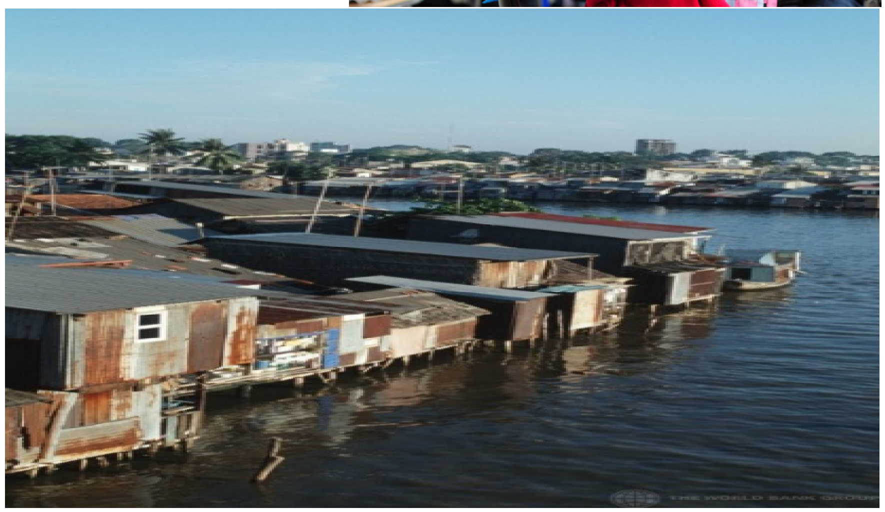
TARGET 8.B Address the special needs of the least-developed countries (including tariff-and quota-free access for exports of the least-developed countries; enhanced debt relief for heavily indebted poor countries and cancellation of official bilateral debt; and more generous official development assistance for countries committed to reducing poverty).

TARGET 8.C Address the special needs of landlocked countries and small island developing states (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the 22nd special session of the General Assembly).

TARGET 8.D Deal comprehensively with the debt problems of developing countries through national and international measures to make debt sustainable in the long term.

TARGET 8.E In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries.

TARGET 8.F In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.



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* All regional and global poverty estimates in this chapter are based on an internal working version of the World Bank's PovcalNet database, with data as of August 2014. While every effort was made to use the most up-to-date data available, the estimates presented in this report should be seen as approximate; the official global and regional poverty estimates will be published in the final publication of the Global Monitoring Report. Concurrent with the publication of the Global Monitoring Report, the World Bank's PovcalNet website will be updated.

A1 The MDG target year of 2015 is fast approaching. Four MDG targets have been met ahead of the 2015 deadline: those for extreme poverty reduction (MDG 1.a), gender equality in primary education (MDG 3.a), access to safe drinking water (MDG 7.c) and improving the lives of at least 100 million slum dwellers (MDG 7.d). But progress on the remaining MDGs has been lagging, especially for the education and health-related MDGs. Various initiatives to help countries accelerate progress will have positive effects but are unlikely to provide enough momentum to bring additional MDGs over the finish line globally before the end of 2015.

A2 More needs to be done and can be done to improve MDG attainment. It has assumed urgency – primarily out of concern for the many people who have not realized the very basic milestones in human development that the MDGs represent. Various initiatives have merged across the globe to accelerate progress (see GMR 2013), including the United Nations System Chief Executives Board for Coordination[1] (CEB) review of MDG implementation at the country level, proposed in November 2012 by the UN Secretary-General and the World Bank Group President. The CEB initiative, co-led by the World Bank Group President and the UNDP Administrator, brings together a broad spectrum of UN agencies at the highest level to identify concrete areas for potential joint action from the UN and the World Bank Group to assist countries in accelerating MDG progress. Three rounds of the review exercise have taken place so far, featuring eleven countries from different regions and covering MDG targets on poverty and hunger, maternal and child health, and sanitation, with a special focus on women and girls' empowerment, building resilience and addressing inequalities. Ghana, Niger and Tanzania took part in the first review in April 2013; Burkina Faso, El Salvador, Indonesia, Kyrgyzstan and Nepal were included in the second review in November 2013; and Benin, Colombia and the Philippines were considered in May 2014. National and/or sub-national MDG acceleration plans prepared using the MDG Acceleration Framework (MAF) have been the basis for the exercise in each country, allowing the UN system to build upon a set of multi-sectoral interventions and partnerships, including those with government planning, finance and sector ministries (CEB MDG Acceleration Review 2014).

Box A1 The CEB and the MDGs

The UN System Chief Executives Board for Coordination (CEB) has initiated a process to help organize the development community's assistance to countries in accelerating progress towads the MDGs. This process involves asking fundamental questions: What stands in the way of achieving the MDGs at the country level? How can obstacles be removed? How can successful initiatives be scaled up? What are the incentive mechanisms that can be put in place to foster cross-cutting collaboration among government entities, the UN system and broader development partners to build systems that are resilient? How can real innovation and creativity to address development challenges be encouraged? How can the multilateral system better support countries?

In light of the answers to these questions in a specific context, the WBG and the UNDP jointly prepare a matrix of concrete action plans to improve a particular MDG indicator in a particular country. These action plans, and the support that could be provided throughout the family of UN agencies, are discussed at the semiannual CEB meetings. The Chief Executives so far have reviewed 11 country case studies,[2] focusing on ways to accelerate progress on poverty and hunger, maternal and child health, water and sanitation. This exercise has generated several broad insights on progress towards the MDGs (See also box A2, box A5, box A7 for details).

The odds of achieving the MDGs are greatly improved where there is sustained economic growth, where effective institutions foster peace and stability, and where good policies promote inclusion, reduce inequality, and build resilience.

A lack of data and good quality statistical analysis poses a serious constraint to timely monitoring, policy development, and the ability to target interventions where they are most needed.

While the MDGs are expressed as sector specific goals, they cannot be achieved in sector silos. For example, well designed social protection programs can help households achieve health, education and nutrition goals; improved resource management and budget planning can help expand social services; and girls' education, security, and human rights are essential to improve maternal and child health outcomes.

The multilateral system can perform better. Becoming "fit for purpose" requires agencies to collaborate on high-level goals, to understand the complementary roles of agencies, and to address weaknesses. The MDG review at the country level has revealed little-known programs worthy of being expanded, and has generated a deeper appreciation of the roles and capabilities of the many institutions in the UN and Bretton Woods system

Source: United Nations. 2008. *Report of the Secretary-General on the Indicators for Monitoring the Millennium Development Goals*. E/CN.3/2008/29. New York.

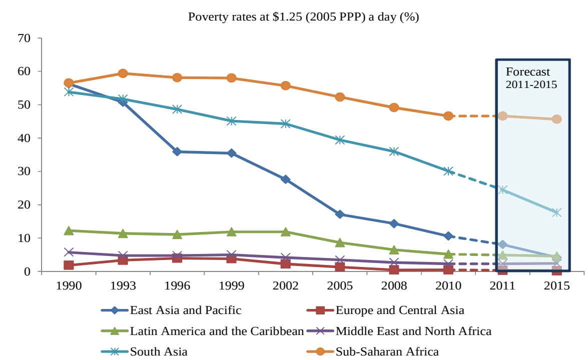
Note: The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries, including 147 heads of state and government, in September 2000 (http://www.un.org/millennium/declaration/ares552e.htm) and from further agreement by members states at the 2005 World Summit (Resolution adopted by the General Assembly—A/RES/60/1). The goals and targets are interrelated and should be seen as a whole. They represent a partnership between the developed countries and the developing countries "to create an environment—at the national and global levels alike—which is conducive to development and the elimination of poverty."

Source: World Bank Group and UNDP staff

MDG1 Eradicating extreme poverty and hunger

A3 The share of developing countries' population living on less than $1.25 a day fell from 43 percent in 1990 to 17 percent in 2011, leaving 1 billion people in extreme poverty. Although the world reached the MDG target of halving the 1990 extreme poverty rate five years ahead of the 2015 deadline, progress on poverty reduction has been uneven across the globe. The relatively more affluent regions of East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, and Middle East and North Africa have already met the target. South Asia has also just met the target, reaching a 24.4 percent poverty rate in 2011. However, World Bank projections indicate that the sub-Saharan African region as a whole is not likely to meet the target by 2015 (figure A1).

Figure A1 Poverty rates continue to fall, but progress is uneven



Source: World Bank, PovcalNet: an online poverty analysis tool, http://iresearch.worldbank.org/PovcalNet/index.htm.

Note: Regional poverty rates are measured at $1.25 (2005 ppp) a day, with forecasts to 2015 (to be updated).

* Surveys cover less than half of the population.

A4 Since 1990, the number of extreme poor has fallen in all regions except sub-Saharan Africa, where population growth exceeded the rate of poverty reduction, increasing the number of extremely poor people from 287 million in 1990 to 413.6 million in 2011. South Asia is the second region with the largest number of poor people after sub-Saharan Africa, with 397.8 million people living on less than $1.25 a day in 2011, down from a peak of 640 million in 2002.

Box A2 Reducing poverty in Tanzania requires more effective management, resources, and technical assistance

The CEB process has generated important insights into how to accelerate poverty reduction in countries that are falling short of the goal. Tanzania is not expected to meet its target of a 19.3 percent headcount poverty ratio by 2015. Poverty declined only marginally from 2000-07 (from 36 percent to 34 percent) and has stagnated since, despite GDP growth exceeding 6 percent a year from 2001-09. Moreover, rapid population growth (2.7 percent in 2012) has resulted in a rise in the number of Tanzanians living in poverty from 8.5 million in 1992 to 15 million in 2011.

Key bottlenecks and gaps identified

- **Policy and planning**: coordination is weak; government guidelines exclude marginalized groups from participation in formal processes; there is no strategy for dealing with land issues.
- **Budget and financing**: budgetary allocations for purchasing agricultural inputs or developing agricultural

markets are inadequate; the poor condition of public goods in rural areas discourages private investment.

- **Service delivery**: domestic production of fertilizers and improved seeds is inadequate; the government fails to adhere consistently to Targeted Fertilizer Program - SMART – Guidelines; the voucher scheme has been plagued by leakages and abuses; there are not enough professionals, such as extension workers; the low agro-processing capacity has led to post-harvest losses.
- **Service utilization**: small farmers cannot afford to participate in programs (50 percent cost sharing is required); small farmers also don't know how to optimize the use of improved agriculture technologies, and lack the access to extension services required to learn; nutrition awareness is low.

The CEB recommendations and commitments to assist Tanzania

Various UN agencies have made specific commitments to help reduce poverty and hunger in Tanzania. Examples include:

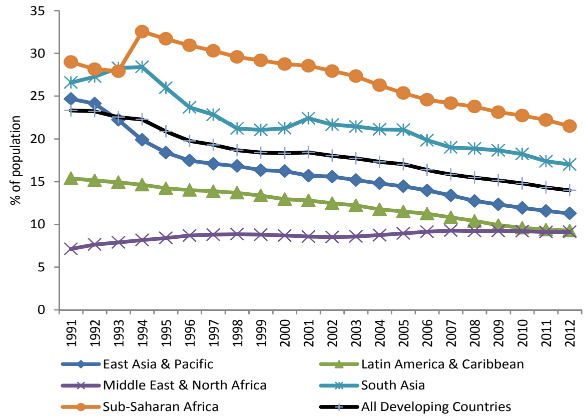
- Increase assistance to the poor and vulnerable by scaling up conditional cash transfer programs coupled with nutrition interventions, through expanding coverage of the Tanzania Social Action Fund. The number of households registered under the program recently reached 130,000, compared to 20,000 less than a year ago. It is expected that an additional 150,000 households will be included by August 2014, and a total of a half million households by the end of this year. The goal is to achieve full coverage of Tanzania's poorest - 1 million households - by mid-2015.
- Promote awareness of post-harvest management techniques, including packaging, storage and transportation.
- Strengthen the Tanzania Horticulture Association (TAHA) and the Horticultural Development Council of Tanzania (HODECT) to serve as the link between smallholder horticulture producers and hotels.
- Identify, document and share Good Agricultural Practices (GAP) in key sub-sectors (cassava, rice, horticulture, and livestock) for adoption and scaling up (FAO, UNDP).
- Support an agricultural marketing strategy.
- Increase income and livelihood opportunities for the poor
- Increase the capacity of the Vice President's Office (VPO), the Prime Minister's Office Regional Administration and Local Government (PMO-RALG) and the Ministry of Finance and Economic Affairs (MoFEA) to coordinate and lead the implementation of key national environmental policies and plans.
- A key conclusion is that the increased resources required for poverty reduction in Tanzania need to be complemented with technical support to improve the productivity of poor farmers.

Source: World Bank Group and UNDP staff

A5 MDG 1 also calls for the share of people who suffer from hunger to be halved by 2015. One measure of hunger is the prevalence of undernourishment: the percentage of the population whose food intake is insufficient to meet dietary energy requirements continuously. Undernourishment reflects a shortage of food energy to sustain normal daily activities, and is affected both by changes in the average amount of food available and by its distribution. On average, the developing world has seen a decrease of the prevalence of undernourishment from 23 percent in 1991 to 14 percent in 2012 (figure A2). The decline has been steady in most developing regions, although in Middle East and North Africa the situation appears to have worsened.

Figure A2 **Undernourishment has declined steadily in most regions.**

Share (%) of population that are undernourished by region, 1991-2012

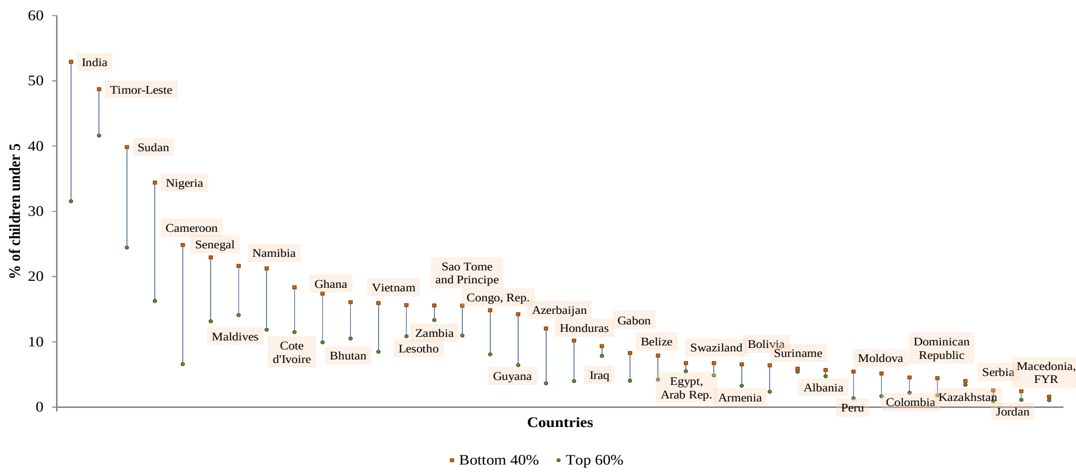


Source: World Bank, World Development Indicators Database 2014. Data series starts from 1991 and are originally from Food and Agriculture Organization, The State of Food Insecurity in the World. No sufficient country data are available to calculate the aggregate values for Europe and Central Asia.

A6 Malnourishment is closely related to income. Young children in the poorest households are 2 to 3 times more likely to be malnourished than those in the highest wealth quintile (UN 2012). The prevalence of underweight for children under five years old is significantly higher among the bottom 40 percent than in the top 60 percent (by household income). This difference is larger in low-income countries than in middle-income countries. In Bangladesh, 46 percent of children in households in the two lowest wealth quintiles are stunted, in comparison to 60 percent of children belonging to the highest wealth quintile. Progress in reducing stunting in this and other countries has been fastest among better-off households (figure A3).

Figure A3 **Prevalence of children underweight is also higher among the bottom 40 percent for middle-income countries (most recent year from 2005-2012)**

Prevalence of underweight by income category (% of children under age 5) for middle-income countries

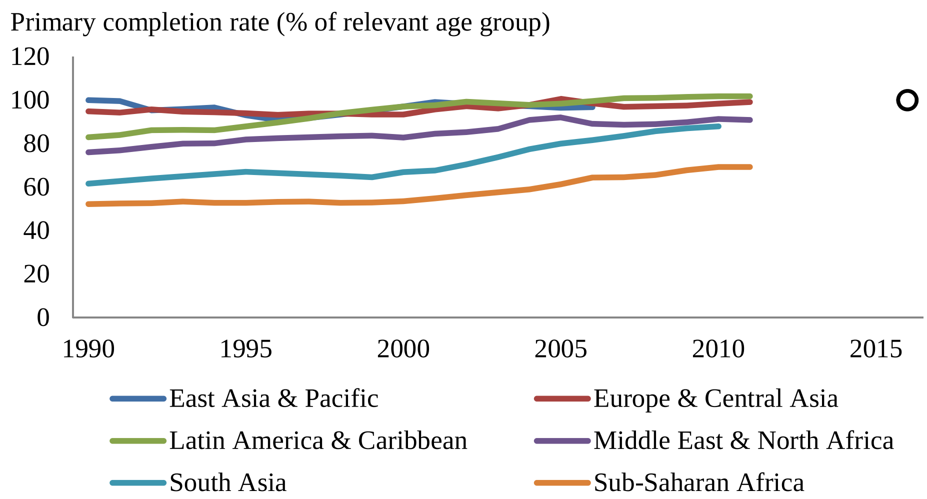


Source: World Bank staff calculations based on data from Health Nutrition and Population Statistics by Wealth Quintile, World Bank, 2014.

MDG2 Achieve universal primary education

A7 The commitment to provide primary education to every child is the oldest of the MDGs, having been set at the first Education for All conference in Jomtien, Thailand, more than 20 years ago. Achieving the 2015 target that everyone, boys and girls alike, will be able to complete a full course of primary education has often seemed tantalizingly near. However, the target has been reached only in Latin America and the Caribbean, although East Asia and Pacific and Europe and Central Asia are close. Progress among the poorest countries, slow in the 1990s, has accelerated since 2000, particularly in South Asia and sub-Saharan Africa, but full enrollment remains elusive (figure A4). Many children start school but drop out before completing the primary stage, discouraged by cost, distance, physical danger, and failure to progress. Even as countries approach the MDG target, the education demands of modern economies are expanding. In the 21st century, primary education will be of value mostly as a stepping stone toward secondary and higher education.

Figure A4 Achieving universal primary education is tantalizingly close



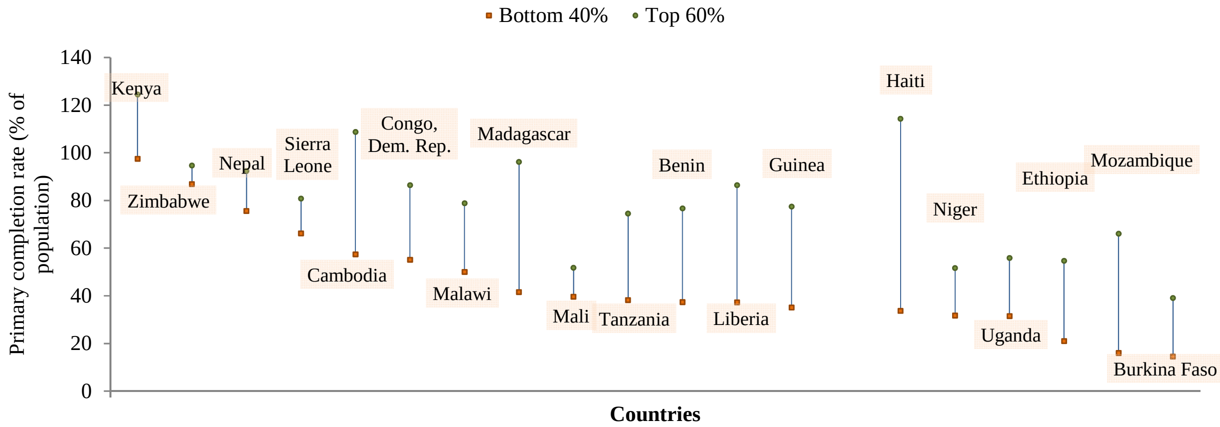
Source: UNESCO Institute of Statistics and World Development Indicators database.

Note: Progress assessment in East Asia and Pacific does not include China, which is believed to have close to 100 percent completion rates.

A8 Access to primary education is inequitably distributed across households. For example, in Mali, Niger, Rwanda, and Uganda, primary completion rates for children in the lowest two quintiles of the wealth distribution are between 20 and 30 percent, while for the highest quintile primary completion rates range between 70 and 100 percent (figure A5). Even in middle-income countries, where access to basic goods and services is nearly universal, inequality of opportunity is widely prevalent in access to primary education. This is particularly true in countries such as Albania, Lesotho, Nicaragua, Nigeria, Zambia, among others, where children in the bottom 40 percent of the wealth distribution have a primary completion rate of around 50 percent, while primary completion rates for children in the highest 20 percent are 90 percent or more (figure A6) (World Bank 2013).

Figure A5 Primary education is inequitably distributed across households in low-income countries

Primary completion rate (% of relevant age group) for low-income countries (most recent year from 2000-2011)

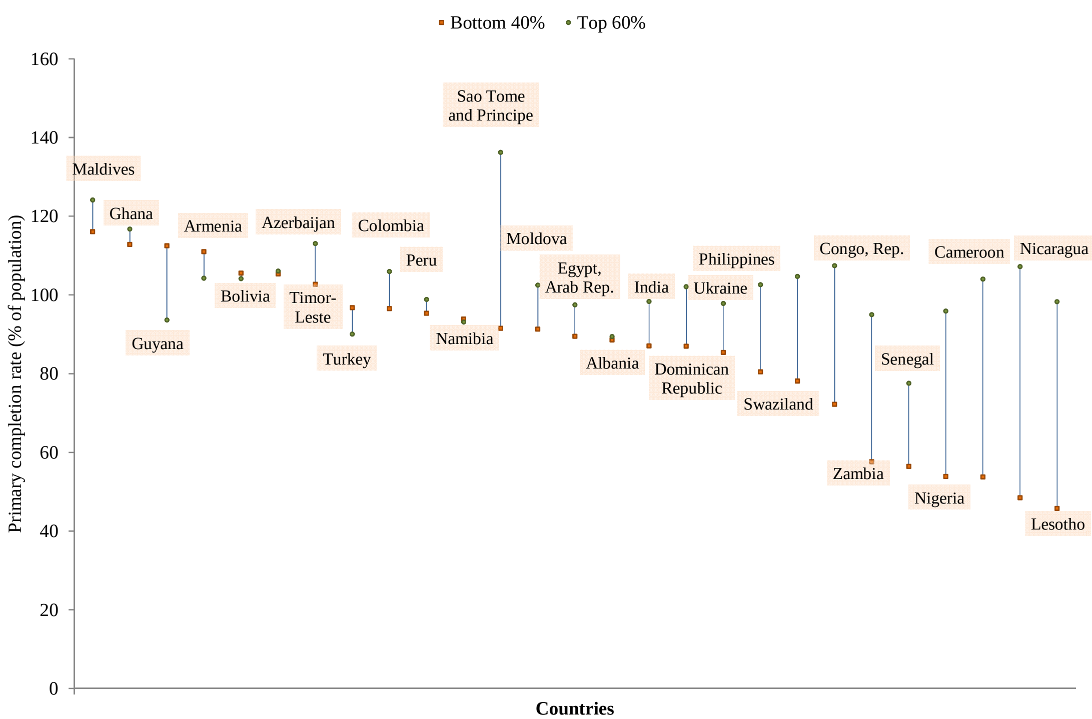


Source: World Bank staff calculations based on Edstats, World Bank, 2014.

Note: The completion rate can exceed 100 percent if there are many overage students in the last grade of primary school.

Figure A6 The gap is smaller for middle-income countries

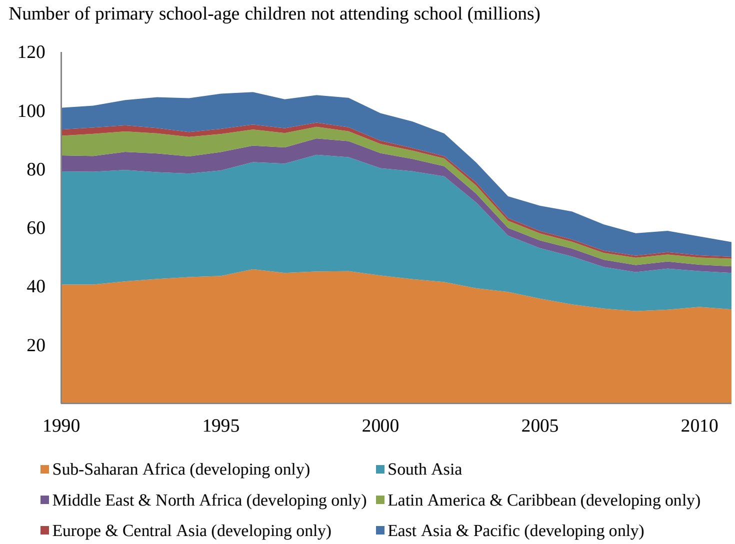
Primary completion rate (% of relevant age group) for middle-income countries (most recent year from 2000-2011)



Source: World Bank staff calculations based on Edstats, World Bank, 2014.*Note*: The completion rate can exceed 100 percent if there are many overage students in the last grade of primary school.

A9 Many children never attend school, or start school but leave it early. In developing countries, the number of primary school-age children not attending school has almost halved since its peak. Above all, a large reduction was made in South Asia in early 2000's, driven by progress in India. However, 55 million children still remain out of school (figure A7). The need for child labor or other obstacles, such as the lack of suitable facilities, absence of teachers, and school fees, may discourage parents from sending their children to school.

Figure A7 55 million children are still not in school



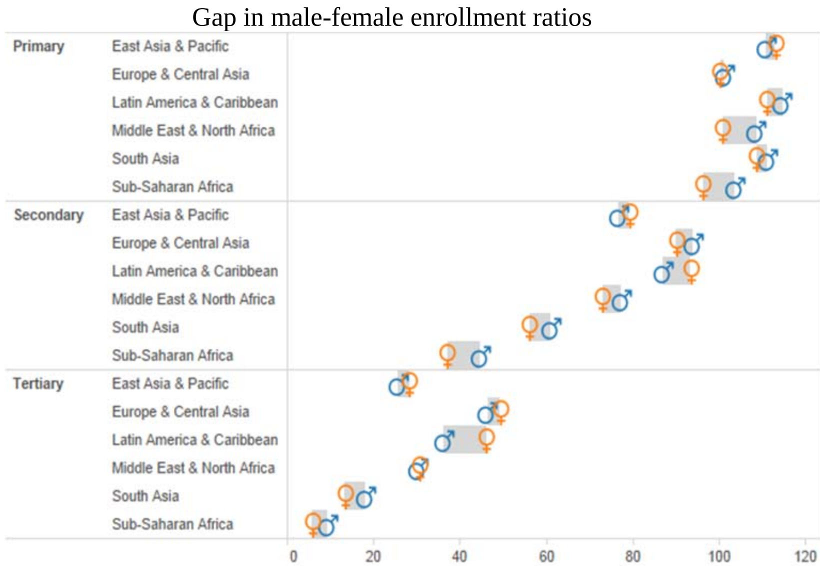
Source: UNESCO Institute of Statistics and World Development Indicators database.

MDG3 Promote gender equality and empower women

A10 Women make important contributions to economic and social development. Expanding opportunities for women and girls in the public and private sectors is a core development strategy, which not only benefits girls and women, but also improves society more broadly.

A11 The target for MDG3 is to eliminate gender disparities in all levels of education by 2015. Girls have made substantial gains in primary and secondary school enrollment. The primary school enrollment rate of girls in developing countries rose from 86 percent of that of boys in 1990 to 97 percent in 2011. Similar improvements have been made in secondary schooling, where girls' enrollments have risen from 77 percent of boys' in 1990 to 96 percent in 2011. In many countries, girls' secondary school enrollments have surpassed those of boys. Progress has been greatest in richer countries. In upper-middle-income countries, girls' enrollments in secondary schools now exceed those of boys. However, Sub-Saharan Africa continues to lag behind (figure A8). Low-income countries lag far behind, and only 19 percent of countries reached or exceeded equal enrollment for girls in primary and secondary education, while 37 percent of middle-income countries have reached this threshold. Poor households are less likely than wealthy households to enroll and keep their children in school, and girls from poor households are the worst off.

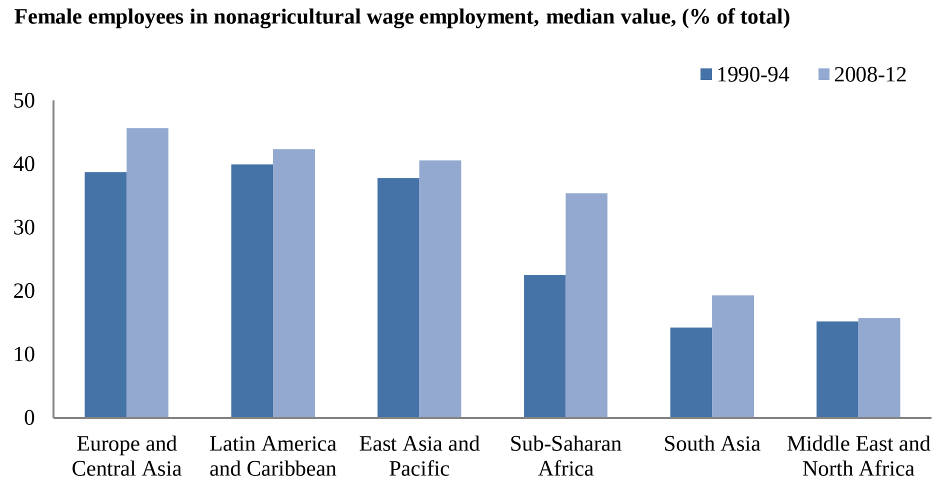
Figure A8 Gap in male-female enrollment ratios by level of education has been declining, however sub-Saharan Africa continues to lag behind, 2011



Source: UNESCO institute for statistics and World Development Indicators database.

A12 Although the gender gap in education has narrowed, in the labor market inequalities persist. While women work long hours and contribute much to their families' welfare, many are in the informal sector or are unpaid for their labor. Women's share in paid employment in the non-agricultural sector has risen marginally, but remains less than 20 percent in South Asia and in the Middle East and North Africa, where women's full economic empowerment remains a distant goal. Europe and Central Asia has the largest share of women in nonagricultural wage employment, and employment in the non-agricultural sector is split almost equally between women and men (figure A9).

Figure A9 Women's share in the non-agricultural sector has risen marginally

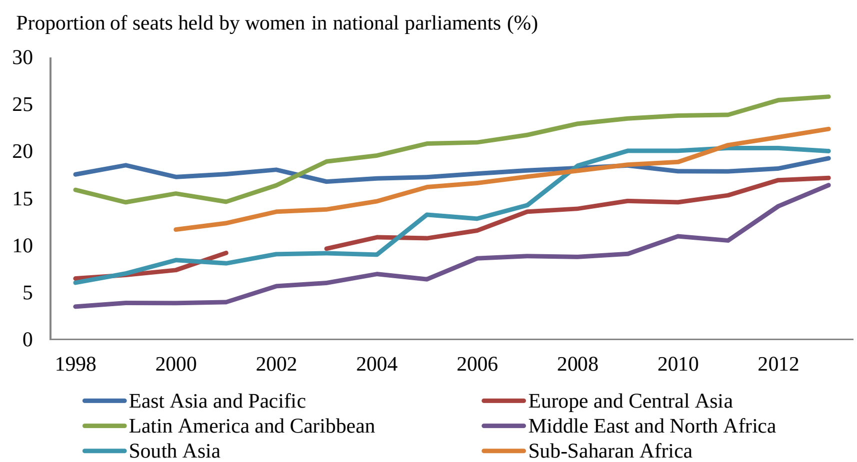


Source: ILO Key Indicators of Labour Market (KILM), 8th edition and World Development Indicators database.

A13 An increasing number of women are participating at the highest levels of public life. The share of parliamentary seats held by women continues to increase. Latin America and the Caribbean, where women hold 26 percent of all parliamentary seats, remains in the lead. The most impressive gains have been made in South Asia, where the number of seats held by women more than quadrupled between 1998 and 2013 (figure A10). In Nepal, women held one-third of parliamentary seats in 2013. Globally, Rwanda leads the way and is ahead of high income countries: at least 56 percent of its parliamentary seats have been held by women since 2008, and this figure increased to 64 percent in 2013. The Middle East and North Africa lags far behind.

Figure A10 An increasing number of women are participating at the highest levels of public life

Share of seats held by women in national parliaments (%), 2013



Source: Inter-Parliamentary Union (IPU) and World Development Indicators database.

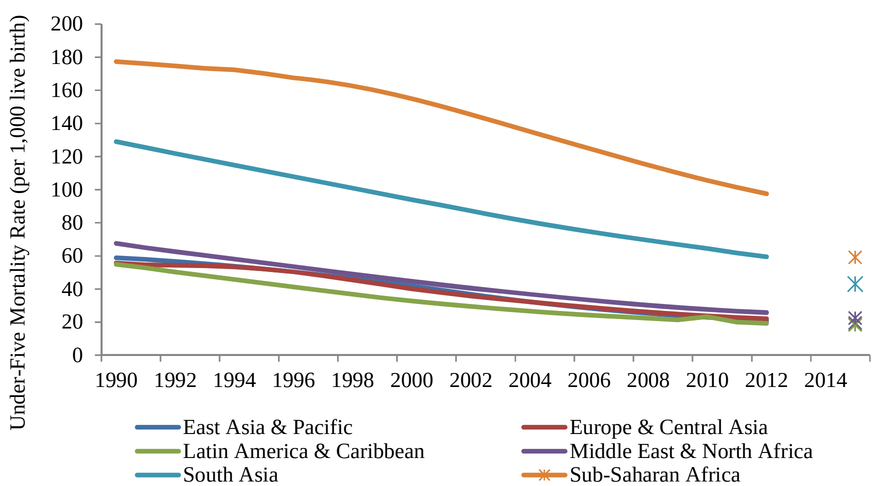
MDG4 Reduce child mortality

A14 The world has made remarkable progress in reducing under-five mortality in the last two decades. Although 216 million children died before the age of five between 1990 and 2012, the mortality rate fell from 90 deaths per 1000 live births in 1990 to 48 in 2012. The total number of under-five deaths also dropped from 12.6 million in 1990 to 6.6 million in 2012. In other words, 17,000 fewer children died each day in 2012 compared to 1990. Moreover, even some low-income countries, for example Bangladesh, Ethiopia, Liberia, Malawi, Nepal, and Tanzania were able to cut the under-five mortality rate by two-thirds by 2012 (figure A11).

A15 However, reducing under-five mortality by two thirds by 2015 remains a huge challenge. Developing countries as a group reduced the under-five mortality by 48 percent from 1990 to 2012, a figure which is far below the MDG target. South Asia and Sub-Saharan Africa, which account 81 percent of all child deaths in the world, face the biggest challenge in achieving the fourth MDG. Moreover, Sub-Saharan Africa is the only region which reduced the mortality rate by less than half from 1990 to 2012 (figure A11). Therefore, there is a need to increase efforts and accelerate progress, especially in these two regions, in order to achieve the fourth MDG target by 2015.

Figure A11 Under-five mortality rate continued to decline

Under-five mortality rate (per 1,000 live births)

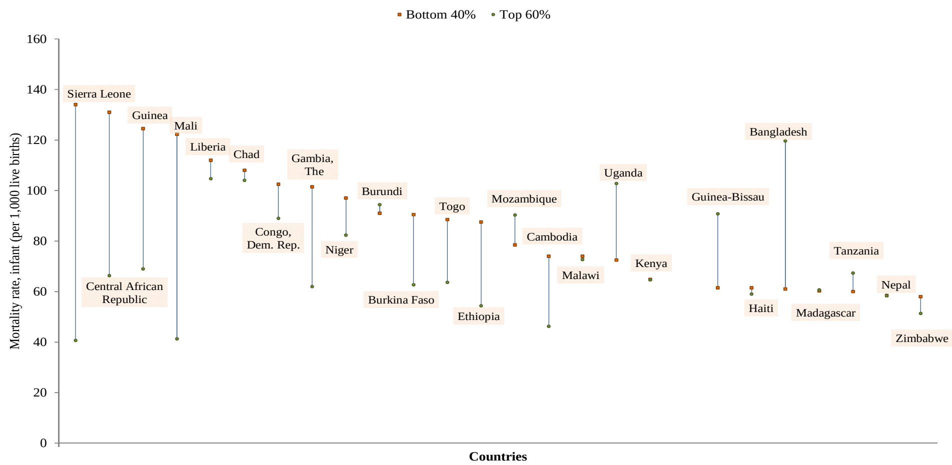


Sources: UN Inter-agency Group for Child Mortality Estimation and World Development Indicators

A16 The infant mortality and under-5 mortality rates for children in the bottom 40 percent of the wealth distribution are almost twice the rates among children in the top 60 percent (including all countries with data available between 2005 and 2012, (figure A12). In 40-50 percent of countries, child health status indicators such as mortality have improved less rapidly among the poorest 40 percent than in the rest of the population, so that relative inequality has risen (Wagstaff et al. 2014).

Figure A12 Infant mortality rates vary significantly between the bottom 40 percent and top 60 percent

Infant mortality rate for low-income countries (most recent year from 2005-2012)

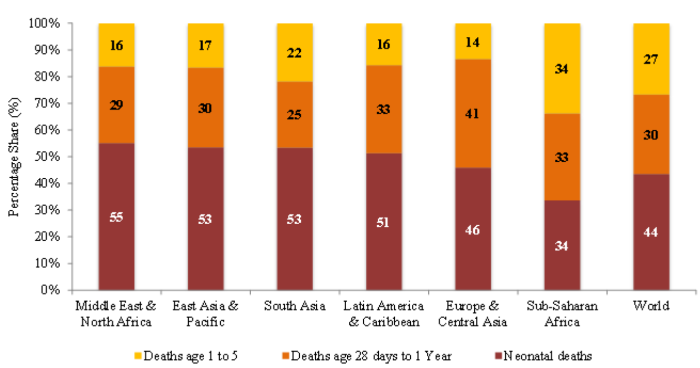


Source: World Bank staff calculations based on data from Health Nutrition and Population Statistics by Wealth Quintile, World Bank, 2014.

A17 Resources devoted to reducing child mortality rates should focus on the first month of life (the neonatal period). In 2012, about 44 percent of the children who died before the age of five died within the neonatal period, and in four regions neonatal deaths accounted for more than half of deaths among children under five (figure A13). Although the total number of neonatal deaths worldwide declined from 4.6 million in 1990 to 2.9 million in 2012, the neonatal share of under-five mortality increased from 37 percent to 44 percent. Thus progress in reducing neonatal mortality has been slower than progress in reducing total under-five mortality. Many of the causes of death of children during the neonatal period, including sepsis and meningitis (12 percent), pneumonia (10 percent) and diarrhea (2 percent), are diseases or conditions that are preventable or treatable with cost-effective interventions. Therefore, investment and efforts focused mainly on reduction of neonatal mortality are crucial if the world is to keep its promise to the youngest generation by achieving MDG 4 by 2015.

Figure A13 Most under-five deaths occur during the neonatal period

Under-five mortality deaths (%)



Sources: UN Inter-agency Group for Child Mortality Estimation and World Development Indicators.

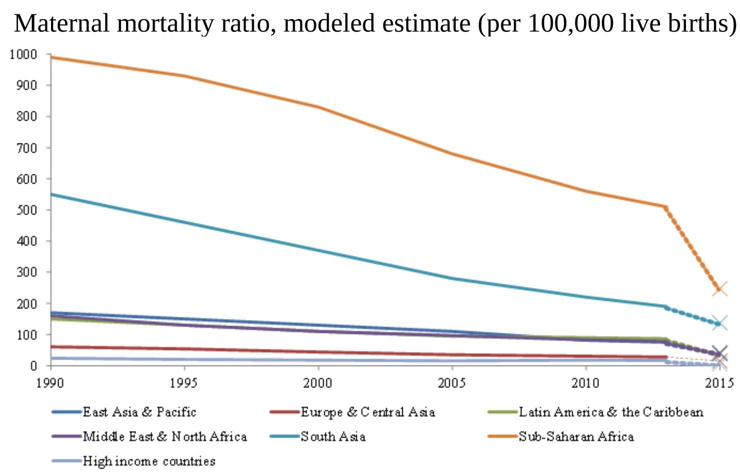
MDG5 Reduce maternal mortality

A18 Every day, 800 women die from pregnancy-related causes during pregnancy, childbirth or postpartum. Most maternal deaths occurred in developing countries. What makes maternal mortality such a compelling problem is that it strikes young women experiencing a natural life event. They die because they are poor, malnourished, weakened by disease, or exposed to multiple pregnancies, at the same time lacking access to trained health care workers and modern medical facilities.

A19 The global maternal mortality rate fell by 45 percent between 1990 and 2013. Progress in reducing maternal mortality rates has recently accelerated in most regions, but overall has been slower than the progress required to achieve the MDG target of a 75 percent reduction from 1990 levels by 2015.

A20 An estimated 289,000 maternal deaths occurred worldwide in 2013. Some 62 percent of these were in sub-Saharan Africa, compared to 42 percent in 1990. Sub-Saharan Africa is the only region where the share has increased this much, indicating that the reduction of maternal deaths is slower than the other regions (figure A14-figure A15).

Figure A14 Maternal mortality has been falling but large regional differences persist

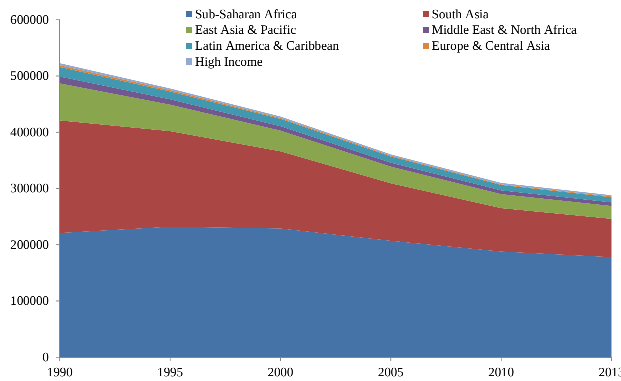


Source: UN Maternal Mortality Estimation Inter-agency Group and World Development Indicators database.

Note: In the figure 'X' indicates MDG target level by 2015.

Figure A15 **Most maternal deaths are in sub-Saharan Africa and South Asia**

Number of global maternal deaths by region



Sources: UN Maternal Mortality Estimation Inter-agency Group and World Development Indicators database.

A21 Death in childbirth is a rare event in rich countries, where there are typically fewer than 15 maternal deaths for every 100,000 live births, an average that has remained essentially constant for more than two decades. The situation is strikingly different in poor countries: women in sub-Saharan Africa face a lifetime risk of maternal death that is about 90 times greater than for women in high income countries. Maternal mortality rates are particularly high in fragile and conflict-affected states.

Box A3 **Improving maternal and neonatal health in El Salvador requires a comprehensive approach**

The CEB review underlined the urgency of addressing high maternal and neonatal mortality rates in El Salvador. Key challenges include high rates of maternal deaths among adolescents, who account for 28 percent of maternal deaths; high rates of preventable maternal deaths (59.7 percent of maternal deaths are viewed as preventable); and high maternal and neonatal mortality rates in rural areas and in provinces with higher health and social exclusion levels. The government's program to reduce maternal and neonatal mortality emphasizes youth, women, and children in rural areas. While the Ministry of Health will lead efforts to address these issues, collaboration with donors, NGOs, and other government agencies (including those involved in food provision to enrolled children, micronutrient supplementation, deparasitation, safe water provision, sexual and reproductive health education in schools, and social protection for pregnant women and for children under two years of age) will be critical. A thorough risk analysis should guide the implementation of the acceleration plan, especially in light of the 2014 presidential elections. Further resource mobilization is also needed.

Key bottlenecks and gaps identified

- **Policy and Planning:** the country lacks a strong rights-based legal framework.
- **Budget and Financing:** tax revenues are low; budget allocations for maternal and neonatal health interventions are inadequate; the incidence of health expenditures across sub-regions is unequal.
- **Service delivery:** regulatory requirements are ignored; human resources management is poor; institutional and operational limitations abound; planning for the delivery of integrated health care services and for stocking up basic supplies is poor; clinical management is deficient.
- **Service utilization:** gang-related violence hinders service demand; social exclusion is compounded by socio-economic determinants and affected by the healthcare system structure; gender bias and stigma prevent the advancement of sex education and behavioral change.

CEB recommendations and commitments

Examples of CEB commitments to address maternal and neonatal mortality include:

- Adoption of a multisectoral approach to addressing maternal and neonatal mortality, integrating efforts to improve food security and sanitation.
- Increasing technical assistance to the Ministry of Health, including efforts by the WB, WHO, UNFPA to hire new personnel, strengthen procurement, and improve equipment maintenance; development of a surveillance system for maternal and neonatal morbidity and mortality by the WHO/PAHO, WB, UNICEF, and UNFPA; and UNOPS support for health infrastructure procurement.
- Efforts to ensure food safety and nutrition for pregnant women, neonates and premature children up to two years old, including a national program set up by WFP and a complementary program to provide food in urban marginalized neighborhoods by the WB.
- The integration of human rights concerns, particularly through addressing gender-based violence, citizen security, and the social inclusion of youth at risk. WHO/PAHO and UN Women are helping the Ministry of Health design a gender and health policy, UNFPA and UN Women are designing an institutional framework to address gender based violence, and the UNDP is helping to promote social inclusion of youth at risk.
- Implementation of a comprehensive model for the provision of sexual and reproductive health services for adolescents and youth nationwide, including support by WHO/PAHO and UNFPA to strengthen educational curricula and train health facilitators in methodologies for adolescent and youth health care.
- Development of a multidimensional approach to poverty reduction, including efforts by the World Bank and UNDP to facilitate a fiscal policy dialogue and by the UNDP to develop a methodology to measure poverty that goes beyond simply the level of income.

Remaining major challenges include strengthening the management capacity of maternity units and improvement of decision-making processes through information systems and operational research, designing a supply chain for drugs and equipment, and the provision of additional resources to expand sexual and reproductive health activities to municipalities and rural areas.

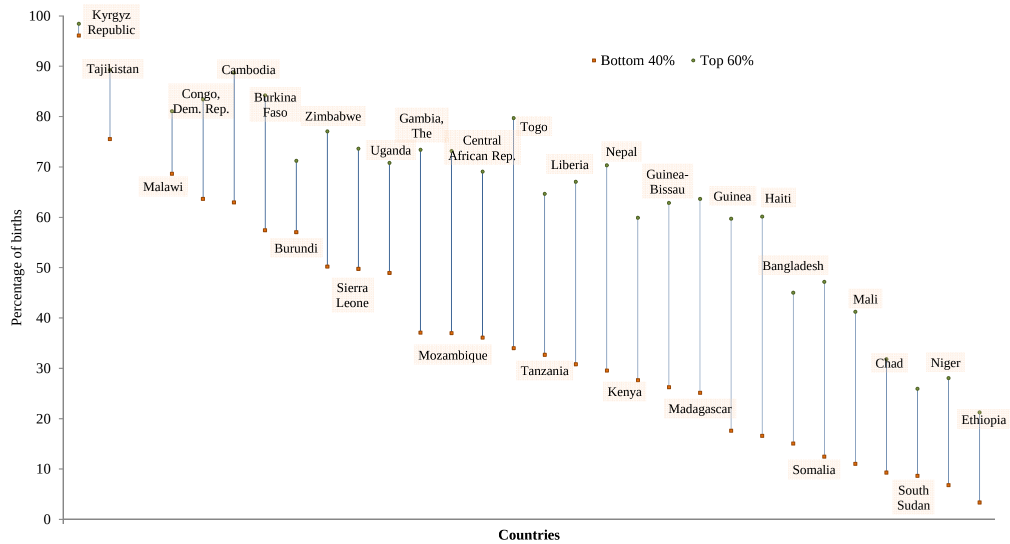
An integrated approach to improving health services, nutrition, and the protection of women, in the context of improved public sector management, is essential to reduce maternal and neonatal deaths in El Salvador.

Source: World Bank Group and UNDP staff

A22 Improved maternal health care and lower fertility levels can reduce maternal deaths. Many health problems afflicting pregnant women are preventable or treatable through visits from trained health workers before childbirth. Having skilled health workers present for deliveries is key to reducing maternal mortality, but in South Asia and Sub-Saharan Africa a large share of births are not attended by doctors, nurses, or trained midwives. For the developing world as a whole, children born in the top 60 percent of households are 3.7 times more likely to have been delivered by a skilled birth attendant than children in the bottom 40 percent; this difference is greater in low-income than in middle-income countries (figure A16-figure A17).

Figure A16 **Assistance during birth delivery varies more between income levels on low-income countries**

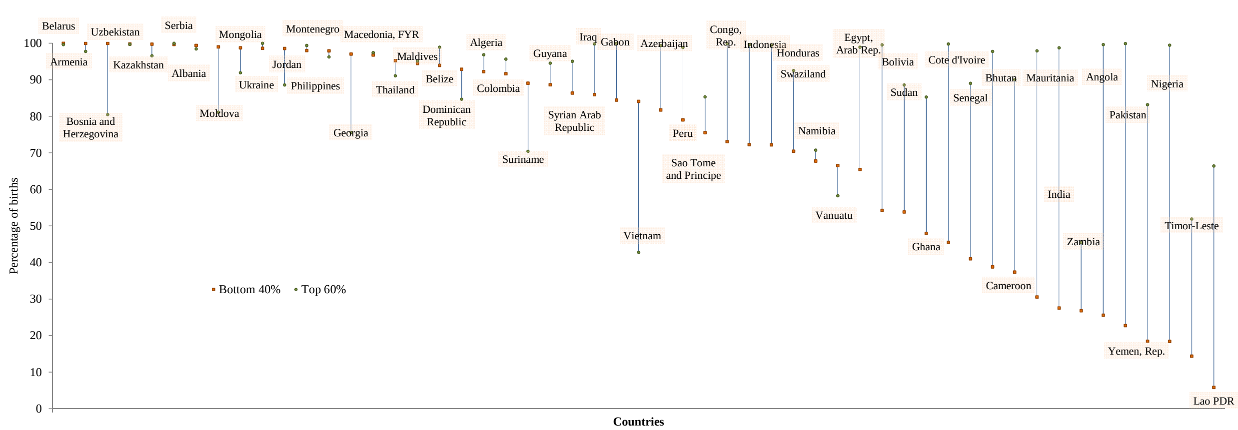
Assistance during birth delivery (any skilled personnel) (% of births) in low-income countries
(most recent year from 2005-2012)



Source: World Bank staff calculations based on data from Health Nutrition and Population Statistics by Wealth Quintile, World Bank, 2014.

Figure A17 **Differences on birth assistance in many middle-income countries is not as high as in low-income countries.**

Assistance during birth delivery (any skilled personnel) (% of births) in middle-income countries
(most recent year from 2005-2012)



Source: World Bank staff calculations based on data from Health Nutrition and Population Statistics by Wealth Quintile, World Bank, 2014.

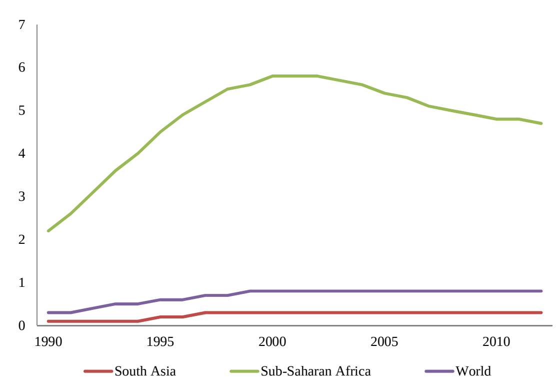
MDG6 Combat HIV/AIDS, malaria, and other diseases

A23 Epidemic diseases exact a huge toll in human suffering and lost opportunities for development. Poverty, armed conflict, and natural disasters contribute to the spread of disease and are made worse by it. In Africa the spread of HIV/AIDS has reversed decades of improvement in life expectancy, left millions of children orphaned, and is draining the supply of teachers and eroding the quality of education. People living with HIV/AIDS, which reduces resistance to tuberculosis, are particularly vulnerable to epidemic diseases (as are refugees, displaced persons, and prisoners living in close quarters and unsanitary conditions).

A24 The statistics on the HIV/AIDS epidemic remain grim. There were an estimated 2.3 million new HIV infections worldwide in 2012, and 35 million people were living with HIV/AIDS. Of these, approximately 58 percent were women and 3.3 million were under the age of 15. Sub-Saharan Africa remains the center of the HIV/AIDS epidemic. However, there is some good news. The number of people newly infected with HIV fell by 33 percent from 2001 to 2012, the share of adults living with HIV/AIDS has begun to fall (figure A18) and the number of AIDS-related deaths has dropped 29 percent since 2005. Access to antiretroviral drugs increased 40-fold from 2002 to 2012. By end-2012, 9.7 million people in developing countries were receiving antiretroviral drugs, while the survival rate of those with access to antiretroviral drugs has increased. Nevertheless, universal treatment remains a distant dream, and HIV treatment coverage for children remained half of coverage for adults in 2012 (UNAIDS 2013).

Figure A18 Bringing HIV/AIDS under control

Prevalence of HIV (% of population aged 15-49)



Source: UNAIDS and World Development Indicators database.

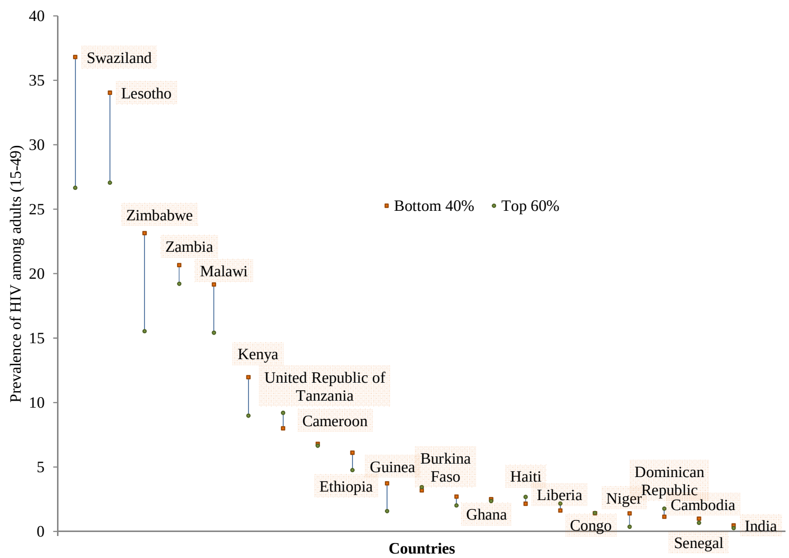
A25 The incidence of HIV infection by income group differs considerably across developing countries. HIV prevalence among people living in the bottom 40 percent of the wealth distribution is higher in countries like Lesotho, Malawi, Swaziland, Zambia, and Zimbabwe, whereas in Cambodia, India, and Senegal this gap between the bottom 40 percent and top 60 percent is very small (figure A19).

A26 Tuberculosis kills some 1.3 million people a year, and 8.6 million people were newly diagnosed with tuberculosis in 2012. However, the incidence of tuberculosis, and the deaths resulting from it are falling (WHO 2013b). If these trends are sustained, the world could achieve the target of halting and reversing the spread of tuberculosis by 2015. Well-managed medical interventions using appropriate drug therapy are crucial to stopping the spread of tuberculosis.

A27 Malaria is endemic in most tropical and subtropical regions, but most of the cases occur in sub-Saharan Africa. There were an estimated 200 million cases of malaria in 2012, causing 600,000 deaths (WHO 2013a). Most deaths from malaria are among African children younger than 5. Even those who survive malaria do not escape unharmed. Malaria takes a large toll on young children and weakens adults, at great cost to their productivity. Repeated episodes of fever and anemia can impair mental and physical development. Over the past decade, substantial progress has been made in scaling up the use of insecticide-treated bed nets, which have proved to be effective in preventing malaria (figure A20). By 2010, over a third of children under five in sub-Saharan Africa slept under insecticide-treated bed nets, substantially higher than a decade earlier. Despite increases in the use of bed nets and in immunization, inequalities in access to these preventatives remain considerable (Wagstaff et al. 2014): children from the richest households in the developing world are 1.2 times more likely to sleep under a bed net, and 1.5 times more likely to be immunized, than children from the poorest 40 percent.

Figure A19 HIV prevalence rate among adults is higher for the bottom 40 percent of the wealth distribution

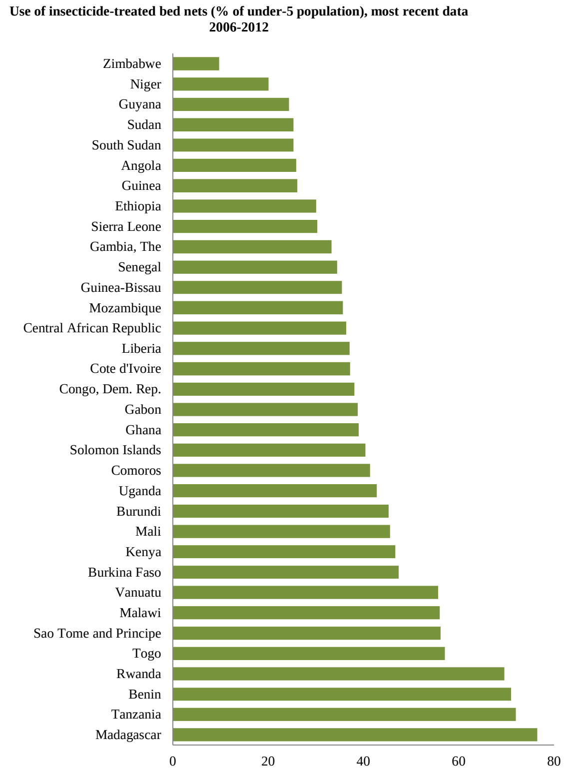
HIV prevalence rate among adults (15-49 years) last year available from 2005-2012



Source: World Bank staff calculations based on data from Health Nutrition and Population Statistics by Wealth Quintile, World Bank, 2014.

Figure A20 **Protecting children from malaria**

Use of insecticide-treated bed nets (% of under-five population)



Sources: UNICEF, World Health Organization and World Development Indicators database. Most recent data: 2006-2012.

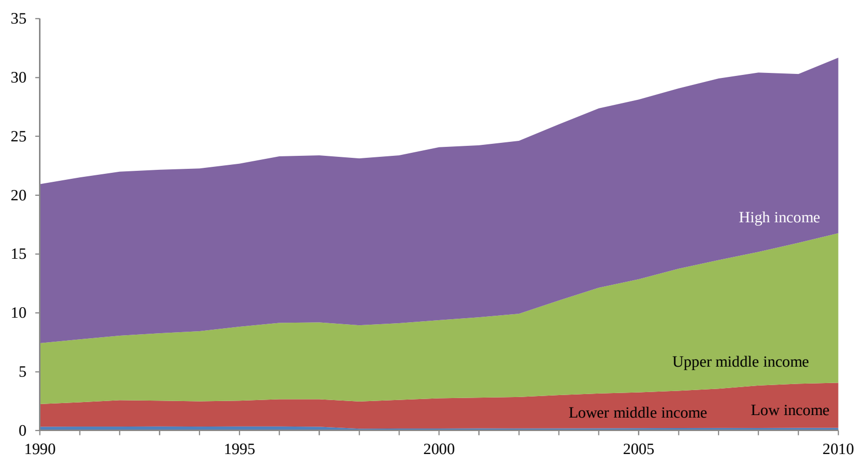
MDG7 Ensure environmental sustainability

A28 The seventh Millennium Development Goal is far-reaching, affecting each person now and in the future. It addresses the condition of the natural and built environments: reversing the loss of natural resources, preserving biodiversity, increasing access to safe water and sanitation, and improving living conditions of people in slums. The overall theme is achieving a sustainable equilibrium in which people's lives can improve without depleting natural and manmade capital stocks.

A29 Most countries have adopted principles of sustainable development and agreed to international accords on protecting the environment. But the failure to reach a comprehensive agreement on limiting greenhouse gas emissions leaves billions of people and future generations vulnerable to the impact of climate change. The effects of climate change are expected to hit hardest in developing countries. Higher temperatures, changes in precipitation patterns, rising sea levels, and more frequent weather-related disasters pose risks for agriculture, food, and water supplies. The world released 33.6 billion metric tons of carbon dioxide in 2010, an increase of 5 percent over the 2009 emissions and a significant rise of 51 percent since 1990–the baseline for Kyoto Protocol requirements (figure A21). Global emissions are estimated at an unprecedented level of 36 billion tons in 2013.

Figure A21 Carbon dioxide emissions continue to surge to unprecedented levels

Carbon dioxide emissions from fossil fuel (billions of metric tons)



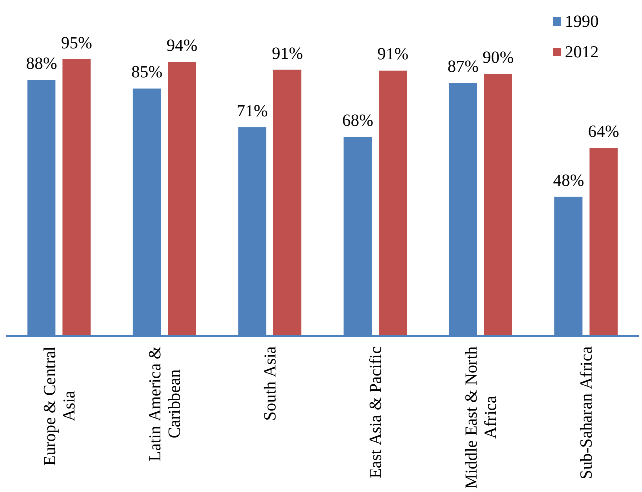
Sources: Carbon Dioxide Information Analysis Center and World Development Indicators database.

A30 MDG 7 includes the target of halving the share of the population without access to improved sanitation and water sources by 2015. However, access to safe water and sanitation remains a problem for people in most developing countries. In 1990, more than 1 billion people lacked access to drinking water from a convenient, protected source. While the share of people in developing countries with access to an improved water source rose from 70 percent in 1990 to 87 percent in 2012, there are still 57 countries that have not made enough progress to reach the MDG target (halving the share of the population without access to improved water sources) by 2015. Sub-Saharan Africa is lagging the most, with 36 percent of its population lacking access.

In East Asia and Pacific, the share of people with access to an improved water source jumped from only 68 percent in 1990 to 91 percent in 2012. The other regions have already managed to reach access rates of more than 90 percent (figure A22). However, 19 countries do not have enough data to determine whether or not they will reach the target by 2015.

Figure A22 Better access to improved water sources remains a problem, especially for sub-Saharan Africa

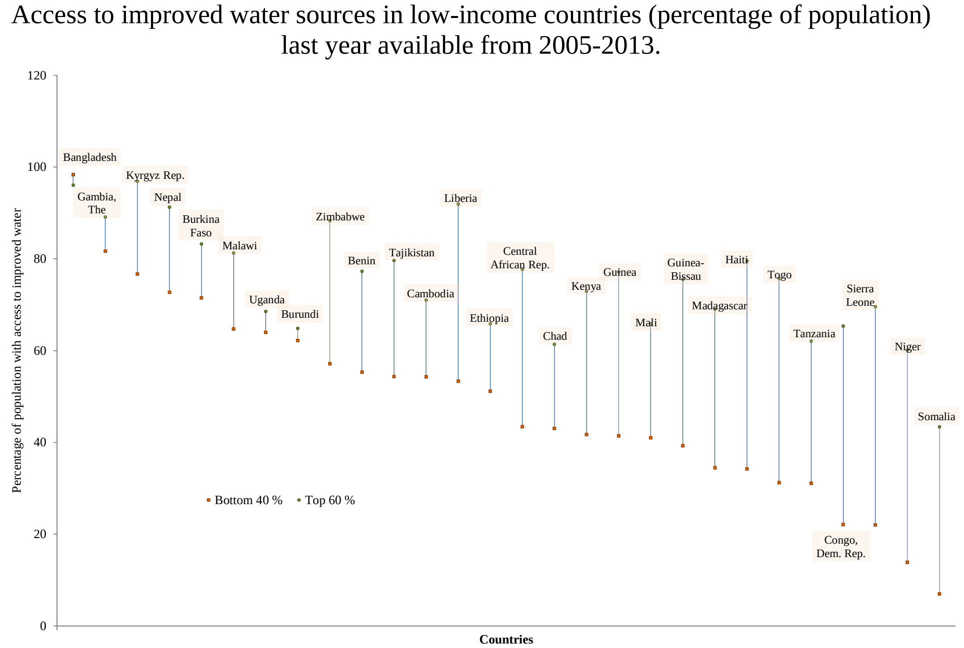
Access to improved water sources (percentage of total population)



Sources: Joint Monitoring Programme for Water Supply and Sanitation of the World Health Organization and United Nations Children's Fund and World Development Indicators database.

A31 Access to improved water sources and improved sanitation facilities is correlated with wealth. In sub-Saharan Africa, almost 90 percent of the richest fifth of the population use improved water sources, while only 35 percent of the poorest fifth of the population do (WHO & UNICEF 2013). Inequality in access to improved water sources differs significantly across countries. In many low-income countries, the richest 60 percent of the population have much greater access rates than the bottom 40 percent. Inequality in access to improved water sources is also great in many middle-income countries (especially in Sub-Saharan Africa), although in other countries, for example Belarus, Bosnia, Herzegovina, Macedonia, and Serbia coverage is almost 100 percent for all income levels (figure A23-figure A24).

Figure A23 **Access to improved water differs significantly across low-income countries**

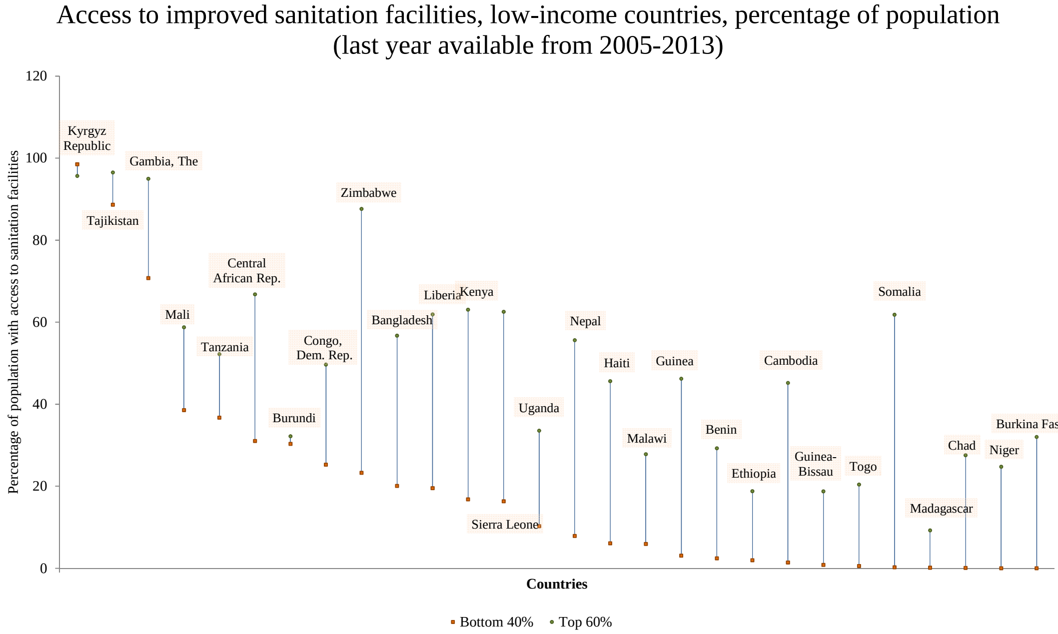


Source: World Bank staff calculations based on WHO/Unicef Joint Monitoring Program for Water Supply and Sanitation 2014.

A32 Poor sanitation causes millions of people worldwide to become ill. In 1990 only 35 percent of the people living in developing economies had access to a flush toilet or other form of improved sanitation. By 2012 the access rate had risen to 57 percent. But 2.5 billion of developing countries' people still lack access to improved sanitation. South Asia and sub-Saharan Africa are the only regions where progress has not been significant, with an increase of only 19 percentage points in South Asia and 6 percentage points in Sub-Saharan Africa from 1990 to 2012. These regions also had the worst starting positions. The situation is worse in rural areas, where only 23 percent of the population has access to improved sanitation; in urban areas the access rate is 20 percentage points higher. This large disparity, especially in South Asia and Sub-Saharan Africa, is the principal reason the sanitation target of the Millennium Development Goals is unlikely to be met.

A33 Access to sanitation facilities is highly unequal across income. Among low-income countries, the richest 60 percent of the population are 367 times more likely than the poorest 40 percent to have improved sanitation facilities in Chad, 32 times more likely in Burkina Faso, 9.6 in Ethiopia, and 1.3 in the Gambia. Access tends to be somewhat less unequal in many middle-income countries. Nevertheless, the richest 60 percent of the population in Mauritania is 26.3 times more likely to have access than the poorest 40 percent; for India the rich are 10 times more likely to have access (figure A24).

Figure A24 **Access to sanitation is highly unequal across income levels**



Source: World Bank staff calculations based on WHO/Unicef Joint Monitoring Program for Water Supply and Sanitation 2014.

Box A4 **Improving sanitation coverage in Nepal requires better targeting and coordination, local involvement, and focusing on girls in schools**

The CEB review reported on Nepal's large discrepancies in access to sanitation across income quintiles, geographical areas, caste, and ethnic groups, driven by a lack of coordination, weaknesses in local government planning capacity, underfunding, exclusion, and inadequate infrastructure. Sanitation coverage averages 62 percent across Nepal's 75 districts, but less than 30 percent have access in the eight densely populated districts in the Terai and one third of all districts have less than 50 percent coverage. Access to toilets is also uneven and is based on economic status: 97 percent of the richest quintile had access to improved toilets in 2008, compared to only 4 percent in the poorest quintile (and almost 90 percent of the poorest quintile had to rely on open defecation).

Key bottlenecks and gaps identified

- **Policy and Planning:** sanitation coordination mechanisms are not fully functional; local governments lack the capacity to plan and implement sanitation improvements (e.g. many lack a sanitation strategic plan).
- **Budget and Financing:** sanitation institutions are underfunded (e.g., lack of dedicated staff, *ad hoc* budgets); district authorities lack a dedicated budget for sanitation (block grants do not cover sanitation initiatives).
- **Service delivery:** sanitation coverage varies dramatically by income quintiles, urban/rural residence, mountain/hill/Terai residence, and ethnic/caste groups (*dalits* have the lowest sanitation coverage).
- **Service utilization:** inadequate sanitation and hygiene facilities in many schools lead to greater absenteeism and drop-outs, especially among girls; lack of awareness of importance of hygiene to health is still widespread in certain communities.

CEB recommendations and commitments

Examples of CEB commitments to improve sanitation and access to drinking water include:

- Improve data to identify priorities and plan interventions, focusing on marginalized areas and groups. The UN and WB are working together to map existing programs and identify gaps and follow up actions, while the ITU and UNESCO, through the Broadband Commission, are supporting the expansion of the E-Pustakalaya initiative to promote general educational and awareness-building on activities that are relevant to sanitation promotion.

- Focus on worst performing districts to address growing service disparities. UNHABITAT is working to expand sanitation support to the worst-performing districts, while WFP and UNICEF are leading an Open Defecation Free Campaign in in Bajhang District.
- Enhance inter-ministerial coordination for planning and programs in the sub-sector. UNICEF is supporting the government-led Joint Sector Review (which includes issues related to climate change and disaster risk management), as well as the institutionalization of the WASH Sector Wide Approach (SWAp) and related coordination mechanisms. The UNDP provided technical support to the National Planning Commission to establish a High Level Advisory Board to enhance inter-ministerial coordination for sanitation.
- Improve awareness of, and local support for, sanitation issues. UNESCO is promoting minimum sanitation standards in educational institutions, and the WFP is promoting an integrated approach to water, hygiene and sanitation in the school feeding program.
- Address gender gaps in coverage, especially in schools to ensure separate facilities for girls. UNICEF and WFP are helping the DoE to assess the gender coverage gaps in public pre-primary and primary schools, and the WFP is planning to support the construction of separate latrines for boys and girls in 40 schools in the mid and far Western regions of Nepal by 2015.
- Designate individual donor responsibility for supporting open defecation free programs by geographical area, and expand efforts to Total Sanitation programs. For example, the World Bank is providing $72 million to improve rural water supply and sanitation, with priority to lagging districts. UNICEF is supporting the formulation of a sanitation strategy plan in 23 districts, a post-ODF strategy in 5 districts, and a coordinated ODF campaign in 8 Terai district.

Remaining major challenges include the mobilization of funds required to move towards total sanitation; improved DDC/municipality leadership for sanitation related issues, including capacity building; enhanced cross-ministerial collaboration, in particular with the Ministry of Finance and Planning Commission; and increased support for the WASH Sector Wide Approach (SWAp).

Key challenges to increasing sanitation coverage in Nepal are thus improved government and donor coordination, and better targeting to reach underserved communities and girls in primary school.

Source: World Bank Group and UNDP staff

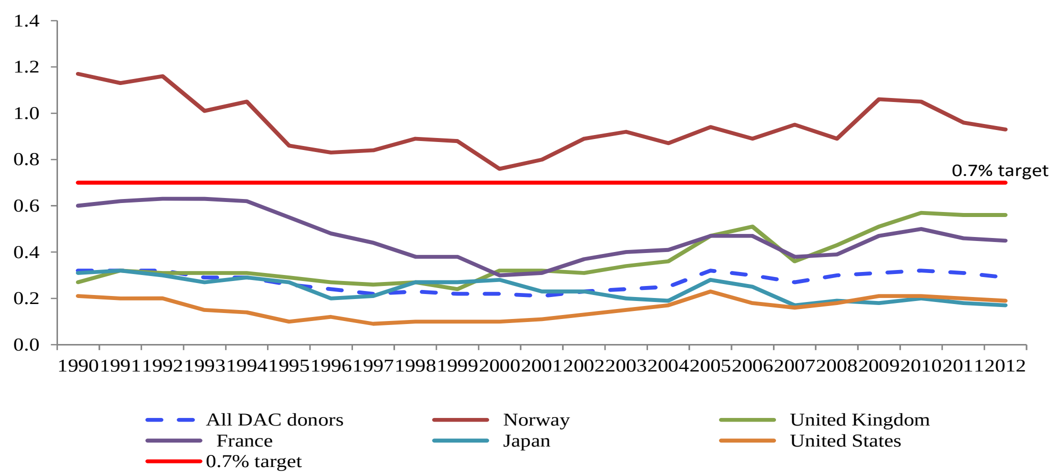
MDG8 Develop a global partnership for development

A34 The eighth and final goal distinguishes the Millennium Development Goals from previous resolutions and targeted programs. It recognizes the multidimensional nature of development and the need for wealthy countries and developing countries to work together to create an environment in which rapid, sustainable development is possible. Along with increased aid flows and debt relief for the poorest, highly indebted countries, MDG 8 recognizes the need to reduce barriers to trade and to share the benefits of new medical and communication technologies.

A35 The financial crisis that began in 2008 and fiscal austerity in many high-income economies has undermined commitments to increase official development assistance (ODA). Since 2010, the year it reached its peak, ODA from members of the OECD Development Assistance Committee (DAC) has fallen by 6 percent in real terms, after taking into account price and exchange rate adjustments. This decline has been accompanied by a noticeable shift in aid allocations away from the poorest countries and towards middle-income countries. As a share of gross national income, ODA from DAC members fell back to 0.29 percent in 2012, well below half the United Nations' target of 0.7 percent (figure A25).

Figure A25 Some donors have decreased their aid levels: selected DAC donors

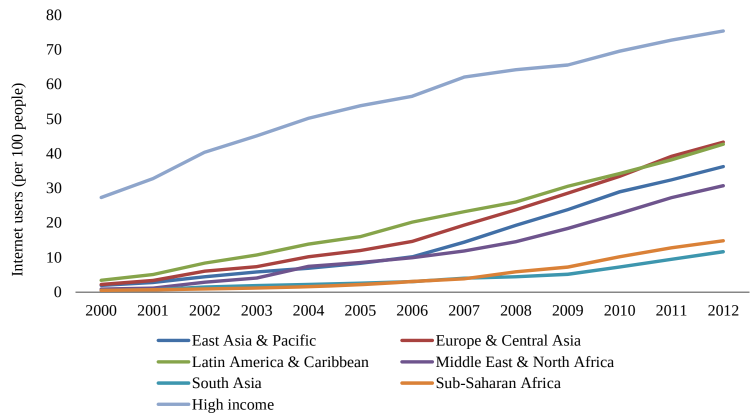
Official Development Assistance as a share of GNI (%)



Source: Organisation for Economic Co-operation and Development (OECD).

A36 Telecommunications is an essential tool for development, and while both telephone and internet use are strongly correlated with income, new technologies are creating new opportunities everywhere. By the end of 2012 there were 6.3 billion mobile phone subscriptions and 2.5 billion people were using the Internet worldwide (figure A26). As the global mobile-cellular penetration approaches market saturation, the growth rates for both developing and high-income economies are slowing down. Since 2000, internet use per person in developing economies has grown impressively — by 28 percent a year — but the low-income economies of South Asia and sub-Saharan Africa lag behind.

Figure A26 **The number of internet users continues to rise**



Source: World Development Indicators database, 2014.

Improving the Measurement of Development Goals

A37 The Millennium Development Goals provide a yardstick against which to measure development outcomes. They have also stimulated demand for better statistics and new programs to increase the capacity of developing countries to produce and use statistics. The United Nations and its specialized agencies, including the World Bank and the IMF, and the OECD responded to these demands by creating new partnerships and mobilizing additional resources to provide support for statistics in developing countries. The result has been a marked improvement in the quality and availability of statistics on core development outcomes: poverty and income distribution, school enrollments, mortality and morbidity rates, and environmental conditions.

A38 Defining and measuring the MDGs posed three challenges: the selection of appropriate targets and indicators with which to monitor progress in development; the construction of an international database to use for global monitoring; and the need for significant improvements in the quality, frequency, and availability of the relevant statistics, especially at the national level. The selection of goals and targets was determined by the Millennium Declaration adopted unanimously by the member states of the United Nations. Building the database and strengthening the statistical systems of developing countries has required the efforts of many partners over many years. When countries produce statistics to monitor their own development programs, there are often differences in definition and methodology that limit comparability across countries. Whether monitored at the national, regional, or global level, international monitoring of the MDGs requires indicators that are comparable across countries and over time.

A39 To produce harmonized statistics suitable for international comparisons, agencies often revise national data or recompile data using different reference periods or standards, such as the "dollar a day" poverty indicator. They may also impute values for missing data or use statistical models to combine multiple estimates. Interagency efforts such as these have been very important in filling the gaps in child and maternal mortality series. However, these efforts inevitably result in data series that differ from nationally reported data and international assessments of country progress that differ from those produced by the countries.

A40 At the time the MDGs were adopted, few developing countries had the capacity or resources to produce statistics of the requisite quality or frequency. Many countries had not conducted a recent census or a household survey capable of producing information on income, consumption, or health status. Values for many indicators disseminated by international agencies were based on unverified reports from national authorities. Statistical activities sponsored by bilateral donors and multilateral agencies often focused narrowly on securing data of interest to them, but did little to increase the capacity of the national statistical system to serve the needs of local decision makers or citizens.

A41 The early efforts to monitor the MDGs revealed large gaps in both the international database and in many national databases. In 2003-2004, the Partnership in Statistics for Development in the 21st Century (PARIS21) conducted six case studies of developing country statistical systems. The general finding of the studies was one of very limited capacity to manage their own statistical programs.

A42 The systems are characterized by under-funding, reliance on donor support, particularly for household surveys, and very weak administrative data systems. The basic demographic information needed to underpin key indicators is out of date in some countries, and funding for major activities, such as population censuses, is particularly difficult to secure. Overall, there is a shortfall in funding for core statistical systems required to provide information both for economic management and for monitoring the MDGs (PARIS21 2004).

A43 The share of countries with two or more data points (the bare minimum needed for assessing trends) for selected MDG indicators in 2005 and 2014 is shown in table A1. For some indicators, the improvement has been quite dramatic (figure A27). In 2005, no country had two or more comparable estimates of population with access to sanitation facilities or population with access to water sources; in 2014, there were over 130 countries with comparable estimates for both of these indicators. But for some other indicators, progress has been slower.

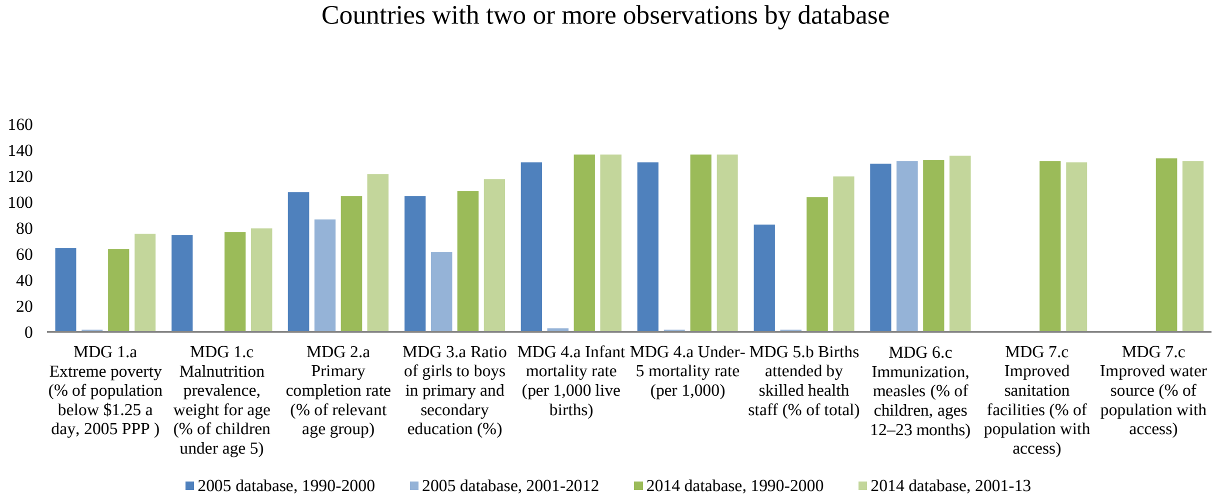
Table A1 Countries with two or more observations for selected MDG indicators

Selected MDG indicators with two or more observations in period show	2005 database		2014 database	
	Number of countries 1990-2000	Number of countries 2001-13	Number of countries 1990-2000	Number of countries 2001-13
MDG 1.a Extreme poverty (% of population below $1.25 a day, 2005 PPP)	65	2	64	76
MDG 1.c Malnutrition prevalence, weight for age (% of children under age 5)	75	..	77	80
MDG 2.a Primary completion rate (% of relevant age group)	108	87	105	122
MDG 3.a Ratio of girls to boys in primary and secondary education (%)	105	62	109	118
MDG 4.a Infant mortality rate (per 1,000 live births)	131	3	137	137
MDG 4.a Under-5 mortality rate (per 1,000)	131	2	137	137
MDG 5.b Births attended by skilled health staff (% of total)	83	2	104	120
MDG 6.c Immunization, measles (% of children, ages 12–23 months)	130	132	133	136
MDG 7.c Improved sanitation facilities (% of population with access)	..	..	132	131
MDG 7.c Improved water source (% of population with access)	..	..	134	132

Source: World Development Indicators.

Note: .. = not available; ppp = purchasing power parity.

Figure A27 **Number of countries with two or more observations by database has been increasing**



Source: World Development Indicators, 2014.

A44 Despite the progress made in the last decade, national systems face immense difficulties on many fronts, including funding, sectoral shortcomings and poor data access, and the development of skills needed to use statistics effectively in planning and management. In 2009, the High Level Forum on Development Effectiveness in Busan endorsed a new action plan for statistics. Several statistical domains have been identified as priorities for international action because of large deficits of data quality and availability. The high priority domains include: agricultural statistics, poverty statistics and household surveys, gender statistics, labor force statistics, environmental accounting and the system of national accounts, and vital registration systems. The Busan Action Plan for Statistics provides an agreed framework for addressing capacity limitations in developing countries, and work is already underway in some domains. However, resources are limited and even with greater resources, capacity building is a slow, deliberate process. The MDGs have contributed to the development of a statistical infrastructure that is increasingly capable of producing reliable statistics on a variety of topics.

A45 The 2013 report of the 27-member High-Level Panel on the Post-2015 Development Agenda, convened by the UN Secretary-General, recognized the important role of data and the challenge of improving development data. It calls for a “data revolution for sustainable development, with a new international initiative to improve the quality of statistics and information available to citizens.” In line with the global trend, a “Data for Goals” initiative has been developed by the World Bank and the funding for development data will be scaled up over the next three years. New technology and collaboration will be also optimized in improving access to quality data and filling data gaps.

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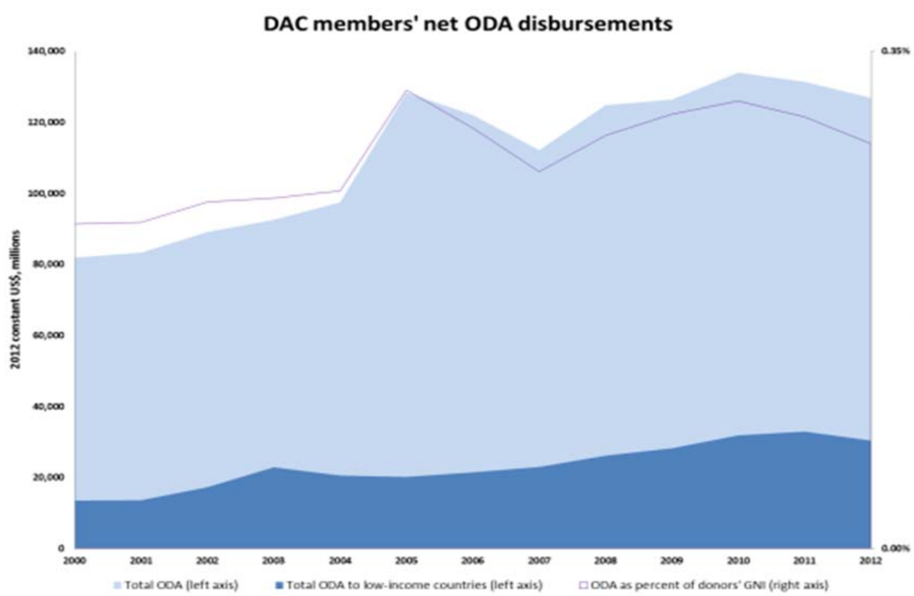
Annex 1 Aid and International Financial Institutions

A1.1 Official development assistance (ODA) to developing countries grew steadily from 1997 to a first peak in 2010, then fell in 2011 and 2012 as many governments took austerity measures and trimmed aid budgets after the global financial crisis. However, ODA rebounded in 2013: even excluding the five countries (Czech Republic, Iceland, Poland, Slovak Republic and Slovenia) that joined the Development Assistance Committee (DAC) in 2013, DAC ODA was still at an all-time high.

Bilateral and multilateral aid

A1.2 Several members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) stepped up their spending on foreign assistance in 2013. DAC members disbursed $134.7 billion (in constant 2012 dollars and exchange rates) in ODA, compared to $126.9 billion the previous year, an increase in real terms of 6.1 percent. In current prices, ODA in 2013 reached $134.8 billion, an increase from $126.9 billion in 2012, making a rebound after two years of falling volumes. ODA continued to increase as a percentage of donors' combined gross national income (GNI), from 0.29 percent in 2012 to 0.30 percent in 2013 (figure A1.1). According to the OECD, aid levels could increase again in 2014 and stabilize thereafter.

Figure A1.1 ODA Disbursements since 2000



Source: OECD DAC and World Bank.

Note: GNI = Gross National Income; ODA = Official Development Assistance.

A1.3 The bilateral share of net ODA decreased marginally in 2013, to 69.6 percent from 69.8 percent in 2012, while the multilateral share of aid reached almost 30.4 percent. Seventeen of the DAC's 28 member countries increased their ODA in 2013, while 11 reported a decrease. Five countries met a longstanding UN target for an ODA/GNI ratio of 0.7 percent.

Poverty and aid

A1.4 ODA to aid-dependent countries has been declining and probably will continue to do so. Already two-thirds of developing countries have an ODA to GNI ratio of less than 2 percent, and only around 30 countries (and 10 small island states) have an ODA to GNI ratio of more than 10 percent (Edward and Sumner 2013). Projections of future economic growth indicate that only about 20 countries, and possibly fewer, will remain low-income in 2030. Many of these, but by no means all, are conflict-affected or post-conflict countries. It could be argued that the shift of poverty to MICs means that the resource constraints and aid volume debates around the MDGs are less pressing for the post-2015 framework. Although there is no sudden change in a country when it crosses one of the per capita income thresholds established by the World Bank Group, countries that achieve higher levels of per capita income have substantially more domestic resources available for poverty reduction. Moreover, most MICs have credit ratings that allow them to borrow from capital markets, and indeed may prefer to do so to avoid the conditions that often are associated with ODA.

A1.5 This is also why donors, including many aid agencies, generally consider MIC status as a reason for reducing aid flows. Nevertheless, there are good reasons for OECD-Development Assistance Committee (DAC) donors to continue development co-operation with MICs – but of a new kind. Development co-operation could shift from grants to concessional loans (which would be cheaper than borrowing from private capital markets); to co-financing global or regional initiatives such as vaccination programs or green infrastructure; and to policy-related research and knowledge exchanges between MICs and other countries. These points need to be factored into the post-2015 framework and into how development is supported in the future. Furthermore, over time it is likely that the expanding number of MICs will make far greater demands on traditional donors to focus on policy coherence (better co-ordination of their trade, migration and other policies), the basis of the oft-forgotten MDG 8.

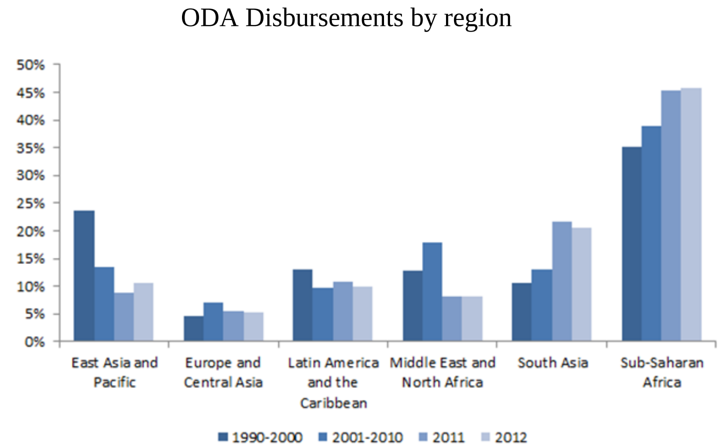
A1.6 The changing pattern of global poverty also raises various questions about whether, in a world of fewer and fewer aid-dependent countries, poverty will become increasingly a matter of within-country inequality. Many of the world's extreme poor already live in countries where the total cost of ending extreme and even moderate income poverty is not prohibitively high, if considered as a percentage of GDP. The cost of ending world poverty measured by the $1.25 a day threshold is about 0.2 percent of global GDP, or $150 billion (at 2005 purchasing power parity). The cost of ending world poverty measured by the $2 a day threshold is around 0.9 percent of global GDP, or $600 billion (ppp 2005). These are relatively low numbers, at least compared to global budgetary resources.

A1.7 Above and beyond considerations of where future aid is allocated, donors also need – as already stated – to adapt new modes and kinds of co-operation to individual country contexts when tackling persistent poverty. In middle-income countries, donors should focus on supporting economic growth that is more equitable; ensuring that policies and programs are coherent; encouraging new types and sources of finance, innovative financing such as PPPs and risk sharing to unlock private funding (see MDB supplement); and exchanging knowledge and experience on poverty reduction. What's more, we need to look at the new and changing geography of poverty.

Regional aid

A1.8 The regional allocation of ODA disbursements did not change greatly in 2012. Sub-Saharan Africa received 46 percent of net ODA disbursements in 2012. South Asia's share of ODA remained stable at 21 percent, and the Middle East and North Africa at 8 percent (figure A1.2).

Figure A1.2 Sub-Saharan Africa still receives the largest regional share of ODA disbursements



Source: OECD DAC 2014.

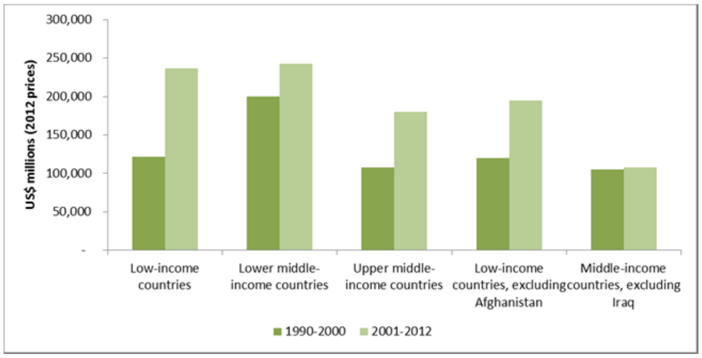
A1.9 While sub-Saharan Africa still received the largest regional share of ODA disbursements, this region suffered a further decrease in 2012, from $26.3 billion in 2011 to $24.6 billion in 2012, and the trend of a falling share of ODA going to the neediest sub-Saharan African countries looks likely to continue. Europe and Central Asia also saw a fall in net bilateral ODA flows, from $3.2 billion in 2011 to $2.7 billion in 2012. Latin America sustained a decrease of 16 percent in 2012, while South Asia registered a decline of 12 percent. The only region with an increase in net ODA disbursements in 2012 was East Asia and Pacific.

Special groups

A1.10 Bilateral net ODA to the Least Developed Countries (LDCs) rose by 12.3 percent in real terms to about $30 billion. For lower-middle-income countries, net ODA disbursements increased by 2 percent from 2011 (figure A1.3).

Figure A1.3 **ODA disbursements for lower-middle-income countries increased by 2 percent from 2011**

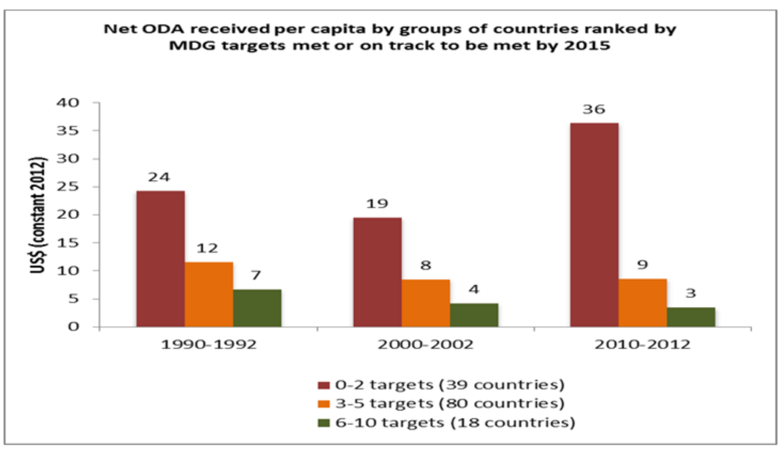
ODA disbursements by income level



Source: OECD DAC 2014.

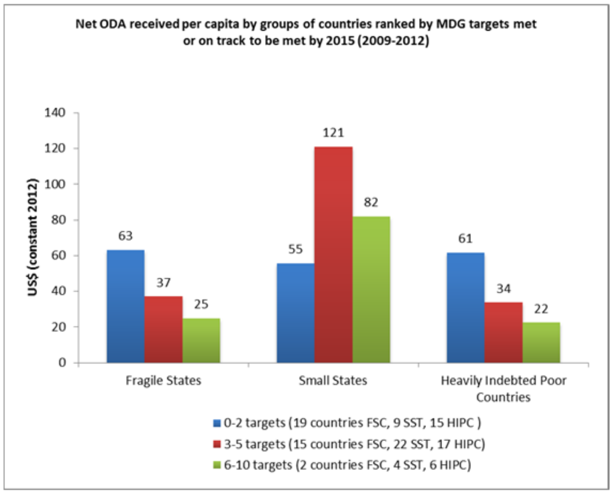
A1.11 When all developing countries are considered, ODA is being directed to countries where progress in achieving the MDGs is limited. For example, ODA disbursements per capita have been increasing for countries with no more than two of the MDGs achieved, following the same trend as last year (figure A1.4). And the group of countries in fragile situations that have met or are currently on track to achieve no more than two MDGs received an annual average of $63 per capita in aid over 2009-2012, compared to $25 per capita for fragile countries that have met, or are on track to achieve, between 6 and 10 MDG targets (figure A1.5).

Figure A1.4 **ODA is directed to countries where progress in achieving the MDGs is limited**



Sources: World Bank staff calculations and OECD DAC 2014.

Figure A1.5 **Support from DAC members to Fragile states has been increasing**



Sources: World Bank staff calculations and OECD DAC 2014.

A1.12 Fragile, small and heavily indebted poor countries (HIPCs) suffered a decline in ODA disbursements from 2011 to 2012.Fragile States received around 15 percent less in ODA disbursements than they did in 2011, while the flow to HIPCs also decreased by 17 percent.

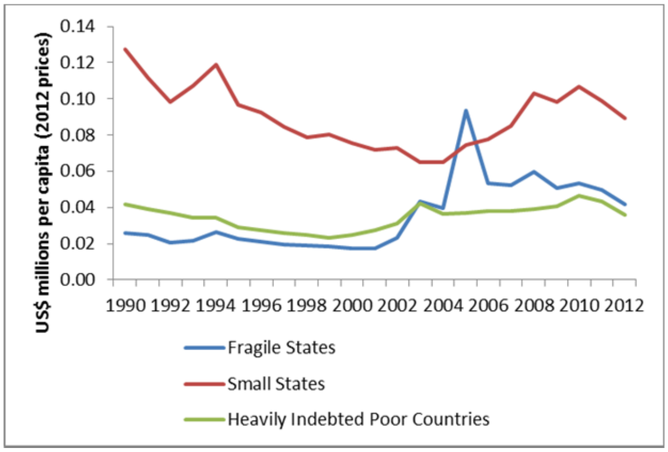
A1.13 Fragile States are the developing countries most challenged in meeting the Millennium Development Goals. These countries are typically characterized by security concerns, weak institutions, growth collapses and macroeconomic instability. Effective engagement by international organizations and development partners requires continued recognition of the limited capacity and large financing needs of these fragile countries.

A1.14 These countries have few, if any, resources available to address these vulnerabilities. If global growth declines, these countries would face the most difficult challenge in responding to the negative shocks to their economies. Their domestic policy space is typically very limited, and therefore these countries would have to turn to the international community for additional assistance. The decline in ODA for these countries is especially worrisome, because well-targeted external financial aid can be effective in supporting countries exiting from fragile situations (World Bank 2011).

A1.15 The past two decades have seen the rise of conflict and fragility as major global concerns, with serious implications for poverty eradication. Between 2000 and 2010, support from DAC members to fragile states more than doubled – from $20 billion to $50 billion – reaching 38 percent of all ODA given by DAC countries. This support is fundamental for addressing global poverty: in 2010, these countries accounted for one-third of the world's poor and by 2015 they are projected to be home to half of them, particularly in sub-Saharan Africa (OECD 2013). Many argue that the principal future use of ODA should be to support fragile states (figure A1.6). The OECD-DAC is working with the New Deal for Engagement in Fragile States (International Dialogue on Peacebuilding and Statebuilding, 2011) to ensure that ODA is used effectively in the particularly challenging conditions that prevail in these countries.

Figure A1.6 Net ODA disbursements to fragile, small, and HIPC has varied in the last few years

Net ODA disbursements



Sources: World Bank staff calculations and OECD DAC 2014.

A1.16 Many fragile states have made great progress in overcoming conflicts and/or undertaking political transitions that include democratic reform. At the same time, many states face persistent challenges in overcoming pressures that can push them back into conflict and in implementing policies that promote poverty reduction and political and social inclusion. Sustained international support is a critical factor in helping countries escape cycles of conflict and instability (OECD 2011). Moreover, international action is required to address global issues, such as illicit trade carried out by organized crime, interstate competition over natural resources, and restrictions on cross-border trade and migration, that tend to promote fragility and violence, and impair development (OECD 2012).

BRICS

A1.17 Brazil, Russia, India, China and South Africa (BRICS) are the emerging players in the area of international development cooperation. During the last decade, this group of countries increased their financial and technical assistance and established means of economic cooperation with developing countries.

A1.18 The BRICS are using their economic weight to induce change, which is challenging traditional Western donors in general and the EU in particular. Development policies followed by the BRICS reflect the idea of South to South Cooperation, which is based on shared experiences and self-reliance of the South (Yamoussoukro Consensus 2008). BRICS-LICs relations are not restricted to financial assistance. Trade, foreign direct investment (FDI) and development financing often are provided together, and there have already been significant spillovers and positive effects, especially on trade. These connections helped lessen the effects of the latest financial crisis on low income countries and contributed to economic development.

A1.19 The BRICS are concentrating mainly on technical assistance rather than financial aid, and a considerable share of aid is disbursed through bilateral channels. Brazil in general focuses on Africa, Latin America and Portuguese-speaking countries in aid for agriculture, education and health, mainly via technical cooperation and co-financed projects. China focuses on Africa and

Asia in extending assistance for infrastructure, industrial and energy development, via bilateral aid, projects, technical cooperation and debt relief. India's aid focuses on countries such as Afghanistan, Bhutan and Nepal, but is also starting to look into the provision of aid to Africa for infrastructure, capacity building and training. The bulk of India's aid is also project oriented and in the form of technical cooperation.

A1.20 These countries are not part of the Development Assistance Committee (DAC) but they are already influencing development policies through multilateral alliances and international forums such as the G20.

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Annex 2 Update on Trade Trends and Trade Policy Developments

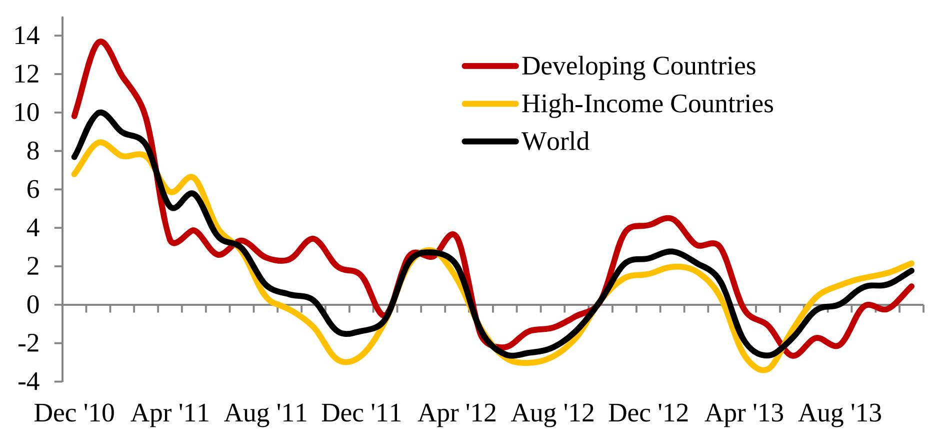
Trend in world trade[3]

A2.1 On aggregate, world trade since the financial crisis has decelerated, including absolute declines in traded values across products and regions. Subdued trade growth over the last several years has been heavily fueled by weak overall demand in high-income countries, which developing countries have mitigated by trading more with each other—South-South trade has accounted for over half of developing country exports since 2010. Nevertheless, aggregate demand from developing countries has also not been immune to the overall post-crisis decline in trade (figure A2.1).

A2.2 The tide turned in 2013, however, as high-income countries began to emerge from several years of economic sluggishness and recession to report more stable growth, coupled with an uptick in import demand. In the United States, for example, GDP growth rose steadily in 2013 in the wake of increased consumer spending, rising industrial output, and employment gains. In the EU, Germany spearheaded a rebound in growth that began in the second quarter. These recoveries represent a marked shift from the previous several years, when developing countries, especially the emerging markets, led growth in the global economy largely on their own. As the United States remains the world's largest importer and the Euro Area remains the most important trading partner for many developing countries, their recovery bodes well for the state of global trade moving forward. Global trade is expected to gradually strengthen through 2016, when trade is projected to increase by 5.1 percent (up from 3.1 percent in 2013).

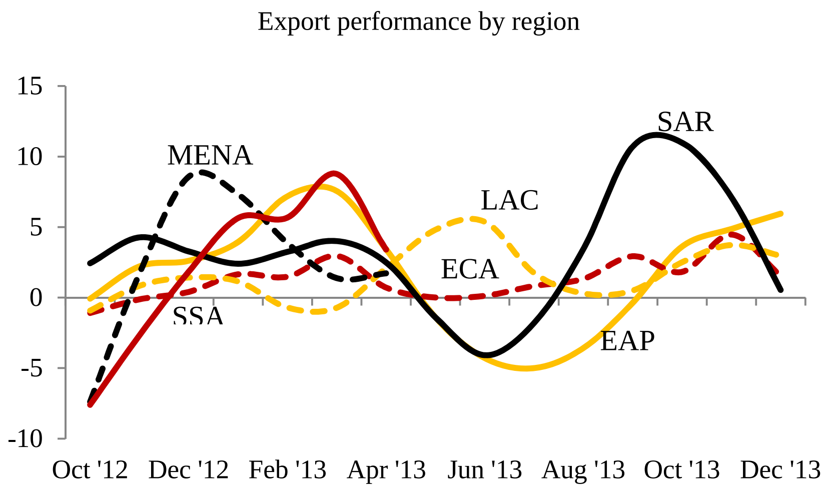
Figure A2.1 Deceleration in import demand has affected both developing and high-income countries

Import Demand by Income level



Source: World Development Indicators, 2014.

Figure A2.2 **Export performance varied by region in 2013, including a multi-region downturn in Q2**



Source: World Bank Datastream.

Note: Y-axes: Merchandise imports, % change, 3m/3m, seasonally adjusted annual rate.

A2.3 Similar to 2012, developing country exports fluctuated throughout 2013, with significant differences among regions (figure A2.2). The East Asia and Pacific (EAP) region was able to offset a second quarter slump with strong export growth from midyear onward, buoyed not only by increased demand from high-income countries and policy stimulus from China, but also by increased net exports from Indonesia, Malaysia, Philippines, and Thailand. It was the only region to end the year with its exports experiencing a consistent and unequivocal upswing. The brief Q3 surge of exports in South Asia (SAR), for example, though more dramatic than in East Asia, proved part of a cyclical phenomenon that decelerated equally as abruptly in the final quarter.

A2.4 Exports in 2013 were least volatile in the Europe and Central Asia (ECA) and Latin America and the Caribbean (LAC) regions. Most countries in ECA fared well on the back of Central Asian energy exports and healthier demand from the EU. Though non-energy commodity exporters like Belarus, the Kyrgyz Republic and Ukraine experienced negative terms of trade shocks, most countries in the region saw their average monthly growth in real exports hover around one percent. In LAC, Argentina, Ecuador, and Guyana proved to be consistent performers in a region that saw January to November merchandise exports grow at a rate nearly half that of the equivalent period in 2012.

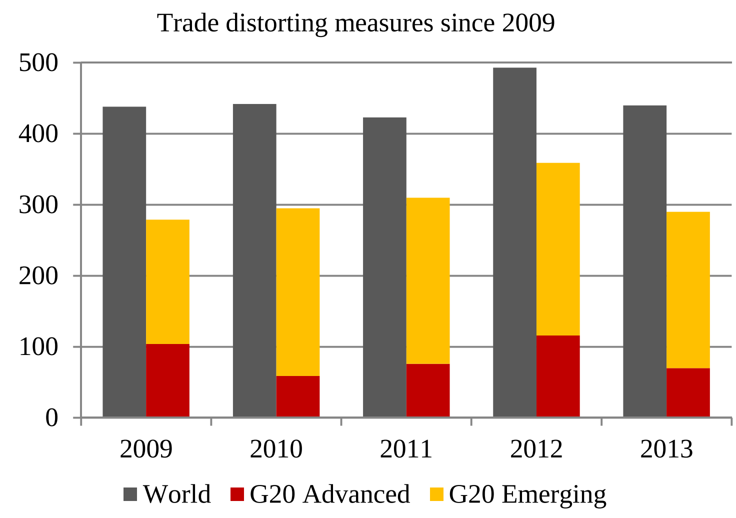
A2.5 In sub-Saharan Africa (SSA), export growth outperformed other regions in Q4 2012 and Q1 2013, part of a trend of increased economic growth on the continent in 2013. Real GDP growth for the year jumped from 3.5 percent in 2012 to 4.7 percent in 2013, complemented by a $6 billion increase in foreign direct investment inflows and a 6.2 percent increase in remittances. Unfortunately, these economic gains were not shared by neighboring countries in the Middle East and North Africa (MENA), where economic performance has continued to suffer from the lingering effects of political instability since the Arab Spring.

G20 countries have failed to fill the trade reform vacuum

A2.6 At a time when leadership on trade reform is sorely needed, G20 countries have vowed only to refrain from imposing new trade-restrictive measures, a commitment which has not been met. On the contrary, G20 countries now account for three quarters of the trade-restrictive measures imposed since November 2008. In recent years, the number of restrictions imposed by G20 emerging economies has more than doubled those imposed by high income G20 countries (figure A2.3). The impact of the increase in trade restrictions affects 4-5 percent of world trade, not including the much higher cost of forgone gains from trade resulting from the failure to lower existing trade barriers. While it is true that G20 members also account for a majority of the trade-liberalizing measures implemented to date, such measures are on the decline. According to World Trade Organization (WTO) data, they represent only 33 percent of the measures enacted from May-November 2013 compared with 40 percent of the measures implemented in the previous monitoring period.

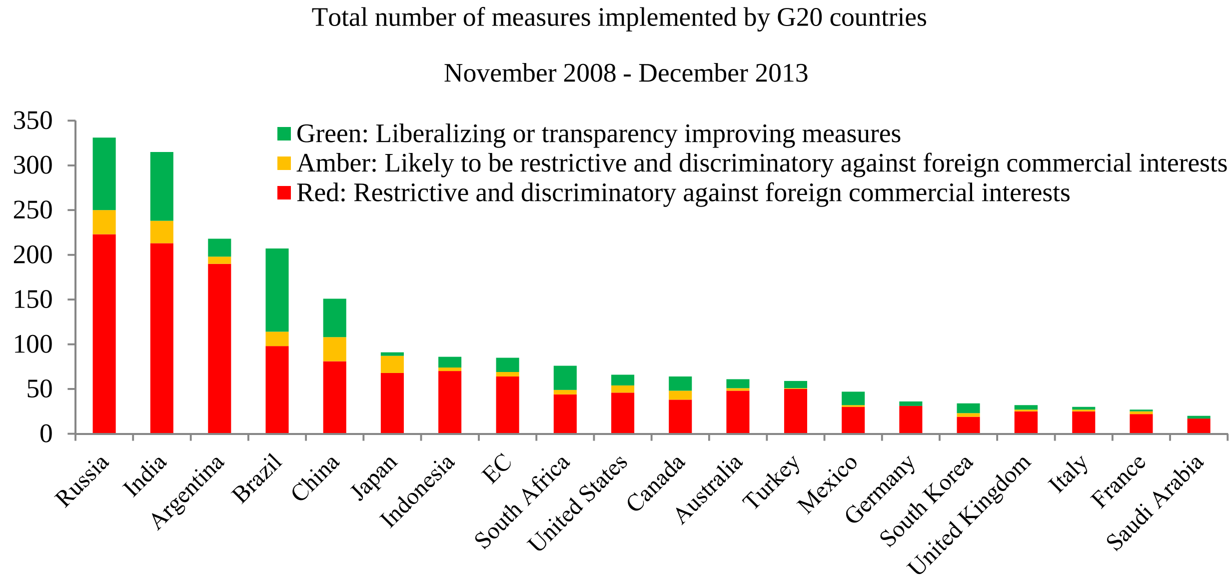
A2.7 According to the WTO's monitoring of trade protection measures, 120 of the 193 new trade-restrictive measures introduced by G20 countries between December 2012 and November 2013 came in the form of antidumping measures and other trade remedies (figure A2.3). Most of the increase in these restrictions has affected exports of emerging economies, especially those of China, with the largest proportional impact arising from restrictions imposed by other emerging economies. In addition, non-tariff measures such as technical requirements, local content requirements, licensing, and export bans remain largely unabated. Though the total number of new trade restrictions is lower than the amount imposed in the immediate aftermath of the crisis, the continued use of such measures despite an open commitment to exercise restraint is damaging the G20's credibility as a viable leader of trade reform. According to the Global Trade Alert (GTA),[4] which provides broader coverage than the WTO in terms of both countries and policy measures, Russia, India, and Argentina are among the countries that have implemented the highest number of trade restrictive measures since November 2008 (figure A2.4).

Figure A2.3 **Trade distorting measures implemented since the onset of the global financial crisis**



Source: Global Trade Alert.

Figure A2.4 **Russia, India and Argentina have implemented the highest number of trade restrictive measures since November 2008**



Source: Global Trade Alert database.

Note: Individual measures may cover a very large portion of trade or just one product—these data are therefore not necessarily reflective of trade coverage. For example, Mexico reduced tariffs on 5,000 tariff lines, but this is reflected in just a few "measures". EC figure includes only measures taken at the EC level. Figures for France, Germany, Italy, and the UK include domestic measures only and not measures taken at the EC level.

A worthwhile challenge ahead to implement the WTO's landmark Bali agreement

A2.8 The agreement reached by the WTO at its Ninth Ministerial Conference in Bali in December 2013 was the first since the organization's establishment in 1995. Covering trade facilitation, rules governing agricultural trade, and improved market access for Least Developed Countries (LDCs),[5] the agreement will provide important economic benefits to the world economy and to developing countries in particular, forging a much needed and welcome way forward after over a decade of stalled negotiations since the launch of the Doha Round in 2001. The Bali agreement comes at an important time, as momentum had been shifting towards bilateral and preferential trade agreements (PTAs). This is especially important for Least Developed Countries that rely most heavily on the multilateral system to have a more equal voice, secure market access and effectively integrate into the world economy.

A2.9 The centerpiece of the Bali package, the Trade Facilitation Agreement, is designed to streamline border procedures, increase transparency, reduce inefficiencies and improve competitiveness. Reducing high transaction costs and unnecessary red tape would provide a sizable boost to global GDP. Developing countries currently take about three times longer, use twice as much documentation, and incur double the costs to import goods than do OECD countries. According to a recent report by the World Economic Forum and the World Bank Group, reducing supply chain barriers to trade could increase GDP by nearly 5 percent and trade by 15 percent. If every country improved just two key supply chain barriers—border administration and transport and communications infrastructure and related services—even halfway to the world's best practices, global GDP could increase by $2.6 trillion and exports by $1.6 trillion, six times more than could be achieved from eradicating all remaining import tariffs.

A2.10 There is much to be done to help countries, especially the poorest, implement the agreement and reap its benefits. A credible commitment on the part of developed countries to support implementation costs—in the form of technical assistance and capacity building—was instrumental in passing the deal. However, questions still remain as to who will ratify the deal and who will remain unbound by its provisions by choosing not to ratify. In a process that could take up to two years, two-thirds of WTO members are needed for the deal to go into effect. In addition, it is not entirely clear if high-income and emerging economies will refrain from excluding vital products like garments or agricultural products from the LDC market access provisions of the Bali Agreement.

Annex 3 Aid and Development Effectiveness

A3.1 The past year has seen two important developments in the evolution of work on aid and development effectiveness. The first High-Level Meeting of the Global Partnership for Effective Development Cooperation (GPEDC) took place in Mexico City in April 2014, marking a critical midpoint between the 2011 Busan High Level Forum (where the GPEDC was created) and the agreement on a post-2015 international development agenda. Second, in the context of defining the post-2015 development framework, a discussion on the means of implementation and a global partnership for sustainable development has begun.

First high level meeting of the Global Partnership for Effective Development Cooperation

A3.2 Building on a range of international activities to improve development co-operation, including the Rome Declaration on Harmonization (2003), the Paris Declaration on Aid Effectiveness (2005), and the Accra Agenda for Action of 2008, the GPEDC was created at the Fourth High-Level Forum on Aid Effectiveness in Busan in 2011. It marked a notable shift from the traditional aid effectiveness discussion between donors and recipient countries to one of inclusive partnerships for effective development cooperation, including donors and recipients (South-South co-operation), multilateral organizations, international financial institutions, and non-governmental bodies such as the private sector and civil society organizations.

A3.3 The GPEDC, at its First High Level Meeting (HLM) in Mexico in April 2014, took stock of progress, notably (i) progress since Busan, (ii) domestic resource mobilization by governments in developing countries, (iii) south-south cooperation and knowledge sharing, and (iv) the private sector as a as partner in development.

Progress since Busan

A3.4 A progress report[6] was prepared to assess progress in effective development cooperation since the 2010 Paris Declaration Monitoring Survey. The assessment and report focused on:

- Ownership of the development priorities by developing countries;
- Results and inclusive development partnerships having a sustainable impact; and
- Transparency and accountability in development cooperation

Country ownership

A3.5 The Busan Partnership Agreement (BPA, 2011) sees developing countries' ownership of the development process as critical. The report highlights the need for setting priorities and interventions in response to the developing countries' contexts and needs. The outcome communique of the Mexico HLM reaffirms the principle of ownership of development priorities by developing countries. Development partners have undertaken to tailor aid to the national development agenda and context, strengthen and use country systems, address aid fragmentation, and improve the predictability of ODA flows.

A3.6 The progress report indicates that about half of ODA disbursements rely on the recipient country's own procurement and financial management systems, about the same share as in 2010 (in countries for which 2010 data are available), pointing to the further potential to strengthen and use country systems. In response to this initiative, the World Bank Group has undertaken a two-year program (from March 2013—2015) to develop new operational and procurement policies and procedures aimed at supporting the World Bank Group's borrowers in strengthening their own procurement systems. By using country public financial management and procurement systems rather than setting up parallel ones, multilaterals can help strengthen developing country institutions and contribute to country ownership and the long- term sustainability of development efforts.

A3.7 Country ownership is at the core of development effectiveness and drives the business model of multi-lateral development banks (MDBs). All MDBs have country- and client-driven business models and identify priorities for support in coordination with the countries and other development partners. The World Bank Group is strengthening the country focus of its programs by developing a more evidence-based and selective country engagement model. This model is based on selectivity, country ownership and national priorities, and contribution to the two goals of ending poverty and promoting shared prosperity in partnership with other development partners. In this model, a Systematic Country Diagnostic (SCD) will use data and analytic methods to help country clients and World Bank Group teams identify the most critical constraints to, and opportunities for, reducing poverty and building shared prosperity sustainably, while considering the voices of the poor and the views of the private sector and other stakeholders. The Country Partnership Framework (CPF) will lay out a program of indicative WBG interventions and the development objectives they are designed to help the country to achieve. The CPF objectives are derived from the country development goals, and reflect the Bank Group's comparative advantage as well as alignment with the goals of ending extreme poverty and promoting shared prosperity.

Box A3.1 Progress towards improving the quality of aid

The OECD/UNDP 2014 Progress Report on "Making Development Cooperation More Effective" reveals substantial progress towards increasing aid predictability, the share of aid on budget, and the use of country systems - indicators for which provider data are available and comparable to the 2010 Paris Declaration Monitoring Survey.

In terms of **annual aid predictability**, 84 percent of all scheduled disbursements communicated to government were disbursed as planned within the fiscal year, an increase from 79 percent in 2010 (table a3.1). Reaching the target requires that by 2015, providers should disburse 90 percent of all scheduled disbursements. The World Bank Group's annual predictability increased from 87 percent to 94 percent, exceeding the 2015 target. Four other MDBs showed progress in annual predictability of their disbursements, while two registered declines.

Regarding **aid on budget,** progress in the share of multilateral aid scheduled for disbursement and recorded on national budgets was mixed. The share of the World Bank Group's aid recorded on budget rose from 77 percemt in 2010 to 82 percent in 2013, closing in on the 2015 target of 85 percent. Three other MDBs showed progress on this indicator, with the EBRD already exceeding the 2015 target.

Progress in the **use of country public financial management and procurement systems** was more mixed. The share of aid disbursed through developing countries' PFM and procurement systems remains less than 50 percent, and the World Bank's Group share fell substantially. At the same time, three MDBs recorded improvements.

Thus the OECD/UNDP report shows some improvements in aid quality from 2010 to 2013. However, significant issues remain, particularly in donor reliance on government financial management and procurement systems.

Source: "Making Development Cooperation More Effective," 2014 Progress Report, OECD/UNDP.

Table A3.1 Performance of multi-laterals in the 2014 progress report

	5a. Annual Predictability (%)[7]			6. Aid on Budget (%)[8]			9b. Use of country public financial management and procurement systems (%)[9]		
	Target: 90			Target: 85					
	2013	2010	Progress	2013	2010	Progress	2013	2010	Progress
Overall Provider Data	84	79	+	64	57	+	49	48	+
World Bank Group(WBG)	94	87	+	82	77	+	52	62	-
African Development Bank (AfDB)	71	60	+	68	76	-	48	34	+
Asian Development Bank (ADB)	66	79	-	51	77	-	70	68	+
European Bank for Reconstruction and Development (EBRD)	95	69	+	98	52	+	-	-	-
European Union (EU)	82	81	+	63	65	-	41	47	-
Inter-American Development Bank (IADB)	65	68	-	28	11	+	53	8	+
International Fund for Agricultural Development (IFAD)	72	51	+	71	56	+	55	83	-
Islamic Development Bank (IsDB)	34	0	n/a	49	0	n/a	-	-	-
United Nations (UN)	86%	80%	+	54%	43%	+	14%	19%	-

Source: OECD DAC 2014.

Focus on results and inclusive development partnerships

A3.8 The Mexico HLM outcome communique calls for the "broadening and strengthening of the initiatives, operational policies and instruments undertaken to improve country results frameworks to better manage, monitor, evaluate and communicate progress", as well as scaling up "initiatives in support of the maximization and sustainability of development results and impacts."[10]

A3.9 The progress report shows that further efforts are needed to ensure that country-led results frameworks are adopted as a common tool to assess performance. Progress will require strengthening the multi-stakeholder country level dialogue in this area, as well as identifying and promoting relevant operational policies and instruments.

A3.10 Most MDBs have adopted multi-tiered results frameworks that track the performance of the organization as a whole, as well as the results of the operations they finance. These frameworks are key to enhancing accountability and evidence-based decision-making. For example, the World Bank Group Corporate Scorecard monitors, at an aggregate level, how the World Bank Group implements its strategy and improves its performance (Tier III) to support clients in achieving results (Tier II) in the context of global development progress (Tier I). The IDA Results Measurement System measures progress on 22 key country outcome indicators, covering areas that are consistent with the Millennium Development Goals, are priorities in many national development plans and/or poverty reduction strategies, and reflect IDA's activities in the respective countries.

A3.11 In Mexico, GPEDC members also reiterated the Busan commitment to inclusiveness in development cooperation, highlighting the role of parliaments, civil society organizations, the private sector, and philanthropic foundations as partners in development. Inclusiveness entails working with citizens to give them a voice in the design, implementation and monitoring of development initiatives and improving development outcomes through strengthening targeting, ownership and sustainability.

Box A3.2 The World Bank is supporting citizen engagement in development projects

Transparency is a necessary but not sufficient condition for participation and accountability processes that improve development outcomes. Emerging evidence shows that under the right conditions, citizen engagement, including beneficiary feedback, can improve development results through better targeting of development interventions and improved monitoring of the performance of governments and service providers both from the public and the private sector perspective. The World Bank Group is developing a Strategic Framework for Mainstreaming Citizen Engagement to improve its operational results. The objectives of the framework are to:

- mainstream a coherent and cohesive approach to citizen engagement in WBG-supported policy dialogues, programs, projects, knowledge and advisory services and,
- within the scope of these interventions, contribute to building sustainable national mechanisms for citizen engagement with governments and the private sector.

This framework highlights additional, context-specific opportunities to engage with citizens and seek beneficiary feedback to improve the outcomes of World Bank Group-supported development interventions.

Source: http://consultations.worldbank.org/consultation/engaging-citizens-improved-results.

Transparency and accountability

A3.12 The Mexico HLM took stock of progress on the Busan commitment to make available timely, comprehensive and forward-looking information on resources generated through development co-operation. By 2013, aid agencies were to adopt a common, open standard for electronic publication[11] and provide regular, timely, rolling three- to five-year indicative forward expenditure and/or implementation plans.

A3.13 A pilot transparency indicator assessment by OECD/UNDP found that accelerated progress is required to reach the Busan commitments. On average, providers publish information once a year for 50 percent of the data points supplied, with forward-looking information being a particular challenge (box A3.3).

Box A3.3 MDBs are making progress in improving transparency

In spite of the considerable challenges involved, MDBs have made some progress in implementing the International Aid Transparency Initiative. The **ADB** posted its first IATI Implementation Schedule in May 2011, and released an initial set of aid data in November 2011 through the IATI central registry. ADB provided updates of machine-readable aid data under IATI on a quarterly basis in 2013. **AfDB** published its first implementation schedule in December 2012 (modified in May 2013), and launched its first publication of IATI data in July 2013. **IADB** began publishing data under the IATI in March 2013, and are moving forward to meet the commitment to the common standard by the end of 2015. **IFAD** posted its implementation schedule in May 2013. The **World Bank Group** was a founding signatory of IATI in Ghana in 2008 and published its first implementation schedule and IATI data in 2011. The World Bank Group is now moving towards a quarterly publication frequency.

Source: "Multi-Lateral Development Banks: Working Together for More Effective Development Cooperation," April 2014

A3.14 Publish What You Fund's annual Aid Transparency Index includes several indicators of donor commitment to aid transparency and progress in the publication of organization- and activity-level information. In 2013, the International Development Association (IDA) ranked at the top of the "good" category, and 5th out of 67 organizations. Four MDBs ranked in the top 11 in the 2013 assessment.

A3.15 While the OECD/UNDP progress report shows that the annual predictability of ODA disbursements has improved (as discussed above), medium-term predictability (the estimated share of development cooperation covered by indicative forward expenditure and/or implementation plans for 1-3 years ahead) declines to 70 percent in year 2 and 57 percent in year 3. Measuring an additional dimension of accountability, 59 percent of countries reported having mutual assessment reviews in place.

South-South cooperation and knowledge sharing

A3.16 The Mexico HLM emphasized the importance of south-south cooperation, triangular cooperation and knowledge sharing. Southern partners are increasingly active in exchanging developmental experiences and in cooperating with other developing countries, especially through infrastructure and economic development, public services and social protection, resilience building, knowledge sharing, and regional cooperation and integration initiatives.[12] South-South cooperation is different in nature and modalities from, and complementary to, traditional development cooperation. Triangular cooperation offers innovative partnership between recipient countries, southern donors, and traditional providers of development cooperation. In this context, country-led knowledge sharing is at the heart of development effectiveness and can involve all development partners to address inclusive and sustainable development challenges. The World Bank Group is actively supporting country-led knowledge exchange through its South-South Knowledge Exchange Facility and its support to high level meetings on Country-Led Knowledge Hubs in Bali in July 2012 and Seoul in June 2014 (www.knowledgenhubs.org).

Private sector as a partner in development

A3.17 The Mexico HLM recognized that the private sector can make an important contribution to poverty reduction and sustainability through strong and inclusive economic growth, wealth and job creation, entrepreneurship and innovation, knowledge sharing, technology transfer and expanded access to goods and services for all.[13] In addition, given the significant financing needs for the post-2015 development framework, the private sector is expected to provide a large share of the needed investments in sustainable development, together with improved domestic resource mobilization. For this reason, the international dialogue on development effectiveness focuses on including business as a partner in the development dialogue, improving the investment climate for the private sector, and developing innovative public-private financing mechanisms for development (box A3.4).

Box A3.4 MDBs are working with the private sector to improve development

In some countries, Public-Private Dialogue platforms have been crucial to creating an enabling business environment. During Nepal's post-conflict period, the World Bank Group's Nepal Investment Climate Reform Program (NICRP) worked closely with the Nepal Business Forum (NBF) — Nepal's very first public-private business forum, including 75 members from across government, business, and civil society — to generate important support for reforms in areas such as tax administration, trade logistics, export promotion, investment facilitation, access to finance, and energy. In this way, the NBF helped to deliver reforms which will generate an expected $10 million in private sector savings.

Many companies are maximizing their development impact by aligning business and development objectives. The IADB's Shared Value Products give clients tailor-made business advisory services focused on developing competitive business strategies that generate social value and sustainable impact.

EBRD's Sustainable Energy Financing Facilities channel support through local financial institutions that allows businesses and households to invest in energy efficiency and renewable energy, helping them generate medium-term savings while delivering on climate objectives.

There are several examples of innovative financial instruments that support sustainable development. The Global Agriculture and Food Security program provides first-loss cover for loans taken out by smallholders, to make them more attractive to creditors (the IFC manages the private sector component). In Mexico, the IADB supported the first issuance of education bonds, helping create a new asset class and increasing capital market investments for poor students. ADB's Off-Grid Pay-As-You-Go Solar Power project in India uses text messages to facilitate consumers' access to affordable solar energy. Finally, the World Bank Group participated in the AgResults Initiative, which uses public financing to reward agricultural innovation in developing countries and build sustainable markets for agricultural inputs, products and services that benefit the poor.

Thus, MDBs efforts to involve the private sector in development operate at multiple levels: helping firms express their concerns about government policy, improving private firms' development impact, and involving firms in financing development activities.

Source: "Multi-Lateral Development Banks: Working Together for More Effective Development Cooperation," April 2014.

Means of implementation for the post-2015 development framework

A3.18 The UN-led debate on the future of development cooperation and means of implementation of a post-2015 development framework has begun. It focuses on (i) improving the allocation of ODA, particularly improved pro-poor targeting and the varying needs involved in achieving sustainable development; (ii) trends in other sources of development cooperation, such as the importance of improving domestic resource mobilization, building strong financial markets, attracting private investment, and developing innovative public-private financing mechanisms; (iii) ensuring the ongoing quality and effectiveness of development cooperation along the principles of untying ODA, simplifying and harmonizing procedures, improving predictability, and mutual accountability; and (iv) the quality and effectiveness of development cooperation beyond ODA, through improved partnerships with south-south providers, the business sector, philanthropy, and civil society, along with improving the effectiveness of providers.[14]

A3.19 A renewed global partnership for [sustainable] development is proposed as successor to MDG8. Among others issues, this partnership will need to focus on three main issues:

- Achieving a sustainable approach to *financing post-2015 initiatives* will require improved domestic resource mobilization, better and smarter aid, private finance for development, and innovative public-private financing sources.[15] The World Bank Group, in collaboration with other MDBs, is working closely with the UN to identify country-level and global sources for financing the post-2015 agenda.

- Improvements in *country-level data* quality are essential to strengthen the monitoring of development results. To this end, the World Bank Group has signed a Memorandum of Understanding with the UN and other MDBs on Cooperation on Statistical Activities.
- *Multi-stakeholder development partnerships* are necessary to leverage and complement existing partnerships at the global level and create inclusive development partnerships at the country level, including governments, development providers, civil society and citizens, philanthropy, the private sector, parliaments and other stakeholders. As part of its client engagement model, the World Bank Group supports such partnerships at the country level.

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Supplement–International Financial Institutions

Role of public private partnerships (PPP) and guarantees

S1 This section pays special attention to the catalytic role and leveraging potential of Multilateral Development Banks (MDBs) and what role each institution has played to mobilize additional financing for development in countries from diverse sources. Its focus is on PPP and guarantees.

The World Bank Group

S2 The World Bank Group undertakes two critical activities to mobilize and leverage financial resources for development i.e. the role that PPPs play and MIGAs role in mobilizing private resources for a country's development.

The World Bank Group and PPPs

S3 WBG has supported, either financially or technically, 750 PPPs over the last decade.[16] During the last 10 years, WBG support to PPPs increased threefold, from $0.9 billion in 2002 to $2.9 billion in 2012. During FY02-12 IBRD/ IDA approved 353 public sector lending and partial risk guarantee projects totaling $7.6 billion with a PPP component. The IFC provided $6.2 billion of financing to private investors in 176 PPPs, while MIGA provided political risk insurance to 81 PPPs with total $5.1 billion gross exposure; and IFC PPP Advisory Services completed 140 transactions, with total expenditure of $177 million.

S4 PPPs undertaken by the WBG were focused within the economic infrastructure sectors with an increasing number of advisory activities within social services. The majority of PPPs were concentrated in the transport, energy and water sectors with an increasing number of PPPs in the health and education sectors. Support provided by the private sector arms of the WBG, the IFC and MIGA, tracked the general PPP market closely by focusing their support on the energy, and transport sectors. Notably, the IFC's advisory work includes a number of projects in the health and education sectors. The public sector arm of the WBG, the IBRD and IDA, provided support to client's primarily within the transport, water and energy sectors, which closely aligns with the development challenges identified by client governments.

S5 The collection of data on mobilization has been evolving so current figures are indicative, rather than comprehensive. The mobilization figures listed below are for "direct" mobilization, i.e. private sector financing provided for projects supported by the WBG which have reached financial closure, rather than "indirect" mobilization, i.e. that arising from projects which might result from reforms or changes in laws supported by the WBG.

S6 In FY13 the World Bank directly mobilized $1.1 billion of private capital, resulting from its guarantee and loan operations. Most of this was associated with infrastructure/PPPs. In FY 13, IFC mobilized US$ 3.2 billion for the infrastructure sector — US$ 2.26 billion from its investment activities and another US$ 941 million from advisory activities (where IFC provided advice to governments to structure and bid out PPPs, and those PPPs then reached financial closure.

Box S1 The WBG is helping to involve the private sector in transport infrastructure

An important goal of the WBG’s support for infrastructure is to generate increased resources through private sector involvement. For example, in 2011-12, the IFC advised the Saudi Arabian Civil Aviation Authority (GACA) on the Madinah Airport PPP, which is the first full airport PPP in the Gulf Cooperation Council (GCC) region. It was structured as a 25 year concession to design, build, finance and operate the airport and reached financial closure in June 2012, mobilizing about $1.2 billion in private investment. The Project is the first full international airport PPP to be entirely financed using Islamic project finance. Given GACA's desire to retain ownership of this strategic asset, the financing agreements were structured so that the airport operating rights are sold to the lenders and then leased back by the Project Company in exchange for lease payments. The Islamic financing package was provided by three Saudi Arabian commercial banks, and included a 3-year, $436 million commodity equity bridge facility, an 18-year, $719m procurement facility, and a $23m working capital facility.

A similar approach can be seen in the WBG’s advice to the Government of Colombia in 2009 to 2011, concerning the structuring of a concession for Ruta del Sol. This is a 1,000 km road from Bogota to the Colombian Caribbean coast, with an estimated investment cost of $2.6 billion. The GOC sought WBG advice to improve its road concession model to attract international investors as well as long term financing from local pension funds. The project was split into three sections, in order to make the project more digestible to the market, and to promote competition between different concessionaires. Each section was successfully awarded to consortia of international and local investors, including some local pension funds. All projects reached financial closing, including about $700 million from private sector funds and local banks.

These examples emphasize the importance of appropriate financial structures to galvanize private sector support for infrastructure.

MIGA, Private Investment and Guarantees

S7 MIGA plays a critical role in supporting private investment flows to developing countries. As the WBG's provider of investment insurance, MIGA instills confidence among investors seeking to secure private investment flows against political and sovereign risks. The Agency does this by leveraging its strength as a member of the WBG with access to knowledge, experience, and key decision-makers that other providers cannot match. By supporting private industry in their goals of generating investment returns, and by mobilizing the reinsurance market, MIGA is uniquely positioned to bring together the forces of industry and the financial markets. At the same time, MIGA's collaboration with IFC, IBRD, and IDA reinforces the WBG's ability to design a full spectrum of solutions that can lead to transformational development anchored on channeling private sector investment where it is most needed. MIGA mobilizes private sector investment in challenging environments that are often beyond the risk tolerance of commercial sources of capital.

Box S2 MIGA provides insurance for political and default risk

MIGA helps to facilitate international investment by insuring firms against the risk of adverse government actions.

Political Risk Insurance

- **Transfer Restriction and Inconvertibility –** provides coverage for the risk of inconvertibility of local currency into foreign exchange for transfer outside the host country. Currency depreciation is not covered.
- **Expropriation –** covers the risk of partial or total loss of the insured investment as a result of acts by the host government that may reduce or eliminate ownership of, control over, or rights to the insured investment.
- **War and Civil Disturbance –** covers the risk of damage to, or the destruction or disappearance of, tangible covered assets caused by politically motivated acts of war or civil disturbance in the host country, including revolution, insurrection, coups d'état, sabotage and terrorism.
- **Breach of Contract** – covers the risk of being unable to obtain or enforce an arbitral or judicial decision recognizing the breach of an obligation by the host government or a state-owned enterprise.

Non-honoring of Financial Obligations

- **Non-honoring of a Sovereign Financial Obligation** – covers the risk that a sovereign fails to honor an unconditional financial payment obligation or guarantee, where the underlying project meets all of MIGA's normal eligibility requirements. Unlike MIGA's breach of contract coverage, this coverage does not require a final arbitral award or court decision as a condition of payment of a claim. Sub-sovereign entities can also be covered.
- **Non-honoring of Financial Obligation by a State-Owned Enterprise** – covers the risk that a state-owned enterprise fails to honor an unconditional financial payment obligation or guarantee, where the underlying project meets all of MIGA's eligibility requirements. This coverage does not require a final arbitral award or court decision as a condition of payment of a claim.

MIGA, as part of the WBG, is better placed than most private firms to evaluate sovereign risk, and thus provides a service that would otherwise be unavailable or cost a great deal more.

S8 To strengthen MIGA's ability to collect, manage and report development outcomes of projects supported consistently by WBG, it has recently implemented a Development Effectiveness Indicator System (DEIS). Data collected on development outcomes through the DEIS cover a project's financial performance, economy-wide impact, environmental and social compliance, and contribution to broader private sector development. Outcomes measured include total investment supported, employment, taxes and domestic purchases. It therefore provides direct information on the investment mobilized component. Initial results for FY13 show that MIGA guarantees of $2.8 billion support $5.7 billion of total investments, adding approximately 20,000 jobs. With $3.2 billion of guarantees offered in FY14, the expectation is of a similar amount of mobilization.

S9 MIGA provides support for private investors or lenders and thus often mobilizes larger amounts of money into the same investments. Another key component of MIGA's leverage is its use of reinsurance. Reinsurance arrangements increase MIGA's direct capacity to support large, complex projects, an important added value for investors in industries such as power, telecom, infrastructure, extractive industries, and finance. Reinsurers look to the track record of their partners and are encouraged by MIGA's participation in frontier markets projects, where without MIGA's presence they may be more hesitant to engage. It also enables other insurers to underwrite transactions with longer tenors than they would normally consider. Through reinsurance, MIGA mobilizes the private insurance market and leverages its own limited capital very effectively. As of December 31, 2013, $1.23 billion of capital supports gross exposure of $11.48 billion for an efficient gross leverage ratio of 9.3. It should be noted that without reinsurance, MIGA would not have been able to support large projects of sizes of $200-700 million or more, within the limitation of its capital base.

Box S3 MIGA guarantees have played an important role in mobilizing investment

The energy and transport sectors have benefited from MIGA guarantees of private investment: *Henri Konan Bédié Bridge* - On June 28, 2012, MIGA issued $145 million in guarantees covering equity investments and subordinated loans from Bouygues Travaux Publics of France and Pan African Infrastructure Development Fund of South Africa, subordinated and senior loans from Africa Finance Corporation of Nigeria, and senior loans from BMCE Bank International Plc of the United Kingdom and FMO of the Netherlands. MIGA's coverage is for a period of 15 years

against the risks of transfer restriction, expropriation, war and civil disturbance, and breach of contract. One of the first toll-bridges in West Africa, this complex, infrastructure project is the first public-private partnership in war-ravaged Côte d'Ivoire, an IDA-eligible country. The bridge is expected to help address significant congestion and pollution in Abidjan. Its construction should result in a reduction of carbon dioxide emissions due to lower fuel consumption.

Azito Thermal Power Plant - In Côte d'Ivoire, demand for electricity is growing at an estimated 8 percent annually as businesses seek to rebuild and urbanization takes hold. MIGA is helping to mobilize private finance for Côte d'Ivoire's vast reconstruction needs with its support for the expansion of the Alito Thermal Power Plant, which will generate 50 percent more power. The project involves converting the existing simple-cycle Alito Plant to combined-cycle, increasing total capacity from 290 to approximately 430 megawatts while avoiding 225,000 tons of CO_2 emissions per year. Upon completion, the facility will become one of the largest independent power generators in Sub-Saharan Africa.

Block CI-27 Expansion Program - MIGA's support for the energy sector in Cote d'Ivoire is further highlighted by its support for SCDM Energie SAS, France's investment in the construction and operation of oil and gas production on Block CI-27, including facilities situated 18 km offshore from Abidjan, in the Gulf of Guinea. The project scope includes: an existing operational production platform (Foxtrot Platform); the construction and operation of a green field production platform (Marlin Platform); drilling of 12 wells; existing and new installation of oil and gas pipelines and onshore facilities. The expansion of this field and the extension of exploration and production into the neighboring Marlin platform are essential to the sustainability of energy production in the country.

In addition to the $487 million in MIGA guarantees supporting this project, IDA is further supporting the project with a Partial Risk Guarantee (PRG) of $15 million covering a Gas Supply Agreement termination risk. Synergies between the PRG and MIGA guarantees are expected to leverage private investments by helping the country to offer a tested credit enhancement framework to attract investors. Overall, MIGA's recent involvement in the country, with an exposure of $754 million in gross guarantees, has mobilized over $2 billion worth of private investment.

These examples show how guarantees by the WBG can help mobilize the private financing essential for large infrastructure projects that contribute to development.

European Bank for Reconstruction and Development (EBRD)

S10 EBRD provides project finance to clients primarily in the private sector in order to foster transition to sustainable, open market economies. From the beginning, mobilizing outside investment has been core to the Bank's mandate. Every €1 of EBRD finance since its founding in 1991 has been accompanied by an additional €2 from other sources.

S11 Through a range of instruments covering debt, equity, guarantees, and currency swaps, EBRD champions private sector development and brings in outside private sector investment. Furthermore, the Bank uses its close relationship with governments in the region and its roster of private sector clients to promote policies that will bolster the business environment.

Improvements in business and investment climate

S12 An unfavorable regulatory environment and non-sustaining investment climate are important impediments to private investment in emerging. EBRD aims to reinforce institutions and policies that make it easier and safer for provision of private finance. Some of the headline initiatives for these efforts are:

Legal Transition Programme

S13 Established in 1995, the Legal Transition Program (LTP) helps to create an investor-friendly, transparent and predictable legal environment in EBRD's countries of operation. LTP activities focus on the development of legal rules and the establishment of the legal institutions and culture on which a vibrant market-oriented economy depends, through policy dialogue, diagnostic studies, technical cooperation and outreach activities. The LTP focuses on a number of topics most relevant to the EBRD's investment activities and in which the Bank has accumulated experience. These topics include access to finance and capital markets, corporate governance, insolvency and debt restructuring, enhancing judicial capacity and contract enforcement, public-private partnerships and concessions, telecommunications and ICT, energy efficiency and renewable energy, natural resources, and public procurement.

S14 More recently, the LTP expanded its scope to deliver improvements to the food chain by developing pre- and post-harvest financing tools. A key instrument of pre-harvest financing, crop receipts allow farmers to use future crops as collateral, thus expanding their access to finance. LTP has worked on crop receipts across the region, including in Ukraine, Serbia and Russia. In Ukraine, legislators have already drafted and enacted a specialized law, and the LTP is focusing the necessary implementing regulations. In Serbia, the draft law was developed with EBRD assistance and is now up for reading in the parliament. Once the dedicated legislation is in place, the EBRD can start offering new products to existing banks for the financing of seeds, fertilizers and other inputs, with the aim of facilitating access to finance along the grain value chain.

Investment Climate and Good Governance Initiative

S15 As a major investor in its countries of operation, EBRD has been active for many years in promoting a better investment climate. In order to better concentrate these efforts, EBRD launched the Investment Climate and Good Governance Initiative in 2014, piloting the approach in Albania. The ICGGI is designed to operate alongside a willing and committed partner in the host country, drawing on a range of well-specified tools and instruments to combat investment climate and economic governance issues faced by both domestic business and cross-border investors. The ICGGI pilot initiative in Albania is underway, and under its auspices EBRD and the Albanian leadership jointly agreed a range of interventions including the establishment of an Investment Council, strengthening the rule of law and judiciary, improvements to the Albanian business registry, and design and implementation of a robust consumer credit bureau.

Anti-Corruption Initiative

S16 Tackling systemic corruption in Ukraine is widely recognized as an essential task for both economic growth and the credibility of the government. As such, EBRD convened multilateral stakeholders such as the OECD as well as domestic and international business associations to join an Anti-Corruption Initiative for Ukraine. Signed in May 2014 by Prime Minister Yatsenyuk on behalf of the Ukrainian government, the Initiative seeks to establish – for the first time in Ukraine–an independently funded Business Ombudsman institution. The Ombudsman will be the first point of contact for companies seeking redress against unfair treatment. The new institution will provide for greater transparency of business practices in the region and it will make its reports public.

Support to Public-Private Partnerships

S17 EBRD has broad and varied experience involving infrastructure projects using various forms of private sector participation approaches, encompassing both PPPs and projects funded with the public sector according to the user-pays principle based on a public service contract (PSC) model.

S18 Over the past 15 years, the Bank has funded some 40 PPPs in the infrastructure sector, including roads, airport terminals, ports, and water/wastewater systems. To date, the Bank has financed a total of EUR 3.0 billion in direct private sector financing. These projects leveraged an additional EUR 4.5 billion in other private financing from commercial lenders or other co-financiers.

S19 Using the PSC model, EBRD's municipal team has financed some 300 projects across the water/waste water, urban transport, district heating and solid waste sectors, totaling approximately EUR 5.3 billion. Importantly for the municipalities and ministries of finance, these projects are typically structured as non-sovereign and off-balance sheet in respect of the municipalities, structured directly with the municipal utilities acting as borrowers. While full-cost recovery tariffs are pursued wherever possible, when public subsidies are necessary on policy or affordability grounds, performance-based contracting holds the management of these public utility companies accountable under the PSCs. This PSC model has proven resilient over the past 15 years, having withstood serious crises, including the fall-out of the financial crisis of 2008-09.

S20 In order to establish pre-conditions favorable to long-term infrastructure investment and deepen the pool of projects that ultimately can be financed, EBRD undertakes focused policy dialogue activities with partner governments. Priorities of this assistance for the rest of 2014 and

2015 will include transport PPPs in Kazakhstan; Private Sector Participation in the solid waste sector; performance-based contracting for roads; and facilities management PPPs in Turkey.

Catalytic Financing Mechanisms

S21 Over the years, EBRD investments have attracted an additional €168 billion from domestic and foreign investors. The critical success factor in mobilizing private capital lies in the EBRD's ability to present quality projects to the market based on sound banking principles. Below are just some of the specific mechanisms that have been successful in attracting co-investment from private sources.

Syndications

S22 Syndication of EBRD loans to commercial banks has been a primary source of attracting private finance and introducing lenders to risks in the EBRD region. Since 2009 EBRD has syndicated over €4 billion to commercial banks. Under the syndication structure, EBRD acts as lender of record for the entire loan but allows commercial bank participation through transferring risks of a portion of the loan to the commercial lender. Through this structure, commercial banks benefit from the EBRD's preferred creditor status which helps mitigate certain elements of country risk.

Private equity

S23 Supporting successful as well as first-time equity fund managers across the EBRD region is one of the most efficient ways to sustainably improve access to a form of finance that is sorely needed by SMEs. Through its investments the EBRD has become the largest private equity funds investor in its region of operations, with investments in over 140 funds, backing over 90 fund managers for over €3 billion in commitments, and fund capital of over €15 billion.

S24 When it comes to direct investments, EBRD's equity portfolio has performed in line with or has outperformed industry benchmarks over the medium to long term. In the interest of mobilizing additional long-term risk capital into the region, EBRD is actively looking at structures that will allow institutional investors to participate in its equity portfolio. The aim is to create a vehicle for global investors to access diversified pool of direct equity investments in a region where they are underweight, tapping in to EBRD's successful track record and robust investment strategy.

Local Currency and Local Capital Markets

S25 EBRD, like most IFI are looking at increasing the number of local currency denominated operations in their own portfolios. While the provision of local currency loans by IFI is critical in encouraging the broader use of LCY as a unit of value and reduces the impact of adverse exchange rate movement on vulnerable borrowers, IFI recognize that strategic initiatives such as LC2 must look beyond local currency lending operations in order to develop more robust and sustainable financial systems that result in more efficient and broader mobilization of capital and access to finance. LC2 efforts bring together EBRD's work across departments in treasury functions, banking operations, and technical assistance to help establish critical market infrastructure and a regulatory framework supportive of broad based capital markets activity. Key to this is strengthening the efficient functioning of domestic capital markets through clearing, settlement and depository improvements, raising confidence in local institutions such as equity exchanges and trading platforms and supporting the systematic development of the local investor base as an alternative source of finance to the banking system. Examples of activities that support these goals include minority strategic investments in equity exchanges and the support of a virtual equity trading platform linking several exchanges in the Balkan region, as well as extensive policy dialogue on the issues related to the creation of Central Counterparties (CCP) and increased issuance of local currency debt and equity instruments. Recent successes include the first-ever Georgian-Lari bond issue by an IFI, and participation in a pilot corporate bond issue in Som by the Kyrgyz Investment and Credit Bank (KICB) as well as investment in several local currency financial sector corporate bonds in Romania. This is often augmented by technical cooperation aimed at encouraging the development of a broader inventory of domestic financial assets such as REITs, infrastructure project bonds and covered bonds.

Inter-America Development Bank (IaDB)

S26 Since 2008, the IaDB have been actively engaged in the mobilization of resources to LAC countries and improving the conditions for private sector activity as a means of attaining growth, employment creation and poverty alleviation. The IaDB has launched diverse initiatives to forge and strengthen alliance with both public and private partners; pursued activities aimed at identifying alternative and innovative sources of financing; and developed new financing products. The Bank has also leveraged its expertise, resources, and regional presence, as well as its partners' financial and non-financial contributions, to increase resource mobilization and respond to LAC's funding needs.

S27 Innovative financing is playing an important role in funding private investment. The IaDB continues to explore innovative mechanisms and identify other possible avenues for funding. In addition to loan operations and technical assistance, the IaDB has a wide array of instruments to mobilize financial resources from private partners or to support private finance. The Bank promotes innovative financing mechanisms that play an important catalytic role and help attract new sources of financing. Here one could think about credit enhancement mechanisms such as partial risk and partial credit guarantees, risk pooling initiatives, project bond credit enhancements and equity tranches covering first loss provisions, and impact investments, to name a few. The Bank has pursued other actions to encourage private sector participation, increase philanthropic support, and facilitate impact investing.

Private Sector Window: Catalytic Role in Mobilizing Private Sector

S28 IaDB's private sector window also provides a series of advisory services, investment facilitation, and knowledge management activities that promote the crowding in of resources from external sources. The Multilateral Investment Fund (MIF) has been able to leverage US$2.7 billion in private investment in infrastructure through the use of grants from their Regional Public-Private Partnership Advisory Services Program. It is expected that an additional US$1.2 billion in private investments will be mobilized as a result in the near future. The Program has achieved this by strengthening government capacities in the design, execution and management of PPPs using advisory services. It addresses gaps that prevent the launch of PPPs in the region by leveraging resources and knowledge of the IaDB. The Program also helps identify bankable PPP projects and market them to the private sector. It focuses on assisting sub-national governments and smaller and lower-income countries with innovative PPPs, such as green PPPs and health and education projects, to assist them with finding investors and achieve financial closure. Program activities include training as well as the development of non-financial products for project financing, management and monitoring. In addition, capacity building is provided directly to government institutions for the identification and management of PPP projects.

S29 This Program is active in 12 countries with an array of PPP support projects including 18 technical assistance, 15 diagnostics to 12 governments, and the successful organization of five international conferences on PPP. As a result of the program, 22 PPP units have been established to date and 2,238 specialists from the public and private sector have received training. Additionally, 28 laws and regulations have been drafted and implemented that have made possible the launch of PPPs across the region.

S30 IaDB also provides innovative tools such as shared value appraisals and platforms such as BeyondBanking[17] and Infrastructure 360[18] that encourage firms to make investments that generate social as much as financial return. These approaches seek to turn private sector leaders into "agents for change" and partners for development on sustainability, gender and other impact focused issues. Through all of its investments, the IaDB encourages improved corporate practices and the highest environmental and social standards (box S4).

Box S4 The private sector is helping to finance clean energy infrastructure in Costa Rica

The IaDB is active in mobilizing private funds for investments in clean energy. In 2012, the IaDB approved a series of loans and guarantees for a total of $200 million for the construction of the largest renewable energy project in Central America, a hydroelectric plant with an installed capacity of 305.5 megawatts, which will supply electricity to 525,000 households. This project represents a milestone in the IaDB's private sector's efforts to increase mobilization by expending its network of potential co-investors.

Reventazón introduced a first of its kind loan and bond package and was the first MDB transaction closed in over a decade using Reg-D private placement structure. The IaDB A/B loan package includes a 20-year term, the longest tenor achieved for any IaDB B-loan. The $200 million A loan tranche was complemented with a $135 Million B tranche which was sold to bond investors through the Reventazón Finance Trust (RFT). The 20-year senior bond has a 14-year average life and pays an 8 percent coupon. At an expected rating of Baa3/-/BBB-, the note is in line with Moody's rating on Costa Rica, but above Fitch's BB+ rating on the sovereign, effectively piercing the sovereign ceiling. Because of the IaDB's lender-of-record status on the B tranche, the deal benefits from the multilateral's "de-facto preferred creditor status". The sale of the B tranche, instead of resorting to commercial bank debt, allowed the deal to seek longer-term funds from institutional investors. The IaDB's package also made possible the mobilization of additional investment. The IaDB secured $470 Million in co-financing from International Finance Corporation (IFC) and a group of Costa Rican banks, all going for the same 20 year tenor in colones, the Costa Rican currency. The project has been structured so construction, operation, and other risks are covered by the government owned Instituto Costarricense de Electricidad (ICE).

S31 IaDB loans and guarantees have thus improved the terms and amount of financing for a project that will play an important role in Central America's efforts to develop while limiting carbon emissions. Another mechanism the private sector windows use for resource mobilization has been impact investing. In March 2014, the MIF launched a US$ 5.3 million program to test Social Impact Bonds in LAC. This financing model offer opportunities for private investors to participate in developing and delivering services to low-income or vulnerable populations. The MIF's Social Impact Bond facility will focus on developing the right conditions to create the ecosystem that is necessary for the Social Impact Bond market to develop and grow. The IaDB Group's Inter-American Investment Corporation (IIC) committed $2.5 million to the Adobe Social Mezzanine Fund I LP. Adobe is an impact investment fund focused on the growth of sustainable SMEs that have adopted innovative business models from a financial, social, and environmental perspective.

S32 The IaDB will continue to provide financial and non-financial instruments to directly engage with the private sector and mobilize additional resource towards projects with high developmental impact. Through the use of innovative financing options, such as guarantee mechanisms for investments and market creation, as well as advisory services to create the conditions for additional investments, the Bank will catalyze investment throughout the region.

Asian Development Bank (ADB)

S33 Support for PPPs to leverage ODA resources from donor countries through project development, including PPP transaction advisory services to structure bankable infrastructure projects.

Box S5 The ADB is helping to involve private partners in infrastructure projects

Forging partnerships with the private sector can help mobilize financing and management expertise for infrastructure in developing countries. Three projects illustrate the ADB's contribution to these efforts:

TA 7342: Supporting an Initiative for Mainstreaming Public–Private Partnerships for Providing Urban Rural Amenities in Rural Areas in India. Component 1 of the TA focuses on development of the Providing Urban Facilities in Rural Areas (PURA) framework at the Ministry of Rural Development, which include (i) defining sector policy objectives with PPP implementation modalities and well-defined scheme parameters; (ii) defining cluster infrastructure asset classes to be funded through the scheme as different to assets being developed through other government schemes; (iii) identifying existing government funding schemes relevant to the asset classes, and developing a policy framework for these funds to be integrated into the PURA framework for PPP implementation; (iv) developing generic PPP models and related contract documents for clusters to be incorporated as guidelines; (v) identifying viability gap funds, if required; (vi) consulting with local governments, and the private sector on the framework and PPP implementation modality; (vii) identifying key risks and their mitigation for implementation; and (viii) developing a communication and advocacy strategy. The cost of the TA is $1.875 million equivalent, of which $1.5 million equivalent was financed on a grant basis by the Japan Special Fund, funded by the Government of Japan.

ADB remains in its role as the mandated advisor to the *Government of Mongolia to structure the Combined Heat and Power Number 5 Project* as a build-operate-transfer concession—a $1.2 billion investment. A multidisciplinary team with project finance and private sector legal skills was assembled to deliver this PPP advisory mandate. The prequalification process started in September 2011; 34 firms worldwide expressed interest in the project and 11 consortia made a submission. The four shortlisted consortia were asked to submit proposal documents in early 2012. Bids were received in May 2012 and the preferred bidder was announced in July 2012. After the project site was changed in December 2012, the government asked the final two bidders to submit their final offers in February 2013. The preferred bidder was announced in August 2013. ADB's advisory team assisted the government in its negotiations with the preferred bidder. The Government signed a Concession Agreement for Ulaanbataar's Combined Heat and Power Plant Number 5 (CHP5) Project with the preferred bidder on Friday 20 June 2014. The Concession Agreement is for 25 years and will be supported by further documentation (power purchase agreement, heat purchase agreement, land use agreement, coal supply agreement and water use agreement).

In November 2013, ADB was appointed as a *transaction adviser to the state gas companies of Turkmenistan, Afghanistan, Pakistan, and India* to help attract a private partner to lead the consortium that will build, own, and operate the planned *1,800-kilometer Turkmenistan–Afghanistan–Pakistan–India natural gas pipeline.* This project will aim to export up to 33 billion cubic meters of natural gas a year from Turkmenistan to critically unserved markets in South Asia, where energy needs are estimated to double by 2030. It will bring multiple benefits to the participants including access to new markets and greater energy security and job opportunities. The project will also help transform regional cooperation and boost other initiatives aimed at bringing peace and stability to the region. The implementation of the mandate is underway with the mobilization of the first batch of consultants who have started their due diligence. The recruitment of other consultants is in process.

The complexity of PPP projects underlines the importance of the expertise that multilateral development banks can contribute in this area.

S34 Development and utilization of project preparation facilities and establishment of new ones, such as the Asia Pacific Project Preparation Facility, to help develop infrastructure projects on a scale larger and at a level and quality that attracts private sector investment.

Box S6 ADB's involvement in Project Development Facilities has mobilized private investment in infrastructure

Project Preparation Facilities are useful instruments to involve the private sector in the development of large, complex infrastructure projects, and the ADB is playing an important role in establishing PPFs:

The Asia-Pacific Project Preparation Facility (AP3F): ADB is preparing the design and the establishment of a new regional project preparation facility. The facility will be a revolving facility that prioritizes the preparation of infrastructure projects that are viable for private participation and investment. ADB will draw from its own experiences in managing PPFs in Asia and will look to the PPF Assessment for relevant inputs. ADB looks forward to sharing the progress and development of AP3F with the Development Working Group under the G20, which it is closely coordinating with.

Cities Development Initiative for Asia (CDIA): CDIA is an international partnership initiative, established in 2007, by ADB and the Government of Germany, with additional core funding support from the governments of Austria, Sweden, Switzerland and the Shanghai Municipal Government. The Initiative provides assistance to medium-sized Asian cities to bridge the gap between their development plans and the implementation of their infrastructure investments. CDIA supports the identification and development of urban investment projects and links them with potential financiers. It also provides courses on PPPs for implementation, operation and facilitation, including training for trainers. CDIA has been actively supporting cities in structuring urban infrastructure project concepts to pre-FS stage at an international level of quality, making it acceptable to other institutions (public, private or multilaterals) either for full-blown standard project feasibility studies or financing. As of June 2012, out of 40 completed pre-FSs, nine were identified for PPP implementation.

The ADB-supported *Project Development and Monitoring Fund (PDMF) in the Philippines* is funding the project development of PPP projects in the pipeline. Australia provided $18 million for the PDMF. As of December 2013, 26 projects, worth an estimated $6.5 billion have been approved for PDMF support.

Large infrastructure investments can require complex planning and enormous resources, underlining the contribution that the ADB can make through Project Preparation Facilities.

Support to PPP to crowd in private sector investment through TA or direct financing of the public part

S35 Linking bankable PPPs and other infrastructure projects to long-term financing sources, such as bilateral and international financial institutions, institutional investors, pension funds, insurance companies, and funds.

Box S7 The ADB supports infrastructure through credit lines

One example is the credit line to India's Infrastructure Finance Company Ltd (IIFCL). In 2013, ADB provided a $700 million loan to support Indian government's efforts to accelerate investment in the infrastructure that the country urgently needs to ensure strong economic growth. This assistance to IIFCL will allow it to lead the market evolution for infrastructure financing and will spur greater involvement from the private sector. IIFCL provides long-term financing on commercial terms for standalone nonrecourse infrastructure projects. IIFCL will finance PPP subprojects selected through a transparent and competitive bidding process and only those assessed for commercial viability. The latest financing for IIFCL comes on top of a previous $500 million loan facility approved in 2007, which helped fund 30 public-private partnerships, including the Delhi and Mumbai international airports, and a further $700 million approved in 2009, which is still being disbursed.

S36 The ADB strives to build on the lessons of the pilot credit enhancement facilities, by developing through TA the foundations of a commercially oriented credit guarantee facility in order to enhance credit and investability of corporate bonds by contractual savings institutions.

Box S8 ADB credit guarantees can also support infrastructure

ADB's Commercially-Oriented Credit Guarantee Facility helps develop innovative financing mechanisms for infrastructure investments. An example is the *Partial Credit Guarantee of $128 million set up in India with ADB support.* The facility will support credit enhancements of infrastructure project bonds to address one of India's key development challenges, namely to meet the infrastructure investment target of about $1 trillion during the Twelfth Five-Year Plan for FY2012-2016. The facility has been developed in partnership with India Infrastructure Finance Company Limited (IIFCL) and it dovetails other PPP infrastructure development initiatives by the government and ADB to support PPP enablers and provide long-term project finance. Under the facility, IIFCL, which is a domestic AAA entity, will issue PCGs in support of infrastructure project bonds and ADB will assume a portion of the credit risk on the underlying project from IIFCL by issuing it a counter guarantee. The PCGs will raise the rating of the project bonds to the AA level, which will enable domestic institutional investors to invest in the credit enhanced bonds in accordance with domestic regulation. In addition to IIFCL, ADB will seek to partner with other eligible domestic financial institutions.

S37 ADB has promoted various other initiatives such as:

- Equity investment and TA to establish the Credit Guarantee and Investment Facility (CGIF) jointly with the governments of ASEAN+3 (10 countries of the Association of Southeast Asian Nations plus People's Republic of China, Japan, and Republic of Korea) to support the development of corporate bond market in these countries with a view to support local currency long-term financing of private investments including refinancing of loans for infrastructure projects (i.e., PPP).[19]
- Support for the establishment of ASEAN+3 Bond Market Forum with voluntary participation of a number of private (regional and global) financial institutions as well as financial and regulatory authorities of ASEAN+3 to promote the integration of bond markets across ASEAN+3. Support for the Cross-border Settlement Infrastructure Forum (CSIF) with participation of central securities depositories as well as central banks to facilitate cross border bond transactions.
- Leveraging additional financing from the private sector through initiatives such as the Canadian Climate Fund for the Private Sector in Asia (CCFPSA), which was established in March 2013, with a $82 million contribution from the Government of Canada as ODA funds. CCFPSA would contribute a maximum of 20 percent of an investment, ADB a maximum of 25 percent, the remaining 55 percent (at least) coming from the private sector; and
- Increase operational departments' cofinancing, particularly with member countries' sovereign funds and state-owned commercial banks.

S38 The ADB has initiated various innovative financing mechanisms that play a catalytic role and help attract new sources of financing.

S39 Exploring and promoting innovative financing solutions, including:

- credit enhancement products and local currency financing for projects, especially through domestic capital markets. For credit enhancements instruments, these can not be provided in the absence of credible rating agencies that have access to historical data on default probabilities and recovery rates. Thus TA support would be required in several countries to support development of rating agencies.

- expanding the scope of existing trust funds to include non-grant contributions to be used to provide guarantees, risk transfer products, loans, and equity investments to mobilize private sector financing
- establishment of new concessional debt cofinancing facilities specifically oriented to support private sector operations
- innovative approaches to better leverage resources. For example, ADB is working on a proposal to blend concessional resources from trust funds and special funds with ordinary capital resources to enable the provision of more flexible debt, equity, and guarantee instruments
- increasing TA for business development in key markets
- expanding the capital available for debt and equity investments with high development impact but larger risks.

S40 Replicating innovative instruments for infrastructure financing, such as the ASEAN Infrastructure Fund, in other subregions of Asia and the Pacific.

S41 Promoting innovative non-recourse and viability gap financing solutions, including credit enhancement products, to support take-out local currency financing for infrastructure projects. For example, a demonstration facility in India will serve to tap into the large savings pool of contractual savings institutions and help recycle capital from bank-based financing to long-term bond financing following the post construction phase of infrastructure projects.

S42 Exploring ways to use grant / trust fund resources as collateral, instead of directly intermediating it, to enhance SME access to credit.

S43 Domestic debt markets especially for corporate bonds should also be developed, as minimum level of liquidity is required at least at higher rating categories to enable trading of credit enhanced instruments in the secondary markets.

S44 Several products could be suggested to client governments including covered bonds. Future flow transactions pooled debt obligation structures may also be considered as some of these products are already being discussed in several emerging countries.

S45 Products that are specific to the urban sector are also important given the challenges of urban poverty. These many include tax increment financing and asset registration frameworks.

S46 The potential for supporting and developing market instruments that can result in financial inclusion especially in the rural sector may also be considered. These could potentially include (i) business correspondent model for expanding banking sector outreach; (ii) supporting instruments such as crop and livestock insurance, forward and futures contracts for agricultural commodities; (iii) micro-finance instruments for a variety of asset classes including small rural enterprises and low income housing.

African Development Bank Group (AfDB)

S47 The African Development Bank Group (AfDB Group) uses public-private partnerships (PPPs) to mobilize additional capital for infrastructure development in Africa. Launched in 2010, the regional flagship Programme for Infrastructure Development in Africa (PIDA) aims to improve access to integrated regional infrastructure. Its Priority Action Plan (PAP) comprises 51 priority infrastructure back bone projects in energy, water, transport and ICT. The overall cost of closing Africa's infrastructure gap is high: $360 billion in infrastructure investment is planned through 2020 under PIDA alone. These costs are beyond the financing capacity of governments or development finance institutions. Thus, attracting private sector participation through PPPs is essential for the delivery of critical infrastructure projects in Africa.

S48 AfDB Group's emphasis on public-private partnerships is enshrined in its Ten Year Strategy (2013-2022) and its Private Sector Development Strategy (2013-2017). In the last 5 years (2009 – 2013), the AfDB Group has approved $8.6 billion in loans to private sector projects with a total value of $71.6 billion. Private infrastructure projects were a considerable part of the above: the AfDB Group directly supported 42 PPP projects, with total direct financial commitments of $2.3 billion.

S49 In addition to its direct lending, the Bank is broadening the platform of financial instruments it can deploy to direct private investment in developing economies towards the financing of well-prepared, adequately structured infrastructure projects. Despite their growing interest, investors continue to perceive doing business in African low-income countries (LICs) as excessively risky, and require a higher risk premium compared to their operations in other regions. This perception of disproportionately high risk increases the cost and reduces the volume of commercial financing and capital. Private undertakings which involve sovereign exposure carry an additional risk premium, as they are subject to various political risks, including governments' failure to honor commitments.

S50 The Bank's increased efforts to mitigate these perceived risks and encourage foreign direct investment in the continent encompass syndications and co-financing through its A-loan/B-loan program, guarantees, the Africa 50 fund, and non-lending services.

Loan Syndication and Co-Financing

S51 The A-Loan / B-Loan program allows eligible commercial co-financiers to share the Bank's preferred creditor status, thus mitigating certain political risks (notably risks related to foreign currency convertibility and transferability). Alternative co-financing structures, such as parallel lending, are also available. The Bank recently finalized two notable syndications transactions: (i) a $810 million facility for Transnet (South Africa), consisting of a $400 million A-loan provided by the Bank on its own account, and a $410 million loan by a syndicate of five commercial banks; and (ii) a $850 million, 300 megawatt wind project in Lake Turkana in Kenya, where the Bank acted as the lead arranger for development financial institutions, multilateral development banks, export credit agencies, and commercial lenders.

Guarantees

S52 The AfDB has offered two guarantee products since 2000: (i) partial credit guarantees (PCGs), which covers a portion of scheduled repayments of private loans or bonds against all obligor's risks; and (ii) partial risk guarantees (PRGs), which protect private investors against defined political risks related to the failure of a government or a government-related entity to honor specified commitments. Initially, these instruments were only available for government, state enterprise, or private sector projects in middle-income countries. However, under the Twelfth and Thirteenth General Replenishments of the African Development Fund, these instruments were made available to projects in low-income countries, including fragile states.

Partial Credit Guarantees (PCGs)

S53 The ADB has successfully issued a number of PCGs in several sectors, including EUR 13 million equivalent for local banks to mobilize EUR 209 million for the MTN Cameroon mobile telephone development project; up to $30 million in portfolio guarantees to catalyze $60 million in loans to support SME finance; and $600 million in risk participation agreements to mobilize a total of $1.2 billion for trade finance.

S54 PCGs were introduced in 2013 to help well-performing ADF countries (and some state-owned enterprises in these countries) with low risk of debt distress and adequate debt management capacity to mobilize domestic and external commercial financing.

S55 Like the AfDB product, the ADF-PCG covers a portion of debt service default on scheduled repayments of commercial debt against all risks, both commercial and political. It should thus help ADF countries increase their borrowing from capital markets at longer maturities and lower interest rates, potentially supporting sovereign mobilization of commercial financing for policy or sectoral reforms. The ADF is still exploring opportunities to utilize this new tool.

Partial Risk Guarantees (PRGs)

S56 The AfDB is yet to issue a PRG. However, the ADF-PRG (approved in 2011) was used to support two key private sector operations in 2013: (i) the Lake Turkana Wind Power project (LTWP) in Kenya; and (ii) the privatization of the power sector in Nigeria, by providing support to 4 identified independent power producers (IPPs).

S57 *Lake Turkana Wind Project in Kenya*. While the AfDB is leading the structuring and financing of the 300 MW LTWP project from the private sector window (see above), the ADF is providing a PRG to cover certain obligations of the Kenyan government in connection with the transaction. The use of the PRG in this project is to secure the timely delivery of a 400 km transmission line to be built by the government-owned Kenya Electricity Transmission Company (KETRACO). The instrument will cover the payment obligations of KETRACO to the project for Deemed Generated Energy of up to EUR 20 million, in the event that the transmission line is not ready once the power plant has been commissioned. Lenders to the LTWP project identified this risk as a major impediment to the commercial viability of the project.

S58 *Nigeria Bulk Electricity Trader (NBET).* The ADF Board also approved the utilization of a PRG for the payment obligations of the newly-established and government-owned Nigeria Bulk Electricity Trader (NBET) to independent power producers under power purchase agreements. The PRG is provided in a programmatic approach, to cover several independent power producers. To date, the NBET has approved the 495 MW Okija power project, where the AfDB is acting as the lead arranger for the debt financing; the 250 MW Ikot Abasi gas-fired power project; phase one of the 1200MW Zuma coal fired power plant; and a brownfield project —the 330MW Transcorp Ughelli gas-fired power plant. The PRG will catalyze investment of approximately $1.8 billion, the total project cost for the three greenfield independent power producers.

Africa 50 Fund

S59 In 2013, the AfDB Group initiated the Africa 50 Fund, which will draw financing from African sources, for example pension funds, supplemented by targeted investments from abroad, to finance transformative projects in infrastructure on the continent.

Non-Lending Services

S60 The AfDB is leveraging its strong local presence and continuing dialogue with policy makers to support the implementation of PPPs through capacity building programs delivered by the AfDB Institute (EADI), the African Legal Support Facility (ALSF), and other support services of the Bank.

Notes

[1] The UN System Chief Executives Board for Coordination (CEB) is the highest inter-agency body for coordination in the UN system on social, economic and related matters. It aims to advance cooperation and coherence among UN system organizations (specialized agencies, funds and programs, and other related organizations) in policy, program, management and operational areas through a coordinated approach on issues of system-wide concern. CEB is chaired by the UN Secretary-General and is composed of the executive heads of 29 UN system organizations.

[2] Benin, Burkina Faso, Colombia, El Salvador, Ghana, Indonesia, Kyrgyz Republic, Nepal, Niger, Philippines, and Tanzania

[3] This section focuses mostly on short-term factors underpinning the current trade slow down. An new IMF-World Bank publication, Trade Watch, discusses long term trends, such as changes in the structure of global value chains.

[4] www.globaltradealert.org

[5] See http://www.wto.org/english/thewto_e/whatis_e/tif_e/org7_e.htm for a full list

[6] "Making Development Cooperation More Effective", 2014 Progress Report, OECD/UNDP. The report assesses progress based on voluntary data submission by 46 countries, including 38 countries that participated in the2010 Paris Declaration Monitoring Survey. The data in the report captures 46 percent of total development assistance that is programmed for developing countries annually.

[7] Share of development co-operation funding disbursed within the fiscal year within which it was scheduled by co-operation providers.

[8] Share of development co-operation funding scheduled for disbursement that is recorded in the annual budgets approved by the legislatures of developing countries.

[9] Share of development co-operation disbursements for the government sector using the developing country's PFM and procurement systems.

[10] Mexico HLM Outcome Communique, paragraph 11.

[11] The common standard agreed in 2012 is a combination of the OECD-DAC creditor reporting system (CRS) and forward spending survey (FSS) and the International Aid Transparency Initiative (IATI) reporting standard.

[12] Mexico HLM Outcome Communique, paragraph 27.

[13] Mexico HLM outcome document paragraph 31.

[14] Draft Report of the Secretary General, Trends and Progress in International Development Cooperation, April 2014

[15] Financing for Development Post-2015, World Bank, October 2013

[16] The Public Private Infrastructure Advisory Facility (PPIAF) has supported an additional 683 activities, with total expenditures of US$134 million.

[17] BeyondBanking is a platform to disseminate best practices and innovation by recognizing the most sustainable environmental, social and corporate governance initiatives by financial intermediaries in Latin America and the Caribbean.

[18] Another initiative of the IaDB that seeks to promote sustainable infrastructure investments is the annual Infrastructure Sustainability Awards, also known as the Infrastructure 360 Awards. This program seeks to identify, assess and reward outstanding sustainability practices in infrastructure investments in the region with emphasis on climate and environment, as well as leading practices in social impact, governance and innovation

[19] For example, the CGIF has issued guarantees for several corporate bonds, and its leverage ratio has recently been expanded to continue the guarantee operations.

Appendix Table A1.1 WBG Classification of Economies by Region and Income, Fiscal 2015

East Asia and Pacific		**Latin America and the Caribbean**		**Sub-Saharan Africa**		**High-income OECD economies**	**Other high-income economies**
American Samoa	UMC	Argentina	UMC	Angola	UMC	Australia	Andorra
Cambodia	LIC	Belize	UMC	Benin	LIC	Austria	Antigua and Barbuda
China	UMC	Bolivia	LMC	Botswana	UMC	Belgium	Aruba
Fiji	UMC	Brazil	UMC	Burkina Faso	LIC	Canada	Bahamas, The
Indonesia	LMC	Colombia	UMC	Burundi	LIC	Chile	Bahrain
Kiribati	LMC	Costa Rica	UMC	Cabo Verde	LMC	Czech Republic	Barbados
Korea, Dem. Rep.	LIC	Cuba	UMC	Cameroon	LMC	Denmark	Bermuda
Lao PDR	LMC	Dominica	UMC	Central African Republic	LIC	Estonia	Brunei Darussalam
Malaysia	UMC	Dominican Republic	UMC	Chad	LIC	Finland	Cayman Islands
Marshall Islands	UMC	Ecuador	UMC	Comoros	LIC	France	Channel Islands
Micronesia, Fed. Sts.	LMC	El Salvador	LMC	Congo, Dem. Rep.	LIC	Germany	Croatia
Mongolia	LMC	Grenada	UMC	Congo, Rep.	LMC	Greece	Curaçao
Myanmar	LIC	Guatemala	LMC	Cote d'Ivoire	LMC	Iceland	Cyprus
Palau	UMC	Guyana	LMC	Eritrea	LIC	Ireland	Equatorial Guinea
Papua New Guinea	LMC	Haiti	LIC	Ethiopia	LIC	Israel	Faeroe Islands
Philippines	LMC	Honduras	LMC	Gabon	UMC	Italy	French Polynesia
Samoa	LMC	Jamaica	UMC	Gambia, The	LIC	Japan	Greenland
Solomon Islands	LMC	Mexico	UMC	Ghana	LMC	Korea, Rep.	Guam
Thailand	UMC	Nicaragua	LMC	Guinea	LIC	Luxembourg	Hong Kong SAR, China
Timor-Leste	LMC	Panama	UMC	Guinea-Bissau	LIC	Netherlands	Isle of Man
Tonga	UMC	Paraguay	LMC	Kenya	LIC	New Zealand	Kuwait
Tuvalu	UMC	Peru	UMC	Lesotho	LMC	Norway	Latvia
Vanuatu	LMC	St. Lucia	UMC	Liberia	LIC	Poland	Liechtenstein
Vietnam	LMC	St. Vincent and the Grenadines	UMC	Madagascar	LIC	Portugal	Lithuania
		Suriname	UMC	Malawi	LIC	Slovak Republic	Macao SAR, China
Europe and Central Asia		Venezuela, RB	UMC	Mali	LIC	Slovenia	Malta
Albania	UMC			Mauritania	LMC	Spain	Monaco
Armenia	LMC	**Middle East and North Africa**		Mauritius	UMC	Sweden	New Caledonia
Azerbaijan	UMC	Algeria	UMC	Mozambique	LIC	Switzerland	Northern Mariana Islands
Belarus	UMC	Djibouti	LMC	Namibia	UMC	United Kingdom	Oman
Bosnia and Herzegovina	UMC	Egypt, Arab Rep.	LMC	Niger	LIC	United States	Puerto Rico
Bulgaria	UMC	Iran, Islamic Rep.	UMC	Nigeria	LMC		Qatar
Georgia	LMC	Iraq	UMC	Rwanda	LIC		Russian Federation
Hungary	UMC	Jordan	UMC	Sao Tome and Principe	LMC		San Marino
Kazakhstan	UMC	Lebanon	UMC	Senegal	LMC		Saudi Arabia
Kosovo	LMC	Libya	UMC	Seychelles	UMC		Singapore
Kyrgyz Republic	LMC	Morocco	LMC	Sierra Leone	LIC		Sint Maarten (Dutch part)
Macedonia, FYR	UMC	Syrian Arab Republic	LMC	Somalia	LIC		St. Kitts and Nevis
Moldova	LMC	Tunisia	UMC	South Africa	UMC		St. Martin (French part)
Montenegro	UMC	West Bank and Gaza	LMC	South Sudan	LMC		Trinidad and Tobago
Romania	UMC	Yemen, Rep.	LMC	Sudan	LMC		Turks and Caicos Islands
Serbia	UMC			Swaziland	LMC		United Arab Emirates
Tajikistan	LIC	**South Asia**		Tanzania	LIC		Uruguay
Turkey	UMC	Afghanistan	LIC	Togo	LIC		Virgin Islands (U.S.)
Turkmenistan	UMC	Bangladesh	LIC	Uganda	LIC		
Ukraine	LMC	Bhutan	LMC	Zambia	LMC		
Uzbekistan	LMC	India	LMC	Zimbabwe	LIC		
		Maldives	UMC				
		Nepal	LIC				
		Pakistan	LMC				
		Sri Lanka	LMC				

Source: World Bank data.
Note: This table classifies all World Bank member economies, and all other economies with populations of more than 30,000. Economies are divided among income groups according to 2013 gross national income (GNI) per capita, calculated using the World Bank Atlas method. The groups are: low income, $1,045 or less; lower middle income, $1,046–4,125; upper middle income, $4,126–12,745; and high income, $12,746 or more. Other analytical groups based on geographic regions are also used. The names of countries and economies in this table comply with the World Bank's official listing.

Appendix Table A1.2 IMF Member Countries as Classified in the World Economic Outlook

Advanced Economy Countries (34 countries)

Australia	France	Latvia	Slovak Republic
Austria	Germany	Luxembourg	Slovenia
Belgium	Greece	Malta	Spain
Canada	Iceland	Netherlands	Sweden
Cyprus	Ireland	New Zealand	Switzerland
Czech Republic	Israel	Norway	United Kingdom
Denmark	Italy	Portugal	United States
Estonia	Japan	San Marino	
Finland	Korea, Republic of	Singapore	

Emerging Market and Developing Countries (154 countries)[1]

Emerging and Developing Europe (13 countries)

Albania	FYR Macedonia
Bosnia and Herzegovina*	Montenegro**
Bulgaria	Poland
Croatia	Romania
Hungary	Serbia
Kosovo*	Turkey
Lithuania	

Emerging and Developing Asia (29 countries)

Bangladesh	**Myanmar***
Bhutan**	**Nepal**
Brunei Darussalam[**,2]	Palau**
Cambodia	**Papua New Guinea**[2]
China	Philippines
Fiji**	Samoa**
India	**Solomon Islands**[*,**,2]
Indonesia	Sri Lanka
Kiribati*,**	Thailand
Lao People's Democratic Republic	Timor-Leste[*,**,2]
Malaysia	Tonga**
Maldives**	Tuvalu[*,**,2]
Marshall Islands*,**	Vanuatu**
Micronesia, Federated States of*,**	**Vietnam**
Mongolia[2]	

Sub-Sahara Africa (45 countries)

Angola[2]	**Madagascar***
Benin	**Malawi**[2]
Botswana	**Mali**[*,2]
Burkina Faso[2]	Mauritius**
Burundi[*,2]	**Mozambique**[2]
Cameroon	Namibia
Cabo Verde**	**Niger**[2]
Central African Republic[*,2]	**Nigeria**[2]
Chad[*,2]	**Rwanda**
Comoros*,**	**São Tomé and Príncipe****
Congo, Dem. Rep. of[*,2]	**Senegal**
Congo, Rep. of[2]	Seychelles**
Côte d'Ivoire*	**Sierra Leone**[*,2]
Equatorial Guinea[**,2]	South Africa[2]
Eritrea[*,2]	**South Sudan**[*,2]
Ethiopia	Swaziland**
Gabon[2]	**Tanzania**
Gambia, The	**Togo***
Ghana	**Uganda**
Guinea[2]	**Zambia**[2]
Guinea-Bissau[*,2]	**Zimbabwe**[*,2]
Kenya	
Lesotho	
Liberia*	

Middle East, North Africa, Afghanistan, and Pakistan (23 countries)

- **Afghanistan, Islamic Republic of**[*,2]
- Algeria[2]
- Bahrain[**,2]
- **Djibouti****
- Egypt
- Iran, Islamic Republic of[2]
- Iraq[*,2]
- Jordan
- Kuwait[2]
- Lebanon
- Libya[*,2]
- **Mauritania**[2]
- Morocco
- Oman[2]
- Pakistan
- Qatar[2]
- Saudi Arabia[2]
- **Somalia***
- **Sudan**[*,2]
- Syrian Arab Republic*
- Tunisia
- United Arab Emirates[2]
- **Yemen, Republic of**[*,2]

Commonwealth of Independent States (12 countries)

- Armenia
- Azerbaijan[2]
- Belarus
- Georgia[3]
- Kazakhstan[2]
- **Kyrgyz Republic**
- **Moldova**
- Russian Federation[2]
- **Tajikistan**
- Turkmenistan[2]
- Ukraine
- **Uzbekistan**[2]

Latin America and the Caribbean (32 countries)

Antigua and Barbuda**	Paraguay[2]
Argentina	Peru
Bahamas, The**	St. Kitts and Nevis**
Barbados**	St. Lucia**
Belize**	St. Vincent and the Grenadines**
Bolivia[2]	Suriname[**,2]
Brazil	Trinidad and Tobago[**,2]
Chile[2]	Uruguay[2]
Colombia	Venezuela[2]
Costa Rica	
Dominica**	
Dominican Republic	
Ecuador[2]	
El Salvador	
Grenada**	
Guatemala	
Guyana[**,2]	
Haiti*	
Honduras	
Jamaica	
Mexico	
Nicaragua	
Panama	

[1]60 countries in bold typeface are low-income developing countries (LIDC) and 94 countries in regular typeface are emerging market countries (EMC). The LIDC are countries eligible for IMF's concessional financial assistance with a per capita Gross National Income (measured according to the World Bank's *Atlas* method) in 2011 of below twice the IDA's effective operational cut-off level, and Zimbabwe. The EMC are the non-LIDC emerging market and developing countries. 32 countries, with an asterisk, are included in the World Bank's list of Fragile and Conflict-Affected States, as of July 2014. 36 emerging market and developing countries, with two asterisks, are countries with a population of less than 1.5 millions in 2013. The two latter country groupings are denoted as fragile states and small states respectively.

[2]56 emerging market and developing countries are fuel or primary commodity exporters.

[3]Georgia, which is not a member of the Commonwealth of Independent States, is included in this group for reasons of geography and similarities in economic structure.