Trajectories for Sustainable Development Goals

Framework and Country Applications

Susanna Gable, Hans Lofgren, and Israel Osorio Rodarte

Foreword by Mahmoud Mohieldin

WORLD BANK GROUP

Trajectories for Sustainable Development Goals

Framework and Country Applications

Susanna Gable, Hans Lofgren, and Israel Osorio Rodarte

Foreword by Mahmoud Mohieldin

WORLD BANK GROUP

1818 H Street NW, Washington, DC 20433
Telephone: 202-473-1000; Internet: www.worldbank.org

1 2 3 4 18 17 16 15

Contents

Foreword . . . . . *ix*
Acknowledgements . . . . . *xi*

Introduction **1**
Notes 3

1 Framework for Country Development Diagnostics Post-2015 . . . . . **5**
1. Introduction 5
2. Step One: Benchmarking SDG Progress 6
3. Step Two: SDG Business-as-Usual Projections 9
4. Step Three: Benchmarking Determinants and Identifying Spending Priorities 10
5. Step Four: Identifying Fiscal Space 15
6. Conclusions 18
Notes 19

COUNTRY BRIEFS

2 Ethiopia **23**
1. Introduction 23
2. SDG Indicators: History and Projections 23
3. Fiscal Space 30
4. Conclusions 35
Annex 2A: Data Sources 37
Notes 38

3 Jamaica **41**
1. Introduction 41
2. SDG Indicators: History and Projections 41
3. Fiscal Space 48
4. Conclusions 54
Annex 3A: Data Sources 55
Notes 57

4 The Kyrgyz Republic **59**
1. Introduction 59
2. SDG Indicators: History and Projections 59
3. Fiscal Space 67
4. Conclusions 72
Annex 4A: Data Sources 73
Notes 75

5 Liberia **77**
1. Introduction 77
2. SDG Indicators: History and Projections 77

3. Fiscal Space 85
4. Conclusions. 90
Annex 5A: Data Sources 91
Notes 93

6 Nigeria 95
1. Introduction 95
2. SDG Indicators: History and Projections 95
3. Fiscal Space 103
4. Conclusions. 108
Annex 6A: Data Sources 109
Notes 110

7 Pakistan 113
1. Introduction 113
2. SDG Indicators: History and Projections 113
3. Fiscal Space 121
4. Conclusions. 126
Annex 7A: Data Sources 127
Notes 128

8 Peru 131
1. Introduction 131
2. SDG Indicators: History and Projections 131
3. Fiscal Space 139
4. Conclusions. 145
Annex 8A: Data Sources 146
Notes 148

9 The Philippines 151
1. Introduction 151
2. SDG Indicators: History and Projections 151
3. Fiscal Space 159
4. Conclusions. 164
Annex 9A: Data Sources 166
Notes 167

10 Senegal 169
1. Introduction 169
2. SDG Indicators: History and Projections 169
3. Fiscal Space 177
4. Conclusions. 183
Annex 10A: Data Sources 184
Notes 186

11 Uganda 189
1. Introduction 189
2. SDG Indicators: History and Projections 189

3. Fiscal Space 197
4. Conclusions. 203
Annex 11A: Data Sources 204
Notes 206

References 209

Boxes

1.1 Using GNI per Capita for SDG Benchmarking 8
1.2 Projecting GDP and GNI. 10
1.3 SDG Business-as-Usual Projections for 2030 11
1.4 Measures of Government Effectiveness 18

Figures

I.1 Recent and Projected Levels of Access to Electricity (% of Population), and Real GNI per Capita Growth, by Country 2
1.1 Uganda—Primary School Net Enrollment and GNI per Capita (Left); Primary School Completion and GNI per Capita (Right) 8
1.2 Uganda—Secondary School Gross Enrollment and GNI per Capita (Left); Secondary School Completion and GNI per Capita (Right) 9
1.3 Uganda—Historical Data and Projections for Real GDP per Capita (2011=100) 10
1.4 Uganda—Expenditure per Primary Student and GNI per Capita (Left); Expenditure per Secondary Student and GNI per Capita (Right) 13
1.5 Uganda—Primary Pupil-Teacher Ratio and GNI per Capita (Left); Secondary Pupil-Teacher Ratio, Secondary and GNI per Capita (Right) 13
1.6 Uganda—Tax Revenues 1990–2011 (% of GDP) (Left); Tax Revenues (% of GDP) versus GNI per Capita (Right) 16
1.7 Uganda—ODA (% of GNI) versus GNI per Capita (Left); ODA (per Capita) versus GNI per Capita (Right) 17
2.1 Ethiopia—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 25
2.2 Ethiopia—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012. 29
2.3 Ethiopia—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting. 31
3.1 Jamaica—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 43
3.2 Jamaica—Percentile Cross-Country Ranking for SDG Indicators since 2000 48
3.3 Jamaica—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 50
4.1 The Kyrgyz Republic—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 61
4.2 The Kyrgyz Republic—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012 66
4.3 The Kyrgyz Republic—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 68
5.1 Liberia—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 78

5.2 Liberia—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012 84
5.3 Liberia—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 86
6.1 Nigeria—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 97
6.2 Nigeria—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012 102
6.3 Nigeria—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 104
7.1 Pakistan—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 115
7.2 Pakistan—Percentile Cross-Country Ranking for SDG Indicators since 2000 120
7.3 Pakistan—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 122
8.1 Peru—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 133
8.2 Peru—Percentile Cross-Country Ranking for SDG Indicators since 2000 139
8.3 Peru—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 140
9.1 The Philippines—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 153
9.2 The Philippines—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012 158
9.3 The Philippines—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 160
10.1 Senegal—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 171
10.2 Senegal—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012 176
10.3 Senegal—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 178
11.1 Uganda—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale) 191
11.2 Uganda—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012 196
11.3 Uganda—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting 199

Map

I.1 The Ten Country Briefs 2

Tables

1.1 Uganda—Historical and Projected Growth from Various Sources 11
1.2 Uganda—SDG Projections for 2030 11
1.3 Uganda—Policy-Relevant SDG Determinants 14
1.4 Government Fiscal Space—Recent Indicators and Future Directions of Change 16
2.1 Ethiopia—SDG Indicators: Evolution since 2000 and Projections to 2030 24
2.2 Ethiopia—Fiscal Space: Revenue, Spending, and Government Efficiency 30
2.3 Ethiopia—Summary Results for SDG Indicators 36
3.1 Jamaica—SDG Indicators: Evolution since 2000 and Projections to 2030 42
3.2 Jamaica—Fiscal Space: Revenue, Spending, and Government Efficiency 49
3.3 Jamaica—Summary Results for SDG Indicators 54
4.1 The Kyrgyz Republic—SDG Indicators: Evolution since 2000 and Projections to 2030 60
4.2 The Kyrgyz Republic—Fiscal Space: Revenue, Spending, and Government Efficiency 68
4.3 The Kyrgyz Republic—Summary Results for SDG Indicators 72

5.1 Liberia—SDG Indicators: Evolution since 2000 and Projections to 2030 83
5.2 Liberia—Fiscal Space: Revenue, Spending, and Government Efficiency 85
5.3 Liberia—Summary Results for SDG Indicators 90
6.1 Nigeria—SDG Indicators: Evolution since 2000 and Projections to 2030 96
6.2 Nigeria—Fiscal Space: Revenue, Spending, and Government Efficiency 104
6.3 Nigeria—Summary Results for SDG Indicators 108
7.1 Pakistan—SDG Indicators: Evolution since 2000 and Projections to 2030 114
7.2 Pakistan—Fiscal Space: Revenue, Spending, and Government Efficiency 121
7.3 Pakistan—Summary of Results for SDG Indicators 126
8.1 Peru—SDG Indicators: Evolution since 2000 and Projections to 2030 132
8.2 Peru—Fiscal Space: Revenue, Spending, and Government Efficiency 140
8.3 Peru—Summary Results for SDG Indicators 146
9.1 The Philippines—SDG Indicators: Evolution since 2000 and Projections to 2030 152
9.2 The Philippines—Fiscal Space: Revenue, Spending, and Government Efficiency 159
9.3 The Philippines—Summary of Results for SDG Indicators 165
10.1 Senegal—SDG Indicators: Evolution since 2000 and Projections to 2030 170
10.2 Senegal—Fiscal Space: Revenue, Spending, and Government Efficiency 177
10.3 Senegal—Summary of Results for SDG Indicators 183
11.1 Uganda—SDG Indicators: Evolution since 2000 and Projections to 2030 190
11.2 Uganda—Fiscal Space: Revenue, Spending, and Government Efficiency 198
11.3 Uganda—Summary Results for SDG Indicators 203

Foreword

The experience with the Millennium Development Goals (MDGs) has provided many lessons which could usefully be applied to the Sustainable Development Goals (SDGs). The SDGs continue to tackle the issues that the MDGs attempted to solve, but they go further, highlighting a global partnership to end extreme poverty and protect the planet for the next generations, while leaving no-one behind. A major issue confronted during the MDG era was managing financing and service delivery gaps at the country level. Thus identifying specific service delivery and financing solutions to close attainment gaps lies at the crux of meeting our development goals.

In 2013, discussions around the Post-2015 Agenda were taking shape. A High-Level Panel of Eminent Persons (HLP) was established by the UN Secretary General on this agenda and, in addition to producing a report on how to eradicate poverty and transform economies through sustainable development, occasioned multiple engagements on how to best tackle the world's most pressing challenges. In this context, I was involved in several meetings with leaders and members of the HLP. Two of these meetings were of direct relevance and significance to this work: the first was with H.E Ellen Johnson Sirleaf, President of Liberia, and Ms. Amina Mohammed, Special Adviser to the UN Secretary-General on Post-2015 development planning; the second was with H.E Ngozi Okonjo-Iweala, then-Coordinating Minister for the Economy and the Minister of Finance of Nigeria. The emphasis of these meetings was the importance of overcoming the financing and service delivery challenges that the SDGs pose. Later discussions with H.E Maria Kiwanuka, then-Minister of Finance of Uganda, confirmed this priority. Conversations with these distinguished leaders, policymakers, and other influential individuals highlighted the demand for a tool to address these challenges which featured so prominently in countries' experience with the MDGs.

Meanwhile, a team of prominent experts at the World Bank was working on various approaches and models to analyze MDG progress. They were asked to assist with the development of a framework through which the ability of countries to achieve the new goals could be assessed. After deliberations and technical discussions, the decision was made to proceed with a practical approach to the questions at hand using case studies of a representative group of countries. Their selection was based on a variety of criteria which was not limited to per capita income and initial conditions, but also included access to natural resources, size, and geography.

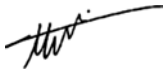
The framework applied in this publication consists of four steps, first illustrated through a pilot study on Uganda:

- Benchmarking current level of progress for each SDG for the country being analyzed relative to other countries, given Gross National Income (GNI) per capita
- Projecting the country's values for SDGs by 2030, given projected business-as-usual development of GNI per capita
- Turning to determinants of SDG outcomes and seeking to identify ways of achieving outcomes that are more ambitious than those of business-as-usual. This includes discussion of potential changes in policies and spending in priority areas
- Discussing ways to expand fiscal space for priority SDG spending, including additional domestic or foreign financing and efficiency gains.

This framework may be used to analyze the likely progress in SDGs and their determinants and discuss policy and financing options to accelerate progress. This publication includes ten examples of geographically dispersed low-income, middle-income, landlocked, fragile, natural resource-rich, and small island countries. The countries included are: Ethiopia, Jamaica,

Kyrgyzstan, Liberia, Nigeria, Pakistan, Peru, Philippines, Senegal and Uganda.

While I believe that there is value in this publication for government officials and development practitioners working on these ten countries, I hope additional value comes from sharing and applying the relevant lessons learned to other countries. Ultimately, I trust this framework improves policymakers' ability to identify and address opportunities and challenges for achievement of the SDGs.



Mahmoud Mohieldin
Corporate Secretary and President's Special Envoy

Acknowledgements

This book was written by Susanna Gable, Hans Lofgren, and Israel Osorio Rodarte under the leadership of Mahmoud Mohieldin, Corporate Secretary and President's Special Envoy, with joint guidance from Marilou Uy and Jos Verbeek.

We thank Hans Timmer, Elena Ianchovichina, and Punam Chuhan for their valuable suggestions as peer reviewers. We are also grateful for comments from Farida Aboulmagd, Lily Chu, Anton Dobronogov, Eric Feyen, Marcelo Giugale, Julius Gwyer, Gloria Grandolini, Raj Nallari, Alberto Portugal, Sajjad Shah, Marco Scuriatti, Chris Thomas, and Debrework Zewdie.

For the country briefs we again thank Jos Verbeek for the overall guidance and the country teams for their crucial feedback. In particular we are grateful for input from Lars Moller and Thanh Thi Mai (Ethiopia); Adam Fuchs, Todd Johnson, Kathy Lalazarian, Jonna Lundwall, Harriet Nannyonjo, Suzette Samms-Lindsay, Sona Varma and Davide Zucchini (Jamaica); Jean-Michel Happi and Gulmira Sultanova (the Kyrgyz Republic); Inguna Dobraja, Errol Graham, Kristen Himelein and Douglas Sumerfield (Liberia), Olatunde Adetoyese Adekola, Irajen Appasamy, Kebede Feda and Khwima Nthara (Nigeria), Mehwish Ashraf, Uzma Basim, Saadia Refaqat, Richard Spencer, Muhammad Waheed, and Inaam Haq (Pakistan), Alberto Rodriguez, Pedro Rodriguez, Jamele Rigolini, Maria Eugenia Genoni, Luciana Velarde, and Ekaterina Vostroknutova (Peru), Rogier van den Brink, Caryn Bredenkamp and Lynnette Perez (the Philippines), Philip English (Senegal) and Anton Dobronogov (Uganda).

The findings, interpretations, and conclusions expressed in this book are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Introduction

In anticipation of the December 2015 expiration of the Millennium Development Goals (MDGs), the UN General Assembly adopted in September 2015 an ambitious agenda for sustainable development up to 2030. The agenda is based on Sustainable Development Goals (SDGs) for 2030 that cover economic, social, and environmental dimensions of development.[1] It is made up of 17 goals and 169 targets that together offer a comprehensive view of what is needed for sustainable human well-being with a special emphasis on ending poverty, environmental sustainability, and inclusiveness. Individual countries face the challenge of translating these global ambitions into feasible strategies with clear targets and specific policies based on country circumstances and initial conditions, and linked to country priorities.

This book presents the Country Development Diagnostics Post-2015 framework, developed by the World Bank Group to assess the country-level implications of the post-2015 global agenda, as well as brief, "at-a-glance" applications of the framework to ten countries: Ethiopia, Jamaica, the Kyrgyz Republic, Liberia, Nigeria, Pakistan, Peru, the Philippines, Senegal, and Uganda—see map I.1. This set of countries is highly diverse in terms of growth prospects, per capita incomes, outcomes for SDG target indicators, natural resource endowments, and physical access to international trade (landlocked or not). For each country, the analysis is designed to offer a starting point for a discussion of how policies and financing should be designed to speed up development outcomes by (a) benchmarking recent outcomes for SDG target indicators and the factors (including policies) that influence them; (b) projecting 2030 outcomes for those indicators; and (c) assessing options to increase financial resources for spending in support of the SDG agenda. The analysis is done from a cross-country perspective, with the outcomes assessed relative to what is typical for countries at the same level of income per capita. Subject to data constraints, the framework strives to address the aspects of the SDG agenda that matter to country-level decision making.

The country briefs cover countries with diverse prospects for realizing the ambitions of the global SDG agenda by 2030: For example, they include countries that face adverse growth prospects and that, compared to other countries with similar per capita incomes, are underperforming for at least some of the SDGs, two considerations that together make it difficult for them to reach the 2030 targets for these SDGs. They also include countries that expect to grow rapidly and, for at least some SDGs, are currently performing better than expected for their income per capita level; however, because of low initial outcomes, they are still projected to find it difficult to reach the global 2030 targets. Other cases offer yet another example: because of low growth projections, they are not expected to realize global ambitions in spite of strong initial SDG outcomes.

Figure I.1 exemplifies the diversity across our country sample for one SDG indicator, access to electricity, for which it shows current and projected outcomes; it also shows the growth projections for GNI per capita that affect differences between countries in the rates of improvements in electricity access.[2] While some of the countries may reach or get close to the global target of universal access, it is also clear that this target is very distant for others. This exemplifies the fact that it will be very difficult to realize global ambitions in all countries, that to even get close to such outcomes, countries should look for policies that permit them to progress beyond what is typical given expected levels of incomes in 2030. For some countries it may be more productive to set their own targets, striking a more appropriate balance between ambition and realism.

The country briefs also illustrate differences in SDG progress via provision of more and higher-quality public services. For example, given

MAP I.1 The Ten Country Briefs

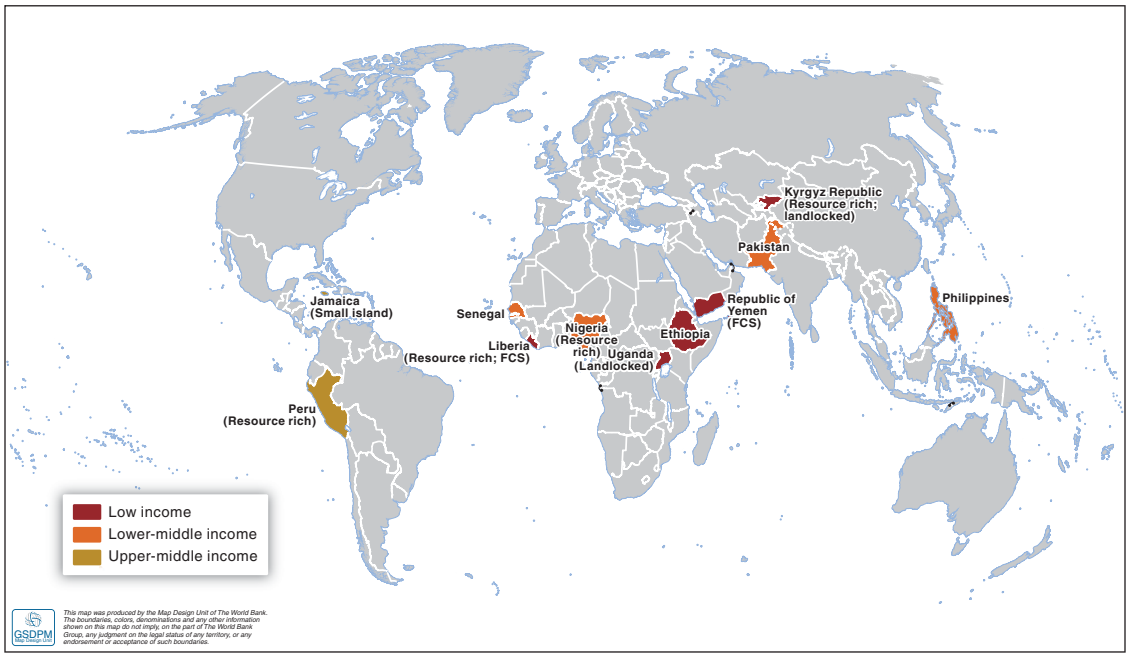
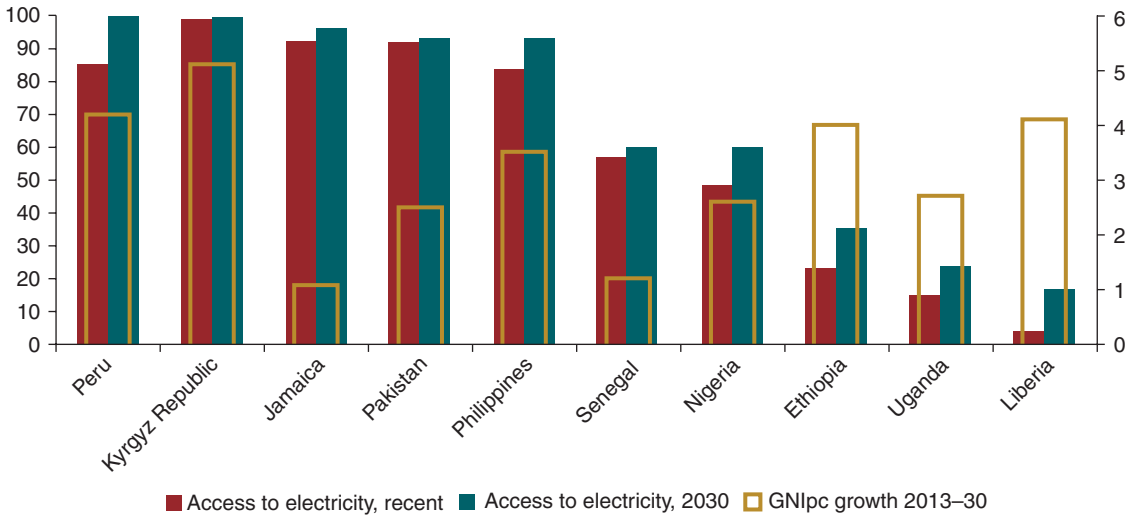


FIGURE I.1 Recent and Projected Levels of Access to Electricity (% of Population), and Real GNI per Capita Growth, by Country



Source: Authors' calculations.
Note: Recent data is the most recent country observation during 2010–13.

current levels of taxes and other revenue sources, some countries may find it difficult to raise resources for SDG-targeted policies without the additional government resources that a growth acceleration would make available. In addition, for most SDGs, accelerated inclusive growth would also promote the SDGs by improving the living conditions of disadvantaged groups and others. In contrast, other countries may find it very difficult to foster growth beyond what is already projected; however, it may be easier to increase resources through other means, such as higher taxes or improvements in government efficiency.

Each country brief provides a starting point for an in-depth analysis of the SDG agenda that could draw more fully on the framework and cover additional indicators. In general, the framework and available cross-country data offer analysts in developing countries and the broader international community a useful starting point for analyses that translate the global ambitions of the agenda into country-specific targets and policies that help accelerating progress.

In outline, the contents of this book are organized as follows: chapter 1 presents the Country Development Diagnostics Post-2015 framework in detail, including examples from Uganda. Chapters 2–11 present the ten country briefs, country by country.

Notes

1. Other key documents on the 2030 SDG agenda include the report of the Open Working Group of the General Assembly on Sustainable Development Goals (UN 2014) and the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda (UN 2013). Our analysis covers the SDG indicators for which data are available in multi-country databases.
2. For a specific country, the higher rate of GNI per capita growth, the stronger improvement in access to electricity. However, comparing across countries, the impact from economic growth is smaller the smaller initial GNI per capita (the increase in resources are smaller) and the higher initial access to electricity in the country (diminishing returns).

Chapter 1

Framework for Country Development Diagnostics Post-2015

1. Introduction

In setting the post-2015 Sustainable Development Goals (SDGs), the global community will need to take cognizance of challenges to implementation and financing at the country level. This will necessitate integrated discussion of the development goals and the associated financing framework. Financing in particular will have to be structured in a way that taps into and leverages a variety of financing sources beyond aid, and the policy framework will have to ensure private sector efficiency and improved public sector productivity. The ability to leverage diverse financing will differ from country to country, typically with less ability for low-income and/or conflict-affected countries. Given vastly different capabilities, histories, starting points, and circumstances, the SDG agenda adopted by the UN General Assembly in September 2015 states that each government should choose the appropriate level of ambition for each target, since every country cannot be expected to reach the same absolute target.[1]

This chapter presents the Post-2015 Country Development Diagnostics framework, developed by the World Bank Group with the aim of providing a starting point for policy makers and researchers who are analyzing the implications of the challenges of achieving the SDG agenda in different countries. The framework is designed for application in countries with a wide variety of characteristics, including differences in initial conditions and access to financing, and provides a starting point for more detailed analysis.[2] It benchmarks a country's achievements, provides projections up to 2030, and helps policy makers ask questions about SDG targets and policy options. It covers the following SDG areas: (a) poverty reduction and shared prosperity, (b) infrastructure (water, sanitation, electricity, roads, and information and communications technology, or ICT), (c) education, (d) health, and (e) climate change. Several indicators are used to measure progress of goals in each of these areas, limited by what is available in cross-country data sets. The aim of this chapter is to concisely present the analytical framework, using data for Uganda for illustration, it is more selective in terms of both SDGs and the indicators used.

The questions that the framework helps to address include: For any country, what would be a set of feasible development targets for 2030 if the country were to develop with the current income projections? What policy areas should the country's government consider in order to accelerate progress? How could it create the fiscal resources needed to achieve more ambitious development outcomes?

More concretely, the framework benchmarks country performance in SDGs, policies, and other determinants (factors that influence SDGs). It makes projections for SDGs to the year 2030, analyzes spending adjustments in priority areas, and discusses sources of fiscal space. Cross-country regressions of SDGs and their determinants on GNI per capita play a central role in the analysis. The advantages and disadvantages of (typically more elaborate) cross-country regressions have been discussed extensively in the literature.[3] Our use of this tool is simple and transparent, drawing on the observation that many development indicators, including SDGs and their determinants, are highly correlated with GNI per capita. For such indicators, we view GNI per capita as a summary indicator of the basic capacity of a country to bring about

outcomes, both for SDGs and their determinants. This does not translate into GNI being a direct or single determinant of outcomes—it is merely a benchmark and starting point for how a country performs relative to others at its income level. It is noteworthy also that certain indicators, such as the income share of the bottom 40 percent (a key measure of shared prosperity), are largely unrelated to GNI per capita. This points to the fact that purposeful measures are crucial to change for many development outcomes: in this case, growth does not, in any regular fashion, directly or indirectly, stimulate processes that bring forth shared prosperity.

Underpinning the analysis is a database that covers all low- and middle-income countries, designed to include available indicators relevant to the post-2015 agenda, including SDGs, their determinants, and indicators related to financing options. Subject to data availability, the database covers key aspects of the post-2015 agenda that can be meaningfully analyzed in a framework of the type developed here.

The purpose of this chapter is to illustrate our framework, drawing on examples from Uganda. The infographic on the next page presents a simplified, visual overview of the framework. The analysis is made up of four steps:

- Step One benchmarks Uganda's current SDG outcomes against those of other countries, given the levels of GNI per capita.
- Step Two projects Uganda's business-as-usual (BAU) levels for the SDGs in year 2030, drawing on GNI per capita projections.
- Step Three tries to assess how to achieve more ambitious targets than those suggested by the BAU projections. To this end, it benchmarks the current levels of the determinants of the various SDGs for Uganda and compares them to those of other countries in order to assess spending priorities. Determinants for which Uganda is significantly lagging behind other countries with a similar level of GNI per capita are singled out for special consideration.
- Step Four addresses challenges related to expanding fiscal space. In this context, the analysis considers Uganda's options for creating fiscal space (through additional financing and government efficiency gains), again by looking at Uganda's current situation compared to what is expected for a typical country at its GNI per capita. These findings for fiscal space are then compared with the assessment of spending priorities identified in Step Three.

The chapter concludes with a summary of findings for Uganda and a discussion of how this framework may be applied to a variety of countries.

2. Step One: Benchmarking SDG Progress

In this step, cross-country regressions are used to assess the performance of the case study country in terms of SDGs, relative to its level of GNI per capita (box 1.1 provides the rationale).

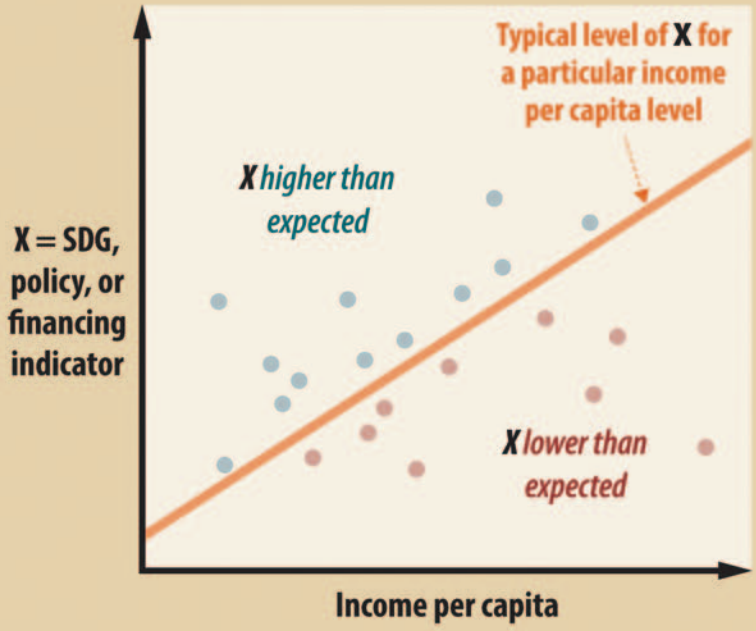
Here we will exemplify the SDG benchmarking approach by analyzing primary and secondary education in Uganda.[4] Figure 1.1 shows two scatter plots with each observation representing a country's position relative to its GNI per capita and the SDG, the latter represented by primary school enrollment on the left and primary completion on the right. The fitted, straight line represents expected school enrollment or completion levels for countries at different levels of GNI per capita. Countries outside the shaded area are significantly over- or underperforming relative to their GNI per capita. Hence, for Uganda, net enrollment in primary is significantly higher than expected, while primary completion rates are significantly lower than expected. Figure 1.2 shows similar information for secondary education in Uganda: gross enrollment rates are significantly lower than expected but completion rates are as expected.[5]

Framework for Country Development Diagnostics Post-2015

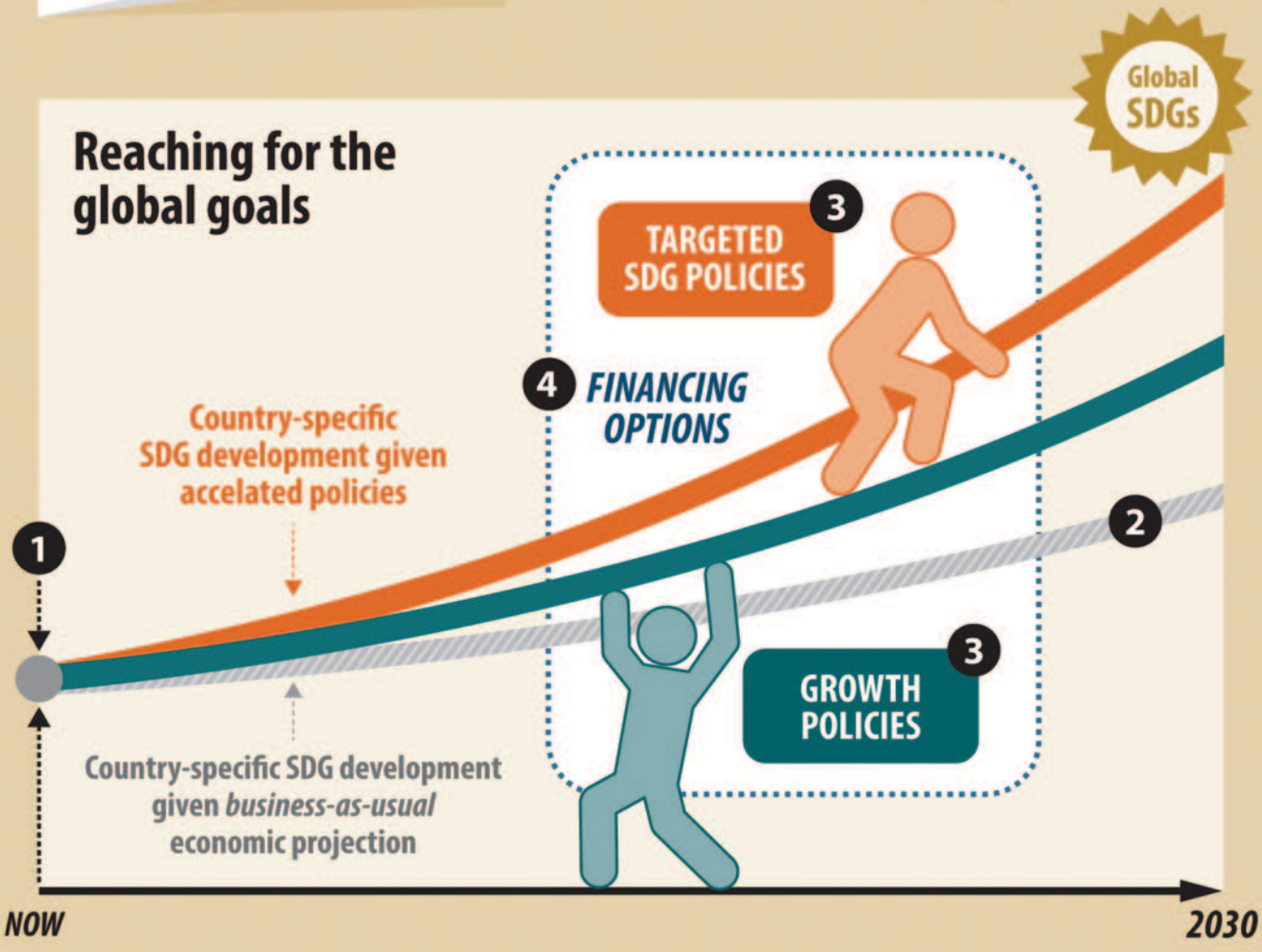
Framework steps

1. Benchmark current levels of SDGs relative to other countries, given income per capita.
2. Project SDG levels until 2030, following *business-as-usual* economic development.
3. Benchmark current levels of SDG determinants relative to other countries, and discuss potential changes in policies.
4. Benchmark current levels of financial indicators relative to other countries, and discuss ways to expand fiscal space for SDG accelerating policies.

Is your country lagging behind?



Reaching for the global goals



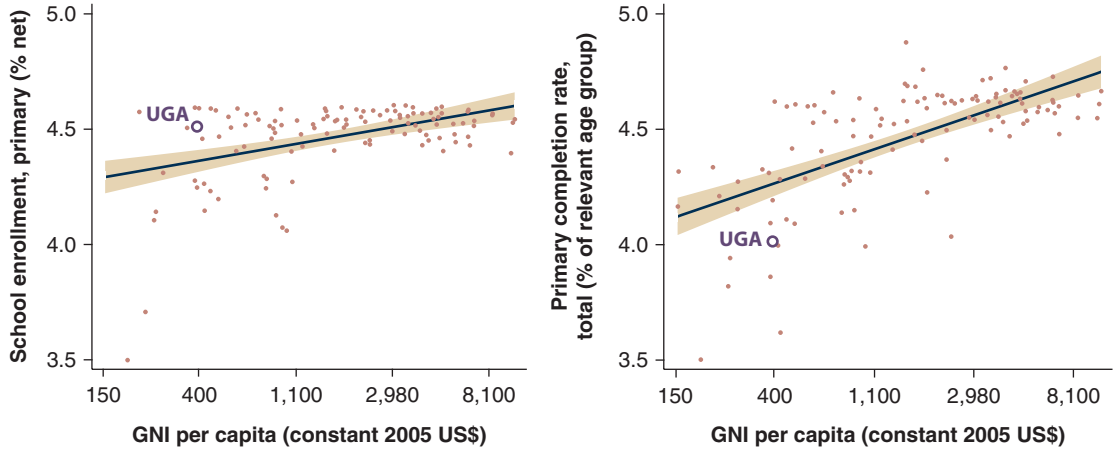
BOX 1.1 Using GNI per Capita for SDG Benchmarking

GNI per capita plays a central role in the analysis. Its level is highly correlated with most SDG indicators for several reasons, perhaps most importantly due to the fact that GNI per capita is highly correlated with determinants of SDGs, including (a) per capita household incomes, parts of which is spent on items that contribute to SDGs (for example, on health, education, and electricity); and (b) tax revenue and government capacity, which contributes to the fiscal space for government spending in areas that, directly or indirectly, contribute to SDGs (most importantly, government services and infrastructure). Causality may also go in the opposite direction: the levels for different SDGs (for example, those related to health and education) may influence GNI per capita.

Cross-country, constant-elasticity regressions are first used to benchmark current SDG outcomes—that is, to assess whether a country is over- or underperforming for an SDG relative to its GNI per capita.[a] Hence, for individual countries, *deviations from predicted SDG values may be viewed as an indication of how well a country does relative to its capacity to achieve outcomes and provide inputs (determinants)*. Instead of GDP per capita (a production measure), GNI per capita, an income measure, is used since it conceptually is more closely related to a country's capacity to achieve SDGs.

a. These simplified regressions are useful for current purposes (benchmarking and projections). However, they do not claim to sort out interactions between different indicators, a difficult task given high degrees of correlation, lagged effects, complex time- and space-specific relationships, and data limitations.

FIGURE 1.1 Uganda—Primary School Net Enrollment and GNI per Capita (Left); Primary School Completion and GNI per Capita (Right)

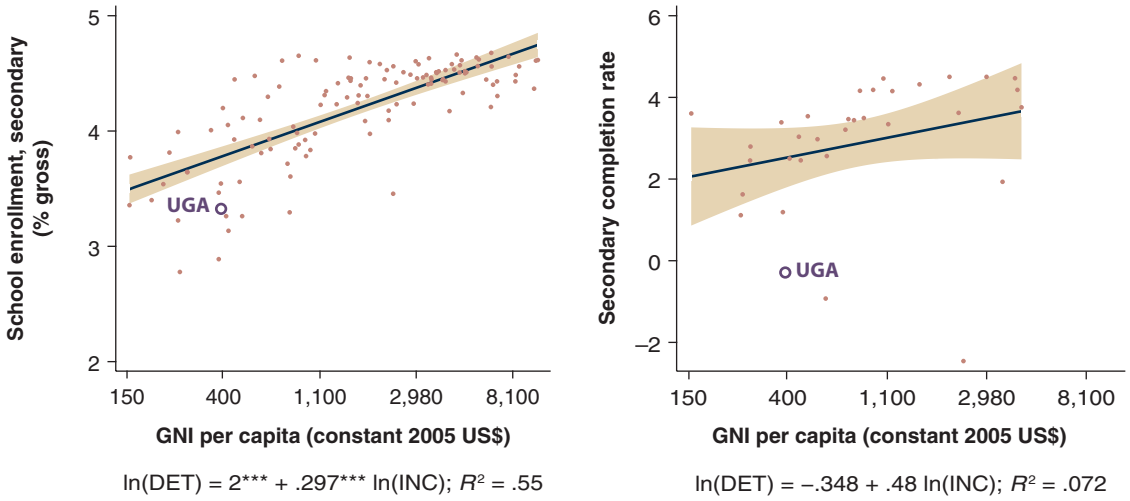


ln(DET) = 3.924*** + .073*** ln(INC); R^2 = .198

ln(DET) = 3.315*** + .153*** ln(INC); R^2 = .421

Sources: WDI, EdStats.

FIGURE 1.2 **Uganda—Secondary School Gross Enrollment and GNI per Capita (Left); Secondary School Completion and GNI per Capita (Right)**



Sources: WDI, EdStats.

3. Step Two: SDG Business-as-Usual Projections

If the relationship between GNI per capita and an SDG is considered tight enough, then the GNI data for the country in question are used, not only to benchmark the initial SDG outcome but also to project BAU SDG outcomes for 2030. For this, we need projections of GNI per capita.

Box 1.2 discusses alternative sources for GDP and GNI projections, which are available for most countries. Figure 1.3 uses three of these sources to show Uganda's projected (indexed) levels of GDP per capita up to 2030 (and, for comparison, the historical development since 1990), while table 1.1 presents growth rates. We opted for the CEPII's EconMAP projection, which for Uganda has a growth rate for GNI per capita of 4.0 percent per year (at constant 2005 US$), translating to an increase from US$378 in 2011 to US$817 in 2030 (both at constant 2005 prices), a level similar to the current levels of countries such as Vietnam, India, and Senegal.[6] Considering the range of alternative projections, an annual per capita growth rate of 4 percent seems realistic, if perhaps erring on the moderately optimistic side.

The levels of selected SDGs are projected to 2030. These BAU projections reflect what can be expected given a country's initial conditions, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and gradual convergence to close gaps between observed and expected values.[7] For any SDG, projections are presented only if the fit between GNI per capita and the SDG is considered sufficiently tight (box 1.3).

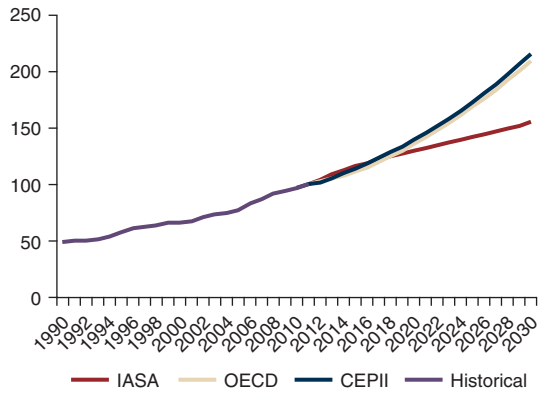
Table 1.2 presents recent values and BAU projections to 2030 for Uganda for a set of SDG indicators, including those shown in figures 1.1 and 1.2, using a 2030 GNI per capita of US$817. As explained under Step 1, Uganda is currently overperforming in its primary school net enrollment rate (indicated by green text in table 1.2); however, the cross-country relationship is not tight enough to make a relevant BAU projection for 2030. For the primary school completion rate, Uganda is underperforming (indicated by red text). The projected BAU value in 2030 is 66.1 percent, an increase due mainly to GNI per capita growth but influenced also by the convergence effect. Substantial progress is recorded for other indicators, but without realizing global ambitions: for example, the extreme poverty rate declines very strongly.

BOX 1.2 Projecting GDP and GNI

Aggregate growth projections covering most countries are produced by various international organizations, including the World Bank, IMF, CEPII, OECD, and IIASA, but also by most governments and other sources, such as Hausmann et al. (2011). From the projections, it is difficult to determine which source is most reliable. Moreover, given the fact that available sources project only GDP while our framework uses GNI data, we have to assume, for most countries quite reasonably, that projected GNI growth will not deviate substantially from projected GDP growth (both expressed in constant 2005 US$).[a] In any country case study, it is good practice to compare different projections and, if necessary, refine what is available.

a. As indicated by the names of the terms, GDP is primarily a measure of production while GNI is an income measure, more specifically GNI = GDP plus net receipts from abroad of primary income (compensation of employees and property income). For most countries, the two measures are highly correlated; among low- and middle-income countries, they tend to diverge most strongly in countries where (net) FDI over time has represented a substantial share of total private investment, often in natural resource sectors, generating substantial profit remittances to the foreign investors. If additional information is available on how future GNI and GDP growth may differ for a country, then such information should be reflected in the GNI projections.

FIGURE 1.3 Uganda—Historical Data and Projections for Real GDP per Capita (2011=100)



Sources: WDI, IIASA, OECD, and CEPII.

4. Step Three: Benchmarking Determinants and Identifying Spending Priorities

Current Performance of Determinants

In Step 3, we regress SDG *determinants* against GNI per capita (in Step 1, we did this for SDG indicators; cf. box 1.1). The identification of determinants is guided by previous country and cross-country research, limited to indicators that are available in cross-country databases. We emphasize those determinants that may be influenced by policy in the short to medium terms. The purpose is to assess the feasibility of policy changes that accelerate SDG progress and make more ambitious targets possible. Policies may influence SDGs in two ways, by: (a) raising the level of GNI per capita, which in turn, through various channels, affects SDGs, and (b) improving country SDG outcomes relative to what is expected given its GNI per capita.

To illustrate, if a country underperforms in both an SDG and its more important determinants, then policy actions may be both feasible and rewarding. Examples include government spending in various areas and the related provision of inputs crucial to SDG progress. Such policies may have an influence directly (by having a direct bearing on specific services—for example, health services targeted to reduce maternal mortality) and/or indirectly (by contributing to capacity-creating economic growth). The discussion of major policy changes has direct implications for costs and financing needs.

The determinants—in our cross-country database represented by over 200 indicators—may be classified according to which of the following four areas they impact: economic growth, education, health, and climate change. In the fifth area that our approach covers—SDGs related to access to infrastructure—the basic approach is simpler: deviations are viewed

TABLE 1.1 Uganda—Historical and Projected Growth from Various Sources

Source	Average annual growth (%)	Time period	Indicator (real values)	Comment
WDI	3.3	1990–2012	GDP per capita	Data used in figure 1.3 for period up to 2012
WDI	3.2	1990–2011	GNI per capita	GDP per capita growth for 1990–2011 was 3.5 percent
CEPII	4.0	2013–30	GDP per capita	
OECD	3.8	2013–30	GDP per capita	
IIASA	2.5	2013–30	GDP per capita	
IMF (2013b)	3.7	2013–30	GDP per capita	Including oil revenues, adjusted for population growth
Hausmann et al. (2014)	3.3	2009–20	GDP per capita	Based on the Economic Complexity Index
Republic of Uganda 2014, pp. 27, 30, 53	5.6	2014–40	GDP per capita	Calculation based on data for GDP growth and population in Uganda's Vision 2040

BOX 1.3 SDG Business-as-Usual Projections for 2030

If the fit between GNI per capita and an SDG indicator is reasonably tight (which tends to be the case), the results of a cross-country regression permits us to compute projected business-as-usual 2030 values.[a] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[b]

a. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ are defined as loose.

b. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for the specific country. The same observation applies to expected values for fiscal space indicators.

TABLE 1.2 Uganda—SDG Projections for 2030

SDG	Recent value	BAU projection for 2030
Poverty rate at $1.25 a day (PPP) (% of population)	38.0	11.5
Malnutrition (weight for age: % of children under 5)	14.1	8.8
Income share, bottom 40% (% of total income)	15.5	—
Gini Index	44.3	—
Access to improved sanitation (% of population)	33.9	44.8
Access to improved water (% of population)	74.8	80.7
Access to electricity (% of population)	14.6	31.0
Road density (km road per 100 sq. km of land area)	32.2	35.8
Internet use (% of population)	14.7	—
Mobile cellular subscriptions (% of population)	45.0	—
Net enrollment, pre-primary (%)	13.6	20.4
Net enrollment, primary (%)	90.9	—
Primary completion rate (%)	53.1	66.1
Gross enrollment, secondary (%)	27.6	41.6
Secondary completion rate (%)	9.4	—

table continues next page

TABLE 1.2 *continued*

SDG	Recent value	BAU projection for 2030
Maternal mortality (modeled estimate, per 100,000 live births)	310.0	146.3
Under 5 mortality (per 1,000 live births)	68.9	42.7
Prevalence of HIV total (% of population ages 15–49)	7.2	—
Malaria reported	7.3	1.3
Prevalence of tuberculosis	175.0	109.0
CO_2 emissions per capita	0.11	0.39

Note: Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because indicator has too loose a relationship with GNI per capita. Whether a specific deviation (positive or negative) reflects a stronger or weaker performance varies across indicators. For example, a positive deviation reflects weaker performance for poverty but stronger performance for water access. The terms overperformance and underperformance are used normatively; for example, with regards to the maternal mortality rate, a lower-than-expected rate is reflected as overperformance.

mainly as indicating insufficient levels of efficient investments. Shared prosperity is not addressed in a separate section but rather highlighted throughout. Wherever data allow, the results of the sample of the bottom 40 percent are presented, and indicators such as those related to education and health, access to finance, and secondary road infrastructure are given special attention. It is important to note that some determinants influence several SDGs, and that SDGs may be determinants of other SDGs.[8] Of course, the fact that cross-country analysis has shown that a certain determinant matters for an outcome does not necessarily mean that it is important in a specific country setting; conversely, a lack of evidence on the cross-country level does not necessarily mean a determinant is unimportant for a specific country. In order to arrive at more definitive conclusions for a given country, it is necessary to assess and enrich the findings of our analysis, drawing on additional country information.

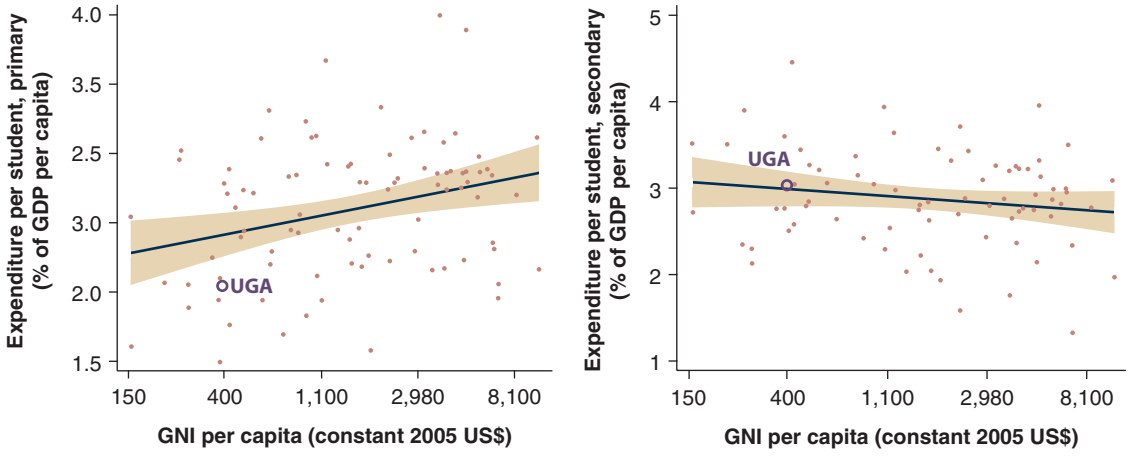
To demonstrate this step, we look at expenditures per student at the primary and secondary school levels, highlighting data for Uganda (figure 1.4): at the primary school level, spending is significantly lower than expected while, at the secondary school level, it is within the expected range. These findings may help to explain the enrollment-completion puzzle presented in Step 1: Uganda's lower than expected primary completion rate may be due to lower-than-expected expenditure per student and, as a related matter, a higher-than-expected pupil-teacher ratio (figure 1.5). As for secondary schools, the expenditures per student are as expected but the pupil-teacher ratio is lower than expected. The fact that the completion rate is as expected while the enrollment rate is below expectations (both rates are computed relative to the total population in relevant age groups) suggests that the system performs relatively well for its spending level in bringing enrolled students to completion. A more detailed investigation is needed to assess the room available for efficiency improvements.

Table 1.3 presents findings for a longer list of determinants, chosen from those that are directly policy relevant, not only for education but also for other SDGs, giving a flavor of the type of determinants that may be analyzed in a more detailed study. In addition to the determinants in the table, household incomes per capita (highly correlated with GNI per capita) and some of the other SDGs, including those related to infrastructure—for example, access to safe water affecting health indicators—may also matter. For those in red text, performance is significantly weaker than expected relative to Uganda's GNI per capita, suggesting that improvements in policies and outcomes in these areas may be most feasible.

Identifying Spending Priorities

A cross-country perspective can shed useful light on spending decisions, which are especially difficult when made in a situation such as Uganda's, where large unmet needs coexist with a

FIGURE 1.4 Uganda—Expenditure per Primary Student and GNI per Capita (Left); Expenditure per Secondary Student and GNI per Capita (Right)

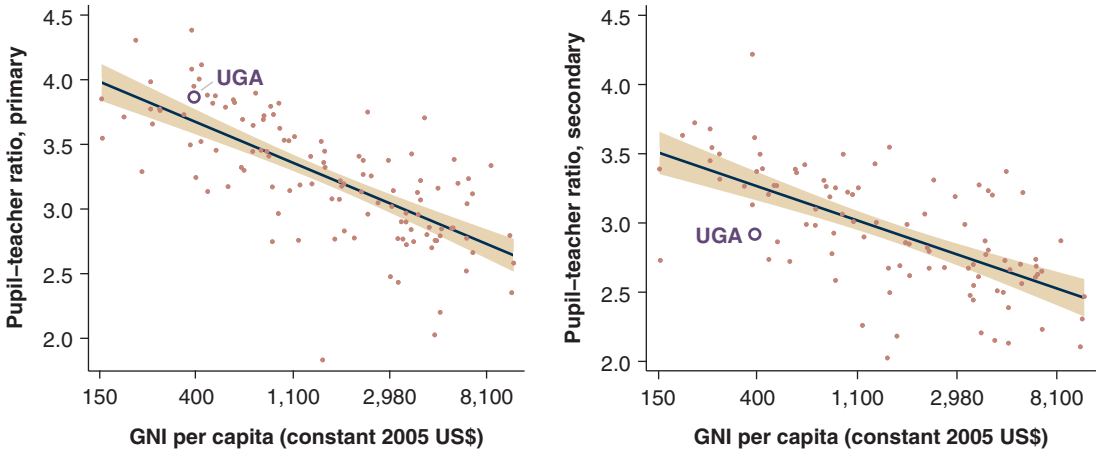


ln(DET) = 1.581*** + .138*** ln(INC); R^2 = .09

ln(DET) = 3.476*** –.082 ln(INC); R^2 = .027

Sources: EdStats, World Bank.

FIGURE 1.5 Uganda—Primary Pupil-Teacher Ratio and GNI per Capita (Left); Secondary Pupil-Teacher Ratio, Secondary and GNI per Capita (Right)



ln(DET) = 5.561*** –.315*** ln(INC); R^2 = .508

ln(DET) = 4.751*** –.247*** ln(INC); R^2 = .408

Sources: EdStats, World Bank.

TABLE 1.3 Uganda—Policy-Relevant SDG Determinants

SDG	Recent value
Government consumption (% of GDP)	11.3
Public investment (% of GDP)	6.7
Logistic performance index	2.8
Ease of doing business rank	132.0
Public expenditure per student, primary (% of GDP per capita)	7.6
Public expenditure per student, secondary (% of GDP per capita)	20.7
Public expenditure per student, tertiary (% of GDP per capita)	45.6
Public expenditure, primary (% of GDP)	1.8
Public expenditure, secondary (% of GDP)	0.8
Public expenditure, tertiary (% of GDP)	0.4
Pupil-teacher ratio, primary	47.8
Pupil-teacher ratio, secondary	18.5
Public health expenditures (% of GDP)	2.5
Contraceptive use (% of population)	30.0
Physicians (per 1,000 people)	0.12
Skilled staff at birth (% of births)	57.4
Adolescent fertility rate (per 1,000 girls 15–19)	131.0
Fertility rate (births per woman, 15+ years of age)	6.1

Note: Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected. The terms overperformance and underperformance are used normatively; for example, with regards to the maternal mortality rate, a lower-than-expected rate is referred to as overperformance.

constrained capacity to scale up spending with retained efficiency. Naturally though, spending priorities need to discuss the cross-country result keeping country-specific conditions and recent developments in mind.

At the aggregate level, Uganda's spending-to-GDP ratio is low relative to its GNI per capita for aggregate public consumption (at 11.3 percent of GDP in 2011, falling short by 2 percentage points) and, to a lesser extent, for aggregate public investment, suggesting that some expansion would not put excessive pressures on financing or institutional capacity.

The above analysis focused mainly on primary and secondary education. At the primary level, Uganda's government spent around 7.6 percent of GDP per capita per student in 2011 (table 1.3), which is less than the expected 11.0 percent. However, while spending per student as percent of GDP is less than expected, its spending on primary education as percent of GDP is as expected. The reason for this seeming contradiction is that enrollment is relatively high, largely due to high rates of repetition and enrollment of students who are older than the expected age for their grade. If repetition rates can be reduced and completion rates increased—something that may require more spending per student—the GDP share for primary spending required to offer services similar to those of other countries will eventually decline as students graduate from the primary level. All things considered, an initial jump in the GDP spending share to 2.5 percent of GDP (compared to the current 1.8 percent of GDP) would raise spending to the expected level. However, even though such increased spending would raise per-student resources to what is typical for countries at Uganda's GNI per capita, it still remains far below what may be needed to offer a quality primary education.[9] For secondary education, the enrollment rate and spending as percent of GDP are both lower than expected while completion rates (measured relative to the population in the relevant age cohorts) and spending per student as percent of GDP are as expected. As Uganda in the future meets the challenge of increasing the number of entrants that proceed from primary, the demands for public spending on secondary education will increase. As a result of expansion at lower levels, the demand for tertiary education will also increase, albeit with a lag. In 2011, public spending on tertiary education was 0.4 percent of GDP, less than expected. Like primary education, keeping spending per student as percent of GDP at expected levels may not be sufficient to offer a quality education.[10]

In addition to education, health and infrastructure are two major SDG-related spending priorities for a low-income country like Uganda. In health, key indicators such as under-five and maternal mortality rates, are at expected levels while total health spending is higher than expected (9.5 percent compared to an expected 5.9 percent of GDP). At a more disaggregated level, public spending is roughly as

expected (2.5 percent of GDP) and private spending higher (7.0 percent of GDP compared to an expected level of 3.0 percent) (Gable, Lofgren, and Osorio-Rodarte 2014). In the short to medium runs, the ability of the public health sector to absorb additional spending while maintaining efficiency is severely constrained by a lack of qualified manpower, while waste is substantial, estimated at 13 percent of spending for 2005–06 (Okwero at al. 2010, pp. 47, 65–68). Meanwhile, the level of spending on current health Millennium Development Goals (MDGs) is well below the recommended minimum—US$54 per capita at 2005 prices (Task Force on Innovative International Financing for Health Systems 2009, p. 11; WHO 2010, pp. 36–37); if projected growth rates are achieved, Uganda's total health spending would not reach this level until about 2020. In other words, further financing for increased health services will be a high priority, especially if the government managed to overcome the manpower and other constraints to increased absorptive capacity in the health sector.

Regarding infrastructural development, investments, and spending on operations and maintenance (in such sectors as water, sanitation, roads, electricity, and information and communications technology, or ICT), are crucial for Uganda's SDG agenda. But, despite having spent heavily on infrastructure during 2001–09—at slightly above 10 percent of GDP, or US$1 billion per year—Uganda still lags behind comparator countries in electricity supply, is severely challenged in achieving universal access to sanitation and considerably lacking in provision of running water and other services. According to Ranganathan and Foster (2012, p. 42), a program for accelerated (but still not unreasonable) progress may require annual spending of an additional US$400 million per year (in 2011 US$) through 2015, corresponding to around 2.4 percent of GDP. Given the importance of infrastructure access within the SDG agenda, and its key role in raising growth and contributing to a wide range of development goals, it would be crucial to continue to improve services in this area up to 2030.

5. Step Four: Identifying Fiscal Space

The level and efficiency of public spending are typically among the determinants of the development of SDGs and their determinants. However, it is important to keep in mind that any given level of spending may take place within a wide range of policy frameworks, among other things, with varying roles for public and private service delivery. Also, the means by which resources are mobilized makes a difference to outcomes—for example, the effects of additional aid are different from the effects of additional taxes.[11]

Here we primarily address fiscal space from a budgetary perspective since, by definition, budget resources are most directly controlled by policy makers. However, as will be noted, financing from NGOs and private investors may play an important complementary role. Our framework is comprehensive, analyzing the scope for creating additional fiscal space from taxes, fossil fuel subsidy cuts, overseas development assistance (ODA—that is, grants and concessional loans), and other borrowing (domestic or foreign). It is also important to bring government efficiency into the analysis: if it is low initially, then improvements may release substantial resources for additional high-priority spending without additional financing. If efficiency initially is high, then this source of fiscal space is less important. However, if so, the government is likely in a better position to use additional financing to scale up services and investments in priority areas while maintaining acceptable efficiency.[12]

Drawing on the summary in table 1.4, among the potential sources of fiscal space for priority spending, we find the following:

- Nonoil taxes. Tax revenues are the main source of government financing in Uganda. Figure 1.6 shows how they have evolved since 1990, and benchmarks their current GDP share against those of other countries.[13] As shown, Uganda's tax revenue, at 13 percent of GDP in 2011, is as expected. The relationship with GNI per capita is not tight enough to

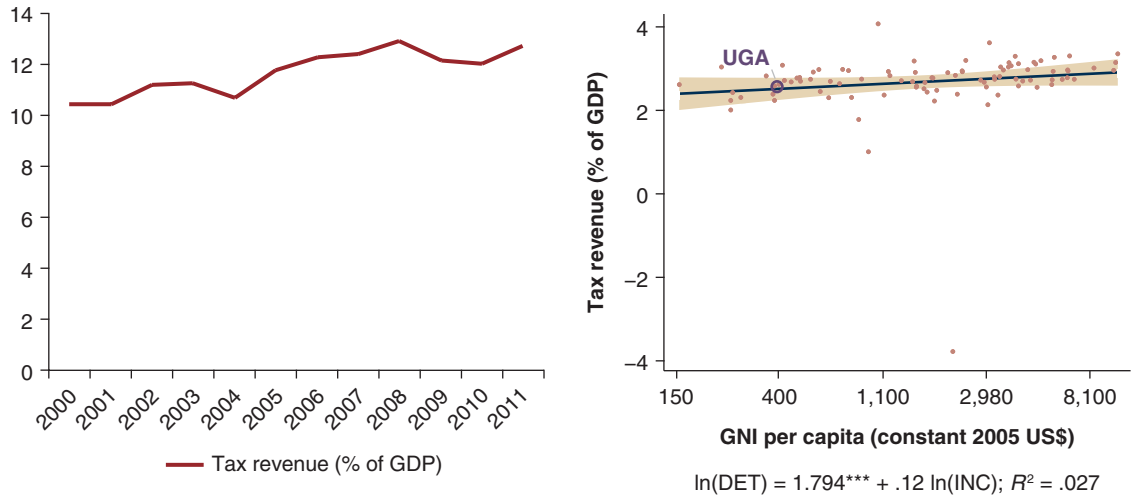
project future changes on the basis of projected income growth. If nonoil tax policy were to change, then it would be important to consider the detailed design and likely effects on the SDG agenda of such changes, comparing the benefits from additional spending to the costs related to a reduction of the resources controlled by households and enterprises.[14]

- Oil taxes. While considerable uncertainty is related to the oil sector—currently, 2018 is the expected starting year for production—it is likely that the sector will generate a substantial increase in tax revenues. According to one set of projections, the tax revenues from oil will reach 8 percent of GDP by 2023, after which they will decline gradually until 2045, when production ends and reserves are depleted; for the period 2016–30, oil revenues may amount to an average of roughly 4.9 percent of GDP per year (IMF 2013b, p. 57).
- Fossil fuel subsidies. Currently Uganda's subsidy level is at around 1.3 percent of GDP. Subsidy reduction is thus a potential source of fiscal space and would contribute positively to the climate change agenda. It is difficult to assess the likelihood of reforms in this area.
- Official Development Assistance (ODA). Uganda's net ODA is at around 10.1 percent of GNI (9.4 percent of GDP), also roughly at the expected level (11.1 percent of GNI). The cross-country relationship between GNI per

TABLE 1.4 Government Fiscal Space—Recent Indicators and Future Directions of Change

Income and efficiency indicators	Recent value	Impact on future fiscal space	Comment
Taxes (% of GDP)	13.0	+	Likely increase (mainly due to revenues from oil sector)
Fuel subsidies (% of GDP)	1.3	+	Potential (and desirable) decrease
ODA (% of GNI)	10.1	–	Likely decrease
External debt stocks (% of GNI)	22.5	+	Potential room to increase borrowing
Government efficiency		+	Potential (and desirable) increase

FIGURE 1.6 Uganda—Tax Revenues 1990–2011 (% of GDP) (Left); Tax Revenues (% of GDP) versus GNI per Capita (Right)

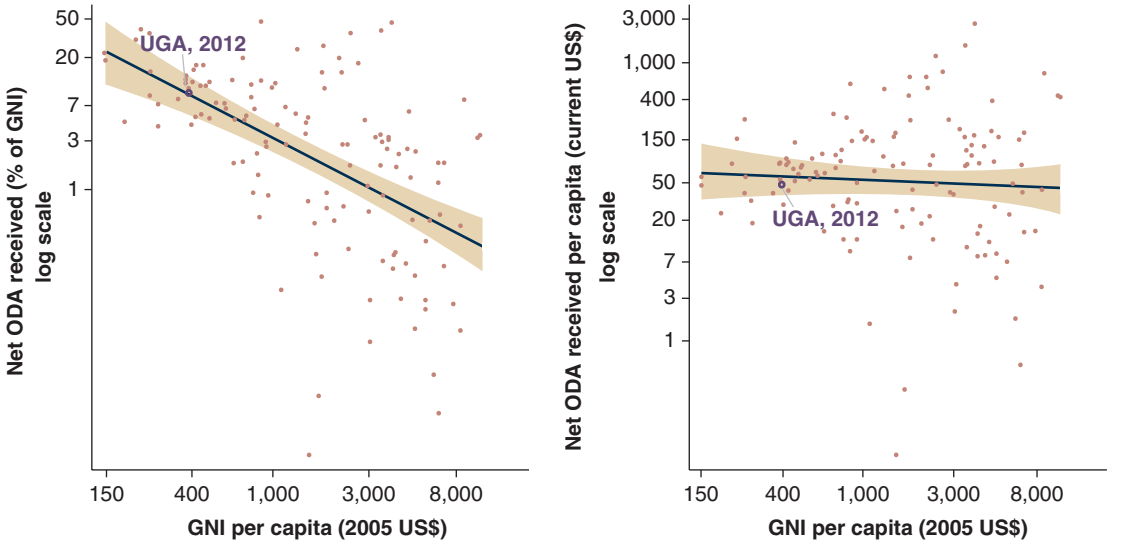


Sources: WDI, World Bank.

capita and ODA (as percent of GNI, or GDP) suggests that Uganda's ODA will decline relative to both GNI and GDP (figure 1.7, left panel) while remaining constant in per capita terms. The likely advent of large oil revenues may lead to further cuts as donors turn to countries with more severe fiscal constraints. The projected 2030 level of ODA for Uganda—taking only the increased GNI per capita into account—is as low as 4.2 percent of GDP or, in an average year during 2016–30, around 6.1 percent of GDP, that is, a loss of 3.4 percentage points. To limit this loss, it may be possible to tap into global initiatives, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria.

- Borrowing. Uganda's external debt stocks have decreased substantially, not least following the HPIC initiative, and the current 22.5 percent of GNI is lower than expected. Again, the relationship to GNI per capita is not tight enough to make projections based on cross-country results. However, a recent IMF-World Bank Debt Sustainability Analysis (DSA) considers as sustainable an increase in Uganda's external public or publicly guaranteed debt from 16 percent of GDP in 2012 to 22 percent in 2033; this permits additional annual borrowing of roughly 0.3 percent of GDP. In the DSA, it was assumed that other debt stocks—public domestic and external private non-guaranteed—would not change from their current GDP shares of 13 percent and 10 percent, respectively (IMF 2013b).
- Government efficiency. A number of government efficiency measures are available (box 1.4). According to both the health and the education indexes, Uganda's performance is below the expected levels; among these two indexes, GNI per capita is strongly correlated with the education index but largely uncorrelated with the health index. Uganda is performing as expected in terms of the more general Public Investment Management Index and better than expected according to the World Bank Governance Indicators. Given that

FIGURE 1.7 Uganda—ODA (% of GNI) versus GNI per Capita (Left); ODA (per Capita) versus GNI per Capita (Right)



Sources: WDI, World Bank.

the different indexes measure different aspects of government performance, such mixed findings may not be inconsistent. Among other country-specific sources, scattered survey evidence also points to inefficiencies. For example, on any given day, roughly 15–20 percent of the teachers (including head teachers with supervisory responsibilities) are absent, with illness accounting for an almost-negligible share of absences (UNESCO 2014a, pp. 31 and 267–268). Similarly, an analysis of local governments suggests, if all districts could be brought up to the health and education outcome-to-spending ratios of the best performing districts, then about one-third of their budgets could be saved (World Bank 2013c, p. xiii). In sum, even though they are unpredictable, efficiency gains have the potential to add considerable fiscal space.

On balance, this information suggests the fiscal space for SDG priority spending could increase by roughly 4–5 percent of GDP.[15] However, the extent of the increase is highly uncertain, not least due to uncertainty regarding the future of the oil sector. In addition to the sources included in the table, it may be possible to attract additional external private financing, especially for infrastructure investments, leveraged by additional government spending in this area. To provide context, according to recent figures, total government spending amounts to around 20 percent of GDP (IMF 2013b, p. 28); it would be a severe challenge to raise spending by 4–5 percent of GDP while maintaining acceptable efficiency. If it were achieved, then gains in the SDG area could be considerable. For the sake of efficiency, if spending is to be increased, it may be wise to do so gradually and seek guidance from frequent impact assessments.

It is important to note that trade-offs are involved, to varying degrees, when fiscal space is freed up and spending is increased according to priorities: policy makers need to think through scenarios for Uganda with and without major policy changes, and the implications for the SDG agenda. The trade-offs may be least severe for success in raising government efficiency and ODA. For alternatives with different tax and subsidy policies, the net short- and long-run impacts on different population groups should be considered. Additional borrowing increases the risk of unsustainable future debt levels.

6. Conclusions

In this chapter, we present the Country Development Diagnostics Post-2015 framework for analyzing the implications for the SDG agenda at the level of individual low- and middle-income countries. The framework that we present is divided into a sequence of distinct steps; each step is illustrated here with selected findings from a more detailed country diagnostic of Uganda (Gable, Lofgren, and Osorio-Rodarte 2014). The fact that, in spite of accelerating progress, most countries will not achieve most of the MDG targets by the 2015 deadline indicates that

BOX 1.4 Measures of Government Effectiveness

On the basis of relationships between inputs and outputs, Grigoli and Kapsoli (2013) and Grigoli (2014) constructed indexes for government efficiency in health and education spending; Dabla-Norris et al. (2011) developed a Public Investment Management Index (PIMI) that reflects actual practices in four areas (appraisal, selection, implementation, and evaluation). In addition, the World Bank Governance Indicators provide cross-country data on rule of law, government effectiveness, control of corruption, political stability and absence of violence, quality of regulations, and voice and accountability.

this is an important undertaking: while ambitions should be global, in order to be effectively embraced, strategies and targets in individual countries should be locally owned and anchored in individual country realities and priorities.[16]

The findings for Uganda—illustrating the nature of country-specific insights that the framework may lead to—reveal a mixed picture of how the country is performing compared to what is expected at its GNI per capita. The fact that the country underperformed in various indicators may set off alarms and prompt more detailed analysis, with the initial hypothesis that improvements are clearly attainable in those areas. The analysis suggests that in some areas certain linkages are at work (for example, between relatively weak primary education outcomes and the allocation of relatively few resources per primary student). With regard to the SDG agenda, the results suggest that substantial yet only moderate progress should realistically be expected by 2030. This is true even for an economy like Uganda's that is expected to grow at a relatively rapid pace and have access to additional foreign exchange resources (from oil). In other words, business as usual clearly is insufficient to achieve the global SDG ambitions. To accelerate progress, policy makers and country leaders will have to prioritize government effectiveness and efficiency and ensure that development spending is raised and allocated to areas critical to the SDG agenda.

The Country Development Diagnostics Post-2015 framework is intended to give analysts in developing countries and the broader international community a useful starting point for assessing policy priorities, targets, and financing options for virtually any low- or middle-income country. The framework does not say what policy makers should do but it should help them pose important questions and find answers, also drawing on more detailed, country-specific studies.[17] Together, this information should provide helpful guidance for stronger SDG accomplishments.

Notes

1. "The SDGs and targets are integrated and indivisible, global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities. Targets are defined as aspirational and global, with each government setting its own national targets guided by the global level of ambition but taking into account national circumstances. Each government will also decide how these aspirational and global targets should be incorporated in national planning processes, policies and strategies. It is important to recognize the link between sustainable development and other relevant ongoing processes in the economic, social and environmental fields" (UN 2015; paragraph 55).
2. An initial version of the framework was applied in Gable, Lofgren, and Osario-Rodarte 2014. "Country Development Diagnostics Post-2015: Uganda." World Bank, Washington, DC. Compared to the Uganda chapter in this book, this chapter covers a larger part of the framework and more indicators.
3. Among the potential advantages is the ability to control for various alternative determinants, and—when robust results are found—to generalize results beyond the country-specific context. However, as noted by many (for example, ADB 2006), cross-country regressions are often unable, for various interrelated reasons, to successfully address the role of different determinants, severely limiting the usefulness of these results to policy makers. More specifically, the regressions tend to suffer from a lack of robustness to different specifications; difficulty in assessing the direction of causality between different indicators (causality may often go in both directions); high correlations and complex interactions between determinants; variable relationships (across time and space); and imperfect indicators (for example, spending on human development is an imperfect indicator of real services in human development).
4. In addition, the analysis may also review the evolution of the SDG in recent decades as part of the assessment of initial country SDG performance. In addition to benchmarking country performance against what is expected, it may also be relevant to benchmark against top performance within countries that in other important respects remain similar to the case-study country.
5. Uganda's secondary completion rate is highly uncertain. Drawing on population, enrollment,

and repetition data in EdStats, a rate of 9.4 percent was calculated for 2011.

6. We chose the projections of CEPII due to a combination of factors, including a transparent model structure, clear documentation, and comprehensive country coverage. See (http://www.cepii.fr/CEPII/en/bdd_modele/bdd.asp). Note that the projected growth rate is from the most current projections at the time of the in-depth Uganda country study, which differs from the projection in the Uganda brief presented later in this book.
7. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is *exactly* as expected relative to GNI per capita, it is necessary to incorporate convergence toward the expected value into the projections. It is here assumed that such convergence is gradual. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
8. For example, access to electricity is an SDG in its own right and is likely also to influence both education and health SDGs.
9. In 2011, at PPP in constant 2010 US$, average public spending per primary student in low-income, middle-income, and high-income countries was US$94, US$554, and US$6,353, respectively (UNESCO 2014a, p. 383; UNESCO 2014b, table 11).
10. For Uganda and many other low-income countries, the education quality gap and challenge is particularly strong at the primary level. This is because enrollment is higher at this level and spending per student tends to grow faster than GDP per capita (raising the value for spending per student as percent of GDP per capita), reflecting initial overenrollment relative to resources. At higher levels of education it is easier to manage the challenge: enrollment is smaller while growth in spending per student tends to be slower than growth in GDP per capita.
11. See World Bank (2013a) for a broader discussion on financing instruments for the Post-2015 agenda.
12. The challenges of raising government efficiency in service delivery in general, and for services benefiting poor people in particular, is addressed in the seminal World Development Report of 2004, "Making Services Work for Poor People" (World Bank 2003). According to the report, the key to improved service delivery is institutional changes that strengthen relationships of accountability between policy makers, providers, and citizens. A large body of research stimulated by this report suggests that such institutional changes are possible but not easily implemented, largely because politicians in many settings may be able to resist accountability to citizens (Devarajan 2014; see also Overseas Development Institute 2014).
13. Figure 1.6 suggests, interestingly, that ODA per capita is unrelated to GNI per capita—that is, there is no significant tendency to give higher aid per capita to the countries where needs are highest.
14. IMF (2013b) suggests that, by 2018, an increase of 1.5 percentage points of GDP for nonoil would be feasible; Uganda would still remain within its expected range.
15. Using figures from the preceding discussion, a high estimate of the fiscal space increase may be as follows (all percent of GDP for an average year 2016–30): 4.9 (oil taxes) + 1.5 (nonoil taxes) + 1.3 (fuel subsidy cuts)—3.4 (ODA) + 0.3 (foreign borrowing) = 4.6. In addition, the government may be able to raise efficiency. However, as noted, the changes for individual items are uncertain, difficult to bring about, and/or subject to drawbacks (especially if increased spending is not efficient).
16. On the basis of data for 2010, Uganda seemed on track to achieve the MDGs for extreme poverty, education gender parity, under-five (and infant) mortality, and water access. On the other hand, Uganda was off track for undernourishment, primary completion, maternal mortality, and sanitation access (World Bank 2014a).
17. Such studies may be sector-focused or economy-wide. An economy wide approach is needed to consider the many interactions between policies, financing, growth, and SDG outcomes. MAMS (Maquette for MDG Simulations), initially developed at the World Bank for analysis of MDG strategies, is an example of such an approach. For more on MAMS, visit www.worldbank.org/mams.

Country Briefs

Chapter 2

Ethiopia

1. Introduction

Ethiopia, a land-locked, low-income country in Africa, has experienced a remarkably strong economic growth driven in part by public infrastructure investment. In coming years, it will be important to monitor its sustainability, paying particular attention to infrastructure financing (see Moller and Wacker, forthcoming). During 2001–12, Ethiopia's average growth rate for GDP per capita (at constant 2005 US$) was 6.0 percent. Between 2000 and 2012, Ethiopia's ranking according to the UNDP Human Development Index (among countries included in both years) improved from the 1st to the 6th percentile. Hence, GDP growth and social improvements have been impressive under the current economic model. However, judging from the development record of other successful developing countries, Ethiopia still faces the long-run structural challenge of finding a more prominent role for the private sector.[1]

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Ethiopia; its findings cannot guide policy on their own but should be seen as an input into policy discussions. The note may also serve as a starting point for a more complete country development diagnostic as well as a more in-depth country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. The note briefly (a) summarizes Ethiopia's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, Ethiopia's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[2] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[3]

2. SDG Indicators: History and Projections

For 17 SDG indicators, table 2.1 summarizes data for Ethiopia: historical evolution, actual and expected values for a recent year, and projected 2030 values.[4] In figure 2.1, data for Ethiopia are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Ethiopia, the projected average annual rate of GNI per capita growth is 4.0 percent.[5] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[6] Projections for SDG indicators are presented only when the cross-country relationship between the indicator and GNI per capita is classified as tight.[7] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and

TABLE 2.1 Ethiopia—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	54.6	30.7	68.4	10.3	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: Income share for lowest 40%	22.3	20.4	17.6	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)	1.6	26.1	11.9	31.4	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)	22.5	57.8	65.0	67.3	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	13.6	24.4	37.5	36.0	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	54.8	97.9	90.8	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	66.7	89.8	79.1	93.6	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	145.5	64.4	95.8	42.9	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	990	420	546	231	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	0.6	1.8	4.9	0.3	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	4.1	1.2	1.2	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	8.2	23.6	22.3	32.4	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	29.0	51.5	64.5	60.3	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)	2.7	9.1	7.9	12.0	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	12.7	23.0	21.9	34.9	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	0.0	1.9	4.4	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	0.09	0.07	0.12	0.29	Integrate climate change measures into national policies, strategies, and planning.

table continues next page

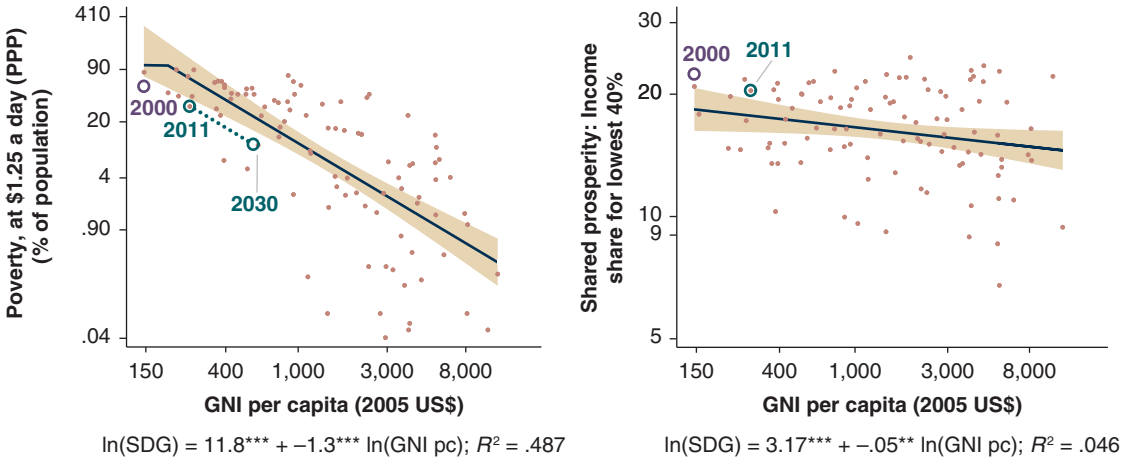
TABLE 2.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Memorandum item					
GNI per capita (constant 2005 US$)	137	273		573	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 2.1 **Ethiopia—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

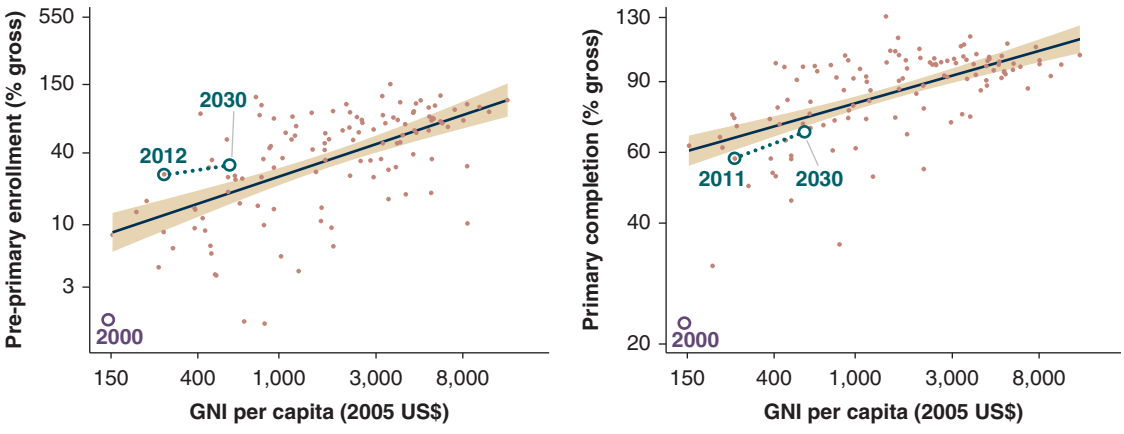
a. Poverty (left), shared prosperity: income share of bottom 40% (right)



ln(SDG) = 11.8*** + –1.3*** ln(GNI pc); R^2 = .487

ln(SDG) = 3.17*** + –.05** ln(GNI pc); R^2 = .046

b. Gross pre-primary enrollment (left), primary completion (right)



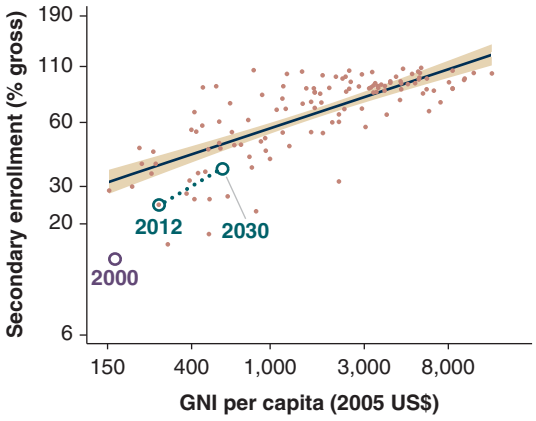
ln(SDG) = –0.73 + .570*** ln(GNI pc); R^2 = .348

ln(SDG) = 3.38*** + .14*** ln(GNI pc); R^2 = .372

figure continues next page

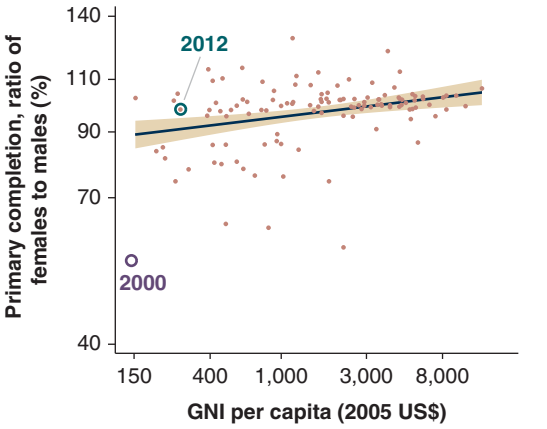
FIGURE 2.1 *continued*

c. Gross secondary enrollment (left)

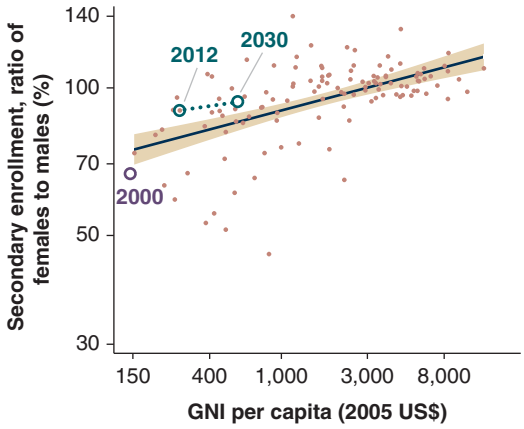


ln(SDG) = 1.9*** + .31*** ln(GNI pc); R^2 = .557

d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)

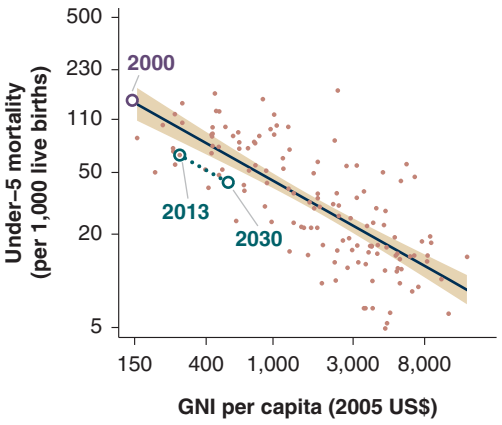


ln(SDG) = 4.31*** + .04*** ln(GNI pc); R^2 = .093

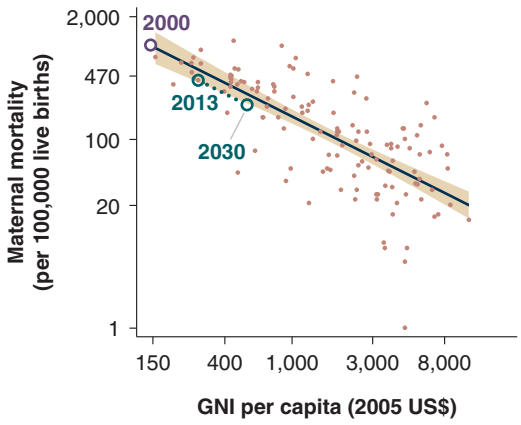


ln(SDG) = 3.82*** + .1*** ln(GNI pc); R^2 = .296

e. Under-5 mortality (left), maternal mortality (right)



ln(SDG) = 7.99*** + –.61*** ln(GNI pc); R^2 = .559

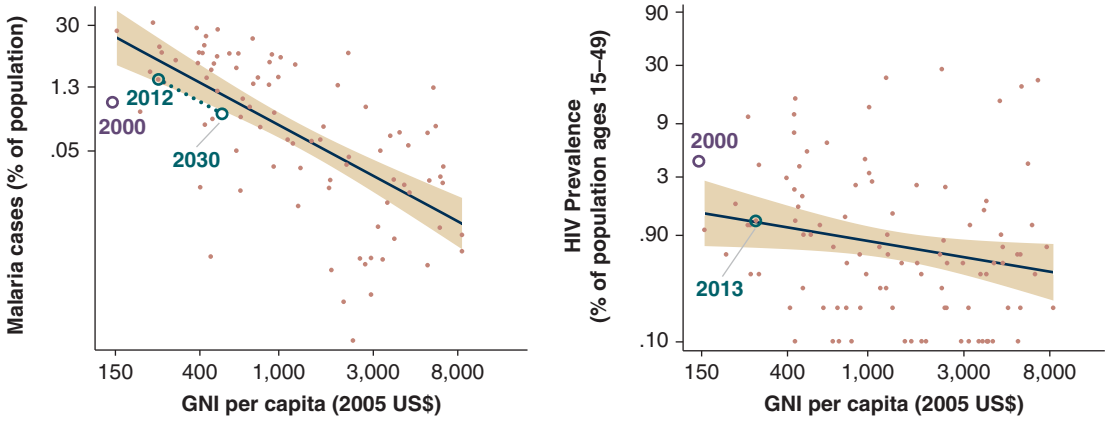


ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .519

figure continues next page

FIGURE 2.1 *continued*

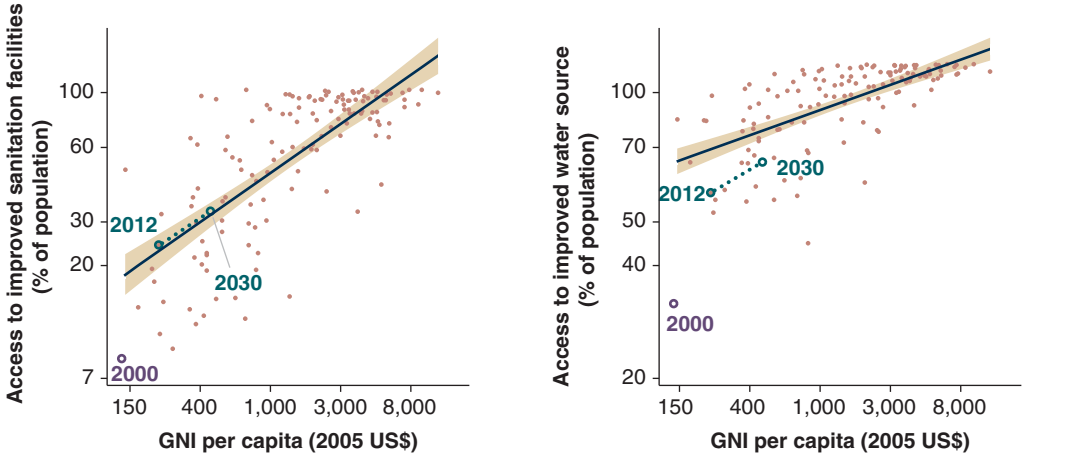
f. Malaria cases (left), HIV prevalence (right)



ln(SDG) = 14.5*** + –2.3*** ln(GNI pc); R^2 = .413

ln(SDG) = 1.87* + –.31** ln(GNI pc); R^2 = .044

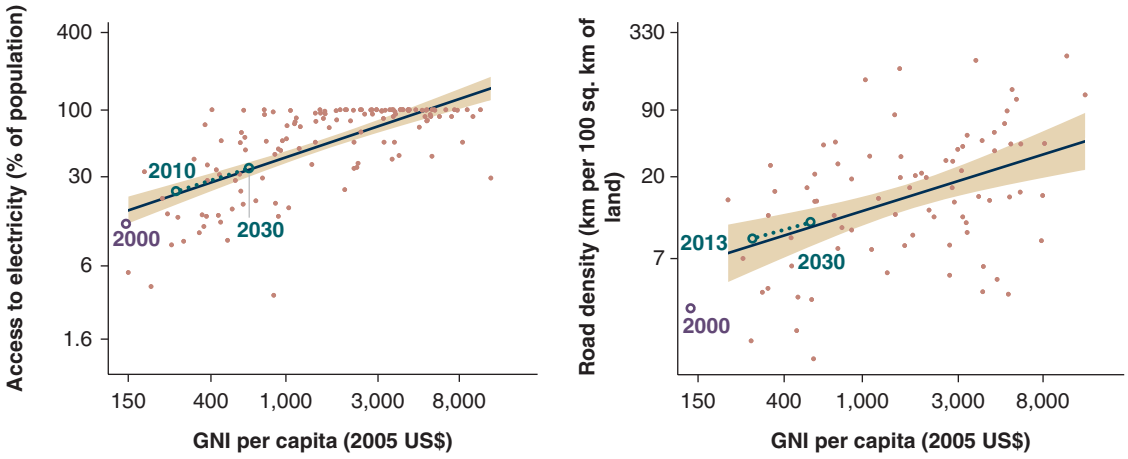
g. Access to improved sanitation (left), access to improved water source (right)



ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .534

ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .435

h. Access to electricity (left), road density (right)

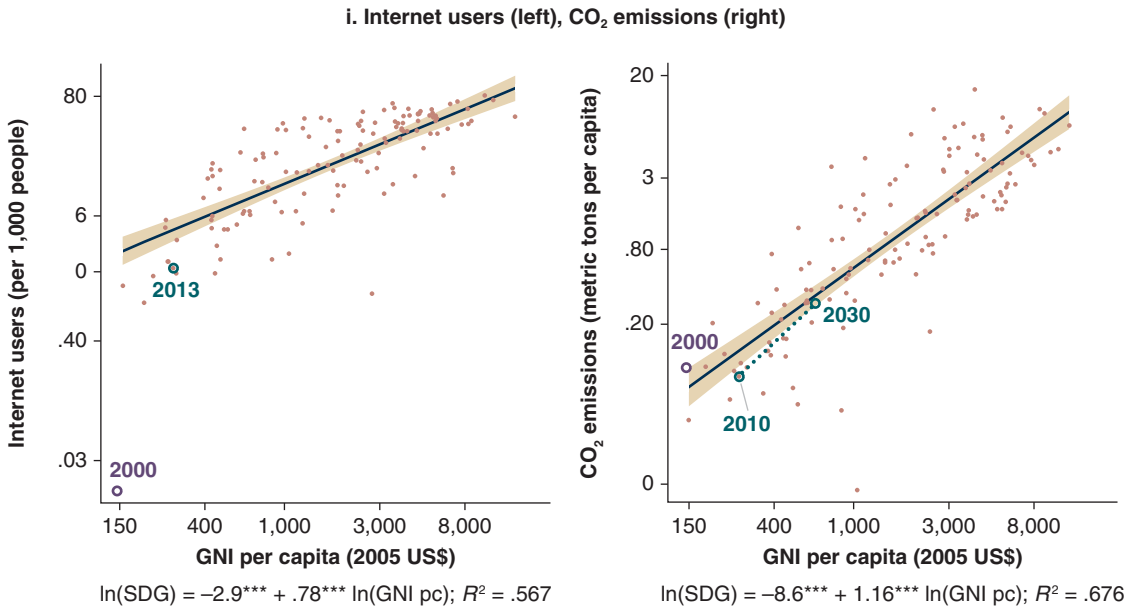


ln(SDG) = .29 + .5*** ln(GNI pc); R^2 = .459

ln(SDG) = –.64 + .48*** ln(GNI pc); R^2 = .189

figure continues next page

FIGURE 2.1 *continued*



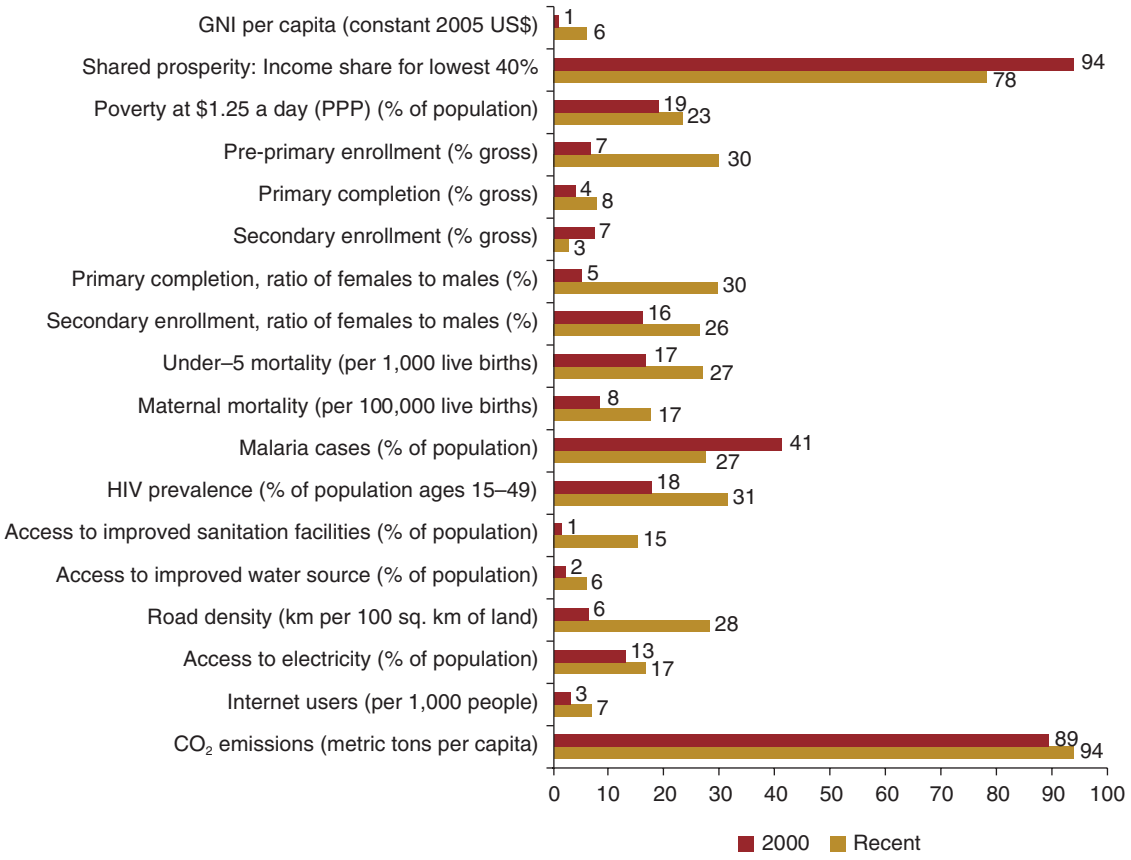
Note: Highlighted observations are for Ethiopia at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[8]

In sum, among the 17 indicators, Ethiopia's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 7 (poverty, shared prosperity,[9] gross pre-primary enrollment, ratio of female to male primary completion, ratio of female to male secondary enrollment, under-5 mortality, and CO_2 emissions), while it falls short for 4 (primary completion, gross secondary enrollment, access to improved water source, and Internet use).[10] For the remaining 6 indicators (maternal mortality, malaria, HIV prevalence, access to electricity, access to improved sanitation, and road density), Ethiopia's current outcomes are as expected. While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may alternatively point to areas in which payoffs from feasible policy change are relatively high, a possibility that calls for further analysis.

As shown in figure 2.2, Ethiopia's GNI per capita percentile ranking among low- and middle-income countries improved by 5 percentile points between 2000 and 2012 (from 1st to 6th percentile).[11] Ethiopia's percentile ranking improved to roughly the same extent for 6 SDG indicators (poverty, primary completion, access to improved water sources, access to electricity, Internet use, and CO_2 emissions). For another 8, the ranking improved even more than for GNI per capita (pre-primary enrollment, the ratio of female to male primary completion rate, ratio of female to male secondary enrollment, under-5 mortality, maternal mortality, HIV prevalence, access to improved sanitation facilities, and road density). For the remaining 3 indicators (shared prosperity, secondary enrollment, and malaria cases), the ranking deteriorated. Among these, the result is not entirely unexpected for shared prosperity given a weak *inverse* cross-country correlation with GNI per capita (cf. figure 2.1a, right panel); however, this direction of change is nevertheless problematic from an

FIGURE 2.2 Ethiopia—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2013 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs.

SDG perspective. For the other 3, a higher GNI per capita is linked to improved performance; given this, these ranking declines are unexpected, suggesting that policies in countries that otherwise are similar to Ethiopia are more apt to address these objectives.

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few patterns emerge. The largest drop in ranking since 2000 was for shared prosperity (although performance is still better than expected) and malaria (now performing as expected). The largest improvements in ranking are for pre-primary enrollment and ratio of female to male primary completion (both now performing better than expected), and road density (now performing as expected).

By 2030, considerable improvements are projected for most indicators (see table 2.1 and respective graphs in figure 2.1). However, compared to the global SDG agenda, also shown in table 2.1, the improvements projected for Ethiopia are moderate. This is to a large extent due to a low initial SDG level. For most indicators, this means that the realization of the global ambitions would require a break in the current pattern, such as continued exceptional growth (beyond the projected real growth in GNI per capita of 4.0 percent) or a significant increase in external support. A break is also needed for indicators

such as shared prosperity, for which a weak relationship with GNI per capita precludes projections. Such a break would be facilitated by more rapid and more inclusive growth for the population with lowest income, combined with SDG policies that benefit the disadvantaged.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure).[12] With regard to Ethiopia's fiscal space indicators, table 2.2 and figure 2.3 summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[13] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover selected indicators related to three aspects of government activities: spending, receipts and debt, and governance and efficiency. While the findings of this country-at-a-glance note cannot guide policy on their own, they should be seen as an input into discussions about policy making.

In general, room for additional priority spending may be created by reducing low-priority spending, increasing current receipts, and/or increasing borrowing. In terms of government spending, in areas that may support the

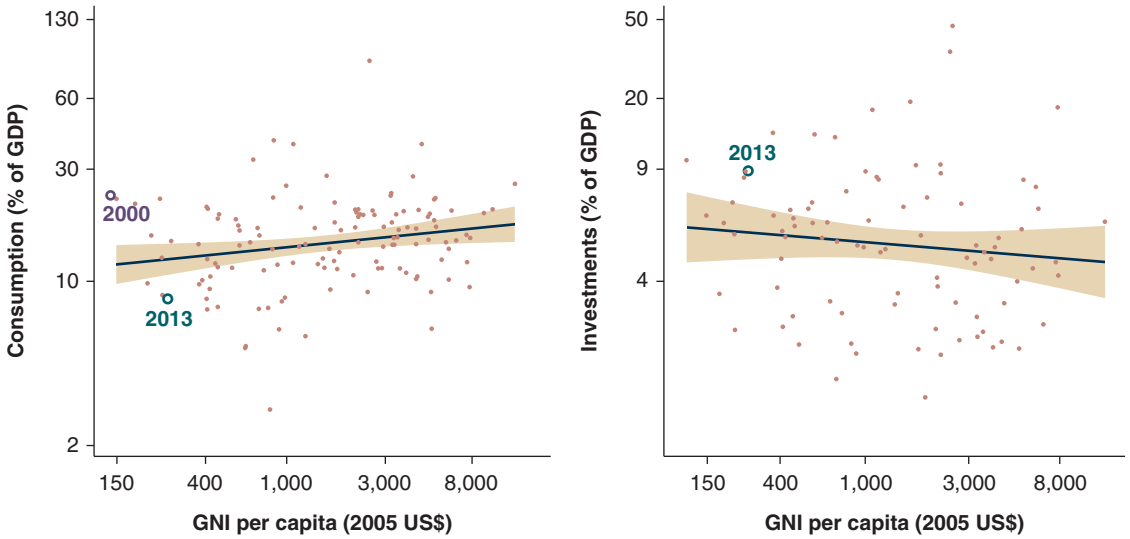
TABLE 2.2 Ethiopia—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	22.9	8.3	12.2	—
Investments (% of GDP)		12.2	7.0	—
Primary education (% of GDP)		3.0	1.9	—
Secondary education (% of GDP)		0.5	1.0	—
Primary education, per student (% of GDP per capita)		19.2	10.9	—
Secondary education, per student (% of GDP per capita)		10.4	20.8	—
Health (% of GDP)	2.3	1.9	2.3	—
Fuel subsidy (% of GDP)		1.4	3.6	—
Government receipts and debts				
Tax revenue *(%* of GDP)	10.9	9.2	11.7	—
Net ODA *(%* of GNI)	8.4	7.5	13.7	3.5
External debt (% of GNI)	68.6	26.8	27.7	—
Governance and government efficiency				
Government effectiveness: percentile rank	15.6	35.9	12.2	38.9
Public investment management index		1.6	1.3	—
Memorandum item				
GNI per capita (constant 2005 US$)	137	273		573

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

FIGURE 2.3 **Ethiopia—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting**

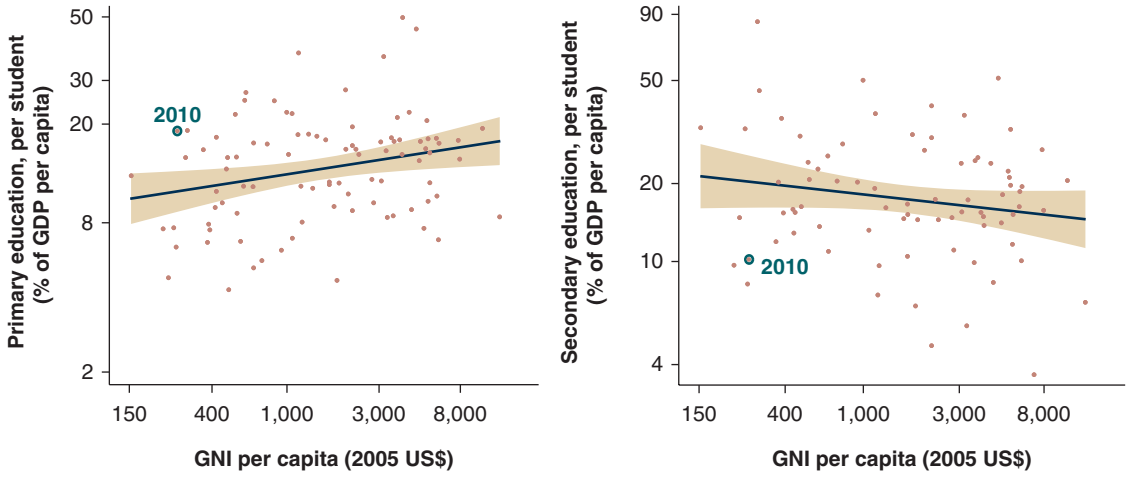
a. Government spending: consumption (left), investment (right)



ln(SDG) = 2.01*** + .09** ln(GNI pc); R^2 = .042

ln(SDG) = 2.34*** + –.07 ln(GNI pc); R^2 = .012

b. Government spending: primary education, per student (left), secondary education, per student (right)



ln(SDG) = 1.72*** + .12** ln(GNI pc); R^2 = .067

ln(SDG) = 3.51*** + –.09 ln(GNI pc); R^2 = .030

figure continues next page

FIGURE 2.3 *continued*

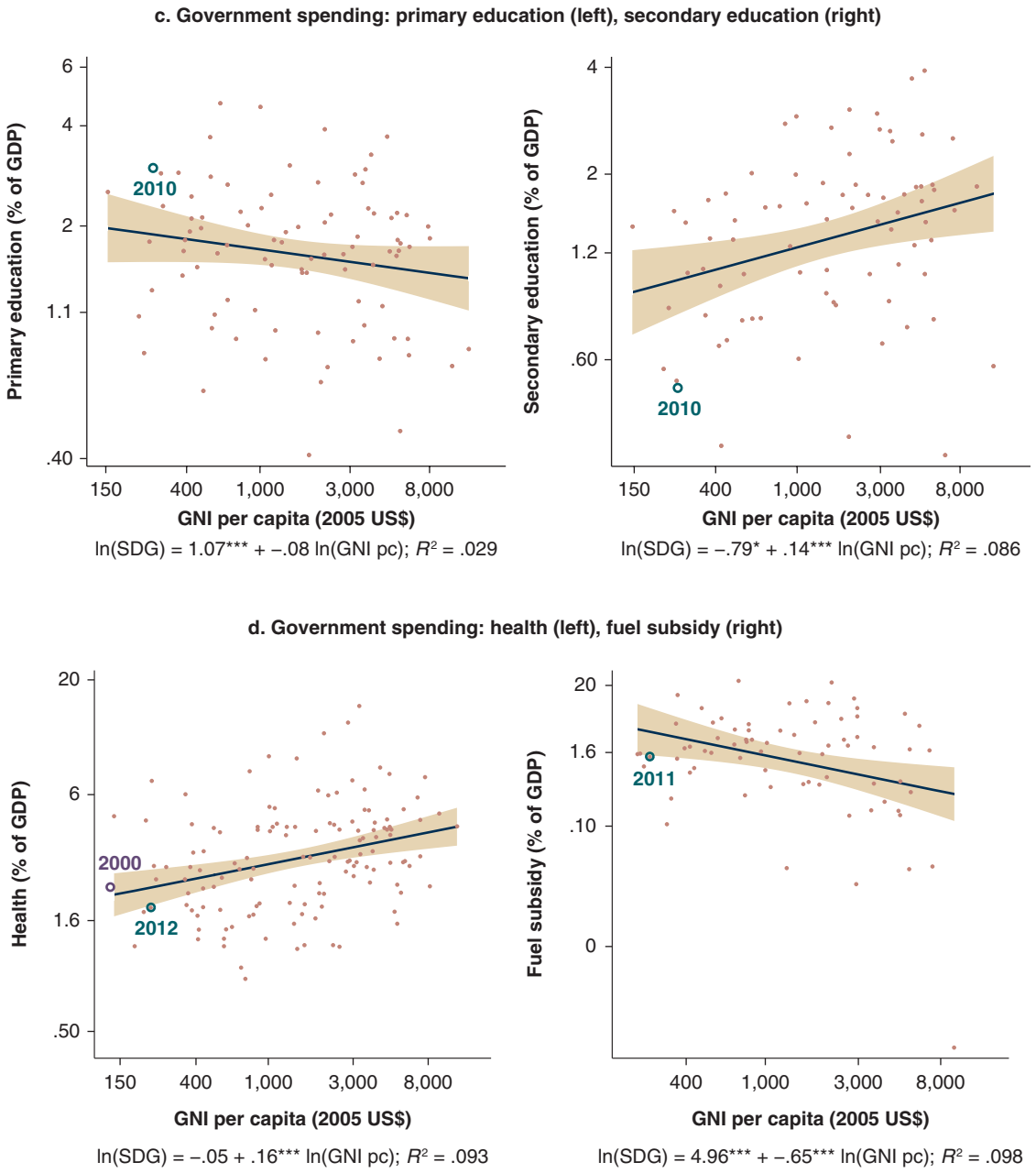
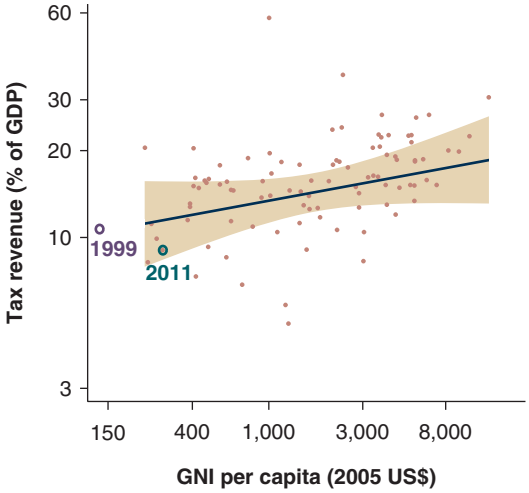


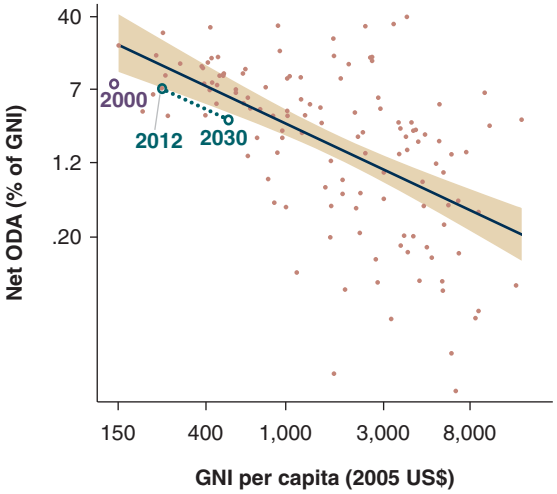
figure continues next page

FIGURE 2.3 *continued*

e. Tax revenue (left), official development aid (right)

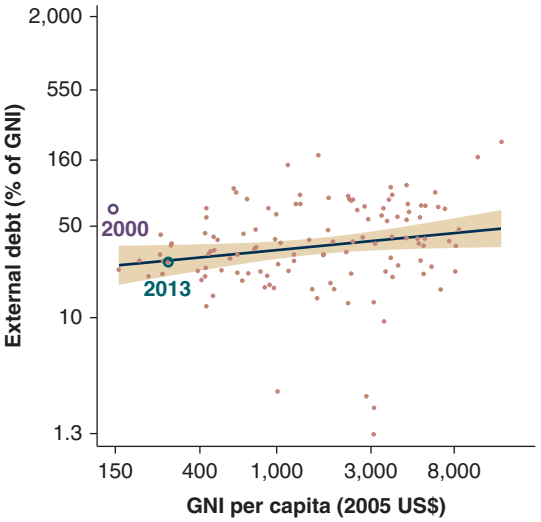


ln(SDG) = 1.75*** + .13 ln(GNI pc); R^2 = .027

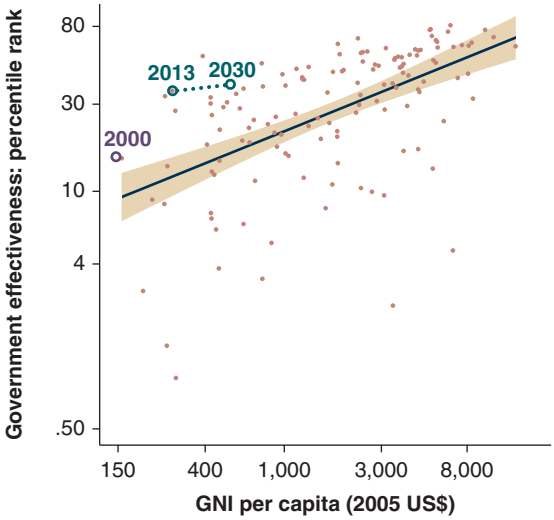


ln(SDG) = 8.26*** + −1.0*** ln(GNI pc); R^2 = .308

f. External debt (left), government effectiveness (right)



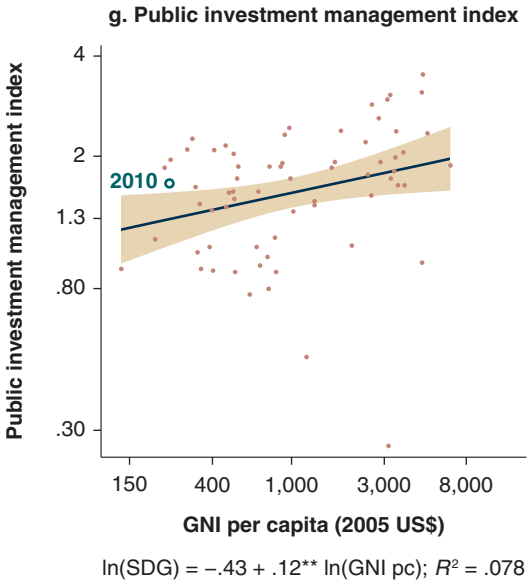
ln(SDG) = 2.52*** + .14** ln(GNI pc); R^2 = .035



ln(SDG) = −.01 + .44*** ln(GNI pc); R^2 = .300

figure continues next page

FIGURE 2.3 *continued*



Note: Highlighted observations are for Ethiopia at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

SDG agenda, government spending is below expected levels (compared to a typical country at the same GNI per capita level) for secondary education (as a share of GDP and per student) and health. Total government consumption is lower than expected (measured as a share of GDP) because the Government of Ethiopia is deliberately constraining consumption to finance public investment—a policy that has paid off in terms of high economic growth. For total investment and primary education (as a share of GDP and per student), the government spending is higher than expected.

Fuel subsidies are the most obvious case of low-priority spending from the post-2015 agenda perspective.[14] However, Ethiopia's spending on fuel subsidies was relatively low in 2011 (1.4 percent of GDP) and since then oil prices have decreased while the government has not fully passed on the decrease to consumers, suggesting that by now there is no effective subsidy or even a net tax on fuel. Public investment is currently double the expected level (12.2 percent of GDP in 2013 compared to the expected 7.1) reflecting its role as a pillar in the government's growth and transformation plan (Government of Ethiopia 2010, p. 1). One apparent consequence of the emphasis on public investment is the potential crowding out of private investment, for which the GDP share in Ethiopia averaged only 6.9 percent of GDP in 2011 (World Bank 2013d). Ultimately, whether adjustments are needed or not depends on the relative marginal returns in the form of social and economic progress from public investment.

Of the government receipts included in table 2.2, net Official Development Assistance (ODA) and tax revenues are as expected.[15] Note, however, that the confidence interval for "expected tax revenues" is very broad and Ethiopia is on the lower side at 9.2 percent of GDP. As further shown, cross-country patterns suggest that, as GNI per capita grows, net ODA tends to decline as percent of GDP (without changing significantly in per capita terms); in the case of Ethiopia this translates into a decrease from the current 7.5 percent of GNI to 3.5 percent in 2030. However, the fact that cross-country patterns point to a likely decline in ODA does not mean that an

increase is excluded: it depends on the priorities of donors and their relationships with Ethiopia's government.

The relationship between tax revenues and GNI per capita, as well as the debt stock and GNI per capita, is not tight enough for projections. However, World Bank and IMF documents stress the need for increased tax revenues as a share of GDP.[16] Higher taxes would reduce the resources controlled by domestic households and firms, pointing to the need to consider the combined impact on SDGs and other indicators from higher taxes and the spending increases that are financed by these taxes. According to the cross-country data, Ethiopia's external debt stock is at expected levels. To finance planned public investments, the government is already projected in the short to medium term to increase both the domestic and the external debt level, however, this with the risk of entering moderate debt distress.[17]

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Ethiopia's performance is stronger than expected according to both the World Bank Government Effectiveness indicator and the Public Investment Management Index (table 2.2). However, these are measures at an aggregated level, and the picture may look different when assessing specific sectors. For example, primary education spending is higher than expected while SDGs related to primary education are underperforming, suggesting that spending on primary education could be more efficient.

In sum, while ODA as a share of GDP may decrease as GNI per capita increases, Ethiopia should be in a position to expand fiscal space via some combination of higher tax revenues and efficiency improvements in targeted sectors. While there are discussions about increased foreign borrowing, further external borrowing on nonconcessional terms may risk debt sustainability. Decisions about the level and allocation of government spending should be made in light of government priorities and would depend on numerous factors that are well beyond the scope of this note, including government capacity in different areas and the scope to encourage complementary private sector activities. From the perspective of the SDG agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged.

4. Conclusions

As summarized in table 2.3, Ethiopia's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 7 of the selected SDG indicators; poverty, shared prosperity, gross pre-primary enrollment, ratio for female to male secondary enrollment, ratio for female to male secondary enrollment, under-5 mortality, and CO_2 emissions. However, for 4 indicators, including central education indicators such as primary completion and secondary enrollment, Ethiopia is underperforming. For the remaining 6 indicators, Ethiopia's current outcomes are as expected.

As also shown in table 2.3, for most of the indicators, the cross-country relationship with GNI per capita is relatively tight. Given this, by 2030, considerable improvements are projected for the SDG indicators; however, compared to global ambitions, the improvements fall short for most indicators due to a combination of low initial SDG levels and projected future growth rates that are lower than recent rates. To get closer to the realization of these ambitions, a break with such projections is needed. Accelerated growth would raise the capacity to accelerate SDG progress. However, for some of the SDG indicators, growth since 2000 has not been accompanied by equally strong progress, as indicated by the development of Ethiopia's country rankings. This may in part be due to

TABLE 2.3 Ethiopia—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Poverty (×) • Gross pre-primary enrollment (+) • Ratio of female to male secondary enrollment (+) • Under-5 mortality (+) • CO_2 emissions (×)	• Maternal mortality (+) • Malaria (–) • Access to electricity (×) • Access to improved sanitation (+) • Road density (+)	• Primary completion (×) • Gross secondary enrollment (–) • Access to improved water source (×) • Internet users (×)
Loose	• Shared prosperity (–) • Ratio of female to male primary completion (+)	• HIV prevalence (+)	

Note: (+) = larger country rank improvement 2000–12 than for GNI per capita; (–) = smaller country rank improvement (or deterioration) 2000–12 than for GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita (+/– 2 percentile points).

lags in translating higher incomes to stronger SDG performance. However, it may also suggest that, with improved policies, available resources could be employed more efficiently to improve SDG performance.

For three of the indicators in table 2.3, the link to GNI per capita is weak, suggesting that growth matters less and that the role for policies that directly or indirectly influence these indicators is particularly important. This is most emphatically the case for shared prosperity, which, on balance, has a weak tendency to suffer as per capita incomes increase, but also for secondary completion, for which the ranking has deteriorated since 2000.

While ODA as a share of GDP may decrease as GNI per capita increases, Ethiopia should be in a position to expand fiscal space via some combination of higher tax revenues and efficiency improvements. Moreover, the country should continue its search for the balance between the government and the private sector, which in virtually all countries plays the role as the leading sector in the production sphere.

Annex 2A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	For Ethiopia, this indicator was defined on the basis of WDI data for GNI per capita in 2005, and for other years calculated, applying GDP per capita real growth.
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20 + SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	2012 data for Ethiopia from MoE Ethiopia (2013).
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	2011 data for Ethiopia from MDG Data Dashboards, World Bank.
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	2012 data for Ethiopia from MoE Ethiopia (2013).
Secondary completion (% gross)	EdStats. API ref: DHS: secondary completion rate [HH.DHS.SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS/SE.PRM.CMPT.MA.ZS*100]	2012 data for Ethiopia from Mo (ESAA).
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	2012 data for Ethiopia from MoE Ethiopia (2013).
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH.STA.MALR/SP.POP.TOTL*100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	2013 data for Ethiopia from World Bank (2014b).
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	

annex continues next page

Indicator	Source	Comment
Secondary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary nontertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pre*-tax subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStats = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. For a discussion of issues related to the role of the public and private sectors in Ethiopia, see World Bank (2013d, pp. 11–19). In 2013, public and private investment were at 12.2 and 20.8 percent of GDP, respectively; however, the average for 2004–13 was 14.7 percent for public investments and 13.4 percent for private investments (World Bank 2014b, p. 53).
2. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
3. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
4. Sources for the indicators are presented in the table in the annex 2A. Note that data for GNI per capita in 2005 US$ is not available for Ethiopia in WDI for years other than 2005; the other years are calculated on the basis of its 2005 value and growth in GDP per capita (2005 US$).
5. Projections for Ethiopia are based on real GDP per capita growth projections by the World Bank

country team. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$).

6. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
7. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 > 0.1$ are defined as loose.
8. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for the specific country. The same observation applies to expected values for fiscal space indicators.
9. In this note, "shared prosperity" is measured as the income share of the poorest 40 percent of the population.
10. With regard to CO_2, Ethiopia's current and project 2030 per capita emissions are 0.7 and 3.7 percent of the current OECD average. Note that Ethiopia is overperforming for CO_2 emissions (emitting below expected levels) both when emissions are measured as a share of GDP and per capita.
11. The ranking is based on data from 2000 and 2012/2013, or the closest year with data (but only if data no later than 1998 for "2000" or 2009 for "recent" exist).
12. There are also cases where the solution to the low level of SDG is neither private nor public spending but more efficient policies.
13. The treatment is the same as in table 2.1 and related figures. That is, in table 2.2, projections are only shown when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
14. Fuel subsidies are detrimental to the climate and encourage technologies that create less employment for the growing labor force.
15. Net ODA is measured as a share of GNI, but net ODA per capita was also as expected. Total government revenues (excluding grants) was somewhat lower than expected, suggesting that nontax revenues are low in Ethiopia.
16. IMF (2014d, p. 30) projects tax revenues to increase from 12.5 percent of GDP in 2012/13 to 13.6 percent in 2018/19. World Bank (2013d, p. 18) is also stressing the importance of improved tax revenues to cover the anticipated public investments.
17. The current government strategy—the "Growth and Transformation Plan" (GTP)—envisages a significant part of investment to be undertaken by public enterprises with average annual borrowing over the five-year period of some 15 percent of GDP, of which some two-thirds is to be borrowed externally (IMF 2014d, p. 12; Government of Ethiopia 2010). IMF (2014d, p. 30) projects the external debt to increase from 20.5 percent of GDP in 2012/13 to 27.7 percent in 2018/19, which together with the increased domestic debt results in an increase of total public debt from 37.4 to 56.0 percent of GDP. This is in line with the DSA (IMF 2014d, annex), which indicates that Ethiopia's overall public sector debt dynamics is sustainable under the baseline scenario but vulnerable to several alternative scenarios. See also World Bank (2014b, p. 5).

Chapter 3

Jamaica

1. Introduction

Jamaica, an upper middle-income island country in the Caribbean, has been stuck in a negative spiral of low growth, high unemployment, high government debt, and uncertain fiscal finances (IMF 2014a, p. 1). During 2001–12, Jamaica's annual average growth in GDP per capita (at constant 2005 US$) was zero (0.014 percent). During the same period, despite a slight improvement in the index score, Jamaica's ranking according to the UNDP Human Development Index (among countries included both in 2000 and 2012) deteriorated, from the 54th to the 50th percentile. In an attempt to break with the past, in 2013 the authorities embarked on an ambitious reform program.

This country-at-a-glance note, which is based on cross-country data and hence provides a cross-country perspective, is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Jamaica, serving as the starting point for a more complete country development diagnostic as well as a more comprehensive country-focused analysis.[1] The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes Jamaica's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The cross-country perspective is manifested in that, for the different indicators, Jamaica's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita. The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[2]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 3.1 summarizes data for Jamaica: historical evolution, actual and expected values for a recent year, and projected 2030 values.[3] In figure 3.1, data for Jamaica are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Jamaica, the projected average annual rate of GNI per capita growth is 1.1 percent.[4] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[5] Projections for SDG indicators are presented only when the cross-country relationship between the indicator and GNI per capita is classified as tight.[6] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this the "expected" values for a

recent year are close to the average for all low- and middle-income countries.[7]

In sum, Jamaica's current outcomes are better than expected (compared to a typical country at its level of GNI per capita) for 4 of the 16 indicators with data[8]: pre-primary enrollment, under-5 mortality, malaria cases,[9] road density,[10] and as expected for 7: secondary completion, ratio of female to male secondary enrollment,[11] access to improved water source, access to improved sanitation, access to electricity, Internet users, and CO_2 emissions.[12] However, Jamaica is doing less well than expected for 5 indicators: primary completion, secondary enrollment, ratio of female to male primary completion, maternal mortality, and HIV prevalence. While underperformance for an indicator may be

TABLE 3.1 Jamaica—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Education					
Pre-primary enrollment (% gross)	83.4	91.6	53.6	92.7	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)	87.9	73.4	94.6	86.1	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	86.7	77.8	84.2	84.9	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary completion (% gross)		54.9	48.9	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	105.7	96.3	99.7	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	102.1	103.8	102.6	105.3	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	23.7	16.6	19.4	14.8	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	88.0	80.0	51.9	67.4	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	0.000	0.001	0.007	0.000	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	2.5	1.8	0.5	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	79.8	80.2	76.9	86.7	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

table continues next page

TABLE 3.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Access to improved water source (% of population)	93.4	93.1	91.7	95.2	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)	190.7	201.3	138.5	221.3	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	86.7	92.0	82.3	96.0	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	3.1	37.8	33.6	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	4.0	2.7	2.6	3.4	Integrate climate change measures into national policies, strategies, and planning.
Memorandum item					
GNI per capita (constant 2005 US$)	3,782	3,788	—	4,655	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used, however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 3.1 **Jamaica—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

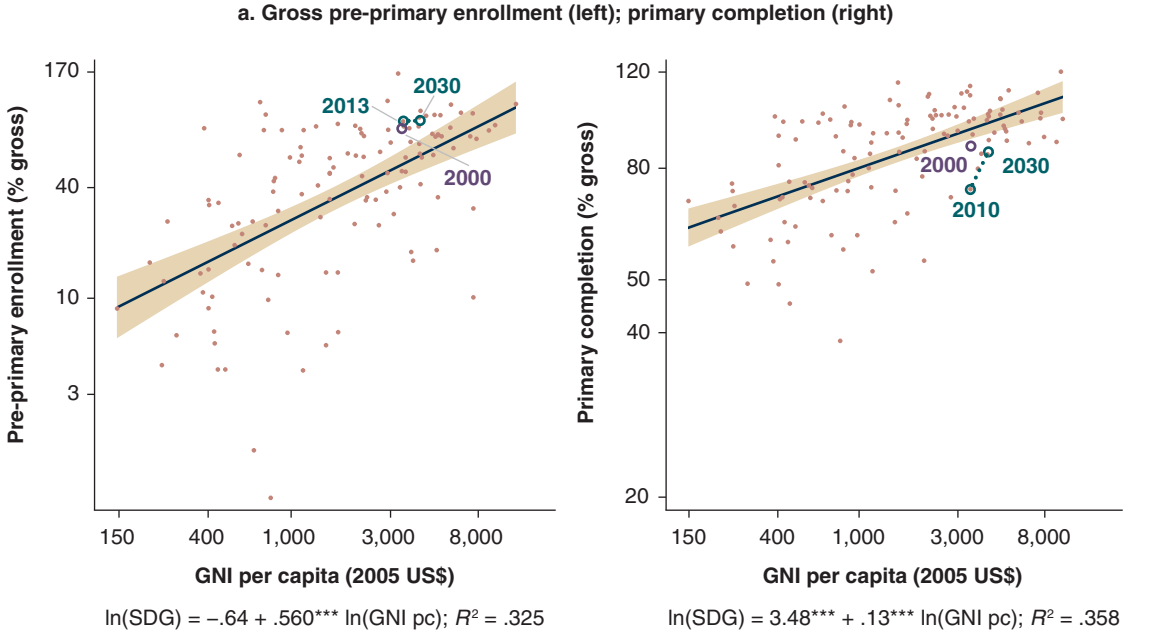
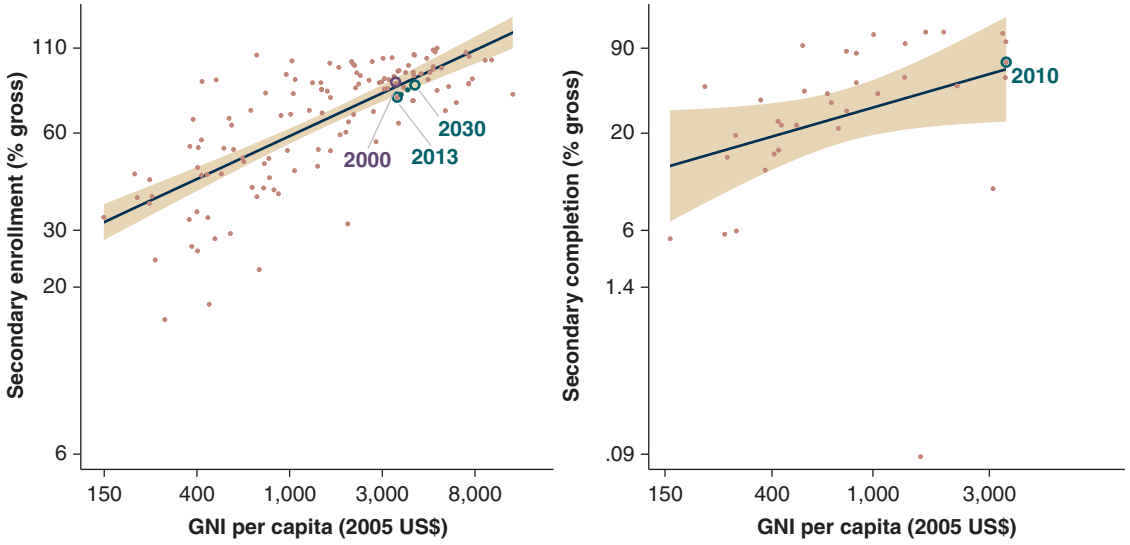


figure continues next page

FIGURE 3.1 *continued*

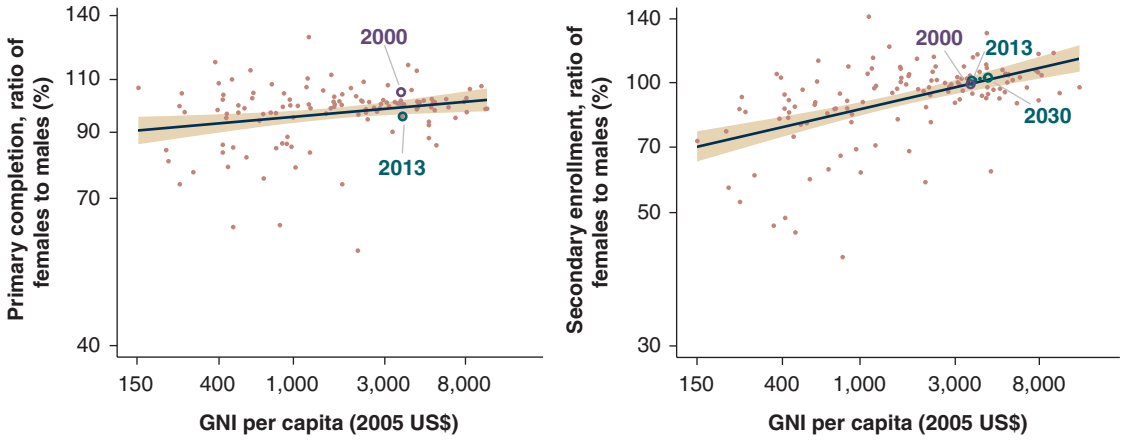
b. Gross secondary enrollment (left); secondary completion (right)



ln(SDG) = 1.94*** + .3*** ln(GNI pc); R^2 = .540

ln(SDG) = –.24 + .5* ln(GNI pc); R^2 = .109

c. Ratio of female to male primary completion (left); ratio of female to male secondary enrollment (right)



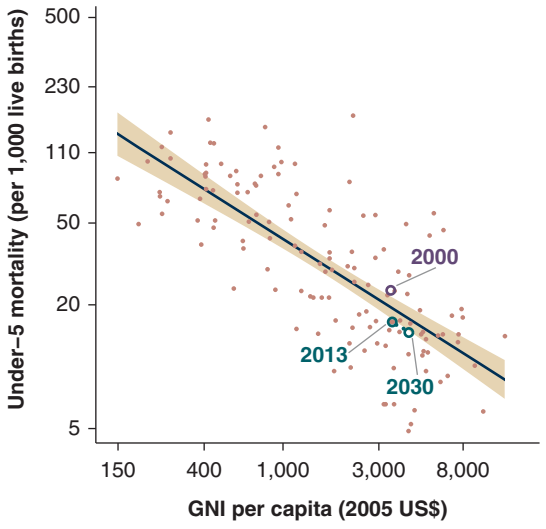
ln(SDG) = 4.37*** + .03*** ln(GNI pc); R^2 = .056

ln(SDG) = 3.88*** + .09*** ln(GNI pc); R^2 = .268

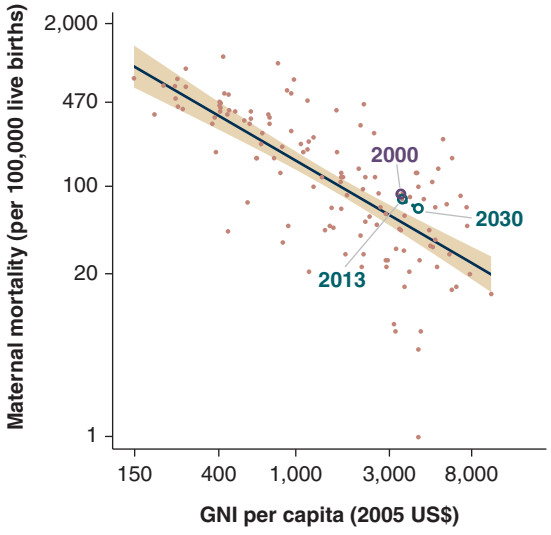
figure continues next page

FIGURE 3.1 *continued*

d. Under-5 mortality (left); maternal mortality (right)

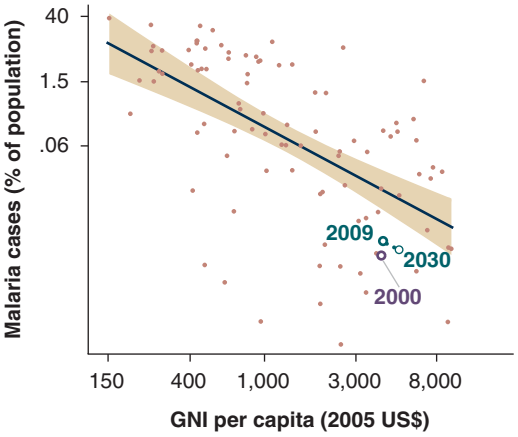


ln(SDG) = 7.98*** + –.61*** ln(GNI pc); R^2 = .559

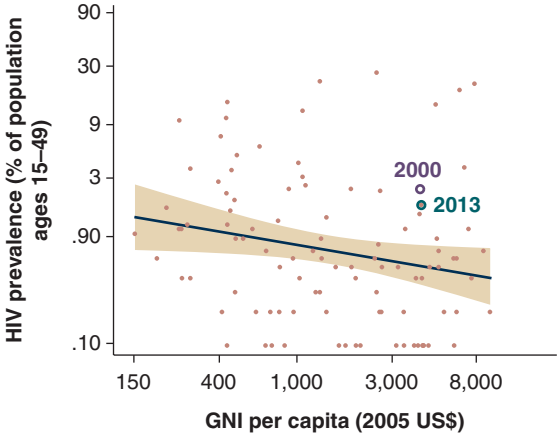


ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .518

e. Malaria cases (left); HIV prevalence (right)



ln(SDG) = 13.9*** + –2.2*** ln(GNI pc); R^2 = .341

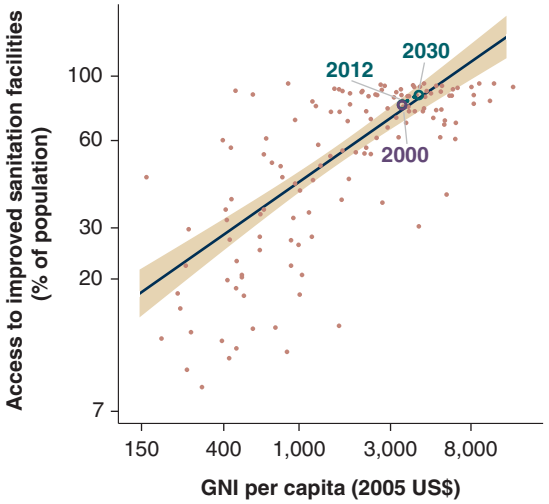


ln(SDG) = 1.88* + –.31** ln(GNI pc); R^2 = .044

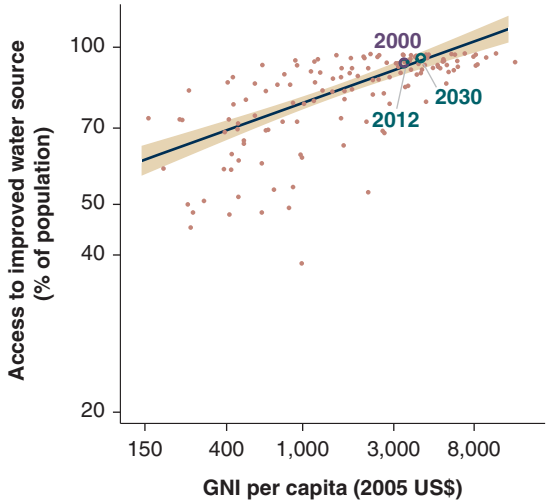
figure continues next page

FIGURE 3.1 *continued*

f. Access to improved sanitation (left); access to improved water source (right)

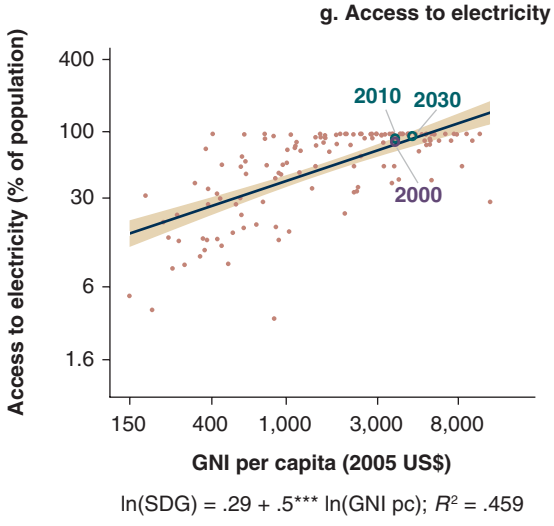


ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .534

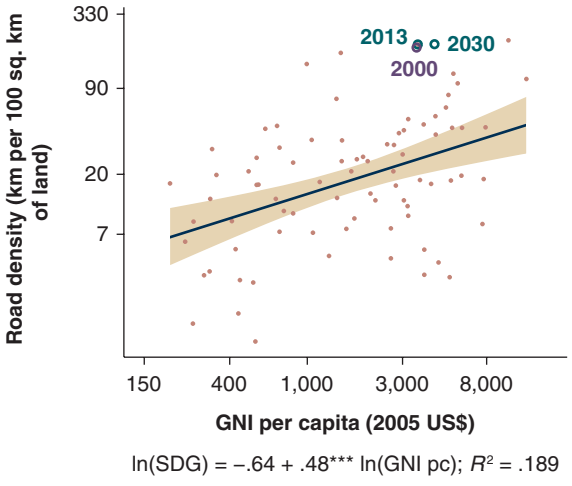


ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .435

g. Access to electricity (left); road density (right)



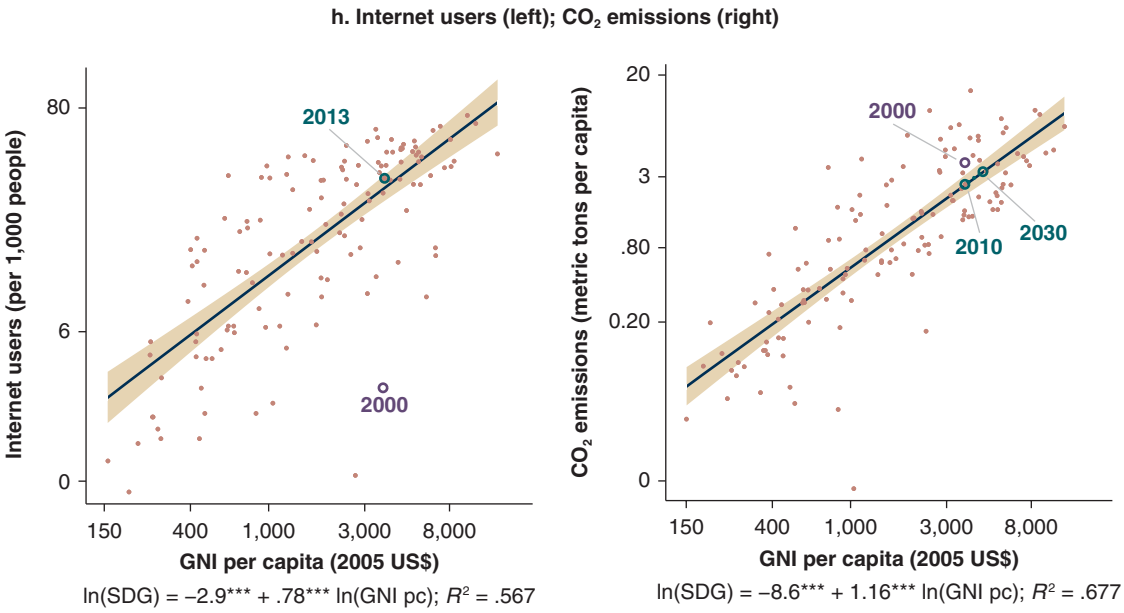
ln(SDG) = .29 + .5*** ln(GNI pc); R^2 = .459



ln(SDG) = –.64 + .48*** ln(GNI pc); R^2 = .189

figure continues next page

FIGURE 3.1 *continued*



Note: Highlighted observations are for Jamaica at different years, whereas the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

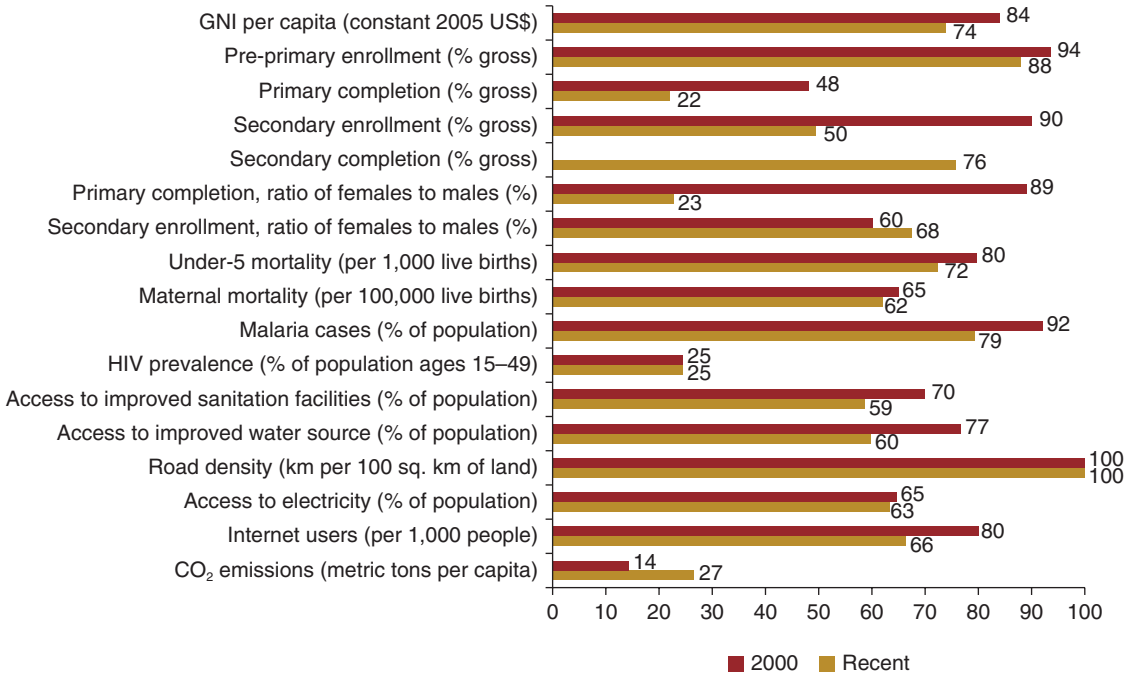
due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high; a possibility that calls for further analysis.

Figure 3.2 shows that, between 2000 and 2012, Jamaica saw its ranking among low- and middle-income countries deteriorate by as much as 10 percentile points for GNI per capita.[13] Only for 2 of the SDG indicators, the ratio of female to male secondary enrollment and CO_2 emissions, did its ranking improve, which in the case of CO_2 emissions was expected because of the inverse relationship to GNI per capita. In addition, 3 indicators more or less retained an unchanged ranking (HIV prevalence, road density, and access to electricity). For 2 indicators (pre-primary enrollment and maternal mortality) the deterioration in ranking was less than for GNI per capita, and for another 2 indicators (under-5 mortality and access to improved sanitation facilities), the deterioration in ranking was similar to GNI per capita. However, for the other 6 indicators (primary completion, secondary enrollment, ratio of female to male primary completion, malaria cases, access to improved water source, and Internet use) the deterioration in ranking was even worse than for GNI per capita.

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few insights emerge. For example, primary completion, secondary enrollment, and the ratio of female to male primary completion are lower than expected and falling in ranking among other countries at a rate faster than the GNI per capita ranking. On the other hand, maternal mortality and HIV prevalence, both of which are underperforming at the current GNI per capita level, are doing better than GNI per capita in terms of country ranking changes since 2000.

By 2030, limited improvements are projected for most indicators, not least due to slow income growth, and the ability to reach the post-2015 global goals is uneven (shown in the last column of table 3.1, and respective graphs in figure 3.1). Nevertheless, in part thanks to Jamaica's strong initial conditions compared to other developing countries, the indicators for the ratio of female to male secondary enrollment, maternal mortality, malaria cases, and access to electricity are all

FIGURE 3.2 Jamaica—Percentile Cross-Country Ranking for SDG Indicators since 2000



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2012 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used. However, the data are never older than 1998 for "2000" or 2009 for "recent." Country-specific data years can be found in the respective graphs.

projected to either realize or get close to realizing the post-2015 global ambition. However, for other SDGs, to get closer to the realization of these ambitions, a break with the past seems needed. Such a break would be facilitated by a combination of more rapid growth and improvements in policies that directly influence different SDGs. For indicators, which are quite unrelated to GNI per capita, progress will depend on country-specific policies, including those affecting links between income-generation in different sectors and the distribution of income across households.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require more efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure). With regard to Jamaica's fiscal space indicators, table 3.2 and figure 3.3 summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[14] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover three aspects of government activities: spending, receipts and debt, and governance and efficiency. While the findings of this country-at-a-glance note cannot guide policy on their own, they should be an input into discussions about policy making.

Room for additional priority spending may be created by reducing low-priority spending, increasing current receipts, and/or increasing borrowing. In terms of government spending in

TABLE 3.2 Jamaica—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	14.3	16.3	15.3	—
Investments (% of GDP)	5.0	2.8	5.8	—
Primary education (% of GDP)		2.3	1.6	—
Secondary education (% of GDP)		2.5	1.5	—
Primary education, per student (% of GDP per capita)		22.5	15.5	—
Secondary education, per student (% of GDP per capita)		29.4	17.0	—
Health (% of GDP)	2.9	3.4	3.5	—
Government receipts and debts				
Tax revenue *(%* of GDP)		23.9	16.1	—
Net ODA *(%* of GNI)	0.10	0.51	0.85	0.42
External debt (% of GNI)	54.4	100.6	40.2	—
Governance and government efficiency				
Government effectiveness: percentile rank	56.6	54.5	39.0	57.1
Grigoli education efficiency score		0.98	0.78	0.98
Grigoli health efficiency score		0.96	0.95	—
Public investment management index		1.72	1.80	—
Memorandum item				
GNI per capita (constant 2005 US$)	3,782	3,788	—	4,655

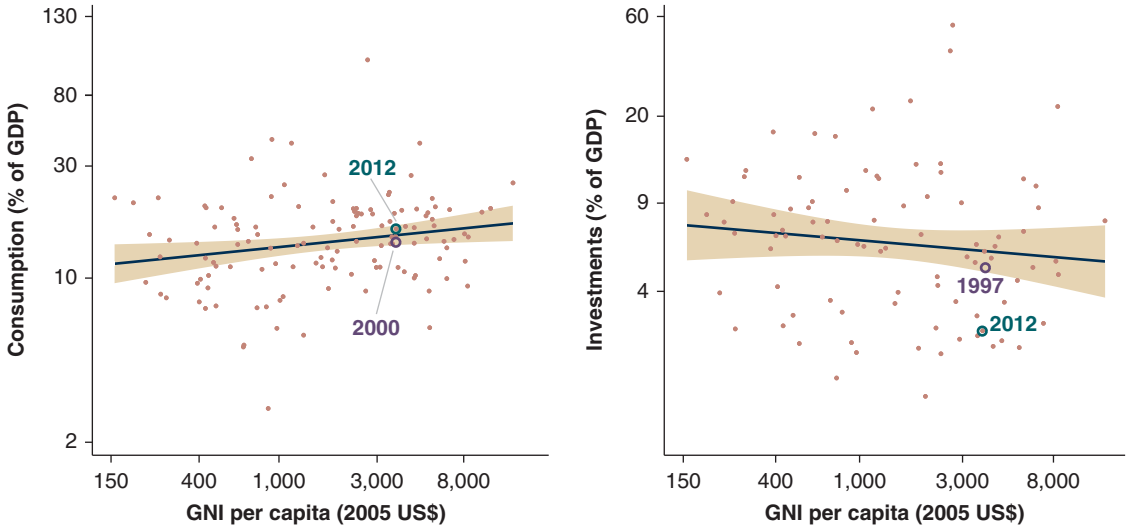
Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship was not tight enough (see criteria earlier in the note).

areas that may support the SDG agenda, Jamaica's values are as expected (compared to a typical country at the same GNI per capita level) for total consumption and spending on health, while public investment is lower than expected. Government spending on education is higher than expected for both the primary and the secondary levels. Note that, for both education levels, spending is measured in two ways: total as share of GDP and per student as share of GDP per capita; for all of the four indicators that are generated, spending is higher than expected. From the perspective of the post-2015 agenda, cuts in fuel subsidies are a top priority source of fiscal space[15]; however, for Jamaica, this is not relevant given negligible—if any—subsidies and a recent introduction of a gasoline tax.[16]

Among current receipts, net Official Development Aid (ODA) is lower than expected, while tax revenues are higher than expected. The cross-country pattern suggests that net ODA will decline as a percent of GDP (without changing significantly in per capita terms); in the case of Jamaica, this translates into a minor decrease (from 0.51 to 0.42 percent of GNI). The relationship between tax revenues and GNI per capita and GNI per capita is not tight enough to project expected changes; the fact that Jamaica's tax revenues are higher than expected suggests that the scope for future tax increases is limited.[17] Finally, borrowing is an unlikely source of additional fiscal space as the government intends to drastically reduce its total (external and domestic) debt as a share of GDP (IMF 2014a, pp. 16 and 28). The fact that Jamaica's external public debt stock is much higher than expected suggests that severe limits on borrowing may be warranted.[18]

FIGURE 3.3 **Jamaica—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting**

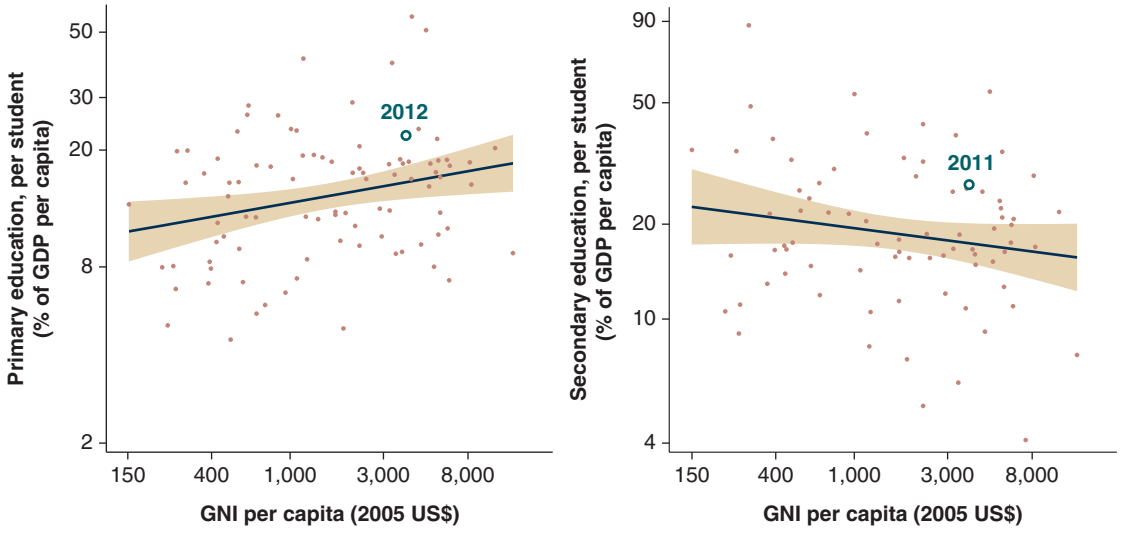
a. Government spending: consumption (left); investment (right)



ln(SDG) = 2.01*** + .09** ln(GNI pc); R^2 = .042

ln(SDG) = 2.37*** + –.07 ln(GNI pc); R^2 = .013

b. Government spending: primary education, per student (left); secondary education, per student (right)



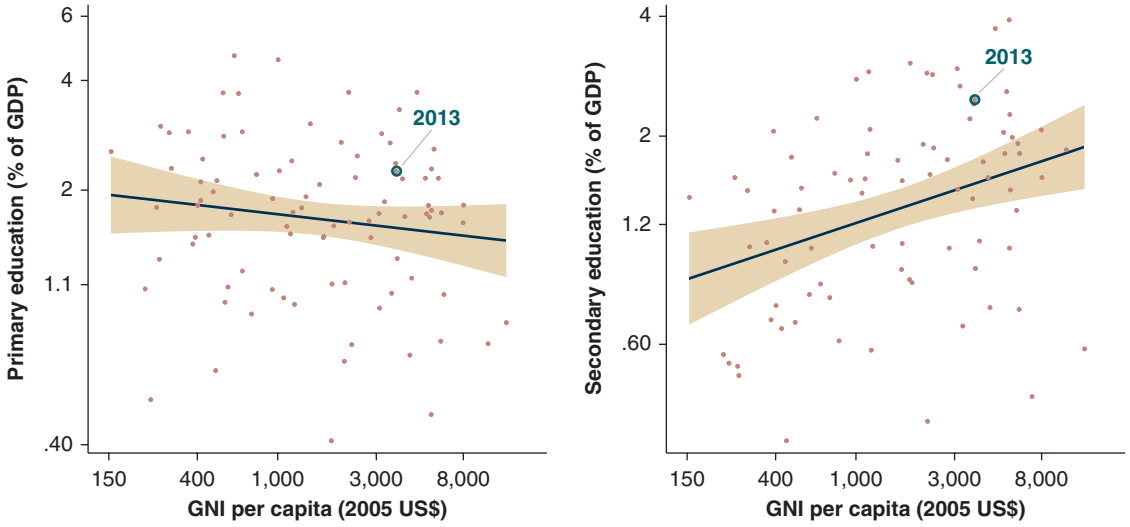
ln(SDG) = 1.72*** + .12*** ln(GNI pc); R^2 = .067

ln(SDG) = 3.51*** + –.09*** ln(GNI pc); R^2 = .030

figure continues next page

FIGURE 3.3 *continued*

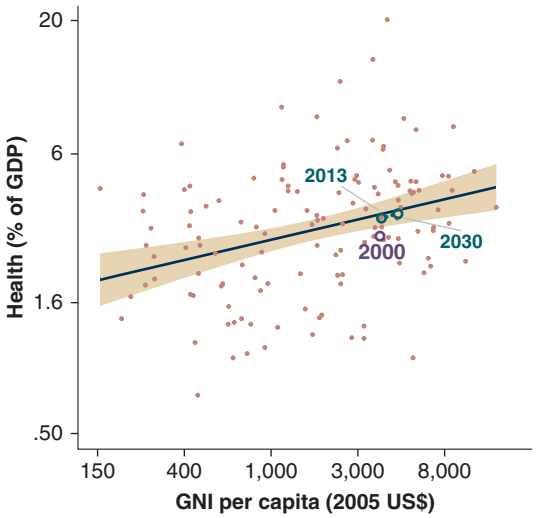
c. Government spending: primary education (left); secondary education (right)



ln(SDG) = .99*** + –.06 ln(GNI pc); R^2 = .019

ln(SDG) = –.98** + .17*** ln(GNI pc); R^2 = .118

d. Government spending: health

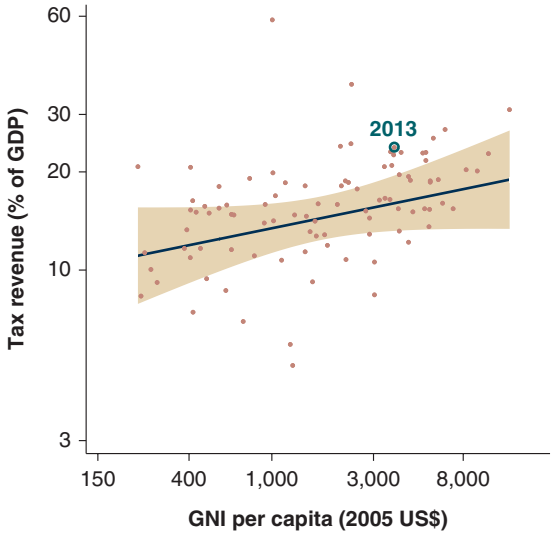


ln(SDG) = .25 + .18*** ln(GNI pc); R^2 = .111

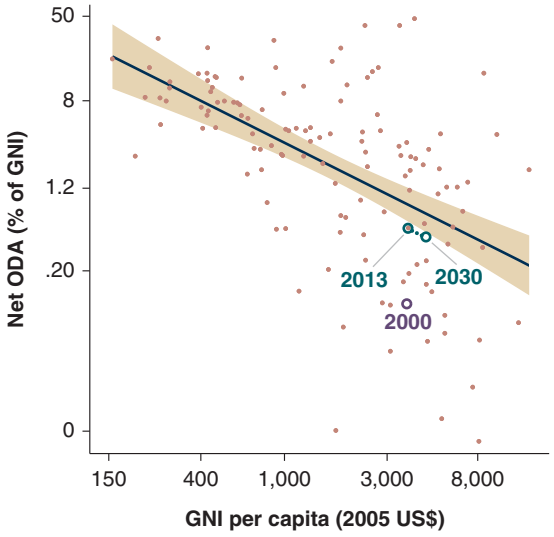
figure continues next page

FIGURE 3.3 *continued*

e. Tax revenue (left); official development aid (right)

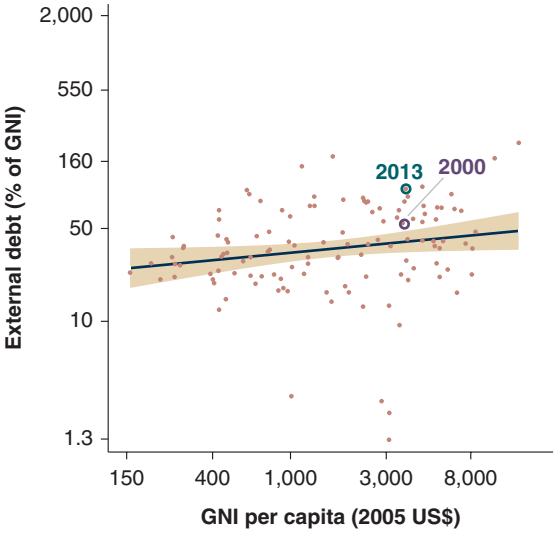


ln(SDG) = 1.69*** + .13* ln(GNI pc); R^2 = .030

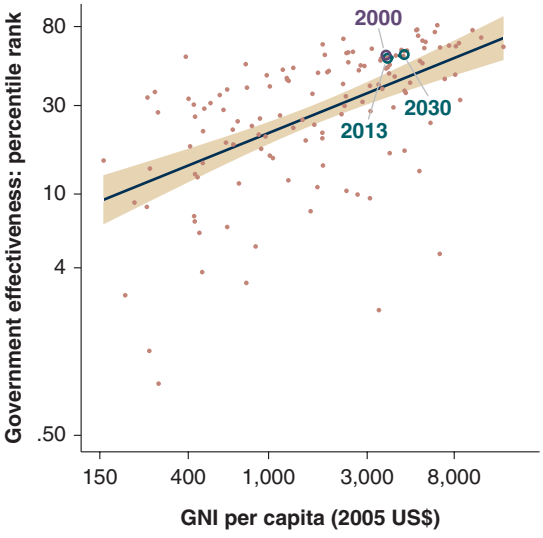


ln(SDG) = 8.10*** + −1*** ln(GNI pc); R^2 = .298

f. External debt (left); government effectiveness (right)



ln(SDG) = 2.52*** + .14** ln(GNI pc); R^2 = .035

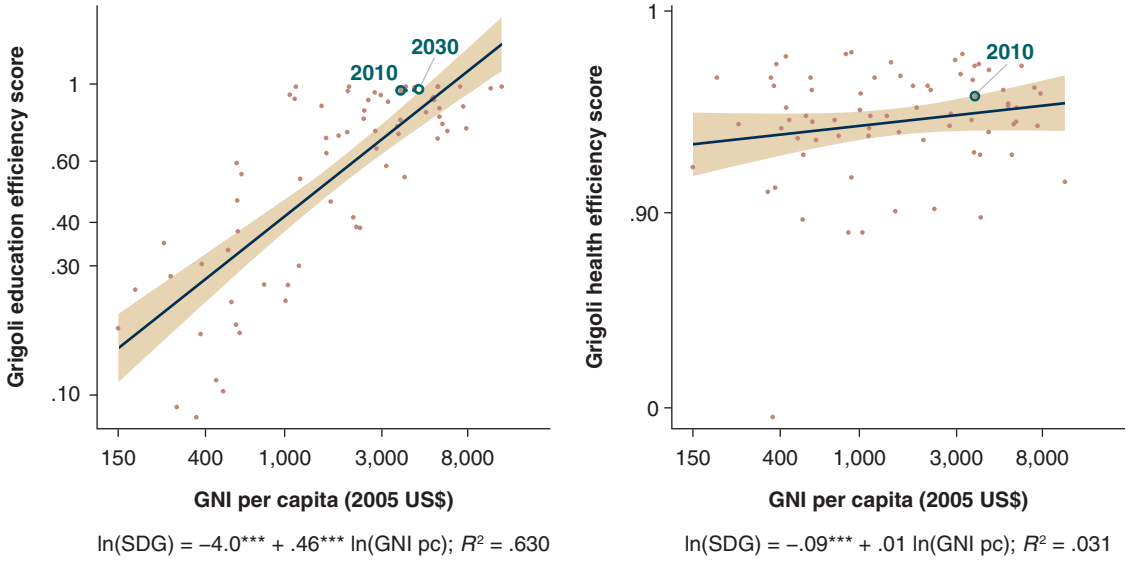


ln(SDG) = 0 + .44*** ln(GNI pc); R^2 = .300

figure continues next page

FIGURE 3.3 *continued*

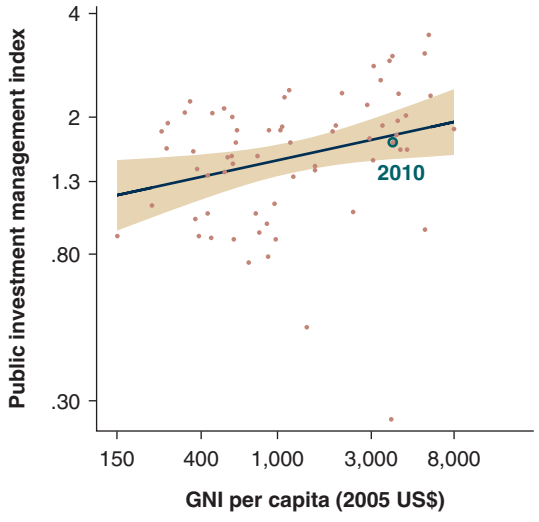
g. Health expenditure efficiency (right); health expenditure efficiency (left)



ln(SDG) = –4.0*** + .46*** ln(GNI pc); R^2 = .630

ln(SDG) = –.09*** + .01 ln(GNI pc); R^2 = .031

h. Public investment management index



ln(SDG) = –.43 + .12** ln(GNI pc); R^2 = .079

Note: Highlighted observations are for Jamaica at different years, while the nonhighlighted country observations are the most recent observation for other low and middle-income countries.

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Table 3.2 displays data for some measures of government efficiency. According to the measures at a more aggregated efficiency level; Jamaica is performing better than expected in terms of the World Bank Government Effectiveness indicator and as expected for the Public Investment Management Index. Education spending efficiency is higher than expected according to the sector specific index, and health spending efficiency is as expected. That is, according to these indicators, government efficiency appears to be better than or as expected given Jamaica's GNI per capita, an observation that does not negate that considerable efficiency gains still may be feasible in different areas.

In sum, our cross-country results indicate that government spending in terms of overall consumption and investment is at or below expected levels. Among the receipts, a comparison of Jamaican data to cross-country patterns does not single out any of the categories for which we have data (taxes, ODA, or borrowing) as being easily tapped for additional fiscal space. Jamaica's high debt burden (total public debt to GDP ratio was estimated at 137 percent at end-March 2015) and the need to maintain a high primary surplus (about 7 percent annually) to achieve medium-term debt sustainability suggest that increased fiscal means for SDG related expenditures would be difficult to find in the absence of higher growth. Any suggestions about fiscal policy adjustments would require additional country-specific information that, from the perspective of the SDG agenda, would permit assessments of the benefits and the costs of feasible changes in the level and allocation of spending and taxation and/or point to areas for efficiency improvements. Such adjustments should be part of a broader strategy for sustainable growth, poverty reduction, and shared prosperity, among other factors considering Jamaica's sectoral production and trade structure, including the importance of tourism and net private transfers (primarily remittances from Jamaica's population abroad)—in 2011/12, tourism amounted to 13.9 percent of GDP (IMF 2014a, p. 32) and remittances to 15.0 percent of GDP in 2013 (World Bank data). Given the important and very direct contribution of the remittances to the living standards of many Jamaicans, policy steps, fiscal and other, that encourage even higher remittances should be a high priority, including the identification of means of channeling them to income-raising investments.

4. Conclusions

As summarized in table 3.3, Jamaica's current outcomes are better than expected (compared to a typical country at the same GNI per capita level)

TABLE 3.3 Jamaica—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Pre-primary school enrollment (+) • Under-5 mortality (×) • Malaria (–) • Road density (+)	• Secondary completion • Ratio of female to male secondary enrollment (+) • Access to improved water source (–) • Access to improved sanitation (×) • Access to electricity (+) • CO_2 emissions (+) • Internet users (–)	• Primary completion (–) • Gross secondary enrollment (–) • Maternal mortality (+)
Loose			• Ratio of female to male primary completion (–) • HIV prevalence (+)

Note: (+) = country rank increase, 2000–12, or smaller deterioration than for GNI per capita; (–) = larger deterioration in country rank 2000–12 compared to GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita (+/– 2 percentile points).

for 4 of the selected SDG indicators, as expected for another 7, and worse than expected for 5, including primary completion, secondary enrollment, ratio of female to male primary completion, maternal mortality, and HIV prevalence. Projections for 2030 show mixed results, where some indicators are expected to achieve or get close to realizing the post-2015 global ambitions, while for others a break with the past seems needed.

Table 3.3 further shows that, for most indicators, the relationship to GNI per capita is tight, suggesting that accelerated improvements in these SDGs will likely follow from accelerated GNI per capita growth and the related increases in resources and capabilities. However, among this group of indicators, primary completion and secondary enrollment are currently underperforming relative to expectations and have deteriorated more than GNI per capita since 2000. For these indicators, it seems particularly important for the government to identify inefficiencies in the translation of resources to outcomes that may be addressed with policy adjustments. Moreover, among the SDGs, some are only loosely related to GNI per capita; this group includes ratio of female to male primary completion and HIV prevalence. This loose relationship suggests that these indicators should not be expected to improve strongly or systematically to more rapid growth in GNI per capita but rather would require targeted policy interventions.

With regard to fiscal space, our cross-country perspective does not suggest that changes in any specific areas are obvious priorities since spending is at or below the expected levels, efficiency is roughly as expected and the room to increase revenues is limited. Given this, increased support to SDG related expenditures will be difficult in the absence of increased economic growth, and policy directions for a future SDG agenda would have to be guided by more detailed country-specific information.

Annex 3A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	WDI data for GNI per capita in 2005, and for other years calculated, applying GDP per capita real growth.
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	No data beyond 2004 for Jamaica.
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	No data beyond 2004 for Jamaica.
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStat. API ref: DHS: secondary completion rate [HH.DHS.SCR]	For Jamaica, data from the World Bank country team.
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS/SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	

annex continues next page

Indicator	Source	Comment
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH.STA.MALR/SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet Users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	IMF (2014a). "Capital expenditures"
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	For Jamaica, data from IMF (2015a).
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	

annex continues next page

Indicator	Source	Comment
Government Effectiveness: Percentile Rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank. API ref = reference and code when using the World Bank Open Data. EdStat = Education statistics, World Bank. HNP = Health Nutrition and Population statistics, World Bank. WGI = Worldwide Governance Indicators, World Bank.

Notes

1. While a cross-country perspective is an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
2. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
3. Sources for the indicators are presented in the table in the annex 3A. Note that data for GNI per capita in 2005 US$ are not available for Jamaica in WDI for years other than 2005; the other years are calculated on the basis of its 2005 value and growth in GDP per capita (2005 US$).
4. Projections from CEPII are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.
5. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values as the maximum or minimum feasible value is approached. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
6. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ are defined as loose.
7. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for the specific country. The same observation applies to expected values for fiscal space indicators.
8. Unfortunately there is no Jamaica-specific data for cross-country comparison for poverty or shared prosperity beyond 2004.
9. Close to nonexistent in Jamaica.
10. However, note that the population density in Jamaica is much higher than average.
11. In the case of Jamaica, the ratio between female and male gross secondary enrollment rates points to a problem of gender imbalance that is the opposite of what typically is encountered in developing countries (especially at the lower end of the income spectrum): the boys are falling behind the girls.
12. With regard to CO_2, Jamaica's current and projected 2030 per capita emissions are 26.7 and 35.6 percent of the current OECD average.

13. If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "2013." The year for Jamaica-specific data is reported in the graphs.
14. The treatment is the same as in table 3.1 and related figures. That is, in table 3.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
15. Fuel subsidies are detrimental to the climate and encourage technologies that create less employment for the growing labor force.
16. Fuel subsidies, *including the cost from external effects* when use of fossil fuels, amounted to merely 0.7 percent of GDP in 2011 (IMF 2013a).
17. IMF projects a marginal increase of tax revenues from 24.0 in 2012/13 to 24.2 percentage of GDP in 2019/20 driven by an increase in the tax base; tax rates are projected to decrease (IMF 2014a, p. 28).
18. According to the IMF (2014a, pp. 16 and 28), the government has recently identified and implemented policies that are consistent with its objective of a reduction of its total public debt (direct and guaranteed) from 147 percent of GDP in 2013 to 99 percent in 2020. As part of these policies, the public external debt is projected to decrease from 63.5 percent of GDP in 2013 to 54.0 in 2020 (IMF 2014a, p. 50).

Chapter 4

The Kyrgyz Republic

1. Introduction

The Kyrgyz Republic, a land-locked and mountainous lower middle-income country in Central Asia, gained independence from the Russian Federation in 1991 and has since struggled with political and economic stability, not least resulting from broken trade relations with Russia. After becoming a parliamentary democracy in 2010 a number of economic reforms have been implemented, but the political situation remains fragile. The Kyrgyz economy is the most open in the region, with strong reliance on gold exports and remittances for its foreign exchange earnings. During 2001–12, the Kyrgyz Republic's annual average growth rate for GNI per capita (at constant 2005 US$) was 3.1 percent, which may be compared to a developing (low- and middle-income) country average of 3.0 percent. During the same period, despite a slight improvement in the index score, the Kyrgyz Republic's ranking according to the UNDP Human Development Index (among countries included both in 2000 and in 2012) deteriorated, from the 37th to the 32nd percentile.

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for the Kyrgyz Republic, serving as the starting point for a more complete country development diagnostic as well as a more comprehensive country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes the Kyrgyz Republic's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, the Kyrgyz Republic's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[1] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[2]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 4.1 summarizes data for the Kyrgyz Republic: historical evolution, actual and expected values for a recent year, and projected 2030 values.[3] In figure 4.1, data for the Philippines is shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For the Kyrgyz Republic, the projected average annual rate of GNI per capita growth is 5.1 percent.[4] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[5] Projections of the SDG indicators are presented only when the cross-country relationship between the indicator

TABLE 4.1 The Kyrgyz Republic—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	36.8	5.1	25.7	1.5	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: Income share for lowest 40%	21.4	19.9	17.1	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)	9.8	24.7	18.0	35.7	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)	93.4	97.7	72.7	98.5	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	84.3	88.2	46.0	91.3	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary completion (% gross)		72.0	18.8	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	98.7	99.4	93.2	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	102.9	99.6	84.4	102.6	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	49.2	24.2	59.8	14.5	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	100	75	273	35	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
HIV prevalence (% of population ages 15–49)	0.1	0.2	0.9	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	91.5	91.8	32.4	93.8	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	78.7	87.6	71.7	91.4	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)	9.3	17.2	11.2	—	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	100.0	99.0	32.8	99.3	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	1.0	23.4	8.0	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

table continues next page

TABLE 4.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Environment					
CO_2 emissions (metric tons per capita)	0.9	1.2	0.3	1.7	Integrate climate change measures into national policies, strategies, and planning.
Memorandum item					
GNI per capita (constant 2005 US$	392	563		1,402	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used. However, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 4.1 **The Kyrgyz Republic—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

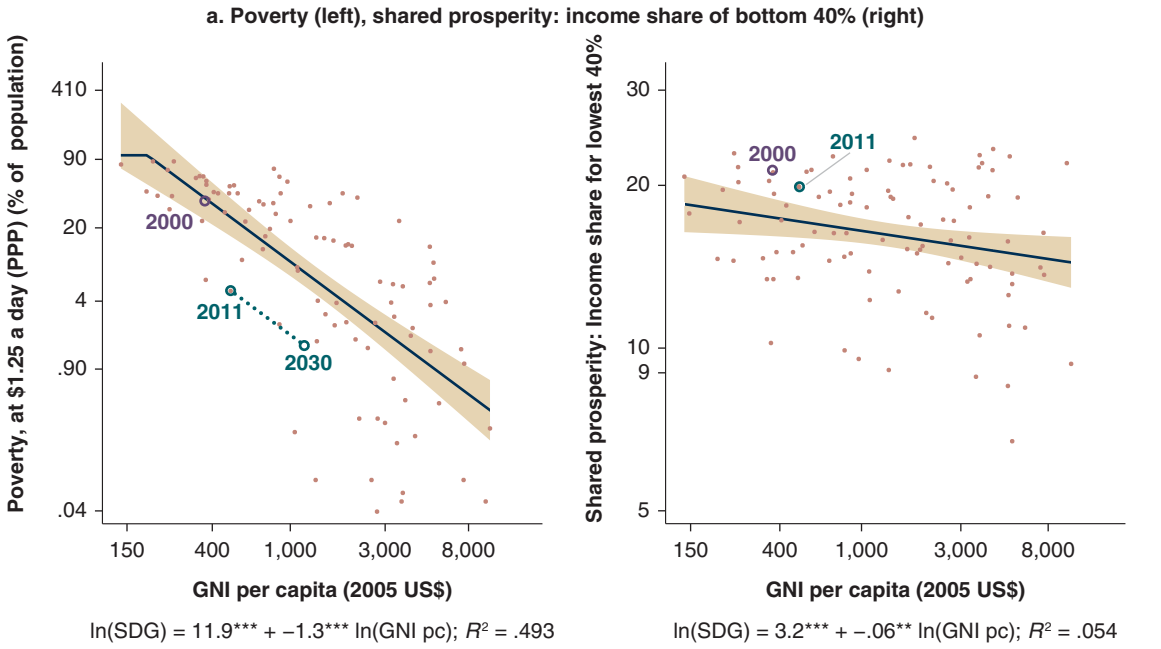
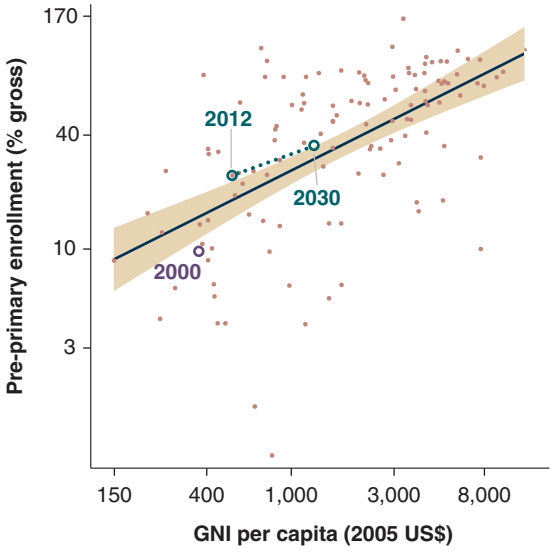


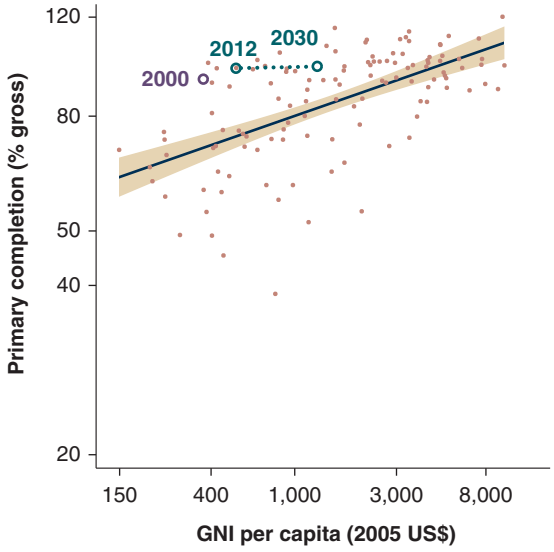
figure continues next page

FIGURE 4.1 *continued*

b. Gross pre-primary enrollment (left), primary completion (right)

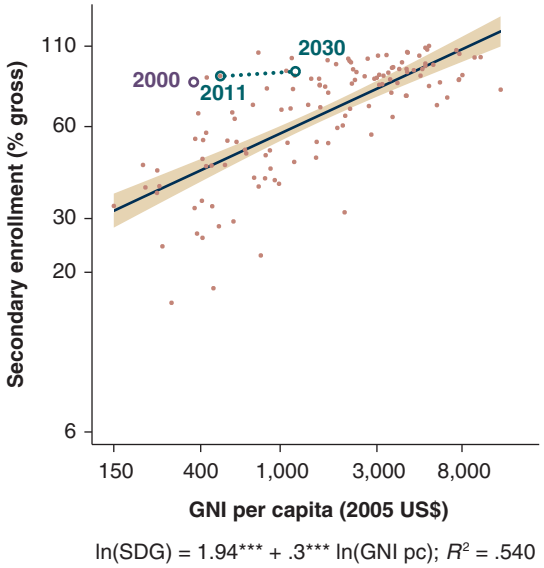


ln(SDG) = –.64 + .560*** ln(GNI pc); R^2 = .325

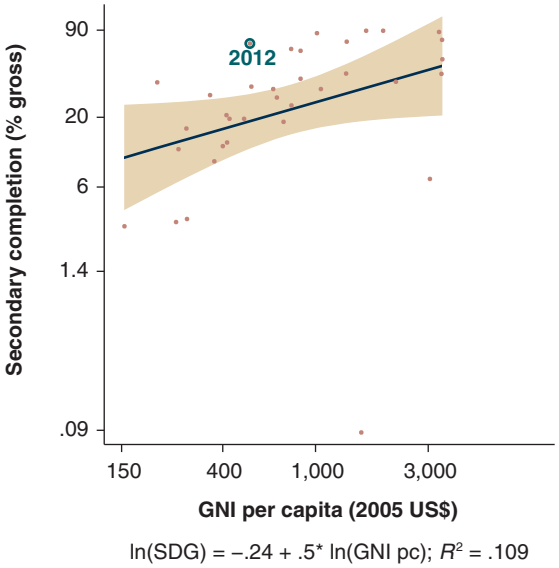


ln(SDG) = 3.48*** + .13*** ln(GNI pc); R^2 = .358

c. Gross secondary enrollment (left), secondary completion (right)



ln(SDG) = 1.94*** + .3*** ln(GNI pc); R^2 = .540

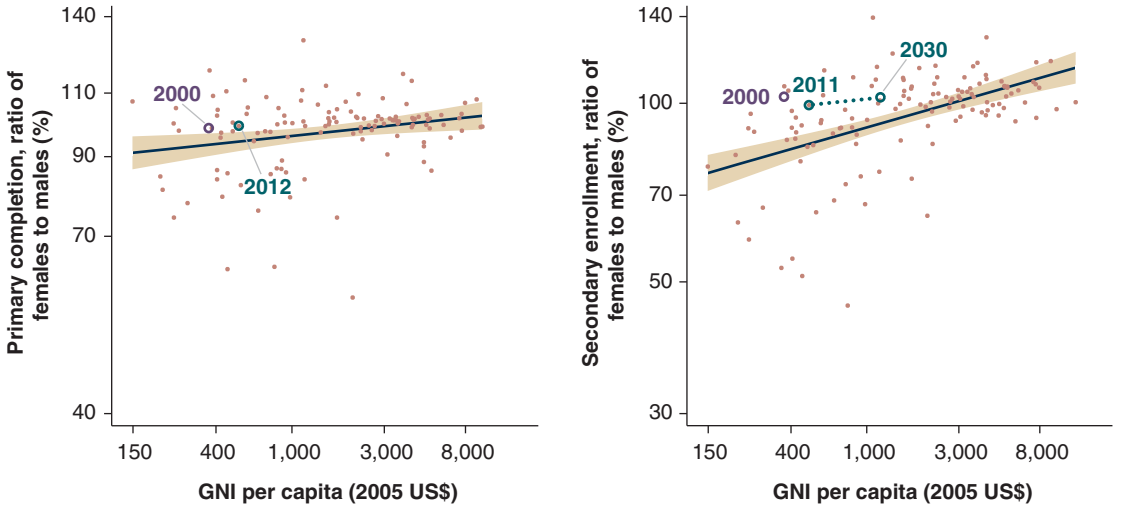


ln(SDG) = –.24 + .5* ln(GNI pc); R^2 = .109

figure continues next page

FIGURE 4.1 *continued*

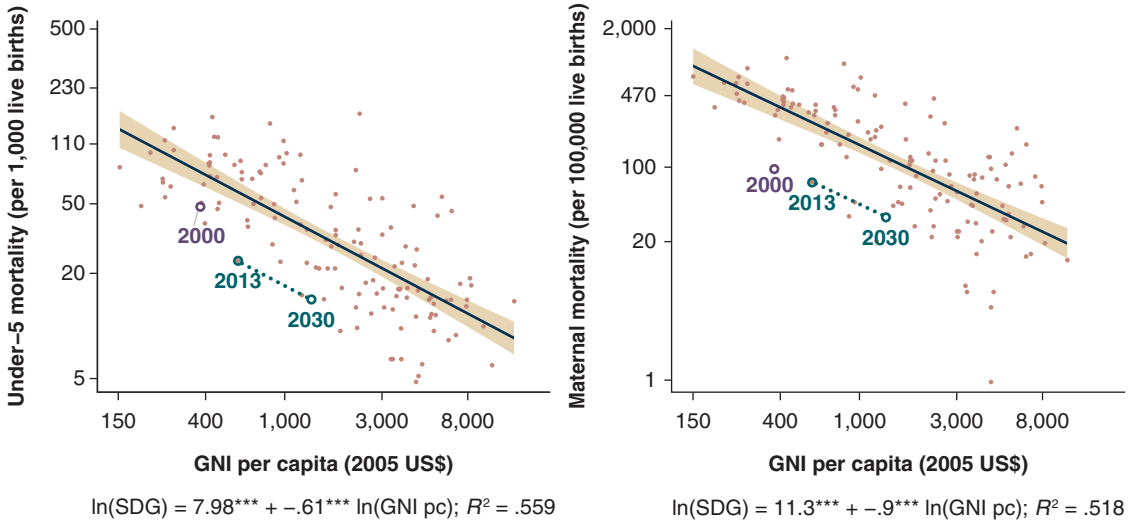
d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)



ln(SDG) = 4.37*** + .03*** ln(GNI pc); R^2 = .056

ln(SDG) = 3.88*** + .09*** ln(GNI pc); R^2 = .268

e. Under-5 mortality (left), maternal mortality (right)

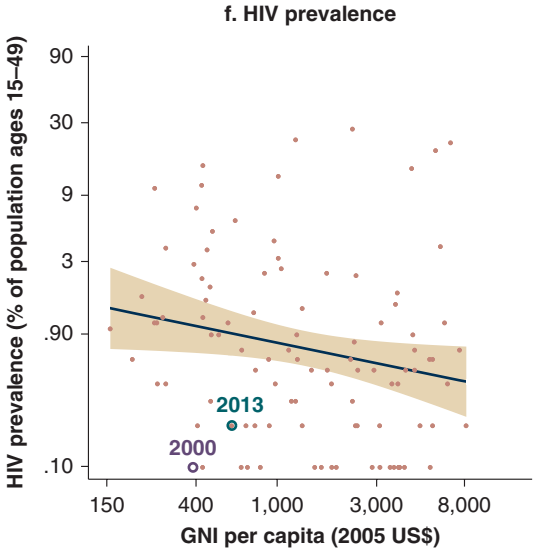


ln(SDG) = 7.98*** + –.61*** ln(GNI pc); R^2 = .559

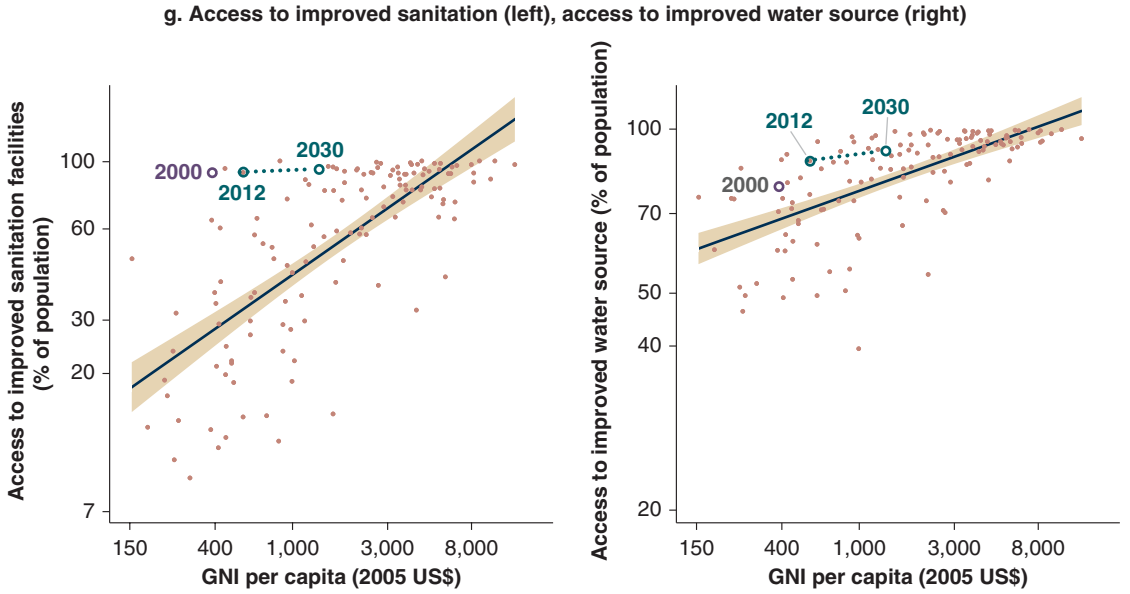
ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .518

figure continues next page

FIGURE 4.1 *continued*



ln(SDG) = 1.88* + –.31** ln(GNI pc); R^2 = .044

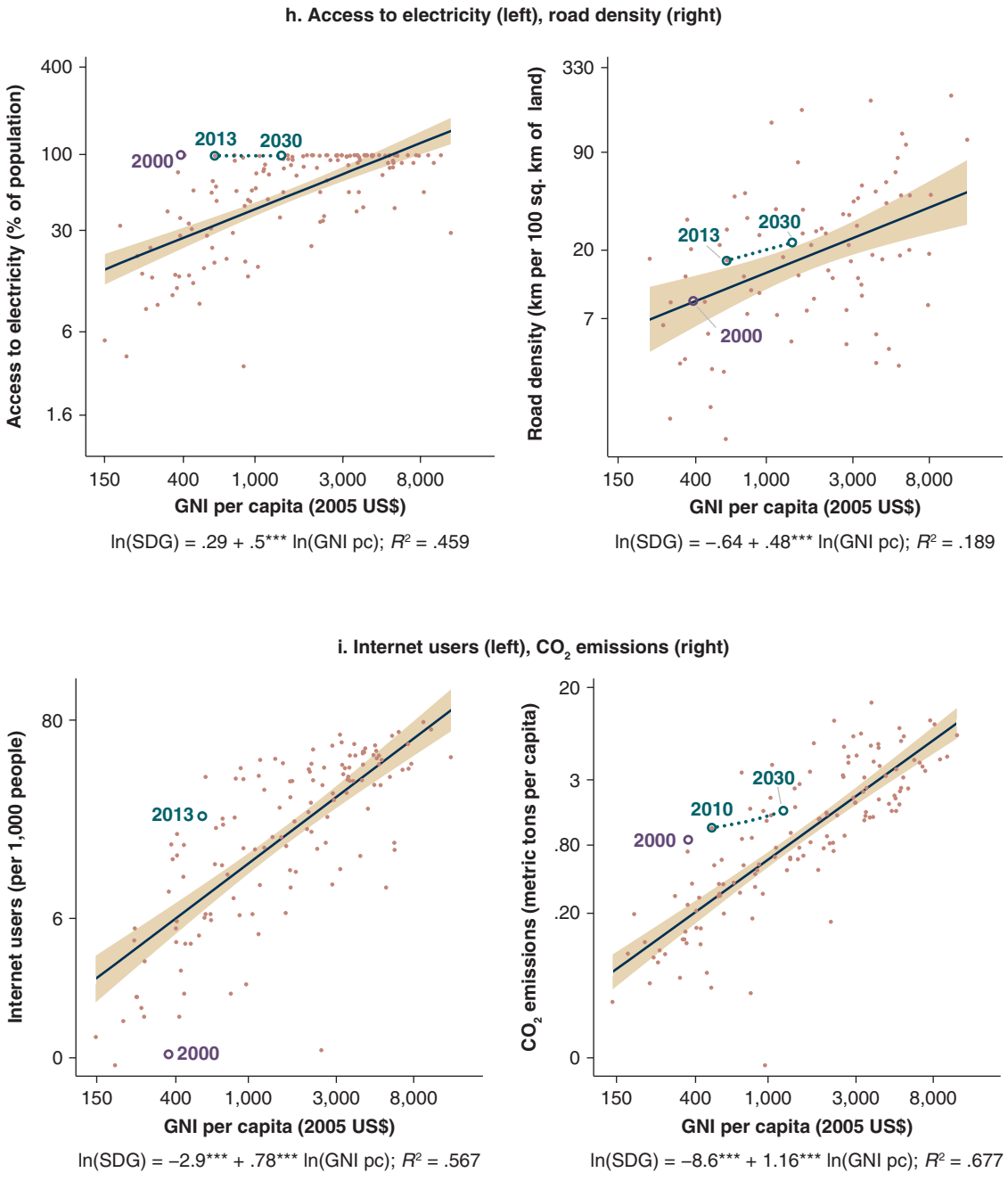


ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .534

ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .435

figure continues next page

FIGURE 4.1 *continued*



Note: Highlighted observations are for the Kyrgyz Republic at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

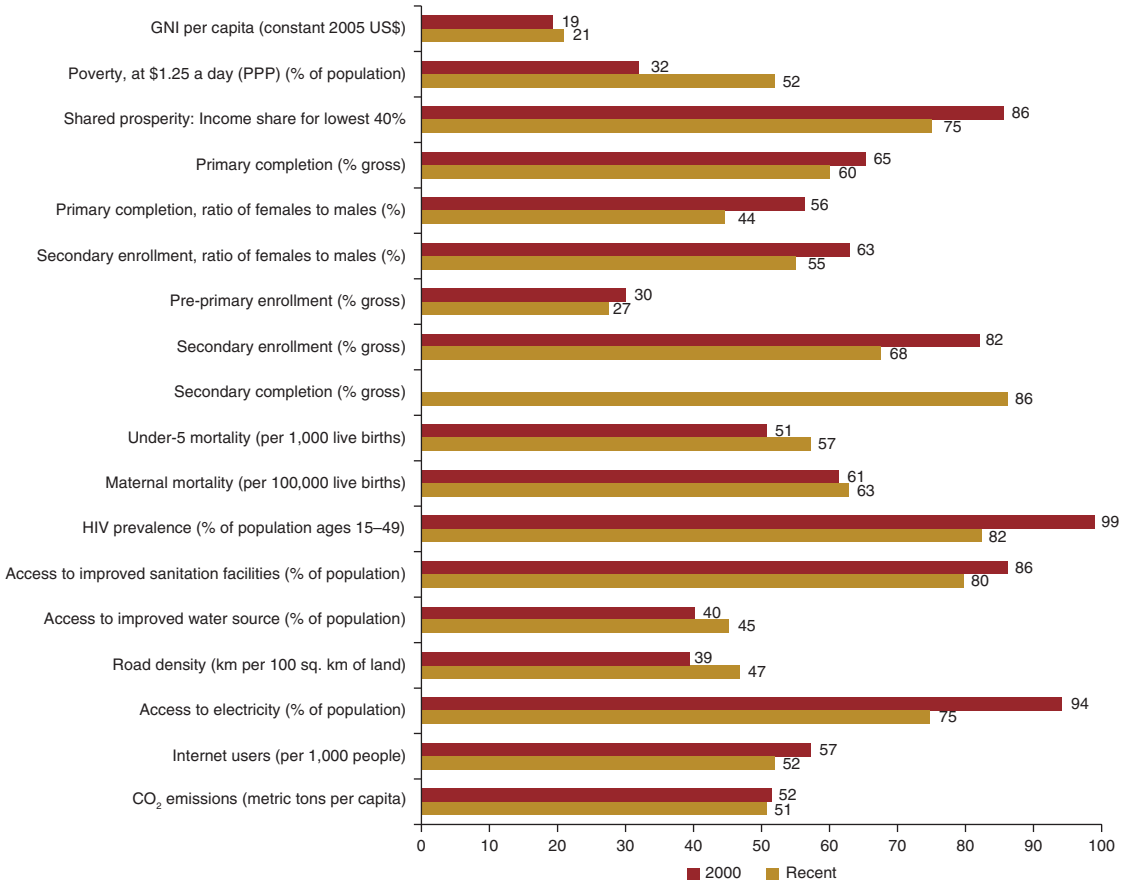
and GNI per capita is classified as tight.[6] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[7]

In sum, the Kyrgyz Republic's current outcomes are better than expected (compared to a

typical country at the same GNI per capita level) for almost all of the selected SDG indicators (poverty,[8] shared prosperity, gross pre-primary enrollment, primary completion, gross secondary enrollment, secondary completion, ratio of female to male primary completion, ratio of female to male secondary enrollment, under-5 mortality, maternal mortality, HIV prevalence, access to improved water source, access to improved sanitation, road density, access to electricity, and Internet users).[9] Only for one indicator, CO_2 emissions, is the Kyrgyz Republic doing worse than expected.[10]

Figure 4.2 shows that, between 2000 and 2012, the Kyrgyz Republic saw its ranking among low- and middle-income countries stay more or less the same for GNI per capita (a slight improvement by 2 percentile points). Compared to GNI per capita, the progress in ranking was stronger for 4 indicators (poverty, under-5 mortality, access to improved water source, and road density) and similar for 2 (maternal mortality and malaria). For the remaining 11 SDGs, while the Kyrgyz Republic's performance still remained strong given its GNI per capita, its ranking deteriorated (HIV prevalence, shared prosperity, pre-primary enrollment, primary completion, secondary enrollment, ratio of female to male in primary completion, ratio of female to male in secondary school enrollment, access to improved

FIGURE 4.2 The Kyrgyz Republic—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2012 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs.

sanitation, access to electricity, Internet use, and CO_2 emissions).

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few patterns emerge. While the Kyrgyz Republic is performing better than expected for almost all SDGs, despite a more or less constant GNI per capita ranking, its ranking among other low- and middle-income countries has deteriorated for the majority of them; shared prosperity, secondary enrollment, and HIV prevalence experienced the largest drops in ranking. The reasons behind this relative decline are not apparent from this analysis but may be related to institutional factors (for example, limited capacity to reach out to the relatively small disadvantaged groups that do not have access to various types of services and infrastructure). On the other hand, poverty, under-5 mortality, and road density are not only overperforming but have improved in country ranking beyond the improvement in ranking for GNI per capita. For CO_2 emissions, the only SDG for which the country is underperforming, the Kyrgyz Republic's ranking has worsened slightly, an outcome that is not surprising given the improved GNI per capita ranking; nevertheless, the Kyrgyz Republic's emissions remain high considering its GNI per capita, suggesting that the potential for improvements is high.[11]

By 2030, considerable improvements are projected for most indicators (see table 4.1 and respective graphs in figure 4.1). Poverty, primary completion rate, ratio of female to male primary completion, ratio of female to male secondary enrollment, maternal mortality, malaria, HIV prevalence, and access to electricity are all projected to either realize or get close to realizing the post-2015 global ambition (shown in the last column of table 4.1). However, for other SDGs, to get closer to the realization of these ambitions, a break with the past seems needed. This is also true for indicators such as shared prosperity, for which a weak relationship with GNI per capita precludes projections. Such a break would be facilitated by a combination of more rapid growth (which for the Kyrgyz Republic may be difficult given that the projected growth rate of 5.3 percent already is relatively high) and improvements in policies that directly influence different SDGs.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure). With regard to the Kyrgyz Republic's fiscal space indicators, table 4.2 and figure 4.3 summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[12] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover three aspects of government activities: spending, receipts and debt, and governance and efficiency. While the findings of this country-at-a-glance note cannot guide policy on their own, they should be seen as an input into thinking about policy making.

In terms of government spending in areas that may support the SDG agenda, the Kyrgyz Republic's values are as expected (compared to a typical country at the same GNI per capita level) for total public investment, and above the expected level for total consumption, primary education (per obvious case of low-priority spending from the post-2015 agenda perspective).[13] Cuts in this area seem particularly urgent for the Kyrgyz Republic given that both its spending (as high as 8.9 percent of GDP) and its CO_2 emissions are above the expected levels.

Among current receipts, Official Development Assistance (ODA) is within the expected range, while tax revenues are higher than expected. As further shown in table 4.2, cross-country patterns suggest that net ODA will decline as a

TABLE 4.2 The Kyrgyz Republic—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	20.0	18.1	13.1	—
Investments (% of GDP)	7.8	9.2	6.6	—
Primary education, per student (% of GDP per capita)		17.1	11.9	—
Secondary education, per student (% of GDP per capita)		25.5	19.4	—
Health (% of GDP)	2.1	4.3	2.6	—
Fuel subsidy (% of GDP)		8.9	2.4	—
Government receipts and debts				
Tax revenue (% of GDP)	11.7	18.1	12.7	—
Net ODA (% of GNI)	16.7	7.3	5.9	2.9
External debt (% of GNI)	150.5	98.4	30.9	—
Governance and government efficiency				
Government effectiveness: percentile rank	33.2	28.7	17.2	35.4
Grigoli health efficiency score		0.9	0.9	—
Public investment management index		1.4	1.4	—
Memorandum item				
GNI per capita (constant 2005 US$)	392	563		1,402

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship was not tight enough (see criteria earlier in the note).

FIGURE 4.3 The Kyrgyz Republic—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting

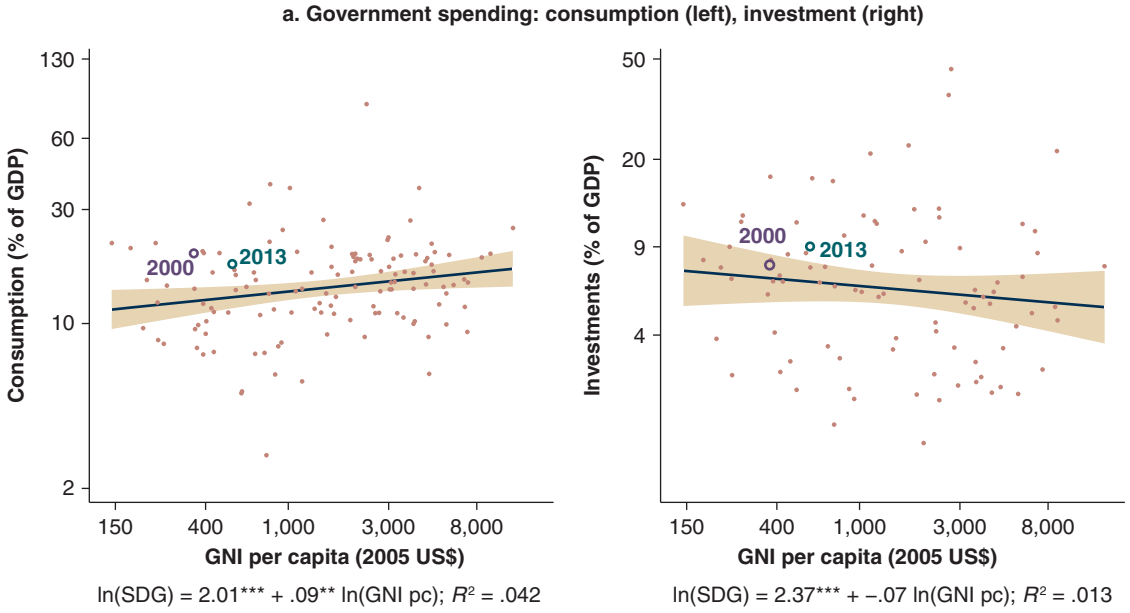
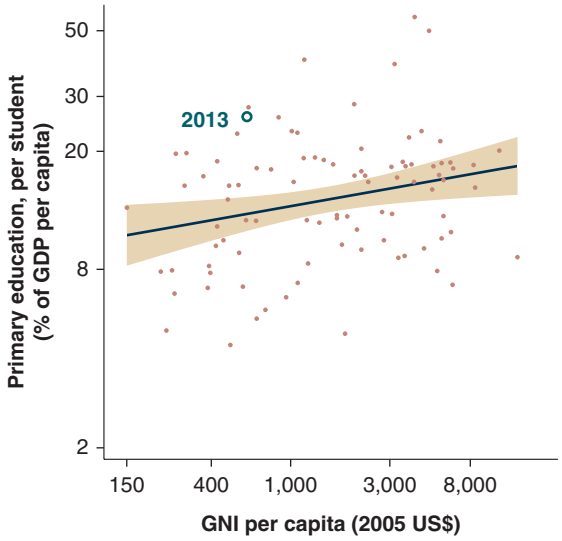


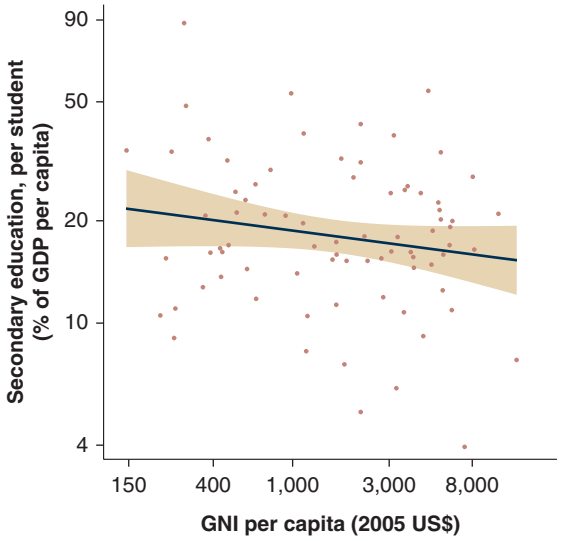
figure continues next page

FIGURE 4.3 *continued*

b. Government spending: primary education, per student (left), secondary education, per student (right)

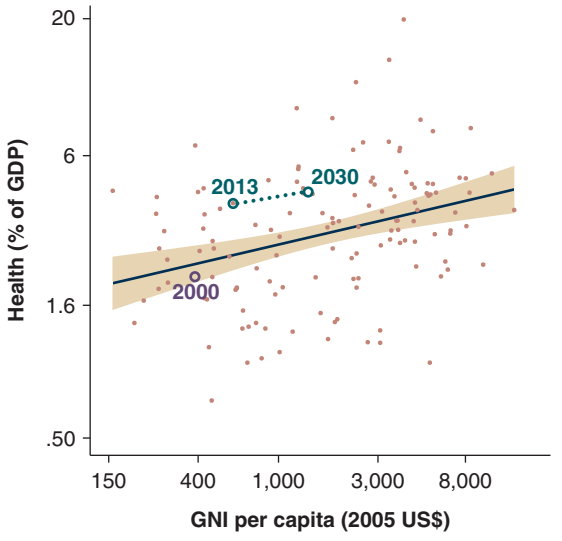


ln(SDG) = 1.72*** + .12** ln(GNI pc); R^2 = .067

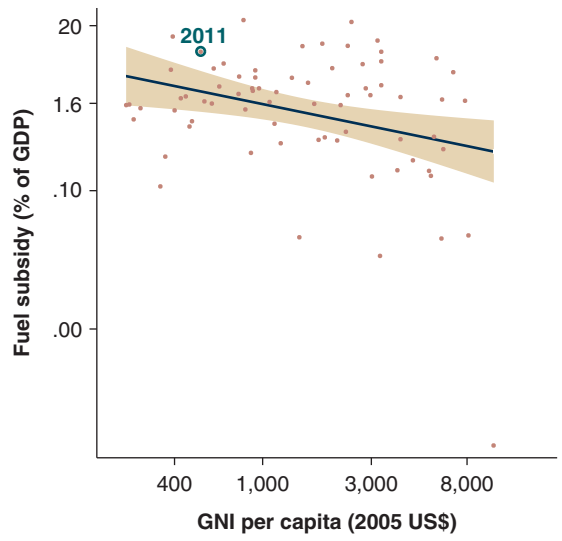


ln(SDG) = 3.51*** + –.09 ln(GNI pc); R^2 = .030

c. Government spending: health (left), fuel subsidy (right)



ln(SDG) = –.25 + .18*** ln(GNI pc); R^2 = .111

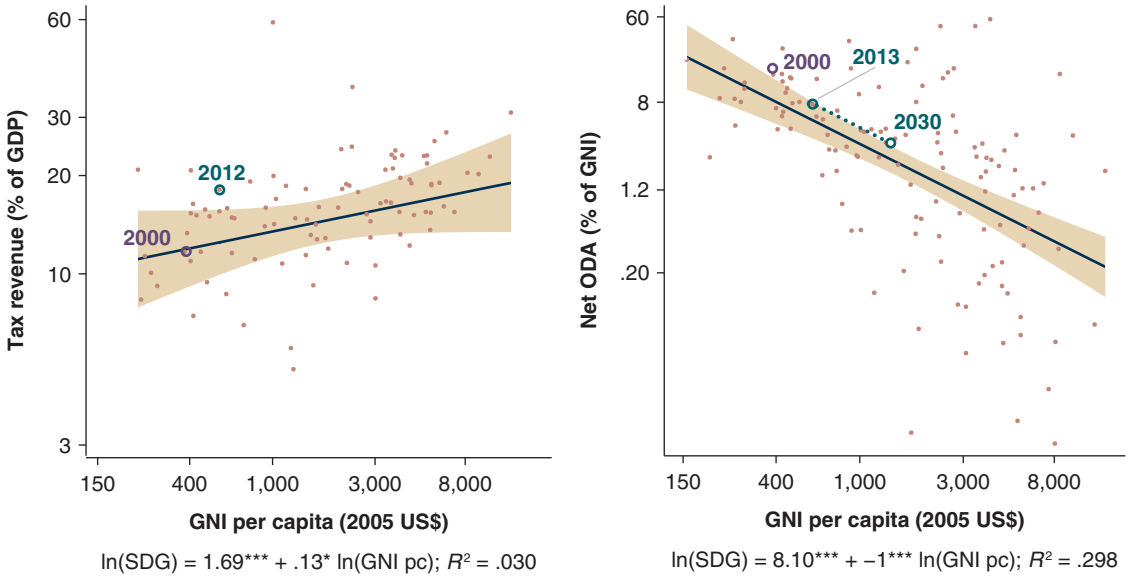


ln(SDG) = 4.96*** + –.65*** ln(GNI pc); R^2 = .098

figure continues next page

FIGURE 4.3 *continued*

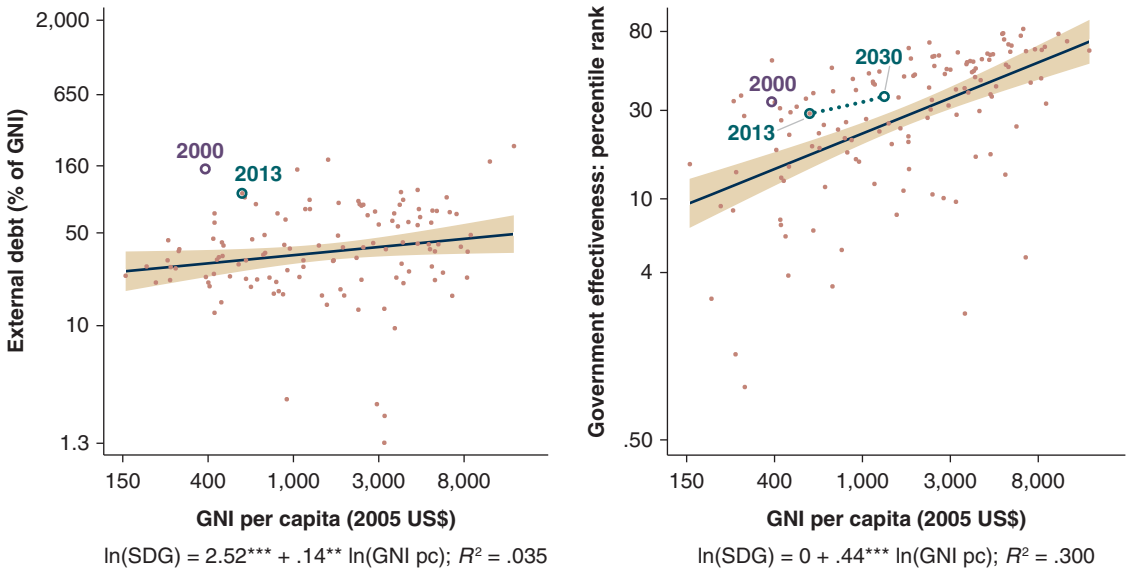
d. Tax revenue (left), official development aid (right)



ln(SDG) = 1.69*** + .13* ln(GNI pc); R^2 = .030

ln(SDG) = 8.10*** + −1*** ln(GNI pc); R^2 = .298

e. External debt (left), government effectiveness (right)

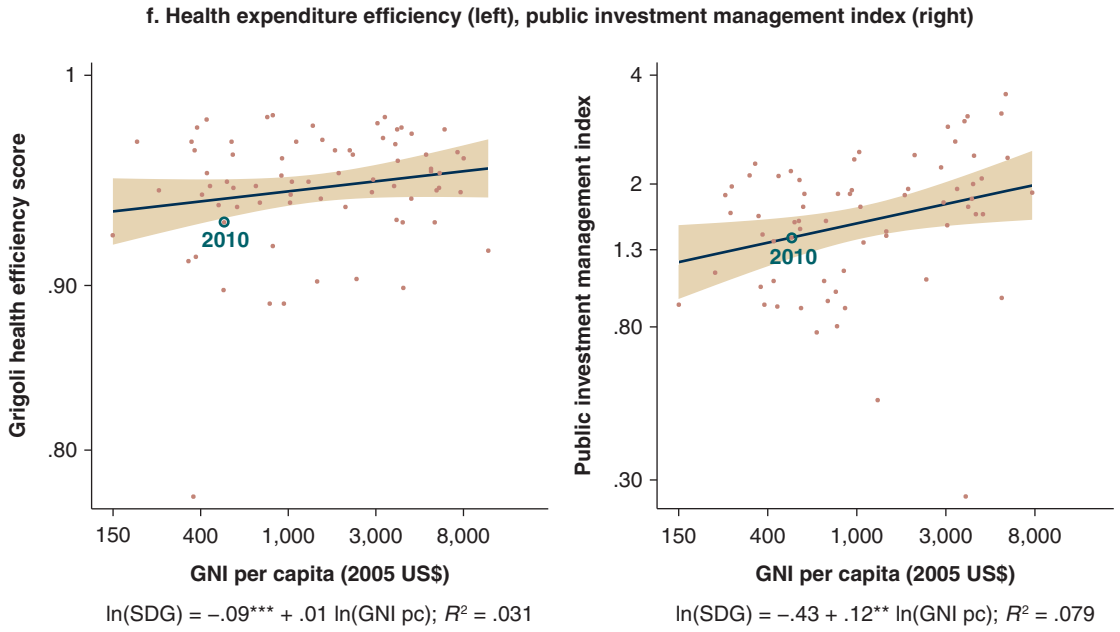


ln(SDG) = 2.52*** + .14** ln(GNI pc); R^2 = .035

ln(SDG) = 0 + .44*** ln(GNI pc); R^2 = .300

figure continues next page

FIGURE 4.3 *continued*



Note: Highlighted observations are for the Kyrgyz Republic at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

percent of GDP (without changing significantly in per capita terms), which in the case of the Kyrgyz Republic translates into a reduction from 7.3 to 2.9 percent of GNI.[14] However, the fact that cross-country patterns point to a likely decline in ODA does not mean that an increase is excluded: it depends on the priorities of donors and their relationships with the Krygyz Republic's government.

The relationship between tax revenues and GNI per capita, as well as the debt stock and GNI per capita, is not tight enough to project expected changes. The higher than expected tax revenues in the Kyrgyz Republic suggest that it is unlikely taxes will be a major contributor to increased fiscal space.[15] This is also true for the currently higher than expected external debt stock, which limits the likelihood of increased external borrowing. The fiscal impact could be substantial if borrowing goes beyond what is consistent with debt sustainability.[16]

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Table 4.2 displays data for some measures of government efficiency. According to both the health index used in this study, the Kyrgyz Republic's performance is below the expected levels. However, the Kyrgyz Republic is performing as expected in terms of the more general World Bank Government Effectiveness indicator and as expected for Public Investment Management Index; that is according to these indicators, government efficiency appears to be better than expected given the GNI per capita of the Kyrgyz Republic, an observation that does not negate that considerable efficiency gains still may be feasible in different areas. For example, the higher than expected health expenditures, together with below expected health expenditure efficiency, suggests that health efficiency improvements should be considered.

In sum, our cross-country results indicate that government spending already is at or above expected levels while it also seems difficult to significantly raise revenues from any major sources (taxes, ODA, or borrowing). However, on the

spending side, there may be room for cuts in low-priority areas, including, most obviously, spending on fuel subsidies; resource-saving efficiency gains may also be possible in various areas. Such adjustment would permit budgetary changes that, directly or indirectly, promote the SDG agenda; the details should depend on government priorities and additional information. For example, while road density is better than expected, the Kyrgyz Republic infrastructure assets are in very poor condition, suffering from critical investment shortage and insufficient and inadequate maintenance (including electricity, urban heating, roads, and irrigation). Likewise, while enrollment rates are met or exceeded, the education system does not produce the quality learning necessary to spur growth. Most importantly, if the government, on the margin, would be able to expand human development and infrastructure services with sufficient efficiency, then spending increases in these areas may be advisable; if not, it may be better for the SDG agenda to selectively reduce taxation.

Beyond the government, it is important to note that, in 2013, remittances accounted for as much as 31.5 percent of GDP (World Bank); if a substantial part of these flows could be further encouraged (for example, via reduced transactions costs) and channeled into spending in support of the SDG agenda, including growth promotion, then payoffs could be substantial. More broadly, from the perspective of this agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged. Given the Kyrgyz Republic's impressive performance in terms of human development and infrastructure (considering its low GNI per capita), the potential for strong future growth and additional progress on the SDG agenda should be very strong if the country manages to put in place appropriate policies and create a supportive business climate.[17]

4. Conclusions

As summarized in table 4.3, the Kyrgyz Republic's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for all of the selected SDGs except one, CO_2 emissions, for which performance is worse than expected. By 2030, many of the SDGs

TABLE 4.3 The Kyrgyz Republic—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Poverty (+) • Pre-primary school enrollment (–) • Primary completion (–) • Secondary school enrollment (–) • Ratio of female to male secondary enrollment (–) • Under-5 mortality (+) • Maternal mortality (x) • Malaria (x) • Access to improved water source (x) • Access to improved sanitation (–) • Internet users (–)	• Road density (+)	• CO_2 emissions (–)
Loose	• Shared prosperity (–) • Secondary completion rate • Ratio of female to male primary completion (–) • HIV prevalence (–)		

Note: (+) = larger country rank increase, 2000–12, or smaller deterioration than for GNI per capita; (–) = smaller increase or a decreased country rank 2000–12 compared to GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita (+/– 2 percentile points).

are projected to either realize or come close to realizing the global goals. However, for some SDGs (such as pre-primary enrollment, secondary school enrollment, under-5 mortality, access to improved water source, and access to improved sanitation), to get closer to the realization of these ambitions, a break with the past is needed.

Table 4.3 further shows that, for most indicators, the relationship to GNI per capita is tight and the Kyrgyz Republic is doing better than expected. Improvements in these SDGs will most likely continue along with GNI per capita growth and increases in resources and capabilities. However, among the currently overperforming SDGs, some are only loosely related to GNI per capita; this group includes shared prosperity, secondary completion, ratio of female to male in primary completion, and HIV prevalence. The fact that these relationships are loose suggests that these indicators should not be expected to improve strongly or systematically to more rapid growth in GNI per capita but rather would depend on country-specific conditions and policies. Among these indicators, the rankings for shared prosperity, ratio of female to male in primary completion, and HIV prevalence have all worsened since 2000.

The only area in which the Kyrgyz Republic currently is underperforming is CO_2 emission. The presence of a tight negative relationship to GNI per capita suggests that future improvements strongly depend on policies that keep emissions in check.

In the fiscal area, cross-country data suggest that spending is relatively high while the room to raise revenues is limited. Given this, improved spending efficiency should be a high priority, including cuts in fuel subsidies. Potential uses of any new fiscal space include selective spending increases and tax cuts; the preferred path should depend on government priorities and the ability of the government to provide SDG-related services with sufficient efficiency.

Finally, the Kyrgyz Republic's strong position in terms of human development and infrastructure puts the country in a favorable position to bring about strong growth and SDG performance during the period up to 2030.

Annex 4A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + Income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStats. API ref: DHS: secondary completion rate [HH.DHS.SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS/SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	

annex continues next page

Indicator	Source	Comment
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH.STA.MALR/SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

annex continues next page

Indicator	Source	Comment
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStats = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
2. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
3. Sources for the indicators are presented in annex 4A.
4. Projections from CEPII are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.
5. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
6. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ are defined as loose.
7. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for the specific country. The same observation applies to expected values for fiscal space indicators.
8. Poverty measured as share of population living on less than $1.25 a day dropped sharply in early 2000s and was 5.1 percent in 2011. However, poverty according to the national poverty line remains very pervasive in the Kyrgyz Republic, affecting over 38 percent of the population in 2012, and on the rise since 2009 as a result of the ongoing economic slowdown and the protracted impacts of the Russian crisis and economic contraction (WDI, World Bank).
9. With the relatively low population density in the Kyrgyz Republic, the higher than expected road density is even more noteworthy.
10. With regard to CO_2, the Kyrgyz Republic's current and project 2030 per capita emissions are 11.6 and 19.1 percent of the current OECD average.
11. The main reason behind high CO_2 emissions is high electricity consumption per capita, not the sources of energy—the share of electricity from fossil fuels is somewhat lower than expected while the share from hydroelectric plants is higher.
12. The treatment is the same as in table 4.1 and related figures. That is, in table 4.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific

analysis is needed to consider policy in the context of the different roles of the government and private services and spending.

13. Fuel subsidies are detrimental to the climate and encourage technologies that are less labor intensive, tending to generate employment for fewer workers at lower wages.
14. Reducing the reliance of external aid is part of the governments' agenda for macroeconomic stability (IMF 2013d).
15. IMF (2013, p. 23) suggests a marginal increase of tax revenues from 26.0 in 2012 to 26.6 percentage of GDP in 2018.
16. External public debt in the Kyrgyz Republic remains at a moderate risk of debt distress and is projected to decrease from 46 percent of GDP in 2012 to 36 in 2018 (IMF 2013, pp. 8, 23).
17. The Kyrgyz Republic scores 61 in ease of doing business (100 is best practice country), while the regional average for Europe and Central Asia is 67 (Doing Business 2014, p. 8). Moreover, the Kyrgyz Republic is underperforming in terms of business climate according to results from regressing ease of doing business scores on GNI per capita for the full sample of low- and middle-income countries.

Chapter 5

Liberia

1. Introduction

Liberia, which is classified as a low-income country, is highly dependent on mining resources for foreign exchange earnings. A violent civil war ended with a peace agreement in 2003. More recently, it has been at the center of the Ebola epidemic, the impact of which is not reflected in the data that were available for this note. For Liberia, social and economic data are uncertain and lacking. Nevertheless, available data indicate that, during the period 2001–12, the country's average growth rate for GNI per capita (at constant 2005 US$) was 4.0 percent; higher than the developing (low- and middle-income) country average of 3.0 percent; however, the initial income level was very low and the country is still one of the poorest in the world. After a period of high volatility during the conflict years, growth has stabilized since 2004; for the period 2005–13, the average was about 10 percent, mainly based on nonmining activities and presumably reflecting a post-conflict recovery.[1] Between 2000 and 2012, despite a slight improvement in its score according to the UNDP Human Development Index, Liberia's ranking according to the index (among countries included both in 2000 and 2012) stayed more or less the same (deteriorated from the 6th to the 4th percentile).

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Liberia, serving as the starting point for a more complete country development diagnostic as well as a more in-depth country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes Liberia's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, Liberia's performance and prospects are benchmarked relative to other countries, considering its past, recent and projected levels of GNI per capita.[2] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example health and education services) and to achieve SDG outcomes (like strong health and education results).[3]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 5.1 summarizes data for Liberia: historical evolution, actual and expected values for a recent year, and projected 2030 values.[4] In figure 5.1, data for Liberia are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Liberia, the projected average annual rate of GNI per capita growth is 4.1 percent.[5] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[6] Projections for SDG indicators are presented only

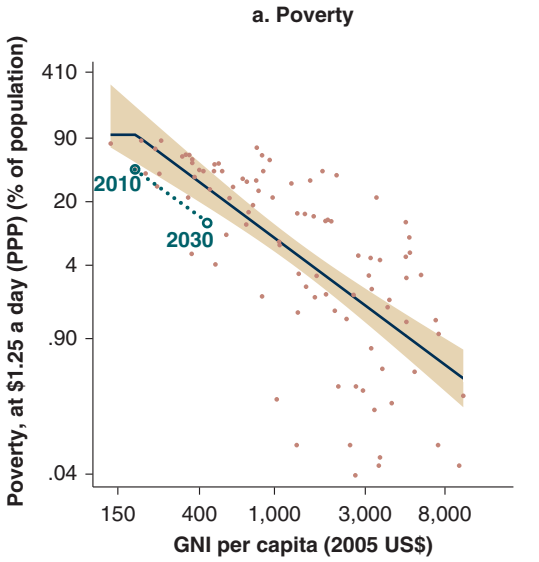
when the cross-country relationship between the indicator and GNI per capita is classified as tight.[7] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[8]

In sum, among the selected 15 indicators in table 5.1, Liberia's current outcomes are better than expected (compared to a typical country at the same, very low, GNI per capita level) for 5 indicators: poverty, pre-primary enrollment, secondary enrollment, under-5 mortality, and access to improved water source. The country falls short for 6 indicators: primary completion, ratio of female to male primary completion, malaria cases, access to improved sanitation, access to electricity, and CO_2 emissions.[9] Outcomes are as expected for 4 of the indicators: ratio of female to male secondary enrollment, maternal mortality, HIV prevalence, and Internet use. While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high, a possibility that calls for further analysis.

For the 13 indicators with sufficient data, figure 5.2 shows Liberia's changes in percentile rankings among low- and middle-income countries between 2000 and 2012.[10] The country's GNI per capita ranking stayed the same (2nd percentile in both 2000 and 2012), and so did the rankings for 4 of the SDGs: maternal mortality, malaria cases, access to electricity, and CO_2 emissions. The rankings improved for 4 indicators—under-5 mortality, HIV prevalence, access to improved water sources, and Internet use—but deteriorated for 5: pre-primary enrollment, secondary enrollment, ratio of female to male primary completion, ratio of female to male secondary enrollment, and access to improved sanitation.

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few patterns emerge; unfortunately, some of these are discouraging: Liberia's rankings are deteriorating among the SDGs for which it has better than expected performance (secondary enrollment and the ratio of female to male

FIGURE 5.1 **Liberia—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

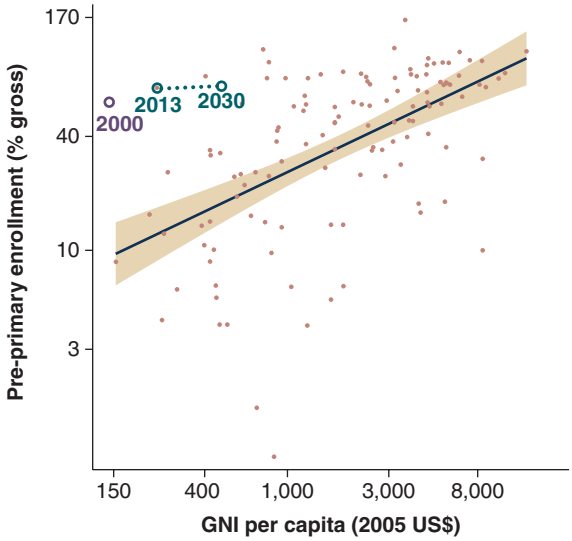


ln(SDG) = 11.8*** + –1.3*** ln(GNI pc); R^2 = .487

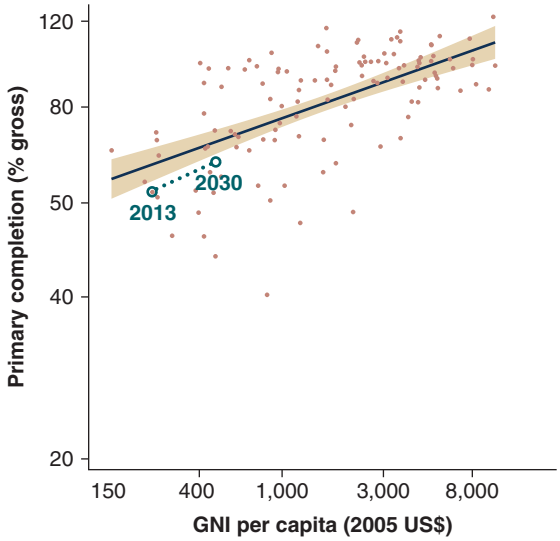
figure continues next page

FIGURE 5.1 *continued*

b. Gross pre-primary enrollment (left), Primary completion (right)

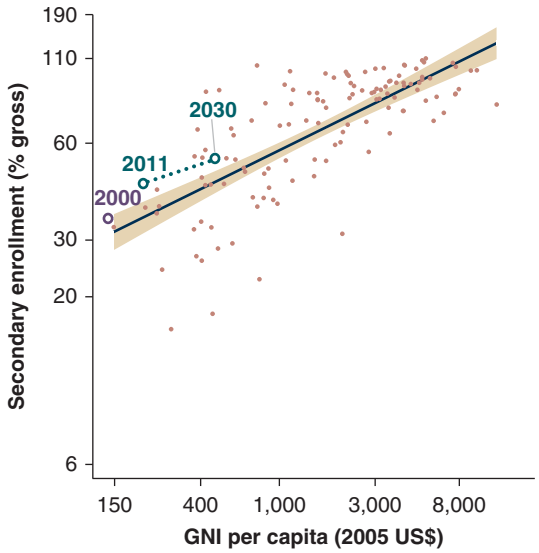


ln(SDG) = –.41 + .53*** ln(GNI pc); R^2 = .301



ln(SDG) = 3.47*** + .13*** ln(GNI pc); R^2 = .363

c. Gross secondary enrollment

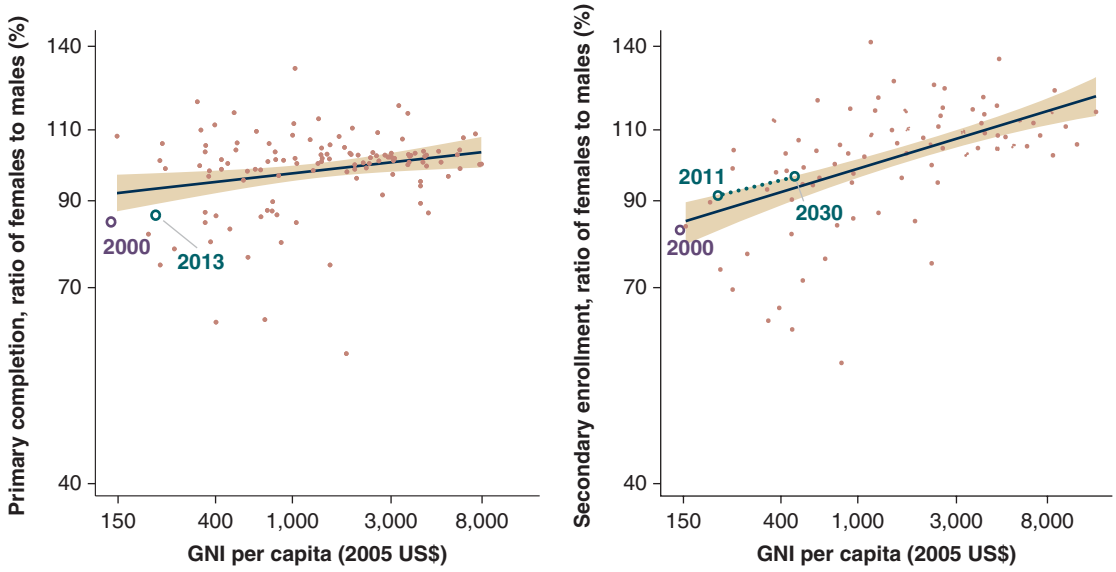


ln(SDG) = 1.9*** + .31*** ln(GNI pc); R^2 = .558

figure continues next page

FIGURE 5.1 *continued*

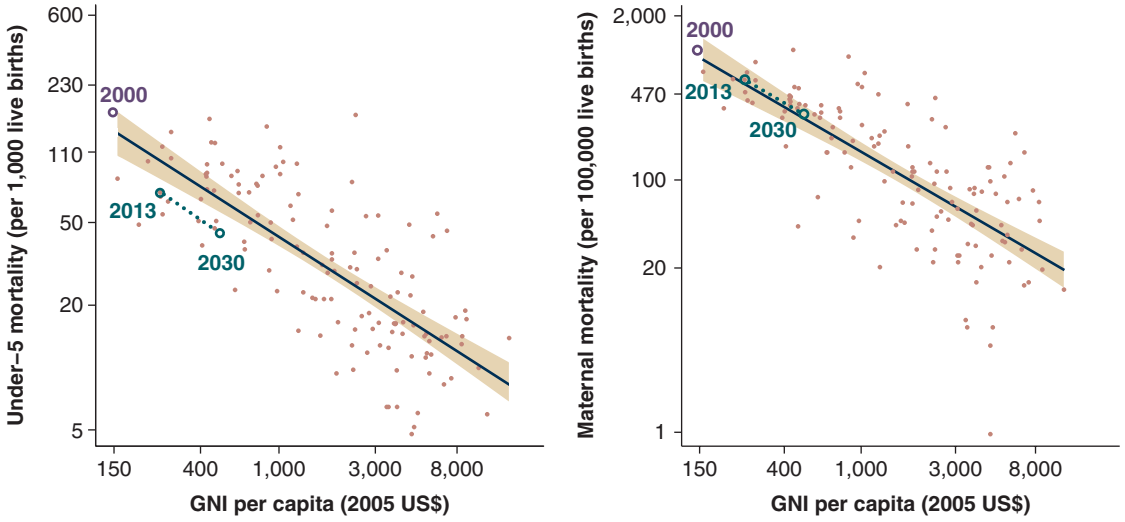
d. Ratio of female to male primary completion (left), Ratio of female to males secondary enrollment (right)



ln(SDG) = 4.38*** + .03*** ln(GNI pc); R^2 = .055

ln(SDG) = 3.82*** + .1*** ln(GNI pc); R^2 = .297

e. Under-5 mortality (left), maternal mortality (right)



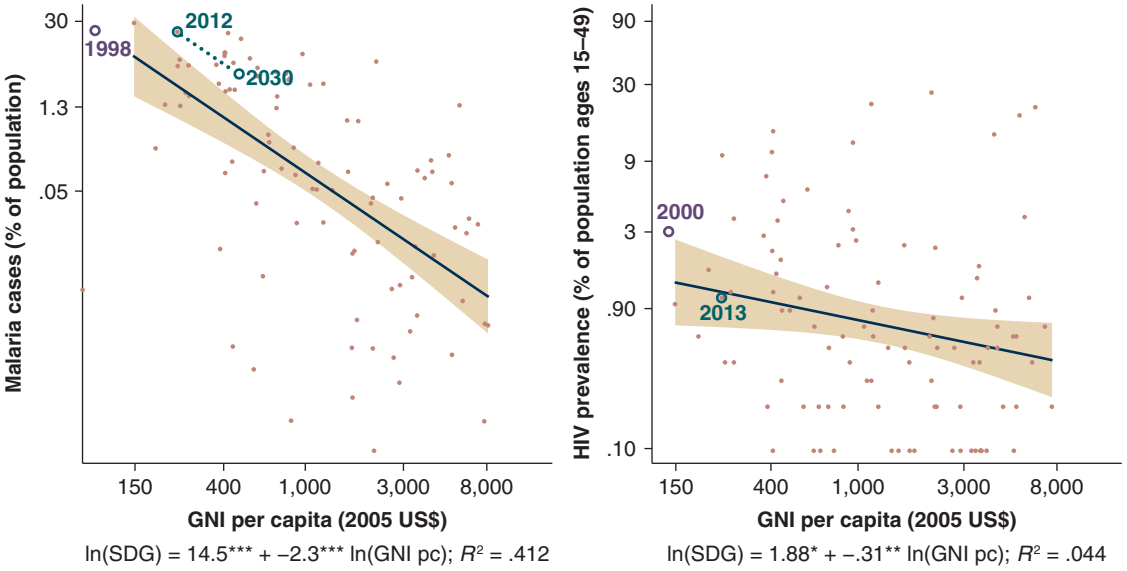
ln(SDG) = 7.99*** + –.61*** ln(GNI pc); R^2 = .660

ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .519

figure continues next page

FIGURE 5.1 *continued*

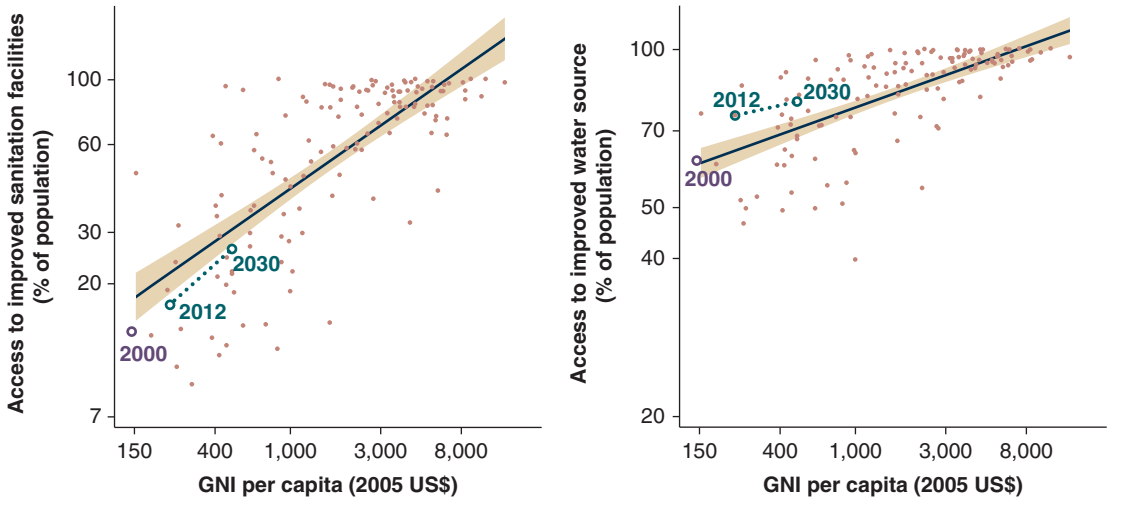
f. Malaria cases (left), HIV prevalence (right)



ln(SDG) = 14.5*** + –2.3*** ln(GNI pc); R^2 = .412

ln(SDG) = 1.88* + –.31** ln(GNI pc); R^2 = .044

g. Access to improved sanitation (left), Access to improved water source (right)

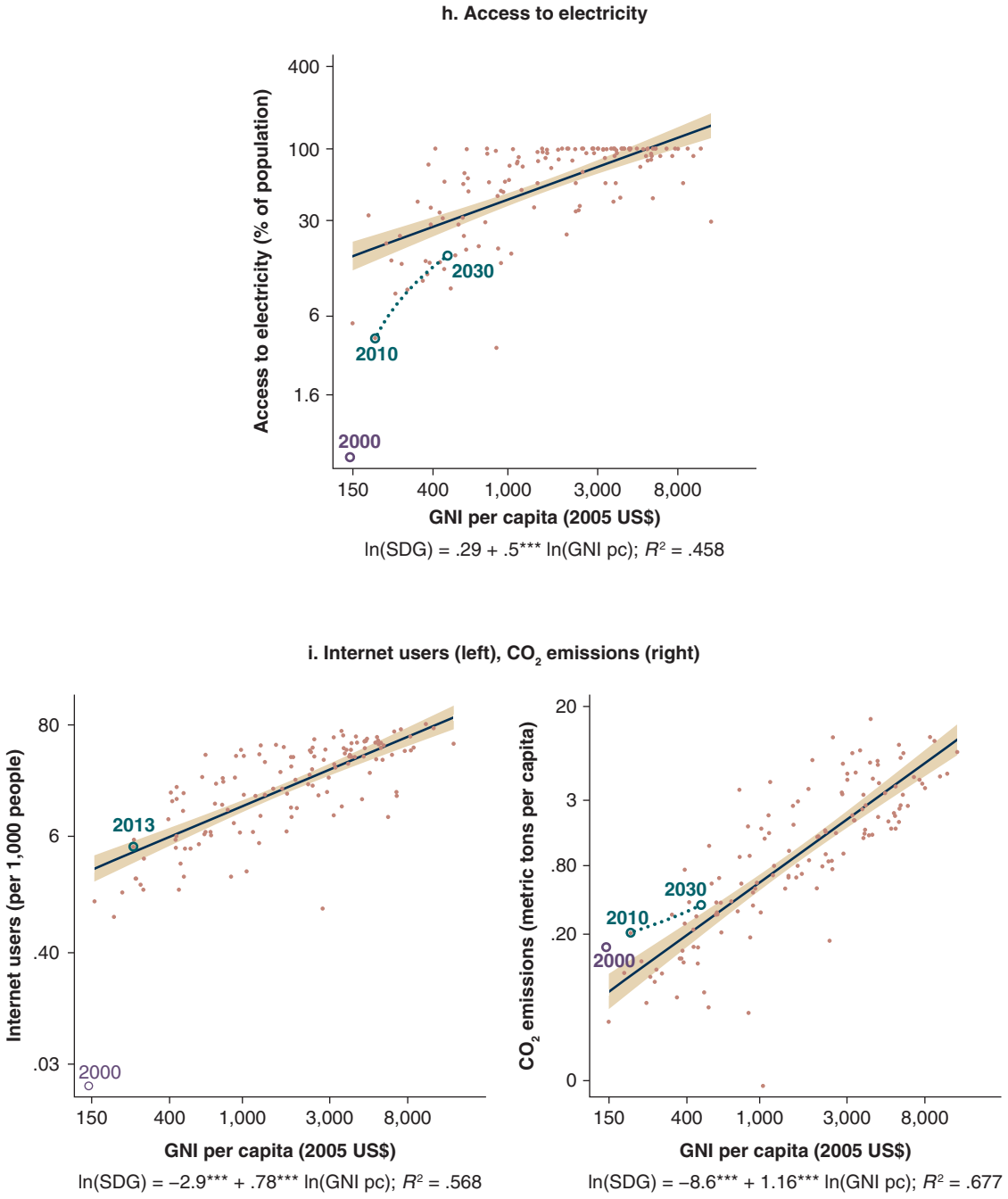


ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .536

ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .436

figure continues next page

FIGURE 5.1 *continued*



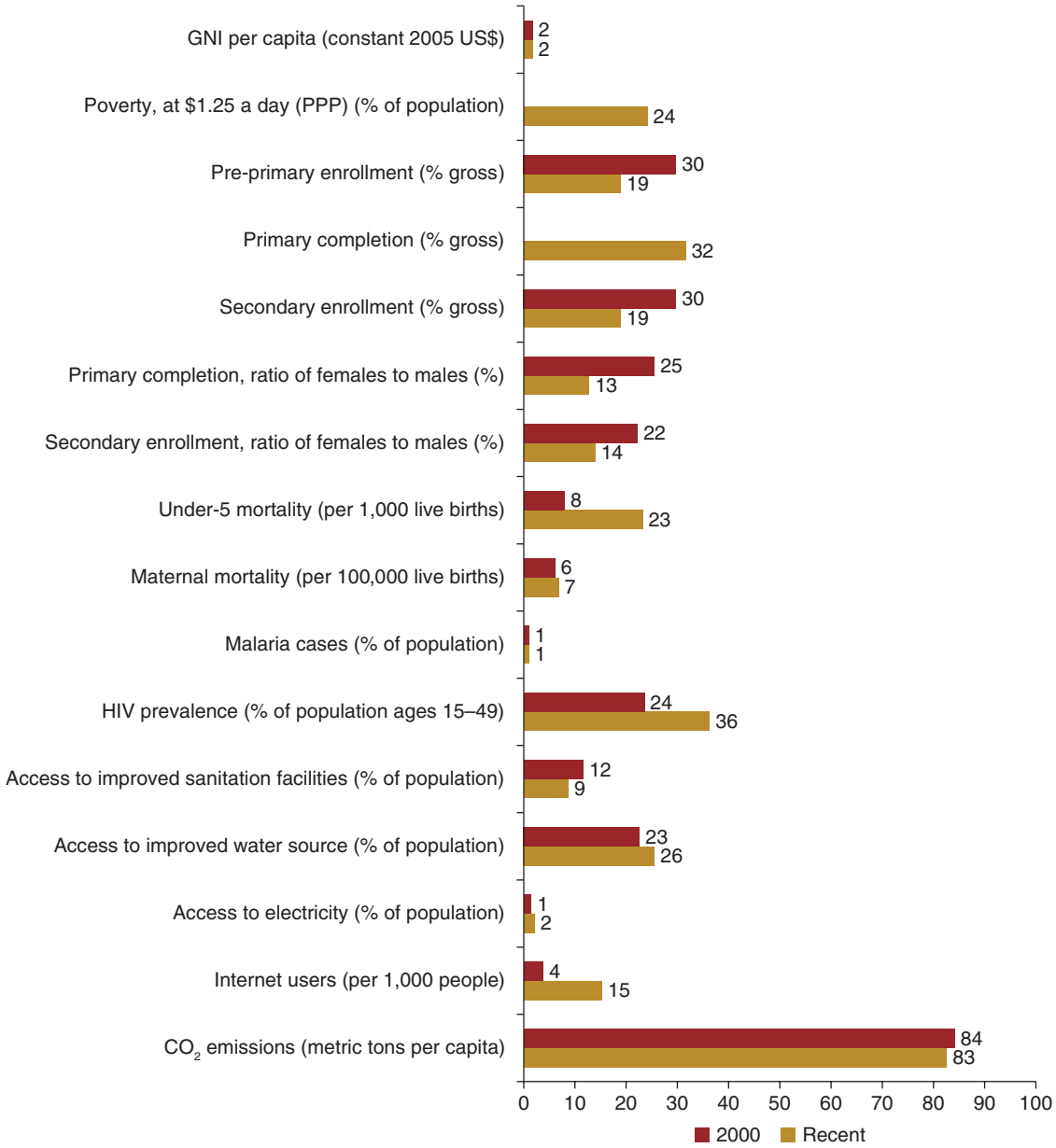
Note: Highlighted observations are for Liberia at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

TABLE 5.1 Liberia—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)		45.1	—	13.2	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Education					
Pre-primary enrollment (% gross)	61.1	72.8	12.3	74.5	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)		59.0	66.0	66.7	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	35.2	45.2	35.2	53.7	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	84.1	85.7	92.5	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary completion, ratio of females to males (%)	72.7	82.0	78.9	87.6	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	175	71	101	46	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	1,100	640	592	341	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	30.4	29.0	3.6	5.8	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	3.1	1.1	1.2	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	13.6	16.8	21.6	26.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	61.2	74.6	63.9	79.2	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Access to electricity (% of population)	0.6	4.1	18.8	16.5	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	0.0	4.6	4.1	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	0.2	0.2	0.1	0.4	Integrate climate change measures into national policies, strategies, and planning.
Memorandum item					
GNI per capita (constant 2005 US$)	145	231		491	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 5.2 Liberia—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2012 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs.

secondary enrollment); for two other indicator (ratio of female to male primary completion and access to improved sanitation facilities) Liberia is both underperforming and experiencing a deteriorating ranking.

By 2030, considerable improvements are projected for most indicators (see table 5.1 and respective graphs in figure 5.1).[11] However, compared to global ambitions, also shown in table 5.1, the improvements are moderate, not least due to

very low initial levels, which means that the realization of such ambitions would require a dramatic break with the past. Such a break would be facilitated by more rapid and more inclusive growth combined with SDG policies that benefit the disadvantaged.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure).[12] With regard to Liberia's fiscal space indicators, table 5.2 and figure 5.3 summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[13] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). In addition, they should be interpreted with a lot of caution given large off-budget donor spending in different areas (not reflected in government spending data) and uncertain macro (GDP and GNI) data—as a result, the values for spending indicators expressed as a share of GDP could be misleading. The variables cover selected indicators related to three aspects of government activities: spending, receipts and debt, and governance and efficiency. While the findings of this country-at-a-glance note cannot guide policy on their own, they should be an input into the discussion on policy making.

In general terms, room for additional priority spending may be created by reducing low-priority spending, increasing current receipts, and/or

TABLE 5.2 Liberia—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	7.5	15.5	12.0	—
Investments (% of GDP)	6.3	7.6	7.2	—
Primary education (% of GDP)		1.7	1.9	—
Secondary education (% of GDP)		1.3	0.9	—
Primary education, per student (% of GDP per capita)		17.0	10.5	—
Secondary education, per student (% of GDP per capita)		61.0	21.7	—
Health (% of GDP)	1.4	3.6	2.1	3.9
Government receipts and debts				
Tax revenue *(%* of GDP)		20.9	11.1	—
Net ODA *(%* of GNI)	13.1	16.7	14.2	7.9
External debt (% of GNI)	551.7	30.9	27.3	—
Governance and government efficiency				
Government effectiveness: Percentile rank		8.6	11.7	13.0
Grigoli health efficiency score		0.97	0.94	—
Memorandum item				
GNI per capita (constant 2005 US$)	145	231		491

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

increasing borrowing. Available data indicate that for government spending (expressed as a percent of GDP), Liberia performs as expected (compared to a typical country at the same GNI per capita level) for total public investment, while government total consumption and health spending is higher than expected. For education-related spending, the government is spending as expected for primary when measured in percentage of GDP, but more than expected when measured per student; secondary spending is more than expected no matter if it is measured as a share of GDP or per student.[14]

Of the government receipts included in table 5.2, net Official Development Assistance (ODA) is as expected and tax revenues are higher than expected.[15] As further shown, cross-country patterns suggest that, as GNI per capita grows, net ODA declines as a percent of GDP (without changing significantly in per capita terms). In the case of Liberia this suggests that net ODA, excluding support to UN peace-keeping forces, is expected to decrease from the current 16.7 percent of GNI to 7.7 percent in 2030; however, whether this will hold depends on the specifics of Liberia's evolving relationship with donors and a possible shift from peace-keeping support to more development-oriented support.[16] If support to UN peace-keeping forces is included, the current level of net ODA is as high as 36.1 percent. The relationship between tax revenues and GNI per capita is not tight enough to project future values. However, even though the tax-GDP ratio is high, IMF projects an increase in tax revenues.[17] Higher taxes would reduce the resources controlled by domestic households and firms, pointing to the need to consider the combined impact on SDGs and other indicators from higher taxes and the spending increases that are financed by these taxes. Liberia's external debt stock is at the expected level, but the Liberia Debt Sustainability Analysis (DSA) suggest there may be room for increased external borrowing consistent with debt sustainability.[18]

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Table 5.2 displays

FIGURE 5.3 Liberia—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting

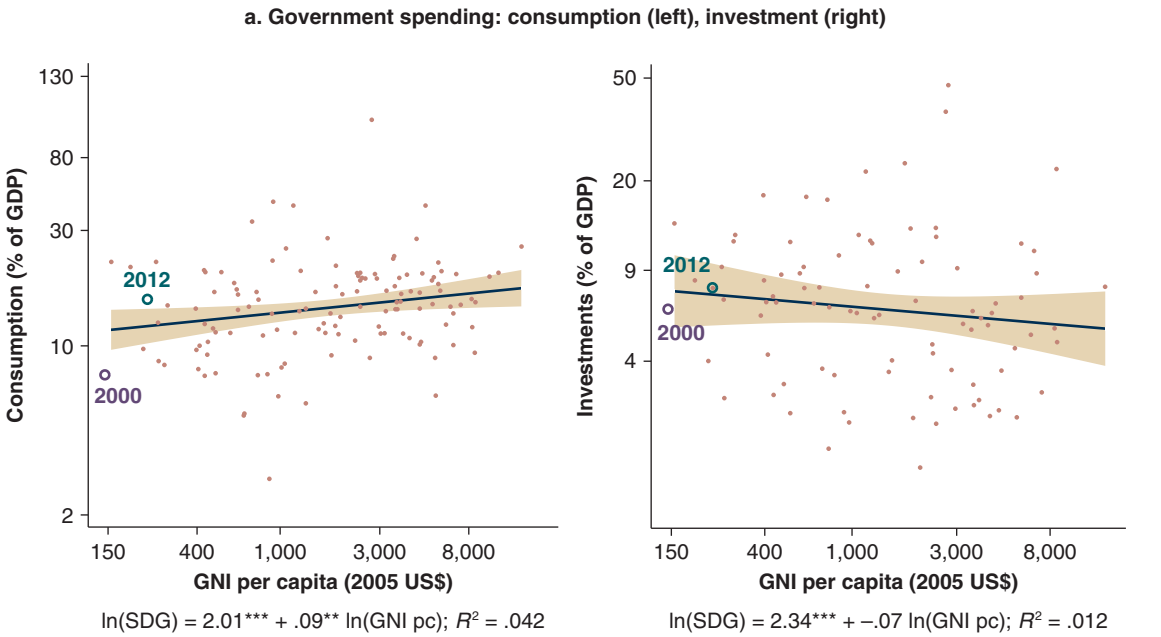
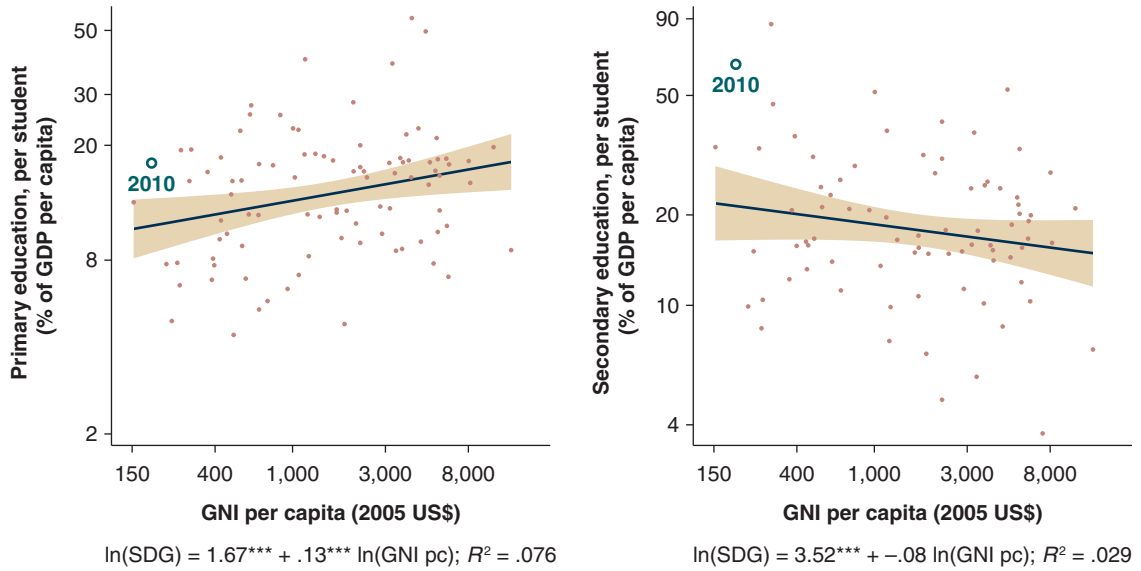


figure continues next page

FIGURE 5.3 *continued*

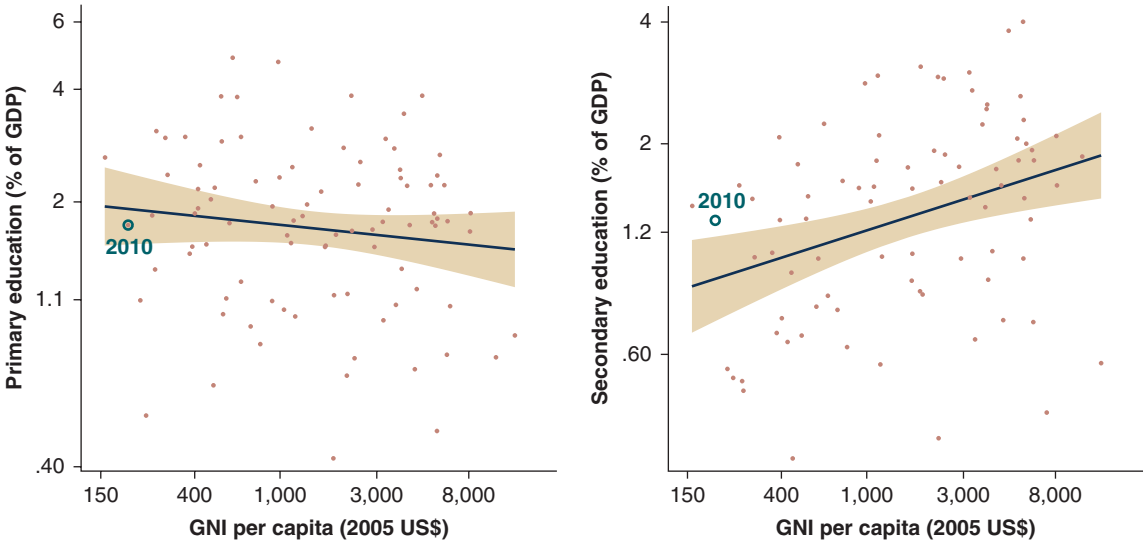
b. Government spending: primary education, per student (left), secondary education, per student (right)



ln(SDG) = 1.67*** + .13*** ln(GNI pc); R^2 = .076

ln(SDG) = 3.52*** + –.08 ln(GNI pc); R^2 = .029

c. Government spending: Primary education (left), Secondary education (right)



ln(SDG) = .940*** + –.06 ln(GNI pc); R^2 = .016

ln(SDG) =–.93** + .16*** ln(GNI pc); R^2 = .113

figure continues next page

FIGURE 5.3 *continued*

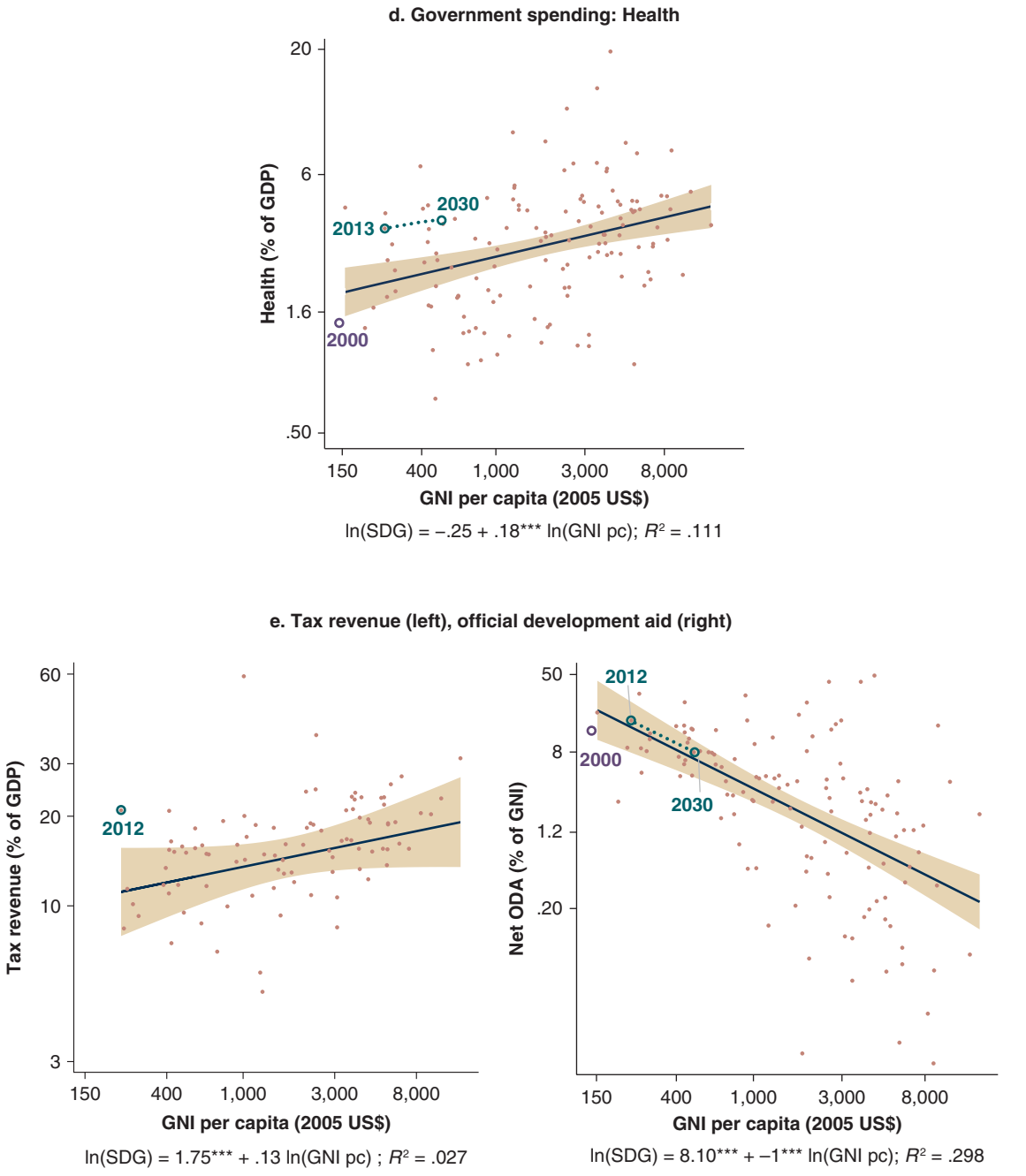
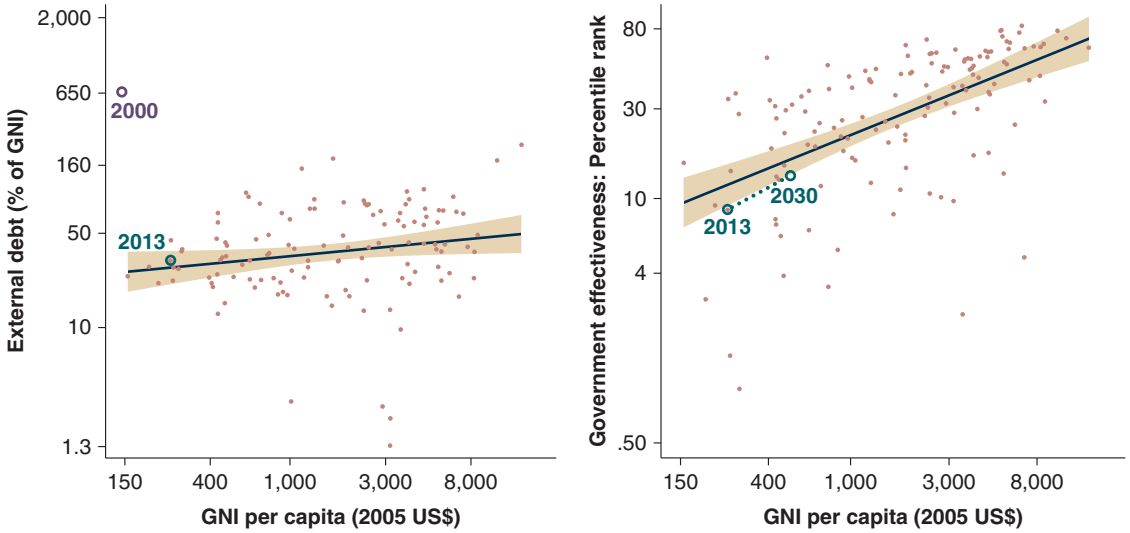


figure continues next page

FIGURE 5.3 *continued*

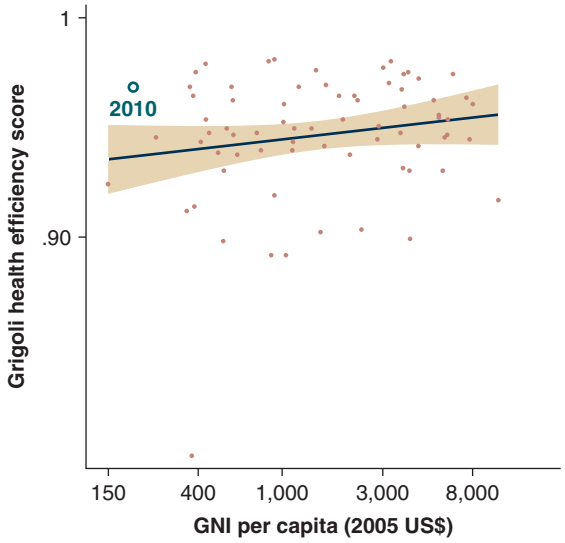
f. External debt (left), Government effectiveness (right)



ln(SDG) = 2.51*** + .14** ln(GNI pc); R^2 = .036

ln(SDG) = 0 + .44*** ln(GNI pc); R^2 = .300

g. Grigoli health efficiency score



ln(SDG) = –.09*** + .01 ln(GNI pc); R^2 = .031

Note: Highlighted observations are for Ethiopia at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

TABLE 5.3 Liberia—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Poverty • Gross pre-primary enrollment (–) • Gross secondary enrollment (–) • Under-5 mortality (+) • Access to improved water source (+)	• Ratio of female to male secondary enrollment (–) • Maternal mortality (×) • Internet Users (+)	• Primary completion • Malaria cases (×) • Access to improved sanitation (–) • Access to electricity (×) • CO_2 emissions (×)
Loose		• HIV prevalence (+)	• Ratio of female to male primary completion (–)

Note: (+) = larger country rank improvement 2000–12 than for GNI per capita; (–) = smaller country rank improvement (or deterioration) 2000–12 than for GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita (+/– 2 percentile points).

data for a limited number of government efficiency measures. Liberia's performance is worse than expected according to the World Bank Government Effectiveness indicator and better than expected according to the health spending efficiency index. Efficiency improvements should be a high priority not only because overall assessment indicators suggest that Liberia is falling behind, but also given the fact that, at very low levels of GNI per capita, they are potentially large also when performance is as expected.

In sum, given the combination of currently higher than expected ODA, when including UN peace-keeping forces, and an anticipated ODA decline as GNI per capita increases, the issue of how additional fiscal space may be created becomes central. While adding to tax revenues may be important, foreign borrowing may also be forthcoming. Opportunities to improve government efficiency need to be pursued. Decisions about the level and allocation of government spending should be made in light of government priorities and would depend on numerous factors that are well beyond the scope of this note, including government capacity in different areas and the scope to encourage complementary private sector activities. From the perspective of the SDG agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged.

4. Conclusions

As summarized in table 5.3, Liberia's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 5 of the selected SDGs, while it falls short for 6.[19] For the other four SDG indicators Liberia's current outcomes are as expected.

As further shown in table 5.3, for most of the indicators, the cross-country relationship with GNI per capita is relatively tight. Given this, by 2030, considerable improvements are projected; however, compared to global ambitions, the improvements fall short for most indicators. This means that, to get closer to the realization of these ambitions, a break with the past is needed. Accelerated growth would raise the capacity to accelerate progress in these SDGs; however, in the case of Liberia, the starting point is very low, suggesting that additional support from the global community may be necessary.

In addition, for indicators such as the ratio of female to male primary completion and access to improved sanitation facilities, Liberia is underperforming and/or falling in country ranking, suggesting that the payoffs from targeted policies that manage to reverse these trends may be substantial. Targeted policies are in general important for indicators with a weak relationship to GNI per capita, since these variables should not be expected to improve strongly or systematically due to indirect effects of more rapid growth in GNI per capita.

The decline in total net ODA is mostly due to the expected decline in UN peace-keeping

forces but also to the typical decline in net ODA as a country's income per capita grows. Given this and the large needs to reach the global SDG ambitions, Liberia need to consider making additional fiscal efforts. In addition to tax increases, fiscal space may be increased via improvements in government efficiency (a top priority) and increased borrowing (as long as it does not violate debt sustainability constraints).

Annex 5A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	2010 value from the World Bank country team
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStat. API ref: DHS: secondary completion rate [HH.DHS.SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS/SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH.STA.MALR/SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	

annex continues next page

Indicator	Source	Comment
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	Support to UN peace-keeping forces excluded using data from IMF (2012, p. 43).
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStat = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. This report does not cover the economic impact of the 2014 Ebola crisis (see World Bank 2014d).
2. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
3. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance by influencing direct determinants (such of access to relevant services or household per capita consumption for different groups) relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it directly influences country SDG capacity.
4. Sources for the indicators are presented in annex 5A.
5. Projections from CEPII are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.
6. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
7. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ are defined as loose.
8. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for Liberia. The same observation applies to expected values for fiscal space indicators.
9. With regard to CO_2, Liberia's current and project 2030 per capita emissions are 2.0 and 3.8 percent of the current OECD average. However, note that Liberia is underperforming for CO_2 emissions (emitting above expected levels) both when emissions are measured as a share of GDP and per capita.
10. The ranking is based on data from 2000 and 2012/2013, or the closest year with data. The year for Liberia data is reported in the graphs.
11. Note that this analysis does not take into account the 2014 Ebola crisis.
12. There are also cases where the solution to the low level of SDG is neither private nor public spending but more efficient policies or complementary policies.
13. The treatment is the same as in table 5.1 and related figures. That is, in table 5.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
14. In many countries, significant savings from reduced fuel subsidies is an obvious potential source of fiscal space given their impact on the environment, income distribution, and technology choice (penalizing labor-intensive technologies). However, Liberia's government does not subsidize fuels to any notable extent. There are only data on posttax fuel subsidies (including estimates of negative external effects) and those are significantly lower than expected in the case of Liberia (IMF 2013a).
15. Net ODA is higher than expected both when measured as a share of GNI and per capita.
16. Data on support to UN military forces are from IMF (2012, p. 43). Note that this analysis does not take into account any additional aid due to the 2014 Ebola crisis, or potential aid increases designed to help Liberia realize global SDG ambitions.
17. IMF (2012, p. 43) projects tax income to increase from 23.6 percent of GDP in 2011 to 25.6 in 2015.
18. The (pre-Ebola) IMF-World Bank DSA for Liberia indicates that Liberia continues to have a low risk of debt distress, following assumptions underpinned by developments in the iron

ore sector and, in the near term, foreign financed investment. DSA projections suggest that the public debt (fully external) of 11.7 percent of GDP in 2012 may increase to 38.8 percent (of which 36.1 percent of GDP external) in 2018 while remaining sustainable (IMF 2012, DSA annex, p. 13).

19. With regard to CO_2, Liberia's current and project 2030 per capita emissions are 2.0 and 3.8 percent of the current OECD average.

Chapter 6

Nigeria

1. Introduction

Economic growth in Nigeria, a low-income country in Western Africa, has been remarkable—even in nonoil sectors—mainly driven by agriculture, trade, and services. During 2001–12, Nigeria's average growth rate for GNI per capita (at constant 2005 US$) was 6.4 percent, which may be compared to a developing (low- and middle-income) country average of 3.0 percent. While aggregate growth has been impressive, Nigeria still faces structural challenges such as income inequality, high unemployment, and growth disparities among regions. A lack of security in the Northern part of the country makes it more difficult to tackle these challenges.

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Nigeria, serving as the starting point for a more complete country development diagnostic as well as a more in-depth country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes Nigeria's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, Nigeria's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[1] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[2]

2. SDG Indicators: History and Projections

Aggregate growth projections covering most countries are produced by various international organizations.[3,4] In the case of Nigeria, the projections to 2030 result in an average annual GNI per capita growth of 2.6 percent. The levels of selected SDGs are then projected to 2030, based on the GNI per capita projections. These business-as-usual projections of the SDGs reflect what can be expected given a country's initial conditions, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[5]

For selected SDG indicators, table 6.1 summarizes data for Nigeria: historical evolution, actual and expected values for a recent year, and projected 2030 values.[6] In figure 6.1, data for Nigeria are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. Projections are presented only when the cross-country relationship between the indicator and GNI per capita is classified as tight.[7] A loose relationship suggests that progress in the indicator is primarily a reflection

TABLE 6.1 Nigeria—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	68.7	62.0	11.6	29.5	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: Income share for lowest 40%	14.1	15.0	16.6	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)		13.4	24.2	23.4	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)		76.0	78.4	83.0	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	24.5	43.8	55.0	56.3	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary completion (% gross)		65.3	23.0	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)		89.1	95.0	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	85.0	88.8	89.3	93.7	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	187.7	117.4	43.6	90.0	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	950	560	171	379	By 2030, reduce the global maternal ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	2.0	0.3	0.2	0.1	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	3.5	3.2	0.8	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	32.5	27.8	41.8	39.9	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defection, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	54.8	64.0	77.1	71.5	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)		10.9	13.0	16.1	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

table continues next page

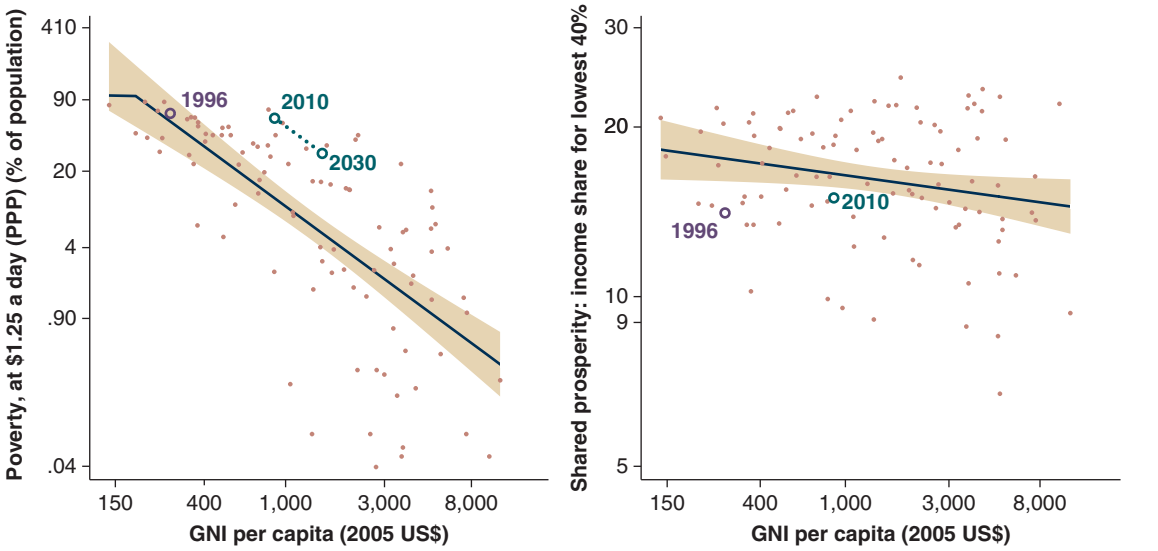
TABLE 6.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Access to electricity (% of population)	44.9	48.0	41.1	59.3	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	0.1	38.0	11.9	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	0.6	0.5	0.5	1.0	Integrate climate change measures into national policies, strategies, and planning.
Memorandum item					
GNI per capita (constant 2005 US$)	467	986		1,570	

Note: Recent refers to the latest year with data, typically 2012 or 2013. If data are not available for 2000 or 2012/2013, the closest year with data is used. If the closest year is more than two years away from the target year (for example, for 1997 or 2003; or 2009), the actual years are reported in the table in the Reference section. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 6.1 **Nigeria—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

a. Poverty (left), shared prosperity: income share of bottom 40% (right)



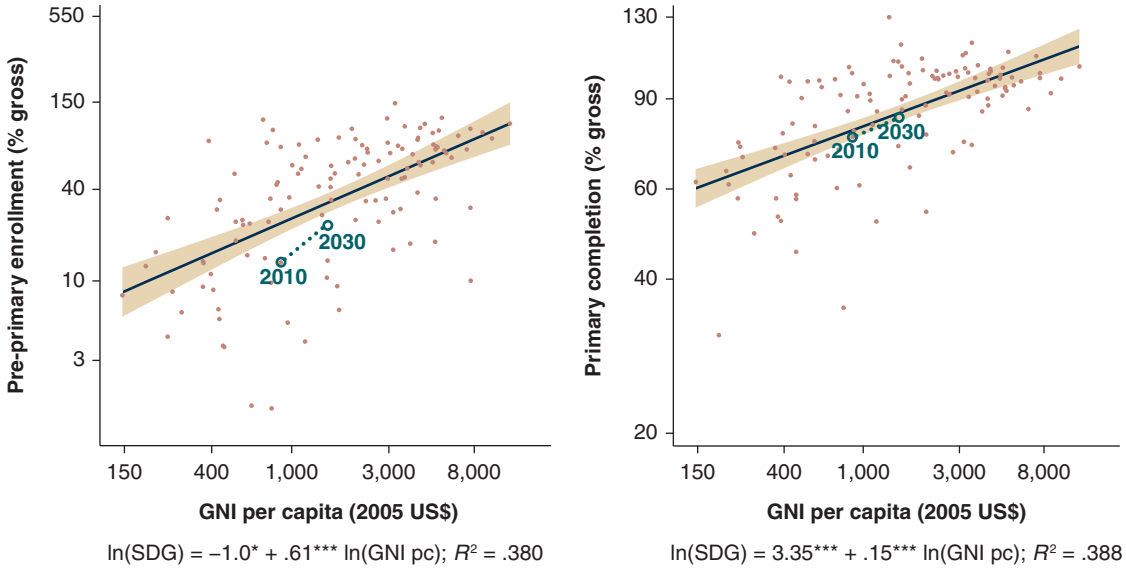
ln(SDG) = 11.8*** + –1.3*** ln(GNI pc); R^2 = .482

ln(SDG) = 3.16*** + –.05** ln(GNI pc); R^2 = .043

figure continues next page

FIGURE 6.1 *continued*

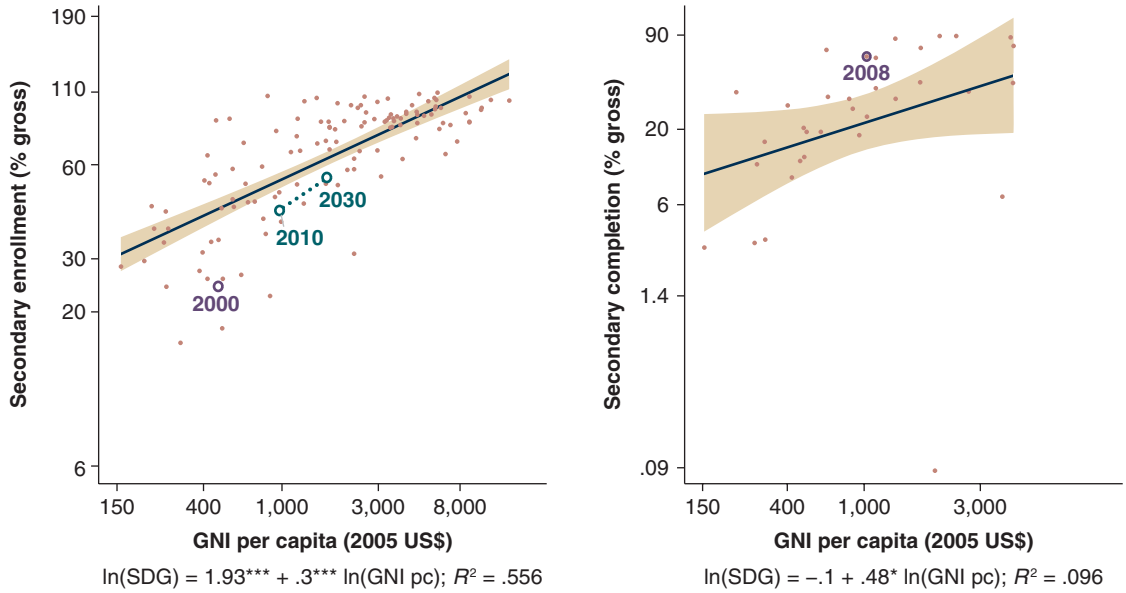
b. Gross pre-primary enrollment (left), primary completion (right)



ln(SDG) = –1.0* + .61*** ln(GNI pc); R^2 = .380

ln(SDG) = 3.35*** + .15*** ln(GNI pc); R^2 = .388

c. Gross secondary enrollment (left), secondary completion (right)



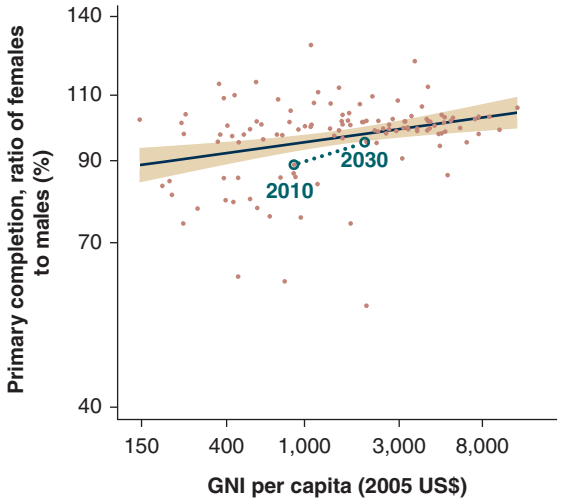
ln(SDG) = 1.93*** + .3*** ln(GNI pc); R^2 = .556

ln(SDG) = –.1 + .48* ln(GNI pc); R^2 = .096

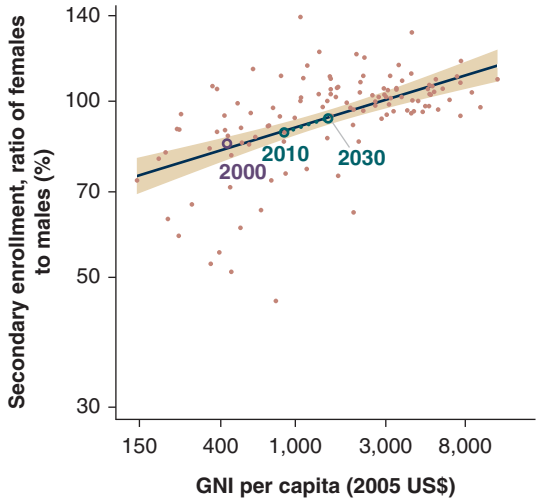
figure continues next page

FIGURE 6.1 *continued*

d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)

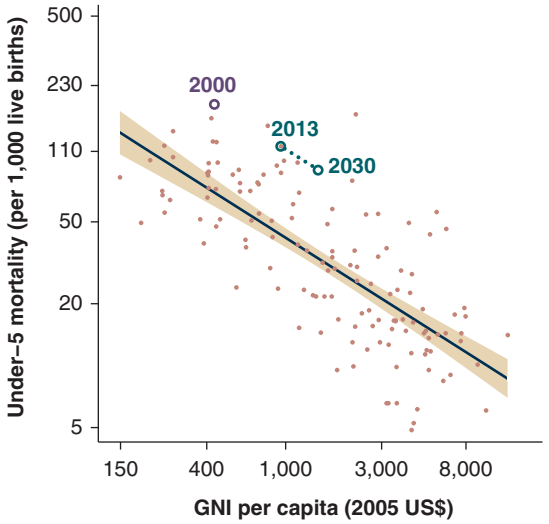


ln(SDG) = 4.28*** + .04*** ln(GNI pc); R^2 = .11

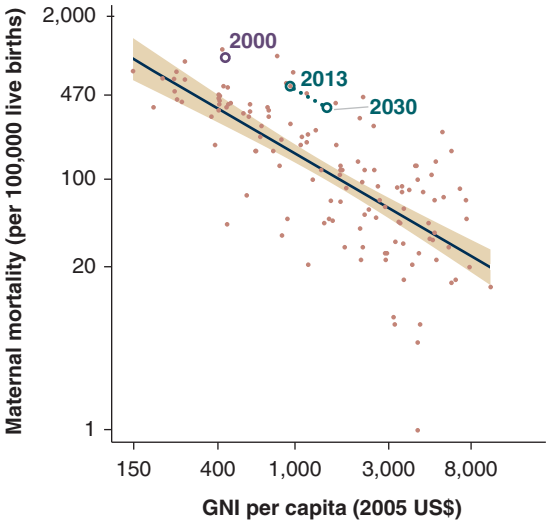


ln(SDG) = 3.78*** + .1*** ln(GNI pc); R^2 = .319

e. Under-5 mortality (left), maternal mortality (right)



ln(SDG) = 8.01*** + –.61*** ln(GNI pc); R^2 = .570

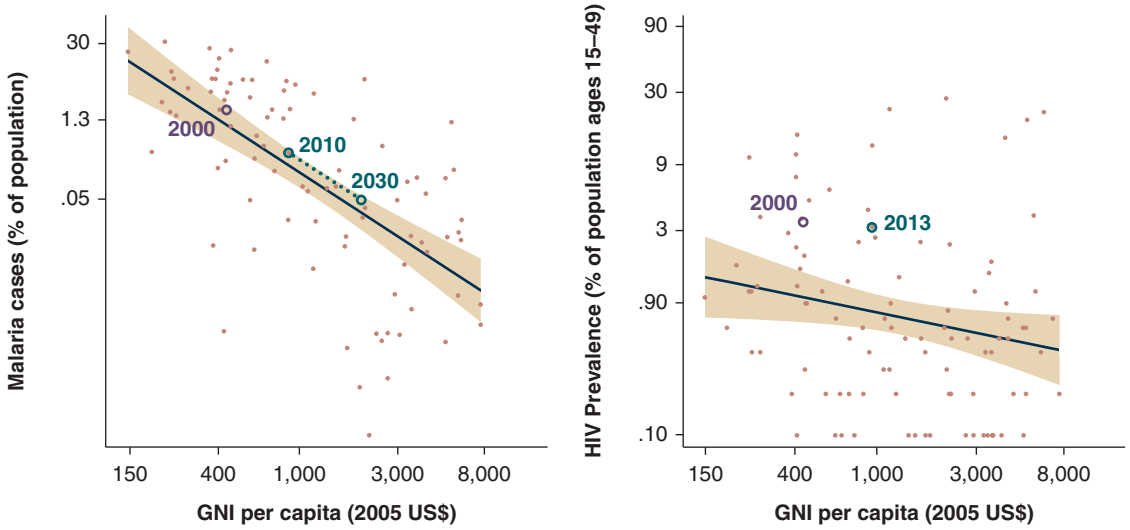


ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .531

figure continues next page

FIGURE 6.1 *continued*

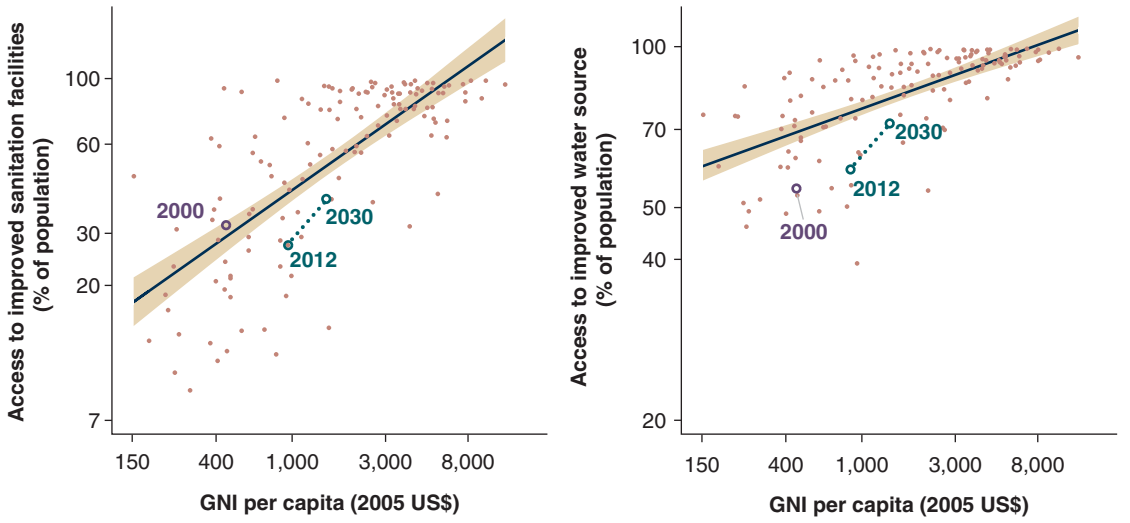
f. Malaria cases (left), HIV prevalence (right)



ln(SDG) = 14.5*** + –2.3*** ln(GNI pc); R^2 = .415

ln(SDG) = 1.96* + –.32** ln(GNI pc); R^2 = .048

g. Access to improved sanitation (left), access to improved water source (right)

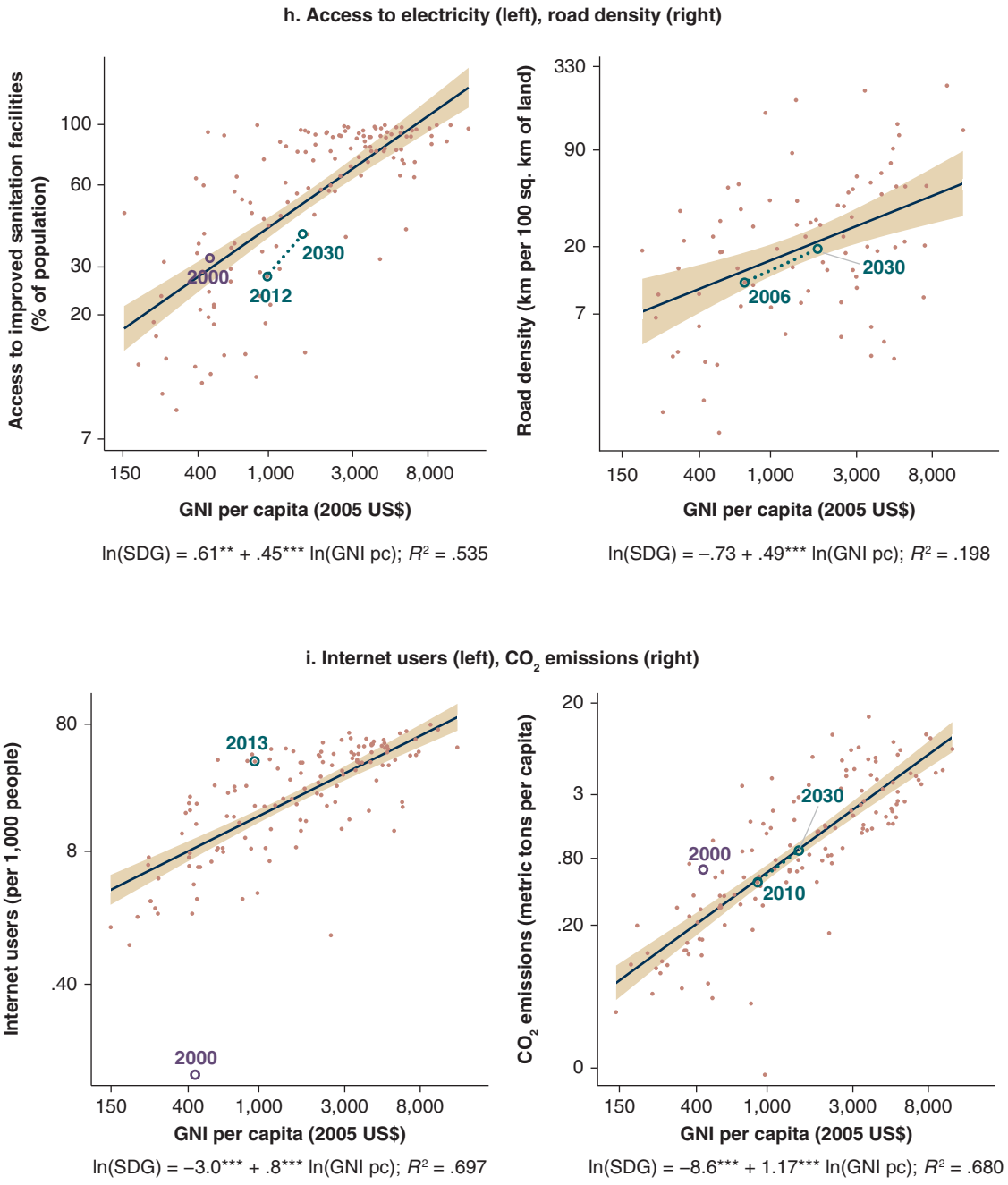


ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .533

ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .432

figure continues next page

FIGURE 6.1 *continued*



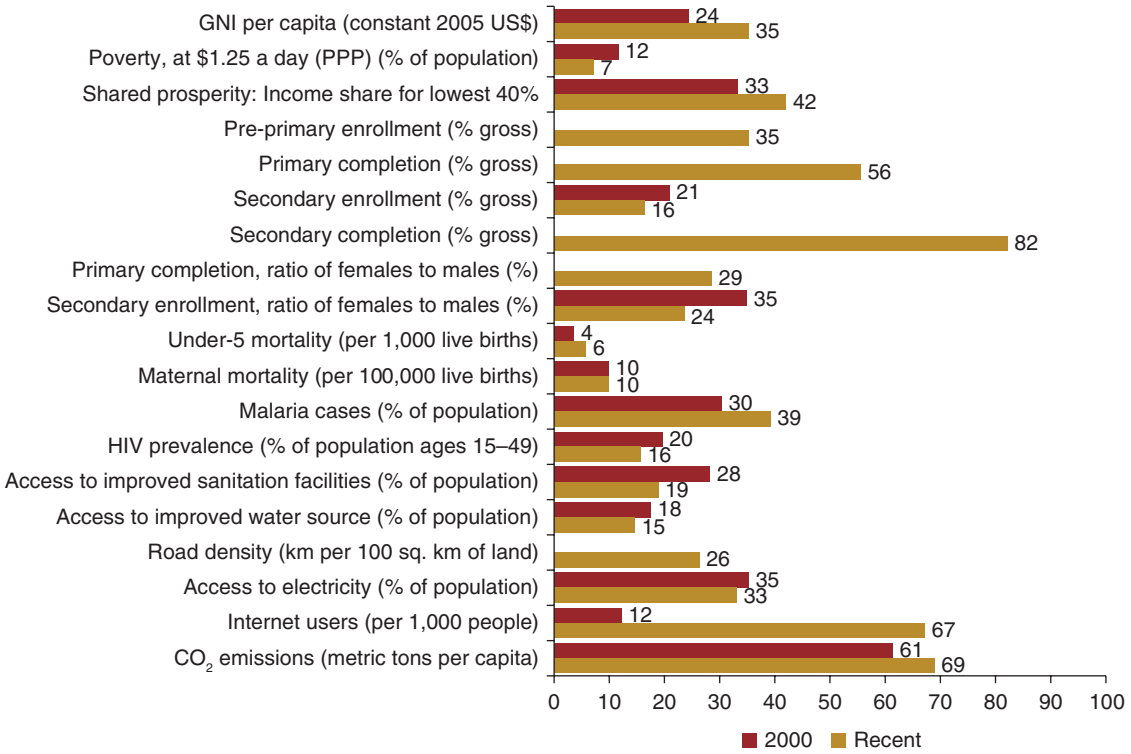
Note: Highlighted observations are for Nigeria at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. Note also that the "expected" values in the cases of a loose relationship to GNI per capita should be taken with caution and interpreted only as best guesses.

In sum, Nigeria's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 3 of the indicators (secondary completion, access to electricity, and Internet use), while it falls short for 10 (poverty, shared prosperity, gross pre-primary enrollment, gross secondary enrollment, ratio of female to male primary completion, under-5 mortality, maternal mortality, HIV prevalence, access to improved water source, and access to improved sanitation).[8] For the other 5 indicators (primary completion, ratio of female to male secondary enrollment, malaria, road density, and CO_2 emissions), Nigeria's current outcomes are as expected. While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high; a possibility that calls for further analysis.

As shown in figure 6.2, Nigeria's GNI per capita ranking among low- and middle-income countries improved by as much as 11 percentile points between 2000 and 2012. Compared to GNI per capita, the progress in ranking among SDG indicators was stronger only for Internet use. For 2 of the indicators the improvement was similar to GNI per capita (shared prosperity and malaria). The remaining SDGs either improved their ranking by less than GNI per capita (as for 2 indicators; under-5 mortality and CO_2 emissions), stayed at the same level of

FIGURE 6.2 Nigeria—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2013 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries.

ranking (maternal mortality), or even deteriorated in ranking for 6 indicators (poverty, ratio of female to male secondary enrollment, gross secondary enrollment, HIV prevalence, access to improved water source, access to improved sanitation, and access to electricity).

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few insights emerge. For example, while virtually all countries made major gains in terms of Internet use since 2000, Nigeria outperformed other countries and is now performing better than expected for its GNI per capita. However, for all other SDGs, Nigeria's ranking is not keeping pace with GNI per capita (improving by less than GNI per capita or even falling); among these, the current outcomes are below expectations for the majority. The performance seems most alarming for poverty, ratio of female to male secondary enrollment, and access to sanitation facilities. The reasons behind these results may be driven by a time lag in income growth translating into SDG effects, or limited government success in ensuring that the broad masses share equitably in the benefits from oil (which in 2012 accounted for 73 percent of government revenue and 36 percent of GDP) (IMF 2014b, p. 24).

By 2030, considerable improvements are projected for most indicators (see table 6.1 and respective graphs in figure 6.1). However, compared to global ambitions, also shown in table 6.1, the improvements are mostly moderate. Possible exceptions are malaria cases, the female to male rates for both primary completion and secondary enrollment: for these Nigeria may get close to achieving global ambitions. Nevertheless, for most indicators, this means that the realization of such ambitions would require a break with the past. This is also true for indicators, such as shared prosperity, for which a weak relationship with GNI per capita precludes projections. Such a break would be facilitated by more rapid and more inclusive growth combined with SDG policies that benefit the disadvantaged.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure).[9] With regard to Nigeria's fiscal space indicators, table 6.2 and figure 6.3 summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[10] The variables cover three aspects of government activities: spending, receipts and debt, and governance and efficiency. While the content in this country-at-a-glance note is too limited for policy conclusions, the indicators have been selected to inform thinking about the need and the ability of the government to adjust spending in priority areas, taking efficiency into consideration. Again, the exact level of the expected value should be interpreted with caution when the relationship between the fiscal space indicator and GNI per capita is loose.

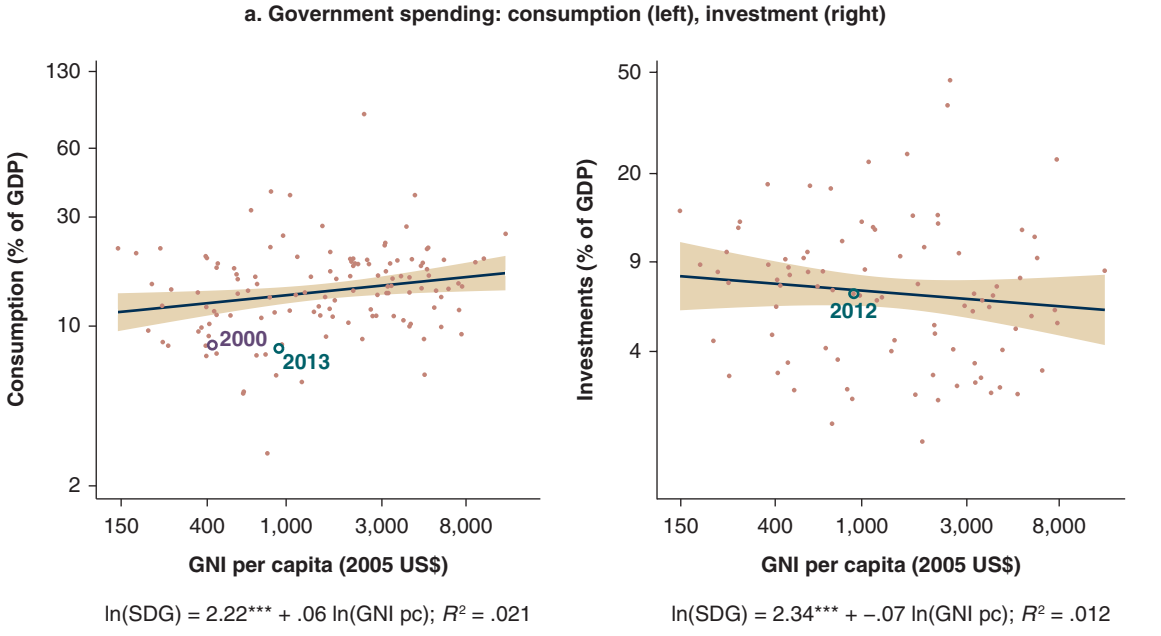
Room for additional priority spending may be created by reducing low-priority spending, increasing current receipts, and/or increasing borrowing. In terms of the selected government spending in areas that may support the SDG agenda, Nigeria performs as expected (compared to a typical country at the same GNI per capita level) for total public investments and fuel subsidies, but it is below the expected level for total consumption and public health. Spending on fuel subsidies (2.7 percent of GDP in Nigeria) is the most obvious case of low-priority spending from the post-2015 agenda perspective.[11] While there is no specific data for educational spending on primary and secondary level in Nigeria, other country data suggest there is a general underspending at least in primary education.[12] In the absence of any overspending in the totals of public consumption and investment, any additional gains in fiscal space would likely have to come from higher revenues and/or improved spending efficiency (including reallocation of spending to high-priority areas).

TABLE 6.2 Nigeria—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	8.3	8.1	13.7	—
Investments (% of GDP)		6.2	6.4	—
Health (% of GDP)	1.5	1.9	2.9	—
Fuel subsidy (% of GDP)		2.7	1.7	—
Government receipts and debts				
Tax revenue (% of GDP)		20.0	13.7	—
Net ODA (% of GNI)	0.4	0.4	3.3	0.3
External debt (% of GNI)	78.5	2.8	33.3	—
Governance and government efficiency				
Government effectivness: Percentile rank	14.6	16.3	21.6	21.2
Public investment management index		1.1	1.5	—
Memorandum item				
GNI per capita (constant 2005 US$)	467	986		1,570

Note: Recent refers to the latest year with data, typically 2012 or 2013. If data is not available for 2000 or 2012/2013, the closest year with data is used. If the closest year is more than two years away from the target year (for example, for 1997 or 2003; or 2009), the actual years are reported in the table in the Reference section. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

FIGURE 6.3 Nigeria—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting



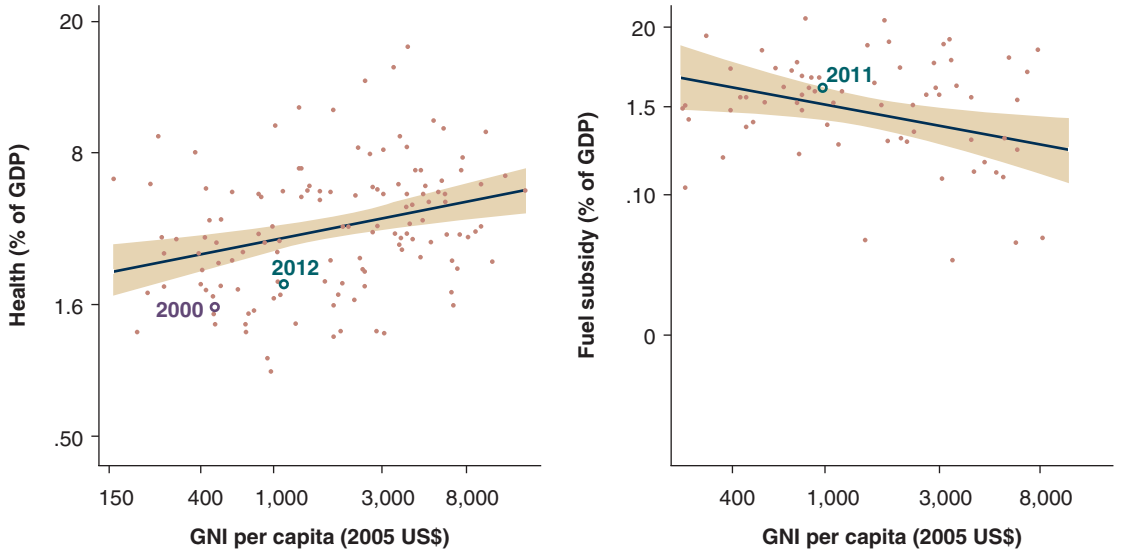
ln(SDG) = 2.22*** + .06 ln(GNI pc); R^2 = .021

ln(SDG) = 2.34*** + –.07 ln(GNI pc); R^2 = .012

figure continues next page

FIGURE 6.3 *continued*

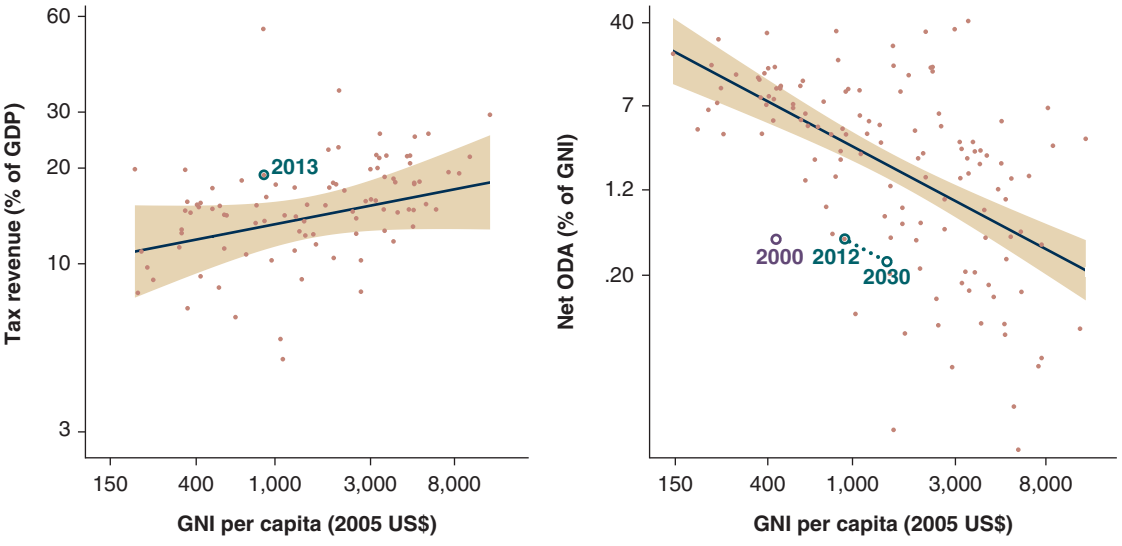
b. Government spending: health (left), fuel subsidy (right)



ln(SDG) = -.04 + .16*** ln(GNI pc); R^2 = .090

ln(SDG) = 4.73*** + -.62** ln(GNI pc); R^2 = .090

c. Tax revenue (left), official development aid (right)

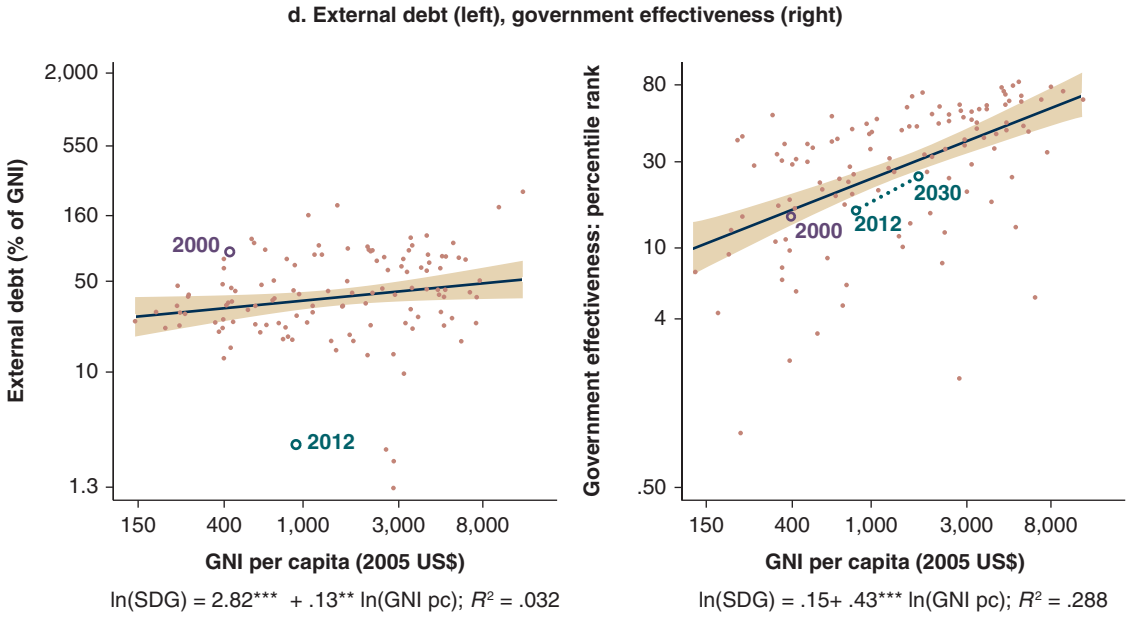


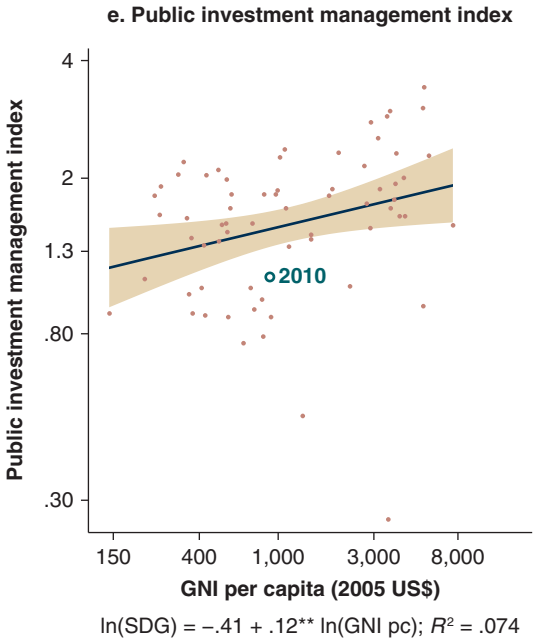
ln(SDG) = 1.82*** + .12 ln(GNI pc); R^2 = .024

ln(SDG) = 8.26*** + –1.0*** ln(GNI pc); R^2 = .308

figure continues next page

FIGURE 6.3 *continued*





Note: Highlighted observations are for Nigeria at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

Of the government receipts included in table 6.2, net Official Development Assistance (ODA) is lower than expected while tax revenues are higher than expected. Note, however, that total tax revenues were 20 percent of GDP in 2013, but only 4 percent of these were nonoil tax revenue.[13] As further shown, cross-country patterns suggest that, as GNI per capita grows, net ODA declines as percent of GDP (without changing significantly in per capita terms). If Nigeria were to gradually converge to expected levels given its GNI per capita, then ODA would be expected to decrease from the current 0.4 percent of GNI to 0.3 percent in 2030. It is difficult to project future ODA for Nigeria given government access to high but uncertain oil revenues, and the fact that the country at this point receives much less ODA than expected given its GNI per capita. Moreover, the fact that cross-country patterns point to a likely decline in ODA does not mean that an increase is excluded: It depends on the priorities of donors and their relationships with Nigeria's government.

The relationship between tax revenues and GNI per capita, as well as the debt stock and GNI per capita, is not tight enough for projecting expected changes. However, IMF projects a decline in total revenues, with the decline in oil revenues being larger than the increase in nonoil revenues.[14,15] Higher taxes would reduce the resources controlled by domestic households and firms, pointing to the need to consider the combined impact on SDGs and other indicators from higher taxes and the spending increases that are financed by these taxes. The cross-country data suggest that Nigeria's external debt stock is low and the latest Debt Sustainability Analysis concludes Nigeria remains as low risks given current macroeconomic assumptions.[16] In sum, some fiscal space may be added through a decrease in fuel subsidies, a marginal increase in aid, and, more tentatively, increased debt. However, although oil revenues are expected to increase in the short to medium run (not least by addressing oil theft and production losses as well as oil-revenue management), the projected long-term decline in oil revenue will necessitate additional fiscal effort.

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Table 6.2 displays data for a limited number of government efficiency measures. Nigeria's performance is weaker than expected according to both the World Bank Government Effectiveness indicator and the Public Investment Management Index. Hence, even though they are unpredictable, efficiency gains could potentially add considerable fiscal space.

In sum, the fact that the decline in oil revenues is projected to be larger than the increase in nonoil revenues, the issue of how additional fiscal space may be created becomes central. Decreased spending on fuel subsidies is one potential source and—depending on future decisions of the government, donors, and the actors of the international financial system—increases in ODA and/or foreign borrowing may also be forthcoming. Opportunities to improve government efficiency should also be pursued. Decisions about the level and allocation of government spending should be made in light of government priorities and would depend on numerous factors that are well beyond the scope of this note, including government capacity in different areas and the scope to encourage complementary private sector activities. For example, remittances from the country's workers abroad was a non-negligible 4.0 percent of GDP in 2013 (above what is expected for Nigeria's GNI per capita level), and depending on how these flows are channeled, the contribution to the SDG agenda will differ. From the perspective of the SDG agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged.

TABLE 6.3 Nigeria—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Internet users (+) • Access to electricity (-)	• Primary completion • Ratio of female to male secondary enrollment (–) • Malaria (x) • Road density • CO_2 emissions (–)	• Poverty (–) • Gross pre-primary enrollment • Gross secondary enrollment (–) • Under-5 mortality (–) • Maternal mortality (–) • Access to improved water source (–) • Access to improved sanitation (–)
Loose	• Secondary completion		• Shared prosperity (x) • Ratio of female to male primary completion • HIV prevalence (–)

Note: (+) = larger country rank improvement 2000–12/13 than for GNI per capita; (–) = smaller country rank improvement (or deterioration) 2000–12/13 than for GNI per capita; (×) = the same country rank change 2000–12/13 as for GNI per capita (+/– 2 percentile points).

4. Conclusions

As summarized in table 6.3, Nigeria's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 2 indicators (secondary completion and Internet use) and as expected for another 6. However, outcomes fall short of expectations for 10 of the covered indicators. In terms of percentile rankings among all low- and middle-income countries with data, the outcomes have deteriorated for most indicators and improved only for one (Internet use).

As shown in table 6.3, for most of the indicators, the cross-country relationship with GNI per capita is relatively tight. Given this, by 2030, considerable improvements are projected; however, compared to global ambitions, the improvements fall short for most indicators. This means that, to get closer to the realization of these ambitions, a break with the past is needed. Accelerated growth would raise the capacity to accelerate SDG progress.

However, for Nigeria, the fact that the country is underperforming for most indicators suggests a crucial role for policies that, directly or indirectly, promote the SDG agenda with potentially strong payoffs. If such policies are put in place, Nigeria may during the next decades improve its percentile rankings compared to other countries with similar growth rates for GNI per capita. Policies would also be important for two indicators with a weak relationship to GNI per capita: shared prosperity and HIV prevalence as they should not be expected to improve strongly or systematically in response to more rapid growth in GNI per capita. However, more rapid growth would promise to contribute to more rapid growth in the level of per capita incomes for the bottom 40 percent.

The projected long-term decline in oil revenue will necessitate additional fiscal effort. In addition, through increased nonoil taxes, fiscal space may be increased via a combination of decreased fuel subsidies, increased aid, government efficiency, and increased borrowing (as long as it does not violate debt sustainability constraints). The net impact on SDG progress from higher taxes would depend on marginal government efficiencies both in spending and in taxation. Finally, even though they are unpredictable, efficiency gains could potentially add considerable fiscal space.

Annex 6A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStat. API ref: DHS: secondary completion rate [HH.DHS.SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS /SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/ Population, total *100 [SH.STA.MALR/ SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	

annex continues next page

Indicator	Source	Comment
Primary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStats = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
2. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
3. Projections from CEPII (or OECD when data is missing) have been used for the Country Development Diagnostics applications, but to

what extent they seem realistic should be set against other projections, historic growth, and recent developments.

4. Given the fact that available sources only project GDP whereas this book uses GNI data, we have to assume, for most countries quite reasonably, that projected GNI growth will not deviate substantially from projected GDP growth (both expressed in constant 2005 US$).
5. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected relative to GNI per capita, it is necessary to incorporate convergence toward the expected value into the projections. It is here assumed that such convergence is gradual. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
6. Sources for the indicators are presented in the table in the annex 6A.
7. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 > 0.1$ are defined as loose.
8. With regard to CO_2, Nigeria's current and project 2030 per capita emissions are 4.9 and 12.0 percent of the current OECD average.
9. There are also cases where the solution to the low level of SDG is neither private nor public spending but more efficient policies or complementary policies.
10. The treatment is the same as in table 6.1 and related figures. That is, in table 6.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
11. Fuel subsidies are detrimental to the climate and encourage technologies that are less labor intensive, tending to generate employment for fewer workers at lower wages.
12. Preliminary data from the World Bank country team suggest that spending on basic education (from preschool to lower secondary school) amounts to 0.9 percent of GDP or, when measured per student, to 5.0 percent of GDP per capita. This can be compared to an expected level of spending *only* for primary education of about 1.7 percent of GDP or 13 percent of GDP per capita when measured per student.
13. Data from http://www.premiumtimesng.com/business/158283-nigerias-tax-revenue-ratio-gdp-drops-okonjo-iweala-says.html.
14. In 2012, nonoil revenues and grants in 2012 amounted to 6.8 percent of GDP and oil revenues to 18.5 percent. IMF (2014b, p. 24) projects that, by 2018, nonoil revenues and grants will be 8.3 and oil revenues 10.0 percent. An increase in nonoil tax revenues is expected mainly through improved tax base and administration rather than the tax rate (IMF 2014b, p. 14). These projections were made before the dramatic international oil price decline in the fall of 2014 and early 2015.
15. Note, however, that these projections of oil revenues are based on the oil prices, which are much higher than today's prices and probably much higher than the long–term equilibrium price.
16. According to IMF-World Bank Debt Sustainability Analysis (DSA) for Nigeria (IMF 2014b, annex), Nigeria remains at a low risk of debt distress under current macroeconomic assumptions. However, without significant or timely compensating policy measures, a prolonged negative oil price shock or a fiscal revenue shortfall could undermine the recent progress in achieving macroeconomic and debt sustainability.

Chapter 7

Pakistan

1. Introduction

Pakistan is a lower middle-income country in South Asia. After gaining independence from Britain in 1947, Pakistan has lived through periods of military rule, political instability, and conflicts with neighboring India, as well as ongoing conflict in its border areas with Afghanistan. Even though Pakistan has realized substantial social and economic progress in recent decades, compared to most other developing countries, economic growth has been relatively unstable, making progress on SDG indicators more difficult. During 2001–12, Pakistan's average growth rate for GNI per capita (at constant 2005 US$) was 2.7 percent, which may be compared to a developing (low- and middle-income) country average of 3.0 percent. During the same period, Pakistan's ranking according to the UNDP Human Development Index (among countries included both in 2000 and 2012) remained in the 22nd percentile. However, recently, Pakistan has turned a situation of declining private investment, a weak external position, and a widening fiscal deficit into one of increased GDP growth (4.1 percent in 2013/14), declining fiscal deficit, decelerating inflation, and improved international reserves (IMF 2015d, p. 18).

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Pakistan, serving as the starting point for a more complete country development diagnostic as well as a more comprehensive country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes Pakistan's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, Pakistan's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[1] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[2]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 7.1 summarizes data for Pakistan: historical evolution, actual and expected values for a recent year, and projected 2030 values.[3] In figure 7.1, data for Pakistan are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Pakistan, the projected average annual rate of GNI per capita growth is 2.5 percent.[4] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[5] Projections for SDG indicators are presented only when the cross-country

TABLE 7.1 Pakistan—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	29.0	12.7	14.9	6.8	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: Income share for lowest 40%	21.1	22.7	16.7	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)	62.8	82.1	22.1	83.6	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)		71.9	76.6	77.8	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)		36.6	52.3	46.6	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)		85.7	94.5	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)		73.5	87.9	79.9	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	113	86	49	66	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	280	170	205	116	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	0.06	0.16	0.30	0.06	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	0.10	0.10	0.84	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	37.4	47.6	38.1	54.7	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	88.3.	91.4	75.1	92.9	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)	31.2	33.0	12.7	35.9	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	79.5	91.4	37.2	92.7	By 2030, ensure universal access to affordable, reliable, and modern energy service.
Internet users (per 1,000 people)	0.1	10.9	10.2	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

table continues next page

TABLE 7.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Environment					
CO_2 emissions (metric tons per capita)	0.74	0.93	0.42	1.23	Integrate climate change measures into national polices, strategies, and planning.
Memorandum item					
GNI pre capita (constant 2005 US$)	589	807		1,267	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 7.1 **Pakistan—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

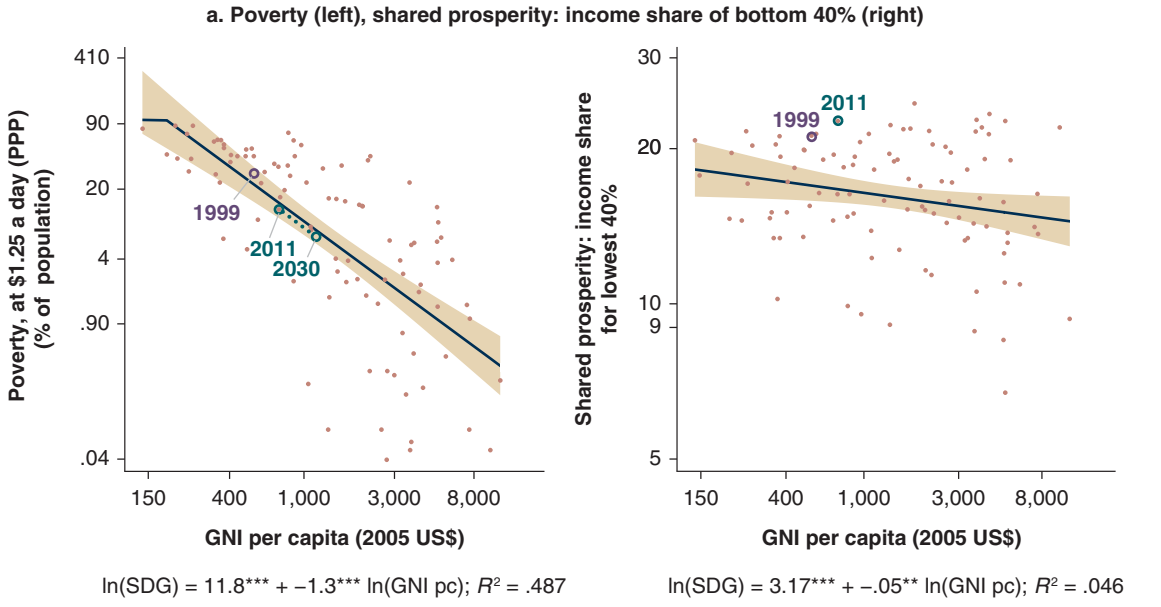
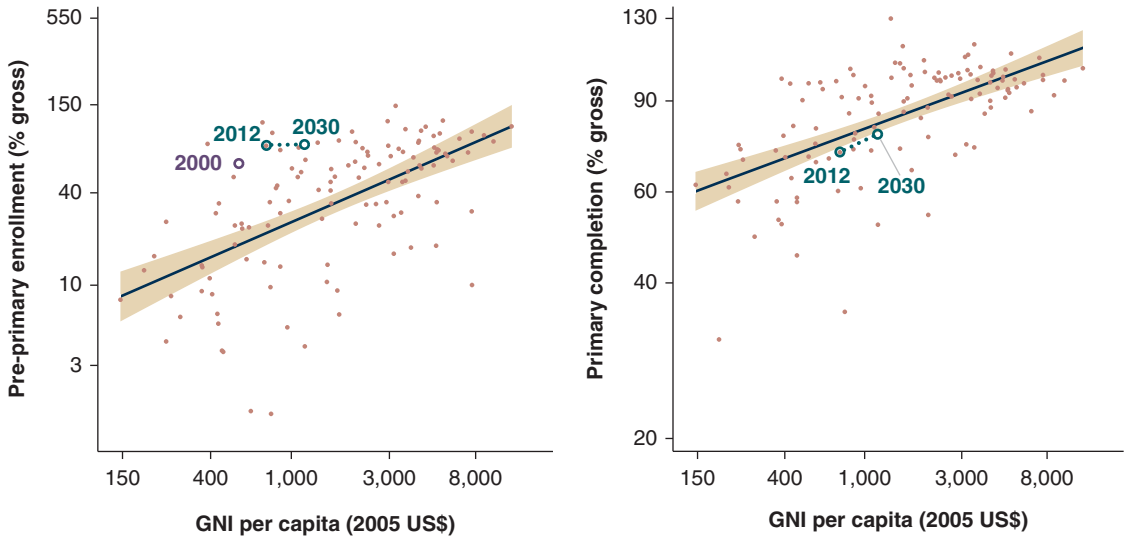


figure continues next page

FIGURE 7.1 *continued*

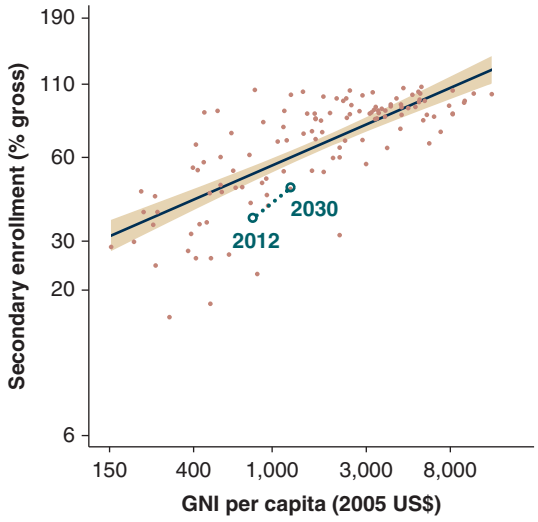
b. Gross pre-primary enrollment (left), primary completion (right)



ln(SDG) = –.73 + .570*** ln(GNI pc); R^2 = .348

ln(SDG) = 3.38*** + .14*** ln(GNI pc); R^2 = .372

c. Gross secondary enrollment

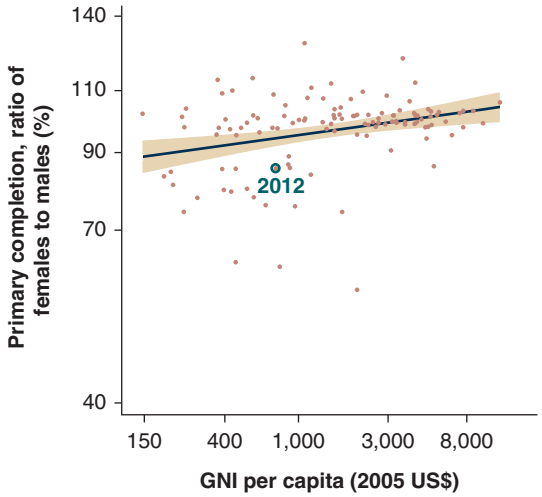


ln(SDG) = 1.9*** + .31*** ln(GNI pc); R^2 = .558

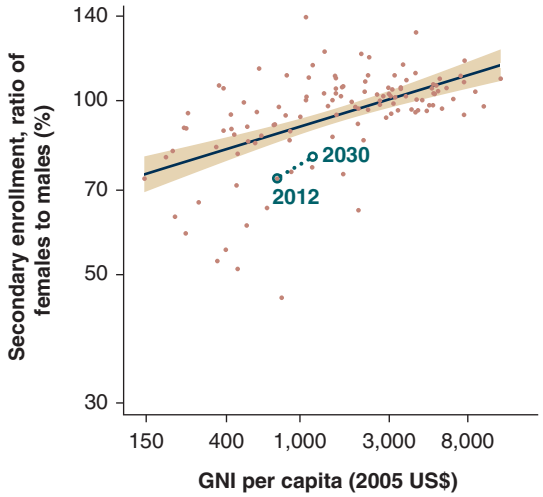
figure continues next page

FIGURE 7.1 *continued*

d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)

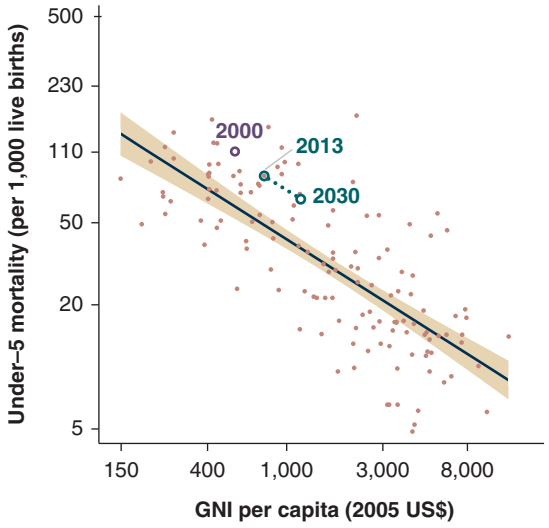


ln(SDG) = 4.31*** + .04*** ln(GNI pc); R^2 = .093

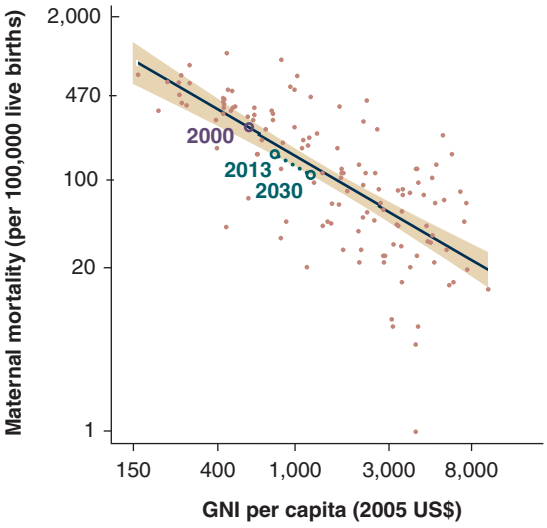


ln(SDG) = 3.82*** + .1*** ln(GNI pc); R^2 = .297

e. Under-5 mortality (left), maternal mortality (right)



ln(SDG) = 7.99*** + –.61*** ln(GNI pc); R^2 = .560

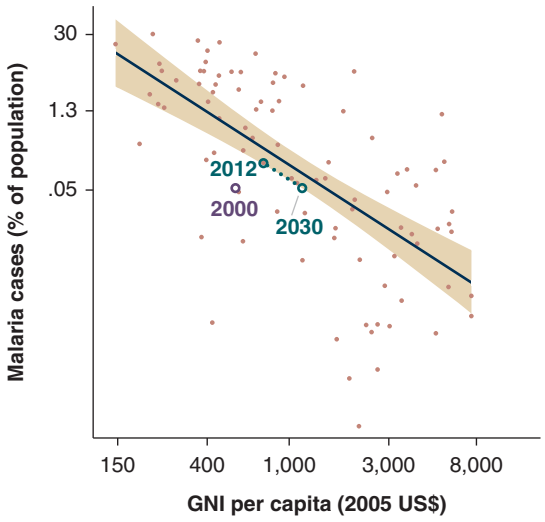


ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .519

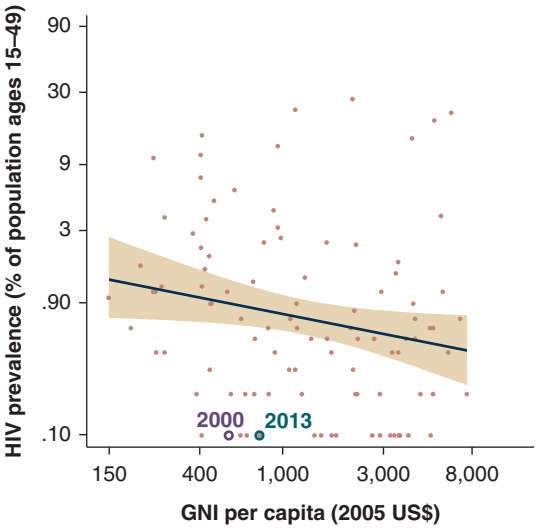
figure continues next page

FIGURE 7.1 *continued*

f. Malaria cases (left), HIV prevalence (right)

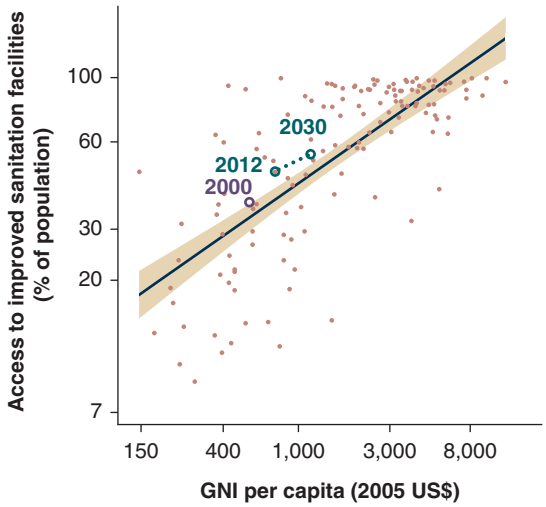


ln(SDG) = 14.5*** + –2.3*** ln(GNI pc); R^2 = .412

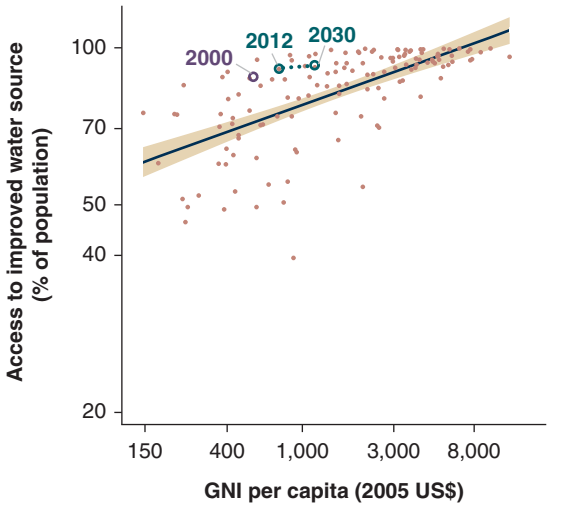


ln(SDG) = 1.88* + –.31** ln(GNI pc); R^2 = .044

g. Access to improved sanitation (left), access to improved water source (right)



ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .535

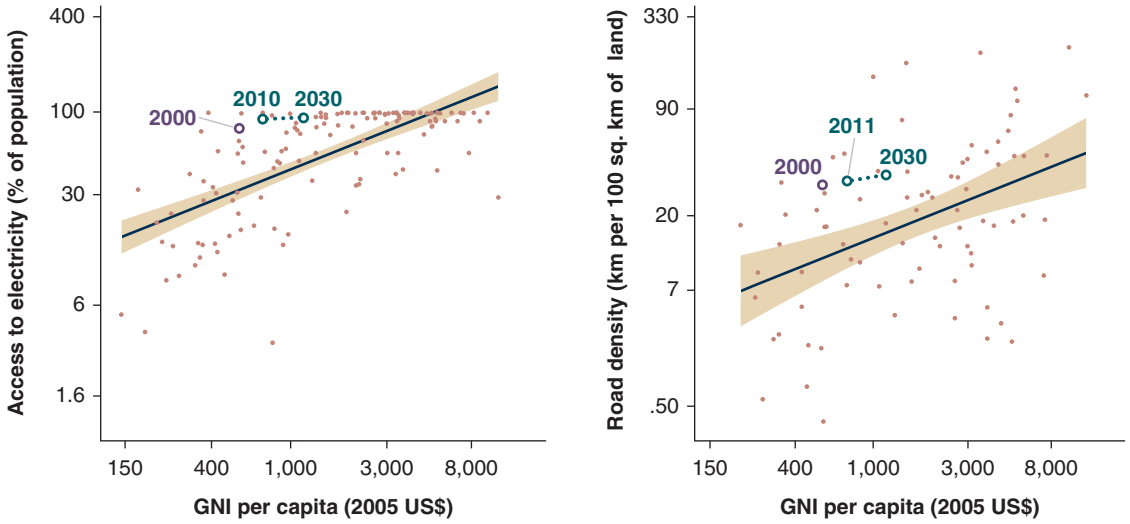


ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .436

figure continues next page

FIGURE 7.1 *continued*

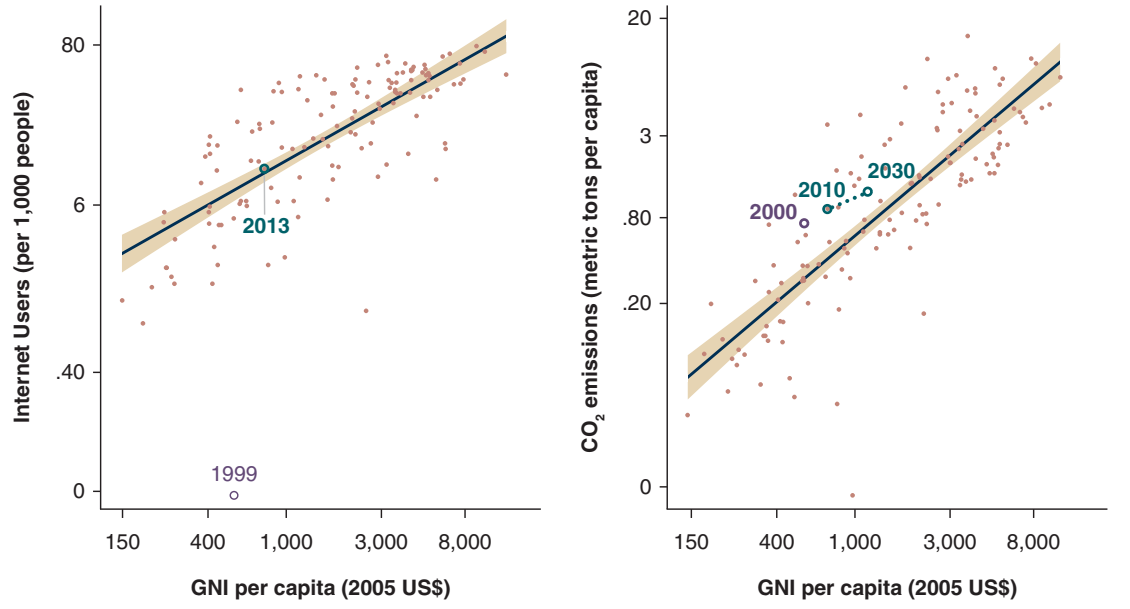
h. Access to electricity (left), road density (right)



ln(SDG) = .29 + .5*** ln(GNI pc); R^2 = .458

ln(SDG) = –.63 + .48*** ln(GNI pc); R^2 = .189

i. Internet users (left), CO_2 emissions (right)



ln(SDG) = –2.9*** + .78*** ln(GNI pc); R^2 = .568

ln(SDG) = –8.6*** + 1.16*** ln(GNI pc); R^2 = .677

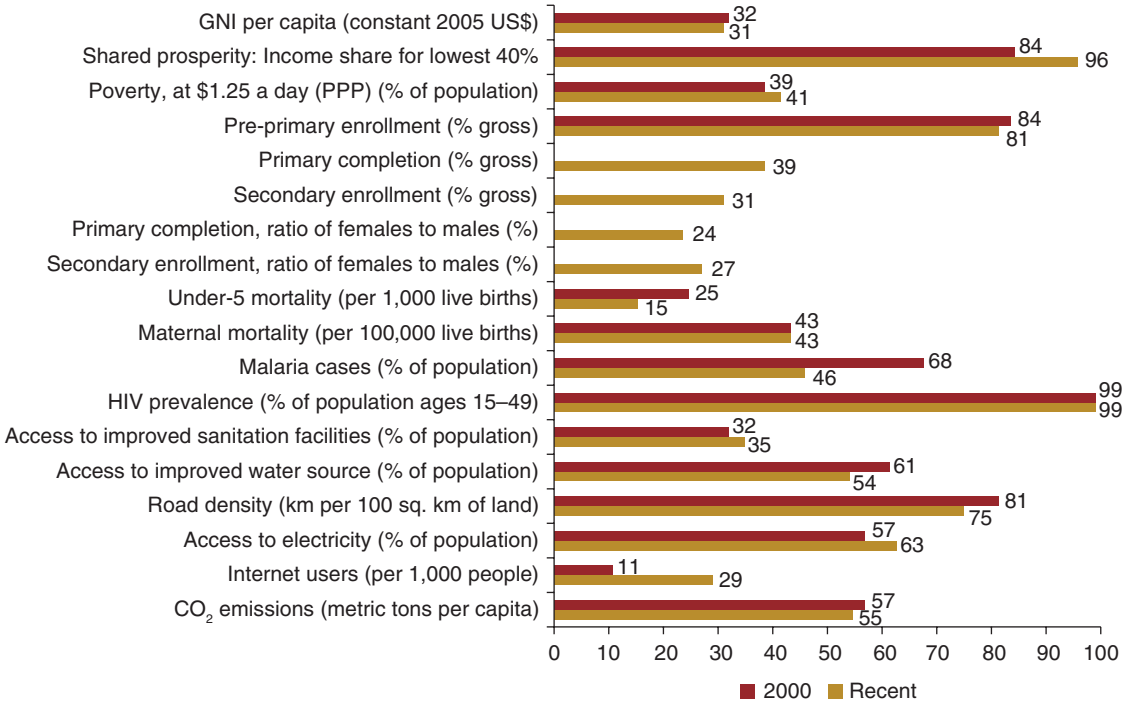
Note: Highlighted observations are for Pakistan at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

relationship between the indicator and GNI per capita is classified as tight.[6] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[7]

In sum, Pakistan's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 8 of the indicators (shared prosperity, pre-primary school enrollment, maternal mortality, HIV prevalence, access to improved water source, access to improved sanitation, access to electricity, and road density).[8] For another 2 (poverty and malaria), current outcomes are as expected. The country falls short of expectations for the remaining 7 (primary completion rate, secondary school enrollment, ratio of female to male primary completion, ratio of female to male secondary enrollment, under-5 mortality, Internet users, and CO_2 emission).[9] While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may alternatively point to areas in which payoffs from feasible policy change are relatively high, a possibility that calls for further analysis.

Figure 7.2 shows that, between 2000 and 2012, Pakistan's ranking among low- and middle-income countries stayed more or less the same in terms of GNI per capita (a deterioration by 1 percentile point). During the same period, among the 13 SDG indicators with rankings for both years, 4 improved their rankings (shared prosperity, access to sanitation facilities, access to electricity, and Internet use (strongly).[10] The rankings were roughly unchanged for 4 indicators (poverty, maternal mortality, HIV prevalence,

FIGURE 7.2 Pakistan—Percentile Cross-Country Ranking for SDG Indicators since 2000



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The ranking for an indicator is not reported if the available sample is less than 20. Recent refers to the latest year with data (typically 2011 or 2012). If data is not available for 2000 or 2013, the closest earlier year with data is used, however, the data is never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs.

and CO_2 emissions), while they deteriorated for 5 indicators (gross pre-primary enrollment, under-5 mortality, malaria cases, access to improved water source, and road density).

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few insights emerge. Under-5 mortality stands out as a particularly problematic area since it combines underperformance with a strong deterioration in ranking compared to GNI per capita. This is also the case for malaria that, although current performance is as expected, Pakistan's ranking has significantly deteriorated. For the SDG indicator with the strongest ranking improvement, Internet use, Pakistan nevertheless remains an underperformer. For shared prosperity, the country's ranking has improved considerably and the indicator value is now better than expected.

By 2030, considerable improvements are projected for most of the selected indicators (see table 7.1 and respective graphs in figure 7.1). However, compared to global ambitions, also shown in table 7.1, the improvements are moderate. This means that, to get closer to the realization of these ambitions, a break with the past is needed, something that would be facilitated by a combination of more rapid growth and improvements in policies that directly influence different SDGs.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure).[11] With regard to Pakistan's fiscal space indicators, table 7.2 and figure 7.3

TABLE 7.2 Pakistan—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	8.6	11.0	13.4	—
Investments (% of GDP)	5.6	3.5	6.5	—
Primary education (% of GDP)		0.8	1.7	—
Secondary education (% of GDP)		0.6	1.2	—
Secondary education, per student (% of GDP per capita)		10.4	18.7	—
Health (% of GDP)	0.4	1.0	2.6	1.2
Fuel subsidy (% of GDP)		4.0	1.9	—
Government receipts and debts				
Tax revenue *(%* of GDP)	10.6	9.9	13.1	—
Net ODA *(%* of GNI)	1.0	0.9	4.0	0.6
External debt (% of GNI)	45.1	22.8	32.3	—
Governance and government efficiency				
Government effectiveness: percentile rank	31	23	20	27
Public investment management index		1.6	1.5	—
Memorandum item				
GNI per capita (constant 2005 US$)	589	807	—	1,267

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

FIGURE 7.3 **Pakistan—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting**

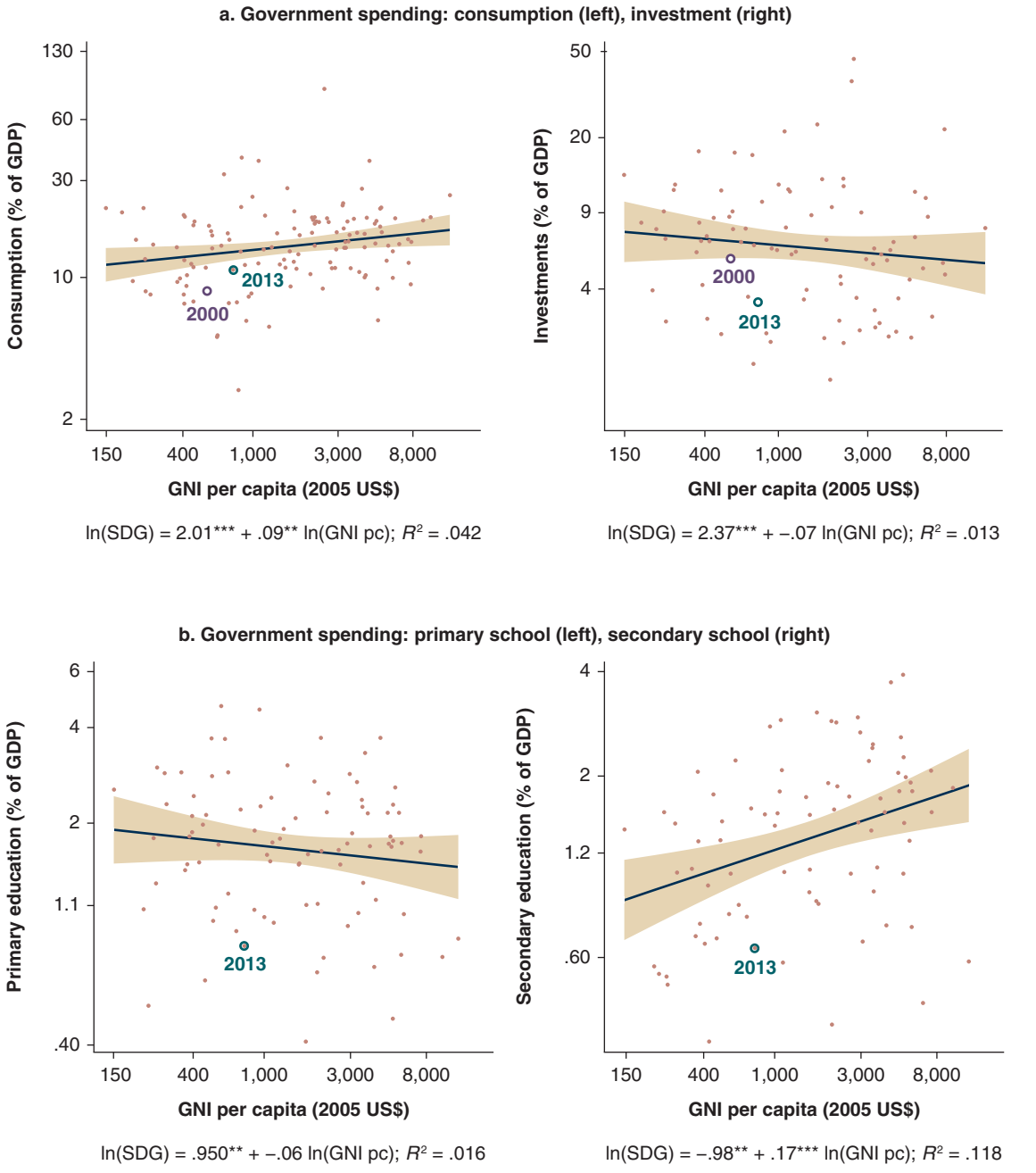


figure continues next page

FIGURE 7.3 *continued*

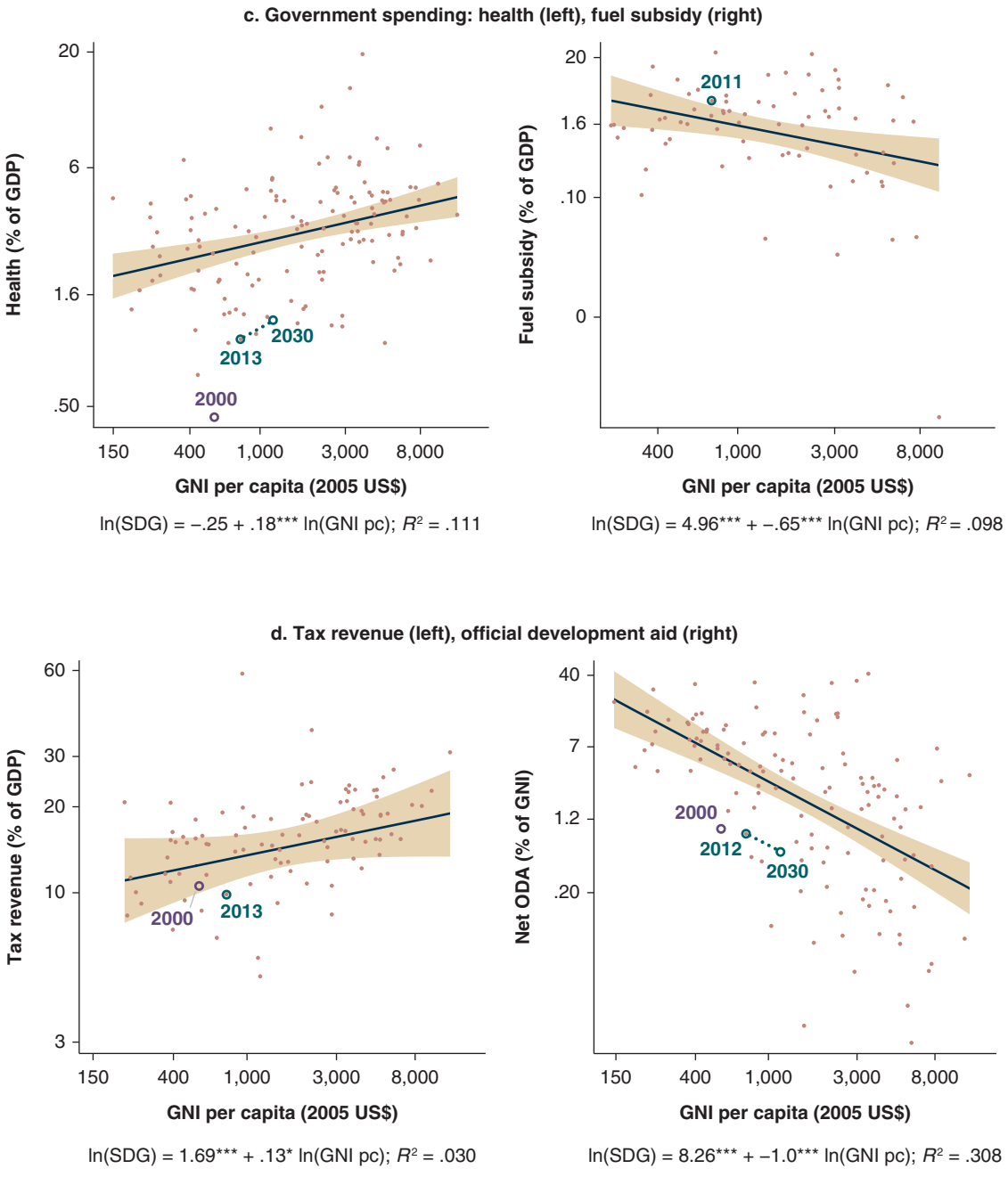
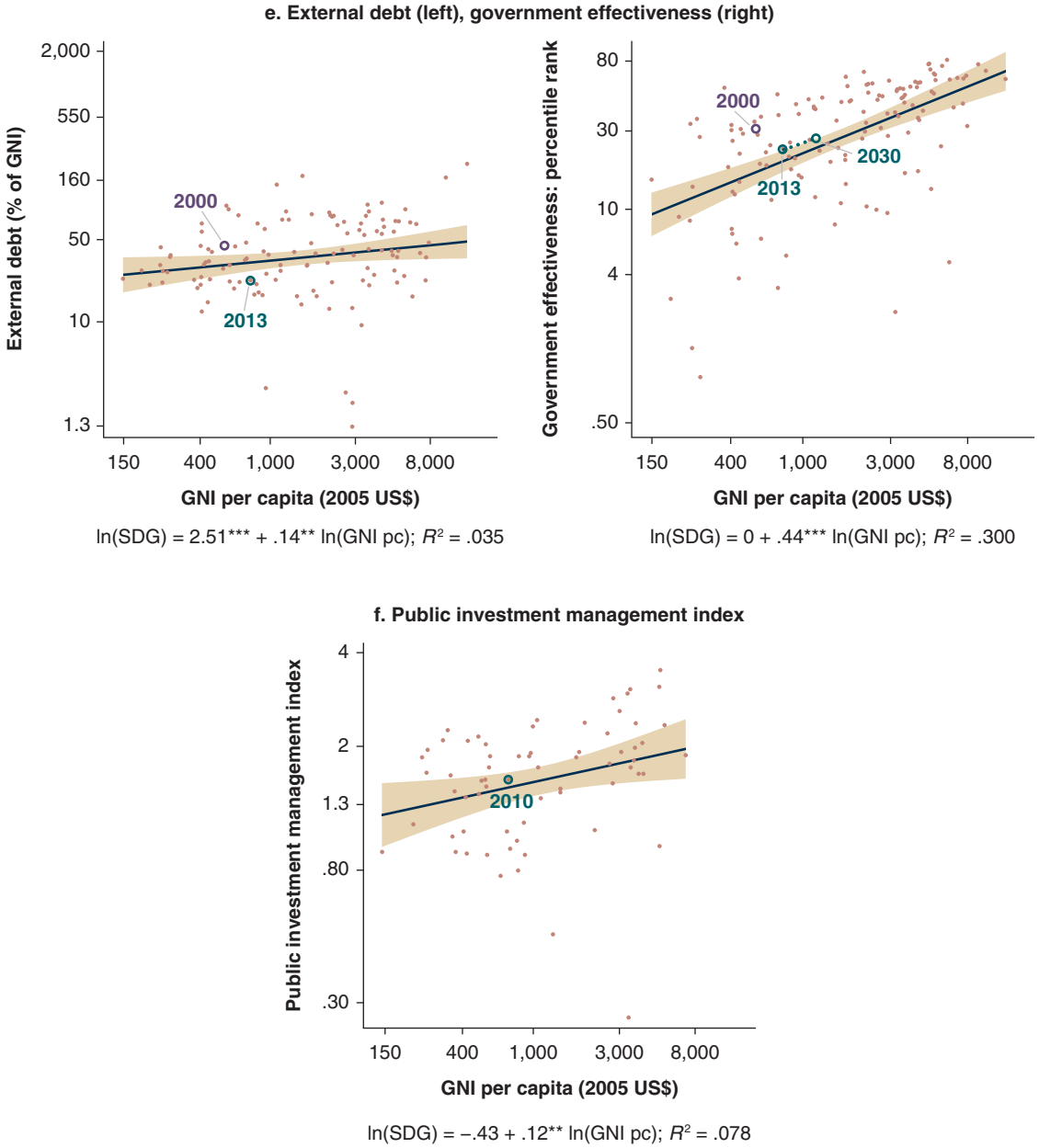


figure continues next page

FIGURE 7.3 *continued*



Note: Highlighted observations are for Pakistan in different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[12] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover selected indicators related to three aspects of government activities: spending, receipts and debt, and governance and efficiency. While the findings of this country-at-a-glance note cannot guide policy on their own, they should be used as an input into thinking about policy making.

Room for additional priority spending may be created by reducing low-priority spending, increasing current receipts, and/or increasing borrowing. Among the included government spending indicators, Pakistan is below expected levels (compared to a typical country at the same GNI per capita level) for total public investment, total public consumption, primary education, secondary education, and health, but it spends more than expected on fuel subsidies.[13] Fuel subsidies, in 2011 as high as 4.0 percent of GDP, are the most obvious case of low-priority spending from the post-2015 agenda perspective.[14] These subsidies have since been on a declining path (IMF 2015d, p. 15).

Among current receipts, taxes and net Official Development Assistance (ODA) are lower than expected.[15] As further shown in table 7.2, cross-country patterns suggest that, as GNI per capita grows, net ODA will decline as a percent of GDP (without changing significantly in per capita terms), which in the case of Pakistan would translate into a decline from the recent 0.9 percent of GDP to 0.5 percent in 2030.[16] The relationships between tax revenues and GNI per capita is not tight enough to project expected changes. However, cross-country data suggest that the tax intake is lower than expected and recent World Bank and IMF analyses suggest that the tax to GDP ratio should be increased.[17] Pakistan's public external debt stock (relative to GDP) is below the expected level; nevertheless, the recent IMF/World Bank debt-sustainability analysis (which considers additional information) indicates a future decline in foreign borrowing but an increase in domestic borrowing.[18]

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Pakistan is performing somewhat better than expected according to the World Bank Government Effectiveness indicator and as expected in terms of the Public Investment Management Index. That is, according to these indicators, government efficiency appears to be as expected given the GNI per capita of Pakistan.[19] However, other assessments suggest considerable efficiency gains may be feasible.[20]

In general, fiscal policies in support of the SDG agenda, including decisions about the level and allocation of government spending, should be made in light of government priorities and additional data that this note does not consider, including information about government capacity to efficiently expand activities in different areas and the scope to encourage complementary private sector activities. The above information suggests that the most obvious opportunities for additional fiscal space would be decreased fuel subsidies and increased taxes. The fact that cross-country patterns point to a likely decline in ODA does not mean that an increase is excluded: it depends on the priorities of donors and their relationships with Pakistan's government. Opportunities to improve government efficiency should also be pursued. The fact that, from a cross-country perspective, government spending is relatively low, both in general and in priority areas, while efficiency indicators are as expected, suggests that, in the long run, additional prioritized spending could yield positive payoffs; however, such long-run considerations need to be balanced against the more immediate priority of reducing the fiscal deficit (it has already declined from 8.3 percent of GDP [excluding grants] in 2012/13 to 5.5 percent in 2013/14). Beyond issues directly related to the government budget, remittances from Pakistan's workers abroad are somewhat higher than expected (6.5 percent of GDP in 2013/14), significantly raising the living standards of many Pakistanis; measures that encourage remittances and channel them to income-raising investments may have high trade-offs for the SDG agenda. More broadly, from the perspective of this agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged.

4. Conclusions

As summarized in table 7.3, among the SDG indicators that this note covers, Pakistan's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for eight indicators, as expected for two, and below expectations for seven. By 2030, even though considerable improvements are projected for most of the indicators, they are still likely to fall short of the global ambitions, indicating that a break from business as usual and current trends would be needed to realize such ambitions.

Table 7.3 further shows that for most indicators, the relationship to GNI per capita is tight. Improvements in these SDGs will likely continue along with GNI per capita growth and increases in resources and capabilities. Note, however, that many of these SDGs are currently underperforming, suggesting that additional gains are feasible. The importance of reviewing current policies seems especially acute for under-5 mortality and malaria, for which Pakistan's ranking among low- and middle-income countries has deteriorated significantly more than for GNI per capita ranking.

For indicators with a weak relationship with GNI per capita, including our measure of shared prosperity (the income share of the bottom 40 percent), strong and systematic improvements should not be expected to accompany economic growth; hence, policies affecting such indicators require additional attention.

The cross-country perspective of this note suggests that government spending is relatively low, that government efficiency is not necessarily lagging, although additional fiscal space may mainly be created through increased tax revenues. Given this, increased government spending in priority areas may be possible and yield positive payoffs in terms of SDGs. Detailed country-specific analysis and actions are needed to develop and implement a strategy that brings Pakistan onto a path that promises to realize the global ambitions of the SDG agenda.

TABLE 7.3 Pakistan—Summary of Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Pre-primary school enrollment (×) • Maternal mortality (×) • Access to improved water source (–) • Access to improved sanitation (+) • Access to electricity (+) • Road density (–)	• Poverty (×) • Malaria (–)	• Primary completion rate • Secondary school enrollment • Ratio of female to male primary completion • Ratio of female to male secondary enrollment • Under-5 mortality (–) • Internet users (+) • CO_2 emissions (×)
Loose	• Shared prosperity (+) • HIV prevalence (×)		

Note: (+) = larger country rank improvement 2000–12 than for GNI per capita; (–) = drop in ranking 2000–12 or smaller improvement than for GNI per capita; (–) = the same country rank change 2000–12 as for GNI per capita.

Annex 7A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI_POV_DDAY]	For Pakistan; 2011 data from the World Bank's MDG data website.
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: School enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE_PRM_CMPT_ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE_SEC_ENRR]	
Secondary completion (% gross)	EdStat. API ref: DHS: secondary completion rate [HH_DHS_SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS/SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE_ENR_SECO_FM_ZS]	
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH_STA_MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH_STA_MALR/SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH_DYN_AIDS_ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH_STA_ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH_H2O_SAFE_ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS_ROD_DNST_K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG_ELC_ACCS_ZS]	
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN_ATM_CO_2E_PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE_GDI_FTOT_ZS]-[NE_GDI_FPRV_ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	For Pakistan, data from the Ministry of Finance.
Secondary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	For Pakistan, data from the Ministry of Finance.

annex continues next page

Indicator	Source	Comment
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE_XPD_PRIM_PC_ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE_XPD_SECO_PC_ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH_XPD_PUBL_ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC_TAX_TOTL_GD_ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT_ODA_ODAT_GN_ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE_PER_RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStat = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
2. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
3. Sources for the indicators are presented in the table in the annex 7A.
4. Projections from CEPII are used for this and other Country Development Diagnostics applications given its wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.
5. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI

per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.

6. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 > 0.1$ are defined as loose.
7. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for the specific country. The same observation applies to expected values for fiscal space indicators.
8. For Pakistan, the very high population density raises the need for and makes it easier to achieve high road density.
9. With regard to CO_2, Pakistan's current and projected 2030 per capita emissions are 9.2 and 14.0 percent of the current OECD average. Pakistan is underperforming (emitting above expected levels) both when CO_2 emission are measured per capita and as a share of GDP.
10. If data for 2013 were not available, data for 2012, 2011, or 2010 were used.
11. There are also cases where the solution to the low level of SDG is neither private nor public spending but more efficient policies.
12. The treatment is the same as in table 7.1 and related figures. That is, in table 7.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
13. Although educational expenditures have increased in absolute levels, they have not increased as a proportion of GDP.
14. Fuel subsidies are detrimental to the climate and encourage technologies that are less labor intensive, tending to generate employment for fewer workers at lower wages. The disaggregated levels for Pakistan in 2011 were petroleum products (0.13% of GDP), electricity (1.31% of GDP), natural gas (2.54% of GDP), and coal (0.00% of GDP) (IMF 2013a).
15. Net ODA is lower than expected both per capita and as a percent of GDP. Total government revenues (excluding grants) as a share of GDP are also lower than expected.
16. Apart from a temporary increase in the beginning of the 2000s, net ODA as a percentage of GNI has been less than expected for Pakistan since the mid-1990s.
17. World Bank (2013e, p. 13) suggests that Pakistan should aim for tax revenues of 14–15 percent of GDP by 2018. IMF (2014f, p. 23) concludes that a broadening of the revenue base and better tax administration would be essential to continued improvement in the fiscal situation. IMF (2015d, p. 27) suggests that Pakistan's tax revenues may increase from its 2012/13 level of 9.9 percent of GDP to 12.9 percent in 2019/20.
18. The Pakistan DSA (IMF 2014f; annex II) finds that reduced foreign debt and fiscal strengthening are needed for Pakistan to become resilient to standard size shocks. The external debt has already decreased from 34.7 in 2010 to 26.2 in 2013 and is projected to decrease further to 23.3 percent in 2020 (IMF 2015d, p. 45). Given strong reliance on short-term debt, the projected decline would be sensitive to a large interest rate shock.
19. Pakistan is also performing as expected for the World Bank's Governance Indicator "Regulatory quality" and "Rule of Law."
20. World Bank (2013e, pp. 14, 60) argues that "addressing the drag imposed on the private sector by an underperforming and overpaid public sector is essential."

Chapter 8

Peru

1. Introduction

Peru, an upper middle-income country in South America, has been one of the best macroeconomic performers in Latin America over the past decade in terms of GDP growth, macroeconomic management, poverty reduction, and shared-prosperity. However, much is still to be achieved to address the basic needs of the population and converge to the living standards of OECD countries. According to 2013 Peru data from the World Development Indicator (WDI) Database, the economy is mainly based on services, which accounts for 58 percent of GDP, while industry represents 36 percent and agriculture a mere 6 percent (World Bank 2013a). Minerals and hydrocarbons accounted for 13 percent of GDP, 14 percent of government revenues and 68 percent of total exports (IMF 2014c, p. 6). During 2001–12, Peru's average growth rate for GNI per capita (at constant 2005 US$) was 4.1 percent, which may be compared to a developing (low- and middle-income) country average of 3.0 percent. During the same period, Peru's ranking according to the UNDP Human Development Index (among countries included both in 2000 and 2012) remained at more or less the same level (deteriorated slightly from the 58th to the 54th percentile).

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 SDG agenda might pose for Peru; which should be seen as an input to the policy discussions around this agenda, together with a study on Peru's productivity (to be issued in 2015) and a Systematic Country Diagnostic (forthcoming in 2016). The note is built around data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since rapid progress on the SDG agenda will require efficient and carefully prioritized public spending—in addition to a strong policy framework that engages the private sector. The note briefly (a) summarizes Peru's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis and the SDG projections are done from a cross-country perspective: for the different indicators, Peru's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[1] Since a country's GNI tends to be highly correlated with both SDGs and the factors that determine their evolution, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[2]

2. SDG Indicators: History and Projections

For the selected SDG indicators, table 8.1 summarizes data for Peru: historical evolution, actual and expected values for a recent year, and projected 2030 values.[3] In figure 8.1, data for Peru are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Peru, the projected average annual rate of GNI per capita growth is 4.2 percent.[4] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[5] Projections of the SDG indicators are presented only when the cross-country relationship between the indicator and GNI per capita

TABLE 8.1 Peru—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and share prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	12.5	2.9	1.8	1.3	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: income share for lowest 40%	11.1	13.4	15.4	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)	58.9	86.0	53.5	91.2	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)	101.9	92.5	94.9	100.0	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	84.8	94.0	84.4	99.6	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary completion (% gross)		87.9	48.1	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	96.7	100.1	99.7	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	93.1	97.8	102.6	106.1	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	39.8	16.7	19.3	12.1	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	160.0	89.0	51.6	55.7	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	0.3	0.1	0.0	0.0	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	0.5	0.4	0.5	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	63.2	73.1	75.7	97.1	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	80.6	86.8	91.3	97.2	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)	6.1	10.0	25.7	19.1	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	71.9	85.1	76.6	100.0	By 2030, ensure universal access to affordable, reliable, and modern energy services.

table continues next page

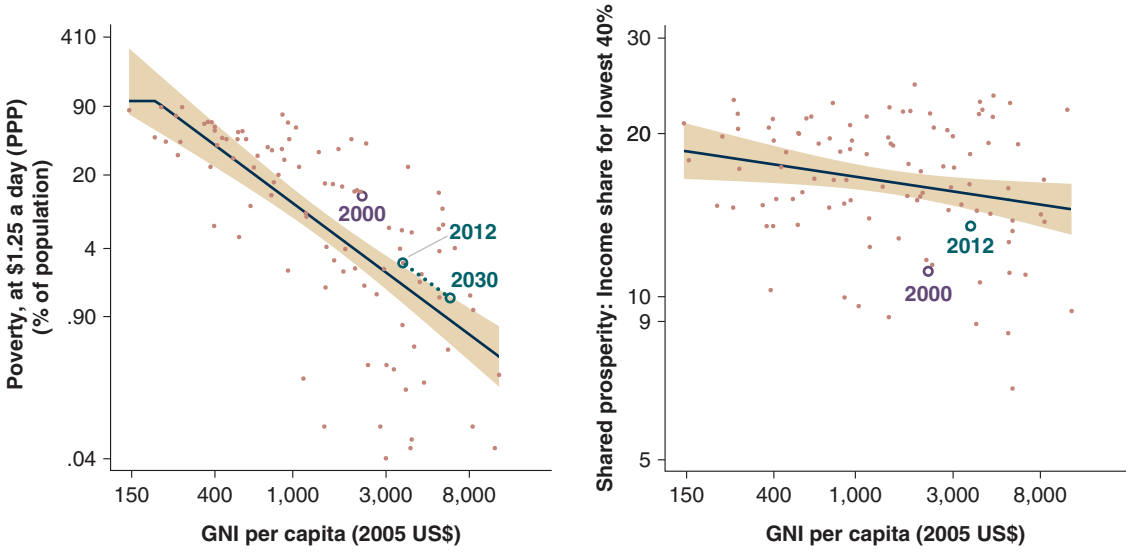
TABLE 8.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Internet users (per 1,000 people)	3.1	39.2	33.8	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	1.2	2.0	2.2	4.5	Integrate climate change measures into national policies, strategies and planning.
Memorandum item					
GNI per capita (constant 2005 US$	2,267	3,656		6,538	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 8.1 Peru—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)

a. Poverty (left), Shared prosperity: income share of bottom 40% (right)



ln(SDG) = 11.9*** + −1.3*** ln(GNI pc); R^2 = .493

ln(SDG) = 3.2*** + −.06** ln(GNI pc); R^2 = .054

figure continues next page

FIGURE 8.1 *continued*

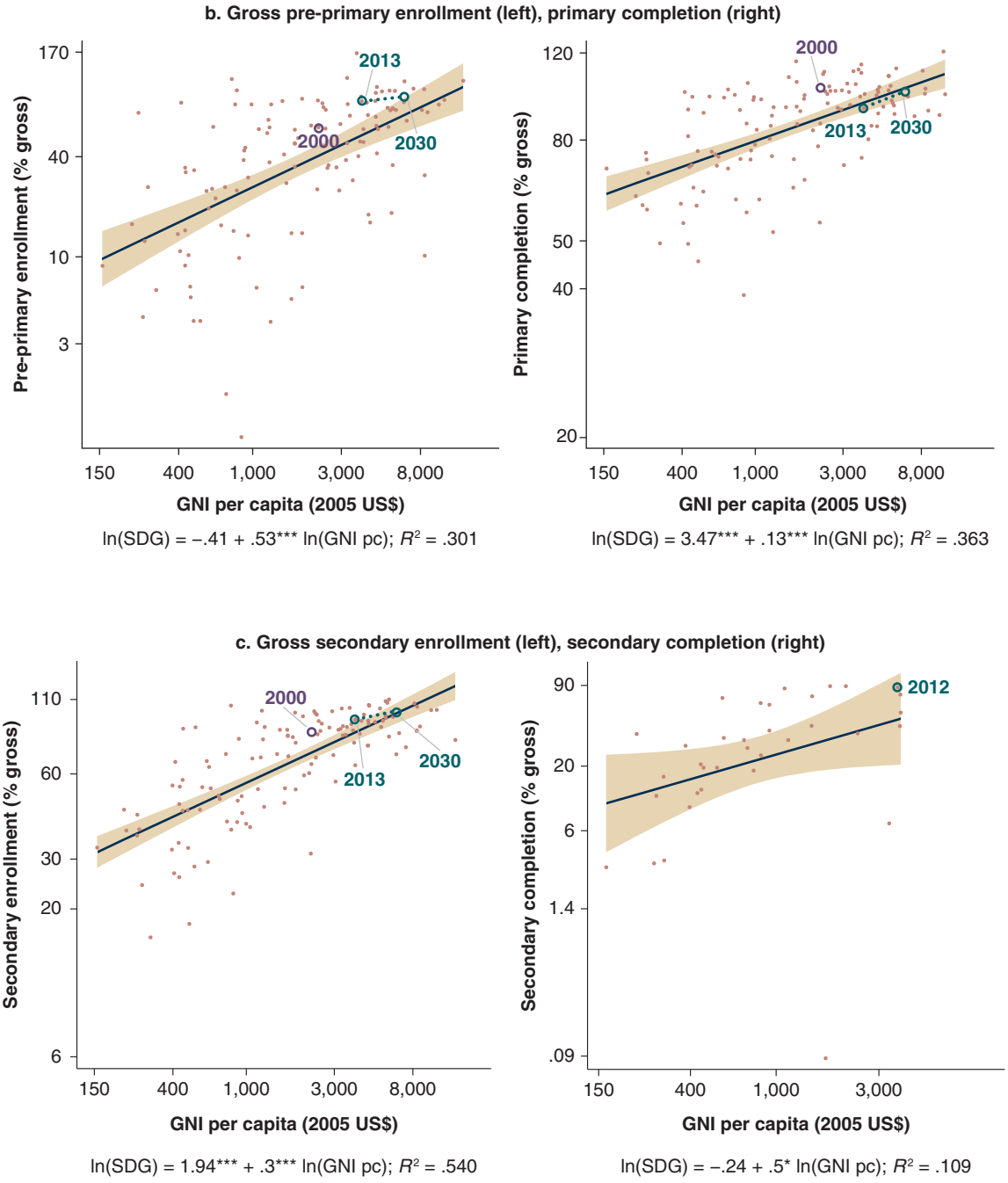
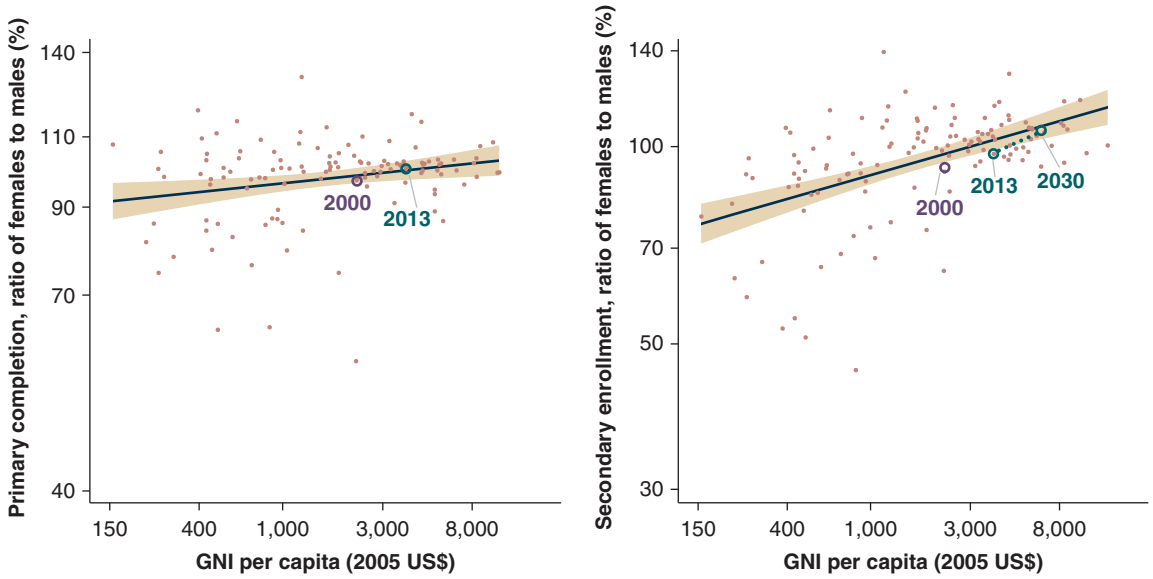


figure continues next page

FIGURE 8.1 *continued*

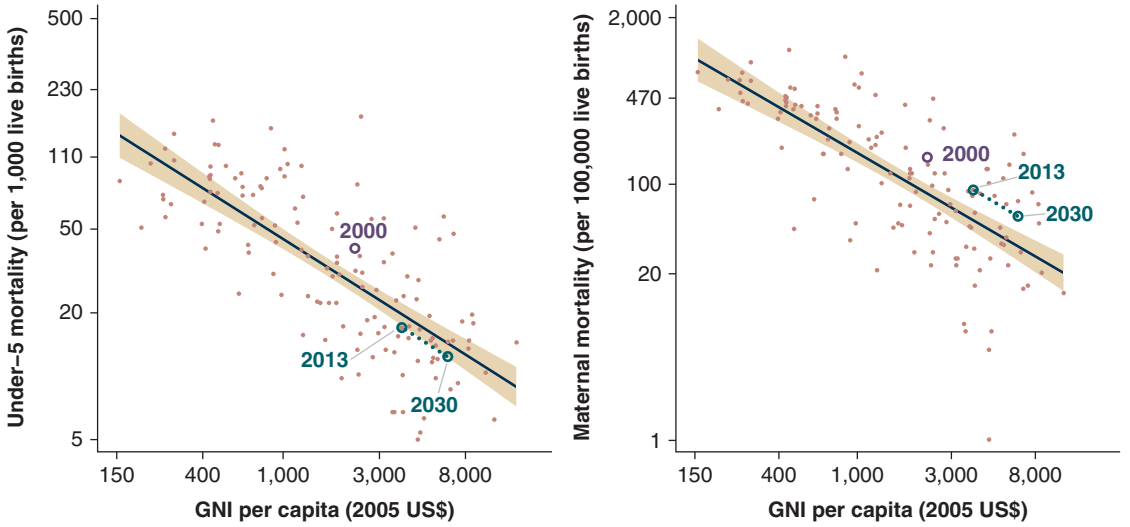
d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)



ln(SDG) = 4.38*** + .03*** ln(GNI pc); R^2 = .055

ln(SDG) = 3.88*** + .09*** ln(GNI pc); R^2 = .268

e. Under-5 mortality (left), maternal mortality (right)



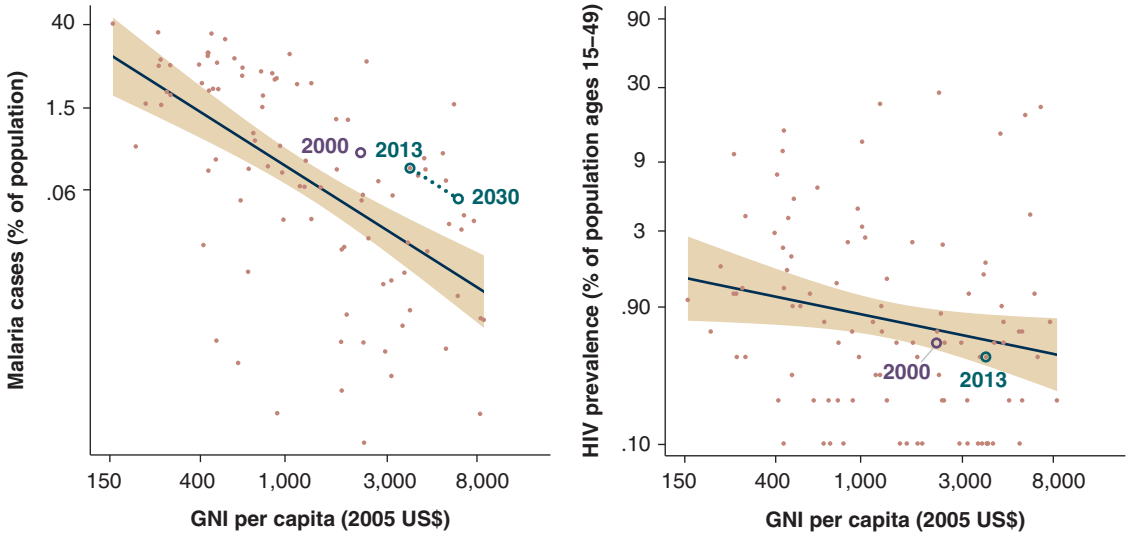
ln(SDG) = 7.98*** + –.61*** ln(GNI pc); R^2 = .559

ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .518

figure continues next page

FIGURE 8.1 *continued*

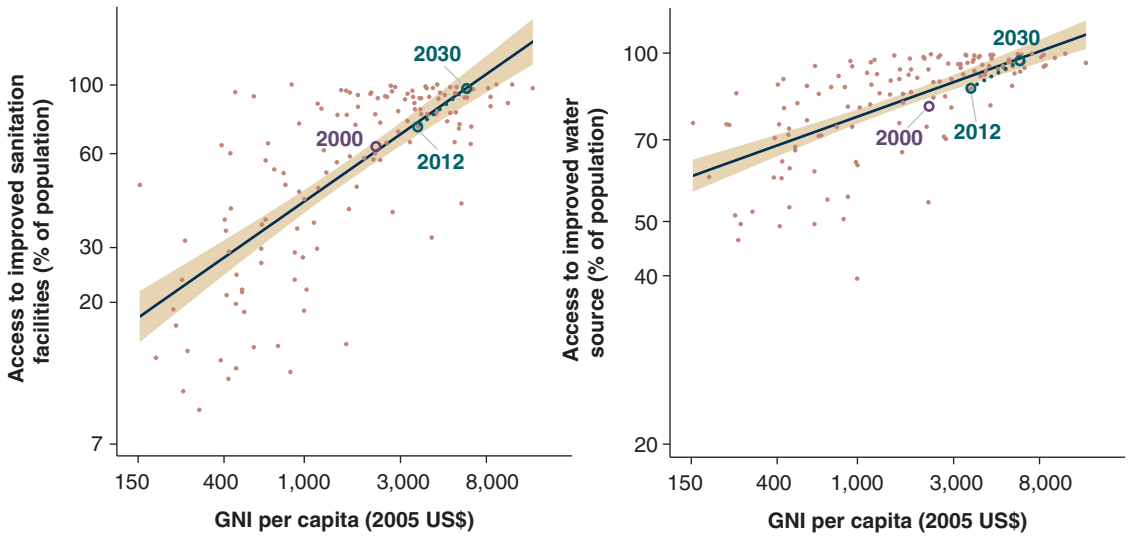
f. Malaria cases (left), HIV prevalence (right)



ln(SDG) = 13.9*** + –2.2*** ln(GNI pc); R^2 = .341

ln(SDG) = 1.88* + –.31** ln(GNI pc); R^2 = .044

g. Access to improved sanitation (left), access to improved water source (right)

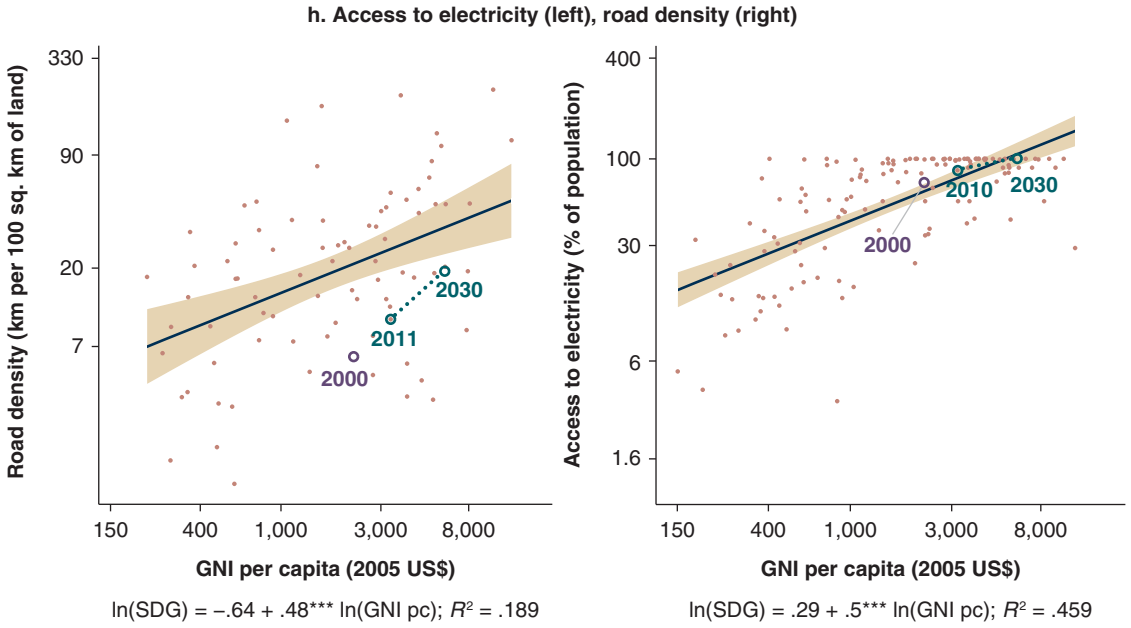


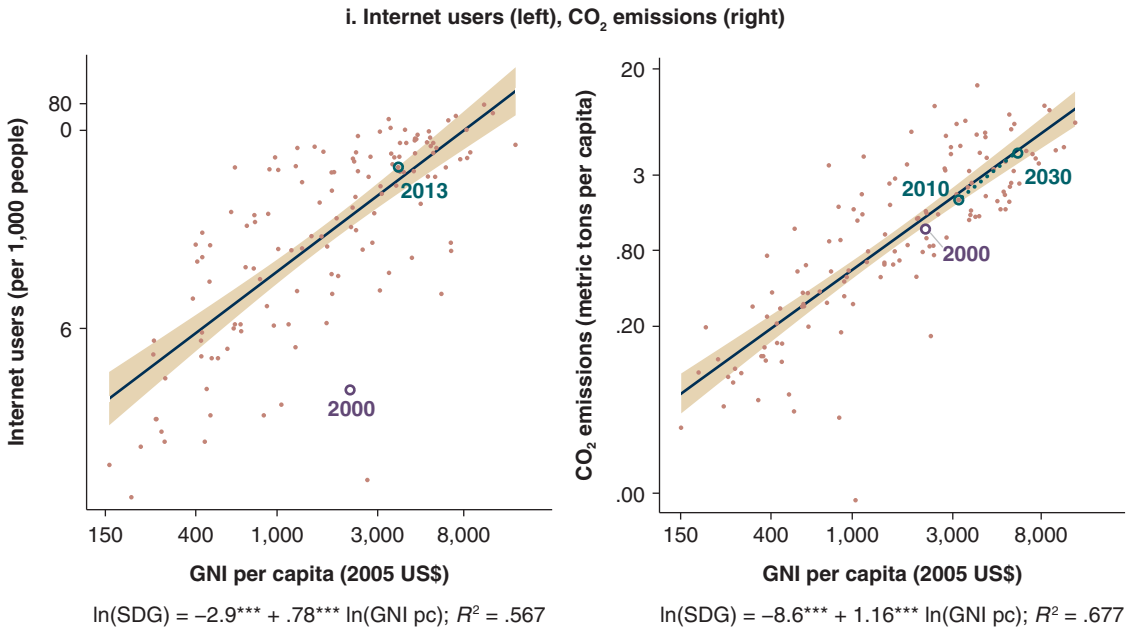
ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .534

ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .435

figure continues next page

FIGURE 8.1 *continued*





Note: Highlighted observations are for Peru at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

is classified as tight.[6] A very loose relationship suggests that progress in the indicator is a reflection of other country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are in practice also small (in absolute terms); given this the "expected" values for a recent year are close to the average for all low- and middle-income countries.[7]

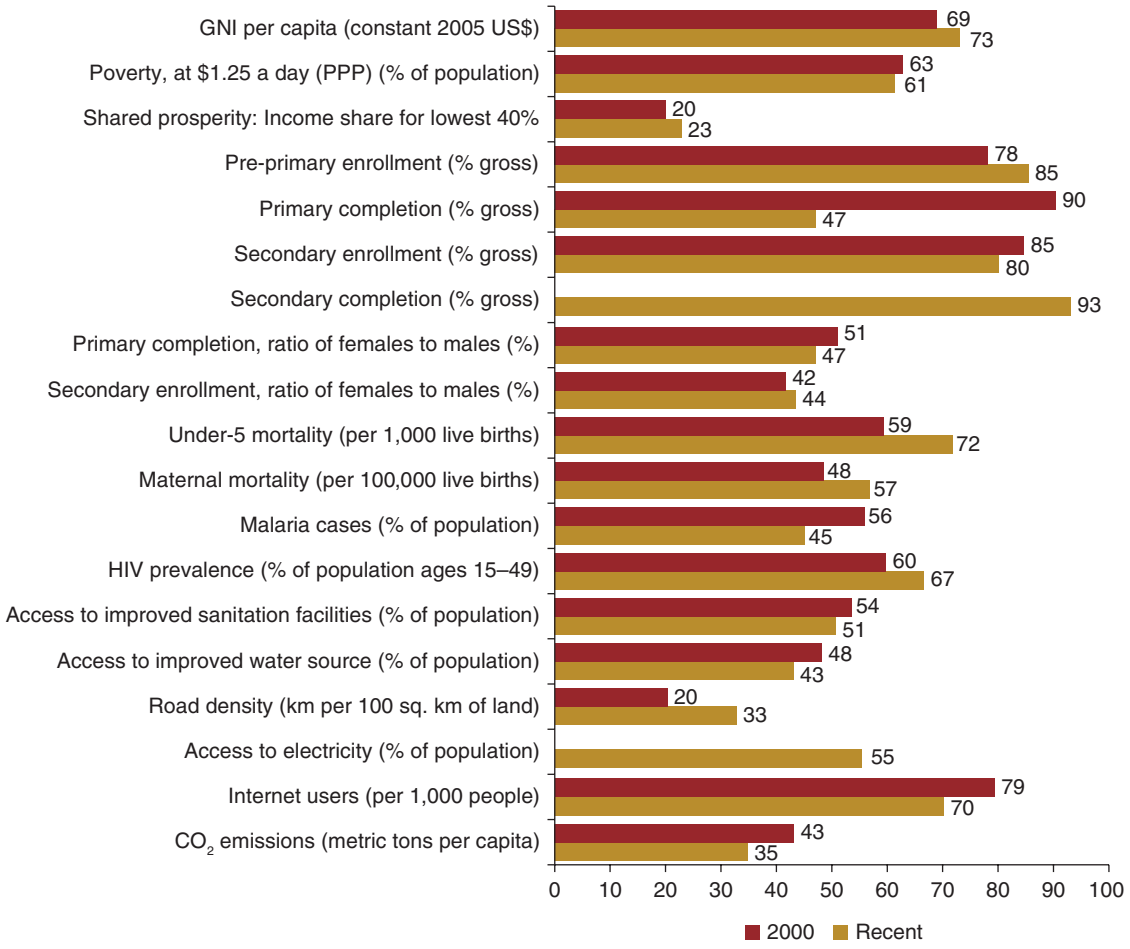
Of the 18 SDG indicators, Peru's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 3; pre-primary school enrollment, secondary school enrollment, and under-5 mortality. However, it falls short for 7 indicators; poverty, shared prosperity, ratio of female to male secondary enrollment, maternal mortality, malaria incidence, access to improved water source, and road density.[8] For the remaining 8 indicators (primary school completion, secondary school completion, ratio of female to male primary school completion, HIV prevalence, access to improved sanitation, access to electricity, Internet use, CO_2 emissions), Peru's current outcomes are as expected. While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high; a possibility that calls for further analysis.

Figure 8.2 shows that, for the 17 SDG indicators with enough data, between 2000 and 2012, Peru improved its GNI per capita ranking among low- and middle-income countries by 4 percentile points.[9] Peru's percentile ranking improved to roughly the same extent for 4 SDG indicators (shared prosperity,[10] pre-primary enrollment, ratio of female to male secondary enrollment, and access to electricity). For another 4, the ranking improved more than for GNI per capita (under-5 mortality, maternal mortality, HIV prevalence, and road density). For the remaining 9 indicators the ranking deteriorated; for some marginally (poverty, secondary enrollment, ratio of female to male primary completion, access to improved sanitation facilities, and access to improved water source) and for others more significantly (primary completion, malaria cases, Internet users, and CO_2 emissions). Among these, the result is not entirely unexpected for CO_2 emissions, which has an inverse correlation with GNI per capita (cf. figure 8.1, right panel).

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few insights emerge. For example, Peru is doing as expected for primary completion but its ranking has deteriorated more than any other indicator, in spite of Peru's improved GNI per capita ranking. On the other hand, Peru's maternal mortality and road density are lower than expected but its ranking has improved by more than GNI per capita, suggesting that policies have been successful beyond what is expected from increases in GNI per capita. Finally, for poverty, malaria, and access to water, Peru's underperformance is combined with a performance that is weaker than GNI per capita in terms of changes in percentile ranking.[11]

By 2030, considerable improvements are projected for most indicators if the assumption on GNI growth materializes as expected (see table 8.1 and respective graphs in figure 8.1). In such a case, poverty, primary completion rate, secondary school enrollment, ratio of female to male primary completion rate, ratio of female to male secondary enrollment rate, maternal mortality, malaria cases, access to improved sanitation, access to improved water, and access to electricity are projected to either realize or get close to realizing the global ambition (shown in the last column of table 8.1). However, for the other SDGs to get closer to the realization of these ambitions, a break with the past is needed. This is also true for indicators, such as shared prosperity, for which a weak relationship with GNI per capita precludes projections. Such a break would be facilitated by a combination of more rapid growth and improvements in overall and sectoral policies that directly influence different SDGs; keeping in mind that a growth rate of 4.2 percent until 2030 has already been assumed for the business-as-usual projections.

FIGURE 8.2 **Peru—Percentile Cross-Country Ranking for SDG Indicators since 2000**



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2013 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and possibly growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments to profitably provide services in a wide range of areas related to the SDGs (including but not limited to infrastructure). There are also cases where the solution to the low level of SDG is neither private nor public spending but more efficient policies. With regard to Peru's additional fiscal effort to reach the SDGs, table 8.2 and figure 8.3 summarize the historical evolution, actual and expected (given GNI per capita) recent values, and, when relevant, projected values.[12] The variables cover selected indicators related to three aspects of government activities: spending, receipts governance, and efficiency. In addition, we address debt sustainability. While these findings on their own would be insufficient for policy design, they provide an interesting input to

TABLE 8.2 Peru—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	11.6	11.2	15.4	—
Investments (% of GDP)	4.1	5.8	5.8	—
Primary education (% of GDP)	1.4	1.3	1.6	—
Secondary education (% of GDP)	0.9	0.9	1.5	—
Primary education, per student (% of GDP per capita)	8.3	11.1	15.4	—
Secondary education, per student (% of GDP per capita)	10.2	10.4	16.9	—
Health (% of GDP)	2.7	3.1	3.5	3.5
Government receipts and debts				
Tax revenue (% of GDP)	12.8	16.5	16.0	—
Net ODA *(%* of GNI)	0.80	0.19	0.85	0.11
External debt (% of GNI)	58.5	29.0	40.3	—
Governance and government efficiency				
Government effectiveness: Percentile rank	52.7	48.8	39.2	57.4
Grigoli education efficiency score		0.90	0.73	1.00
Grigoli health efficiency score		0.98	0.95	—
Public investment management index		2.16	1.77	—
Memorandum item				
GNI per capita (constant 2005 US$)	2,267	3,656		6,538

Note: Recent refers to the latest year with data (typically 2011–13). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

FIGURE 8.3 Peru—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting

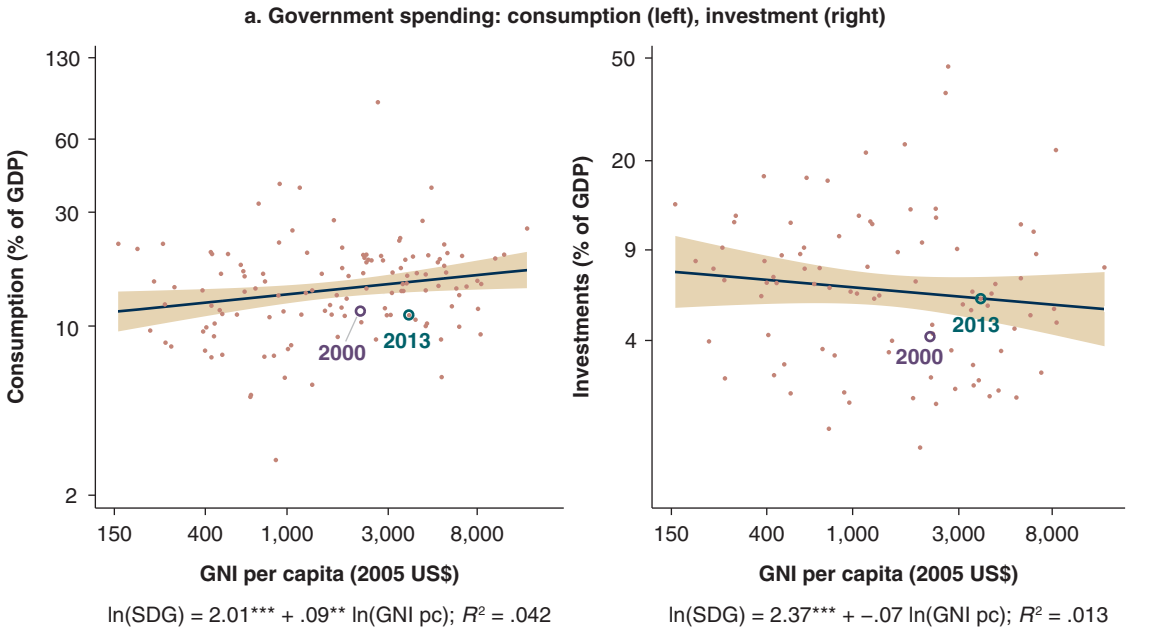
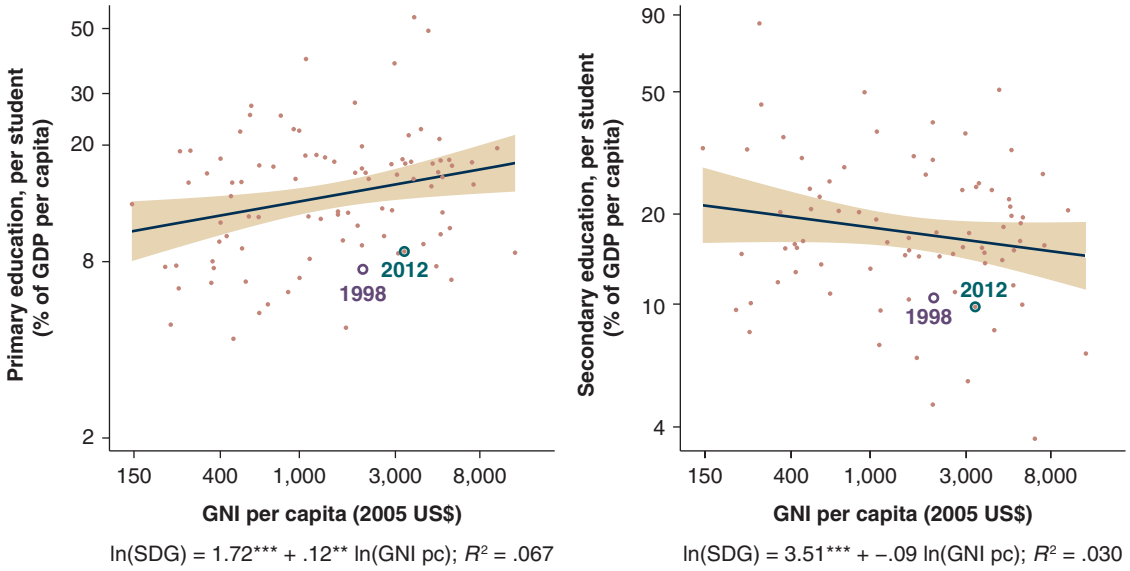


figure continues next page

FIGURE 8.3 *continued*

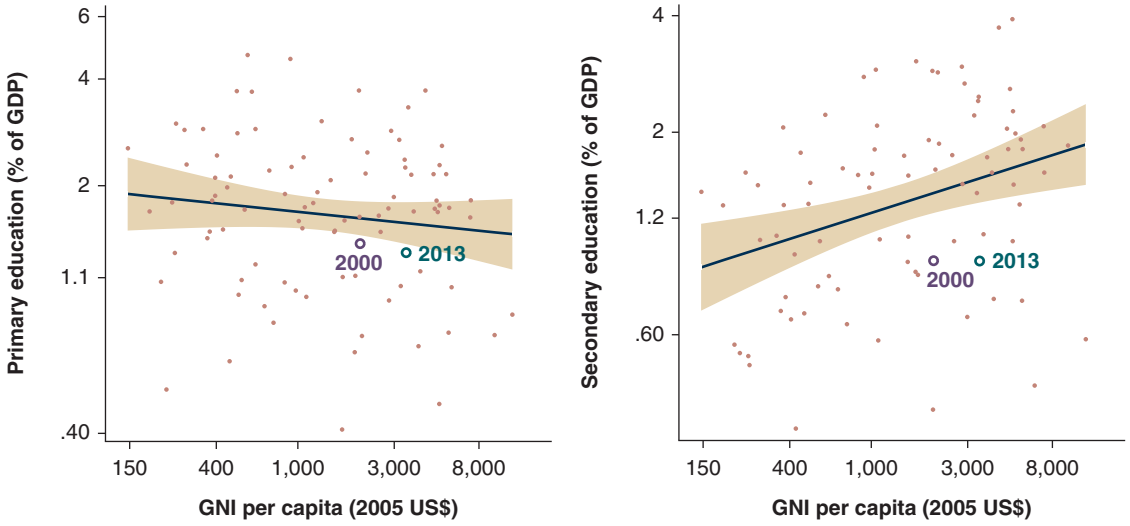
b. Government spending: primary education, per student (left), secondary education, per student (right)



ln(SDG) = 1.72*** + .12** ln(GNI pc); R^2 = .067

ln(SDG) = 3.51*** + −.09 ln(GNI pc); R^2 = .030

c. Government spending: primary education (left), secondary education (right)



ln(SDG) = .940*** + −.06 ln(GNI pc); R^2 = .016

ln(SDG) = −.93** + .16*** ln(GNI pc); R^2 = .113

figure continues next page

FIGURE 8.3 *continued*

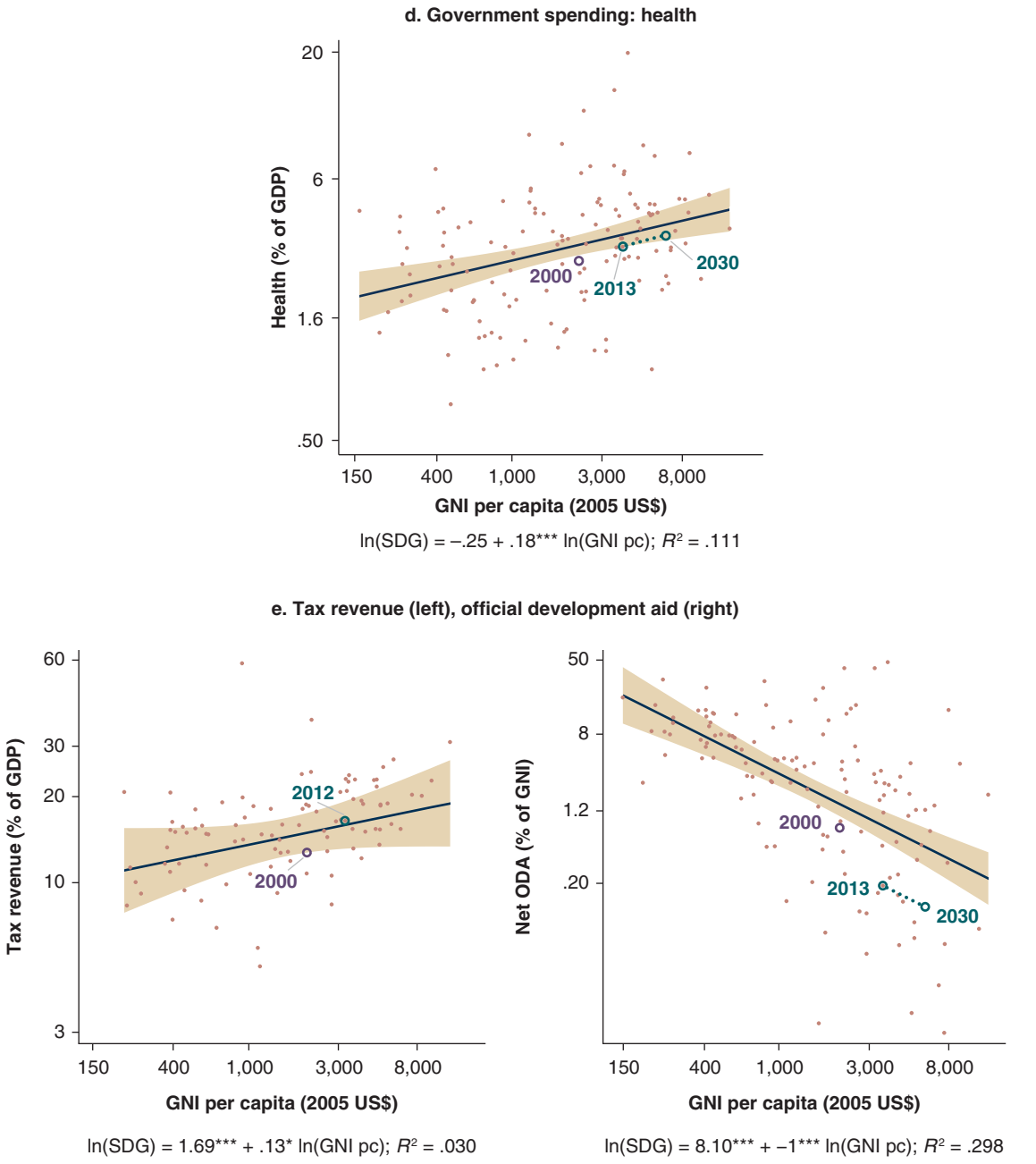
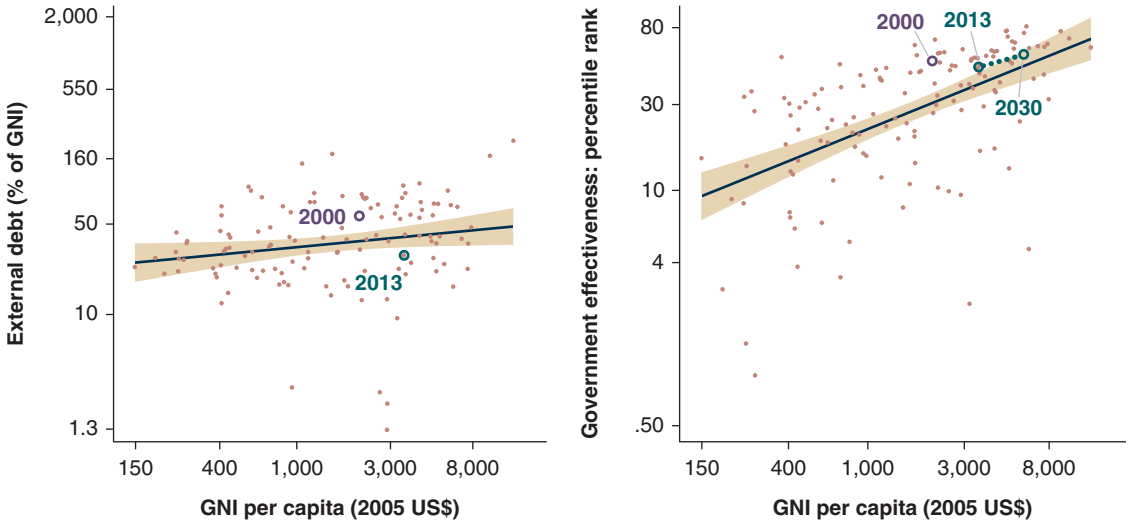


figure continues next page

FIGURE 8.3 *continued*

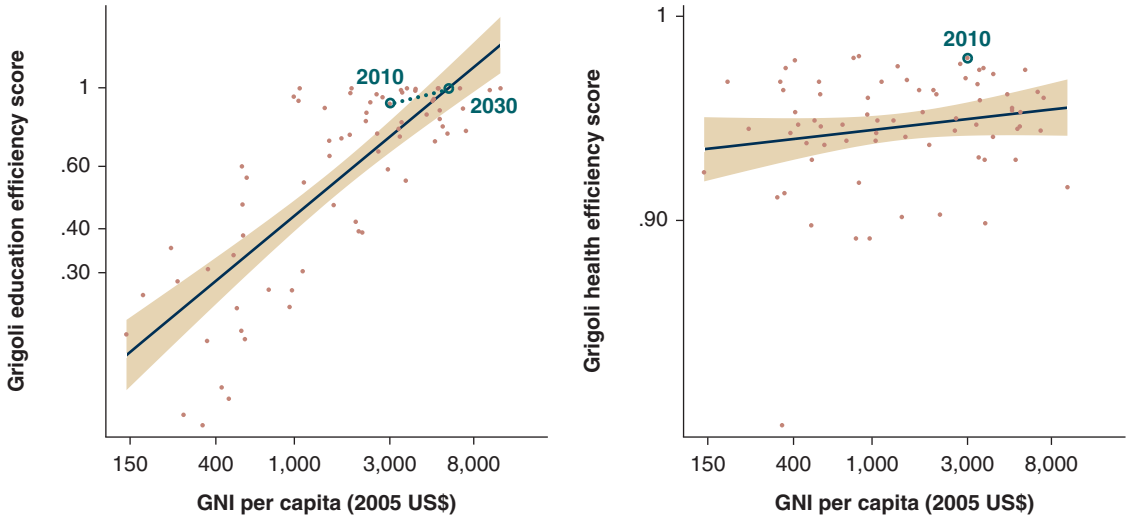
f. External debt (left), government effectiveness (right)



ln(SDG) = 2.52*** + .14** ln(GNI pc); R^2 = .035

ln(SDG) = 0 + .44*** ln(GNI pc); R^2 = .300

g. Education expenditure efficiency (left), health expenditure efficiency (right)

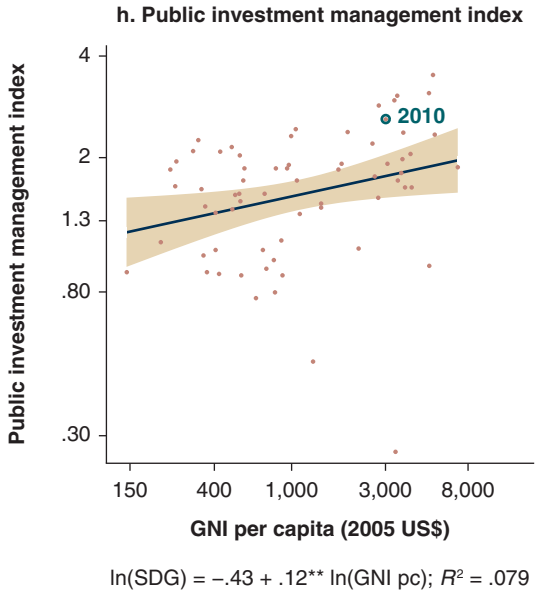


ln(SDG) = –4.0*** + .46*** ln(GNI pc); R^2 = .630

ln(SDG) = –.09*** + .01 ln(GNI pc); R^2 = .031

figure continues next page

FIGURE 8.3 *continued*



Note: Highlighted observations are for Peru in different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

policy discussions around the size of the government that could be needed to fulfill the SDGs.

In terms of government spending in areas that may support the SDG agenda, Peru spends as expected (compared to a typical country at the same GNI per capita level) for total public investment, but below the expected level for total public consumption, primary education, secondary and secondary education, and health.[13] Note that, for primary and secondary education, spending is measured in two ways: total as share of GDP and per student as share of GDP per capita; for all four indicators, spending is lower than expected—something that the authorities are well alert to, and efforts are ongoing to create fiscal space for education. Fuel subsidies are the most obvious case of low-priority spending from the post-2015 agenda perspective.[14] However, Peru's spending on fuel subsidies appears to be very low.[15] Since Peru might need to increase spending in key SDG related areas, resources will need to be mobilized either from spending reductions in non-SDG related areas, from higher revenues, or from higher spending efficiency.

Among current receipts, tax revenues are within the expected range while net Overseas Development Assistance (ODA) is lower than expected, compared to other countries at the same income per capita level. As also shown in table 8.2, cross-country patterns suggest that net ODA will decline as a percent of GDP (without changing significantly in per capita terms). The relationship between tax revenues and GNI per capita and GNI per capita is not tight enough to project expected changes. Still, if recent changes to tax rates are taken into account, it is likely that tax revenues will be below peers and, thus, become an important contributor of an increased fiscal effort.[16] In addition, in comparison with OECD countries, Peru's tax revenues are low. The public debt position is very robust due to commendable macroeconomic as well as asset and liability management policies.[17] In 2014, Peru's total public debt stood at US$39 billion, or 20 percent of GDP, down from 42 percent in December 2005 and was among the lowest relative to other middle-income countries in the LAC region. Debt reduction follows a decade of high real GDP growth accompanied by overall fiscal surpluses.[18]

Enhancing government's spending and overall efficiency will increase the room for priority spending and enhance its impact on the SDG agenda. Table 8.2 displays data for some measures of government efficiency. According to both the health and the education indexes used in this study, Peru's performance is better than expected; among these two indexes, GNI per capita is strongly correlated with the education index but largely uncorrelated with the health index. Peru is also performing better than expected in terms of the more general Public Investment Management Index and the World Bank Government Effectiveness indicator. Given that the different indexes measure different aspects of government performance, it seems reasonable to conclude that, at the aggregate level, it is unlikely that improvements in the efficiency of spending will generate significant fiscal space for resources to flow toward SDG-related spending. However, efficiency still needs to be a central part of any public expenditure strategy, and—as for any country—is expected to improve as GNI per capita improves.

In sum, our cross-country results indicate that government spending in terms of overall consumption and investment is at or below peers. Among the receipts, a comparison of Peru's data to cross-country patterns combined with recent economic studies do not single out any of the categories for which we have data (taxes, ODA, or borrowing) as being easily tapped for additional fiscal space. Any suggestions about fiscal policy adjustments would require additional country-specific information that, from the perspective of the SDG agenda, would permit assessments of the benefits and the costs of feasible changes in the level and allocation of spending and taxation and/or point to areas for efficiency improvements. Such adjustments should be part of a broader strategy for sustainable growth, poverty reduction, and shared prosperity.[19] With that in mind, it is important to remember the strong growth performance of Peru, and that many of the global SDG goals seem within reach for Peru when based on business-as-usual GNI per capita projections—that is, without any major adjustments in fiscal space.

4. Conclusions

As summarized in table 8.3, Peru's current SDG outcomes are better than expected (compared to a typical country at the same GNI per capita level) for three indicators, while it falls short in terms of poverty, shared prosperity, maternal mortality, malaria, access to improved water source, and road density. For the other eight indicators, Peru's current SDG outcomes are as expected. By 2030, considerable improvements are projected for most indicators if the country manages to sustain a pace of growth of 4.2 percent on average for GNI per capita. For the majority of SDG outcomes, this means the post-2015 global ambitions will be realized or close to being realized.

Table 8.3 further shows that, for about half of the SDG indicators, the relationship to GNI per capita is tight and Peru is doing as expected or better than expected. Improvements in these SDGs will most likely continue along with GNI per capita growth and increases in resources and capabilities. Note, however, that, among these relatively successful SDGs, there are those indicators where Peru's percentile ranking has deteriorated despite its significantly improved GNI per capita rank. For these SDGs, the efficiency of policies through which resources are translated into SDG outcomes may need special attention.

The areas in which Peru currently is underperforming relative to peer countries differ among each other in terms of how well they are explained by GNI per capita—that is, the "tightness" of their relationship to GNI per capita. The relationship is relatively tight for poverty, ratio of female to male secondary enrollment, maternal mortality, malaria incidence, access to improved water source, and road density. The presence of a tight relationship to GNI per capita suggests that future improvements depend on a combination of sustained rapid growth, better policies, and a larger but well-focused fiscal effort. Peru is also underperforming for an indicator with a weak relationship to GNI per capita: the income share of the bottom 40 percent. The loose relationship to GNI

TABLE 8.3 Peru—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• School enrollment, pre-primary (´) • School enrollment, secondary (–) • Under-5 mortality (+)	• Primary completion (–) • Ratio of female to male primary completion (–) • Access to improved sanitation (–) • Access to electricity (×) • Internet users (–) • CO_2 emissions (–)	• Poverty (–) • Ratio of female to male secondary enrollment (×) • Maternal mortality (+) • Malaria cases (–) • Access to improved water (–) • Road density (+)
Loose		• Secondary completion • HIV Prevalence (+)	• Income share for lowest 40% (×)

Note: (+) = larger country rank improvement 2000–12 than for GNI per capita; (–) = smaller country rank improvement (or deterioration) 2000–12 than for GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita (+/– 2 percentile points). A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 > 0.1$ are defined as loose.

per capita suggests that this indicator should not be expected to improve strongly or systematically in response to more rapid growth in GNI per capita; it would rather require targeted policy interventions. However, more rapid growth would clearly promise to raise growth in the *level* of per capita incomes for the bottom 40 percent.

With regard to the likely required fiscal effort to achieve the SDGs, our cross-country perspective does not suggest any obvious priorities since spending is at or below the expected levels, spending efficiency is roughly as expected and the room to increase revenues is limited when taking additional analyses into account. However, a detailed, forward-looking Public Expenditure Review will be needed to provide better insights in this area to the country. Given this, policy directions for a future SDG agenda would have to be guided by more detailed country-specific information. However, even without any assumptions about major increases in fiscal effort, Peru is projected to reach a number of the global SDG goals if it maintains the pace of strong economic growth.

Annex 8A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDGs		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStat. API ref: DHS: secondary completion rate [HH.DHS.SCR]	

annex continues next page

Indicator	Source	Comment
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS /SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH.STA.MALR/SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	

annex continues next page

Indicator	Source	Comment
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: PPP = purchasing power parity; WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStats = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
2. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
3. Sources for the indicators are presented in the table in the annex 8A.
4. Projections from CEPII (v 2.3) are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project. As a comparison, IMF (2015b, p. 7) projects a 4.5 percent medium-term growth potential for real GDP in Peru by 2020.
5. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
6. A "tight" enough relationship is defined as one with an R^2 greater than 0.3, while a "moderately tight" is defined as one with an R^2 between 0.3 and 0.1, and a "loose" relationship as one with an R^2 smaller than 0.1.
7. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for Senegal. The same observation applies to expected values for fiscal space indicators.
8. With regard to CO_2, Peru's current and projected 2030 per capita emissions are 19.5 and 51.0 percent

of the current OECD average. Also, with a relatively low population density, a low road density may still reflect fair access to roads.

9. The ranking is based on data from 2000 and 2012/2013, or the closest year with data (but only if data no later than 1998 for "2000" or 2009 for "recent" exist).
10. In this note, "shared prosperity" is measured as the income share of the poorest 40 percent of the population.
11. Note, however, IMF (2015b, p. 1) reports that there are visible, absolute improvements in poverty reduction in Peru.
12. The treatment is the same as in table 8.1 and related figures. That is, in table 8.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
13. Note that in Peru most major roads are under PPPs and, thus, are financed by users to a large extend (outside the budget framework, that is, through concession contracts). Peru is the third-largest attractor of private capital to infrastructure in the world according to the WB PPI data base: http://ppi.worldbank.org/.
14. Fuel subsidies are detrimental to the climate and encourage technologies that create less employment for the growing labor force.
15. There are no data on "pretax fuel subsidies" for Peru (there are no taxes on either petroleum products, coal, natural gas, or electricity), but in terms of "post-tax subsidies," which also measures the costs through associated negative external effects, Peru's level is significantly lower than expected (IMF 2013a).
16. The authorities reduced corporate and personal income tax rates in 2014 to align rates in Peru with the rest of the region and to support private investment and growth. IMF (2015b, p. 28) projections suggest tax revenues will be 15.6 percent of GDP by 2020, that is, lower than in 2013.
17. Peru is considered to be debt sustainable even when looking at total (public and private) debt. IMF projects an increase of total external debt from 27.4 percent of GDP in 2012 to 31.6 percent in 2016, followed by a decline to 26.7 percent in 2020 (IMF 2015b, p. 26). Such an increase in the debt stock would still leave Peru below what is expected.
18. There has also been a change in the debt structure: domestic currency denominated debt represents more than half of the total public debt (up from close to zero a decade earlier). Markets have recognized the country's prudent fiscal and macroeconomic policies by continuously upgrading Peru's sovereign debt ratings.
19. In 2014, the government of Peru has implemented a series of fiscal and structural packages, including tax cuts, increases in fiscal spending, and structural measures to support investment, consumption, and growth. See IMF (2015b, annex) on measures taken by the government to promote financial and social inclusion in Peru.

Chapter 9

The Philippines

1. Introduction

The Philippines is a lower middle-income country in Southeast Asia made up of more than 7,000 islands. Over time, the importance of services has increased at the expense of agriculture and manufacturing, while remittances amount to 9.8 percent of GDP (in 2013, World Bank data).[1] During 2001–12, the Philippines' average annual growth rate for GNI per capita (at constant 2005 US$) was 3.1 percent, which may be compared to a developing (low- and middle-income) country average of 3.0 percent. During the same period, the Philippines' ranking according to the UNDP Human Development Index (among countries included both in 2000 and in 2012) deteriorated from the 42nd to the 37th percentile. Although growth accelerated in the past decade, unemployment and poverty have been slow to decline. In addition, problems of poor infrastructure, limited competition, and governance issues have created a climate that is not conducive to productive sector investments but instead encourages overseas employment that leads to remittance inflows and real exchange rate appreciation.

This country-at-a-glance note is for most of the SDG indicators based on data covering the period until 2012. It is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for the Philippines; its findings cannot guide policy on their own but should be seen as an input into policy discussions. The note may also serve as the starting point for a more complete country development diagnostic as well as a more comprehensive country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes the Philippines' SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, the Philippines' performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[2] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[3]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 9.1 summarizes data for the Philippines: historical evolution, actual and expected values for a recent year, and projected 2030 values.[4] In figure 9.1, data for the Philippines are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For the Philippines, the projected average annual rate of GNI per capita growth is 3.5 percent.[5] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[6] Projections of the SDG

TABLE 9.1 The Philippines—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	24.6	15.4	4.8	6.7	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: income share for lowest 40%	14.1	15.3	16.0	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)	25.5	51.5	34.5	64.9	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)	86.4	91.3	85.6	97.0	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	74.4	81.4	66.9	89.2	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	106.5	102.0	97.2	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	109.8	102.0	95.0	105.1	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	39.9	29.9	29.8	21.0	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	120.0	120.0	97.8	71.3	By 2030, reduce the global maternal ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	0.05	0.01	0.05	0.00	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	65.5	74.3	54.7	84.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	87.6	91.8	83.3	95.2	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Access to electricity (% of population)	71.3	83.3	57.8	92.5	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	2.0	37.0	19.4	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	0.9	0.9	1.2	2.3	Integrate climate change measures into national policies, strategies and planning.
Memorandum item					
GNI per capita (constant 2005 US$)	1,247	1,789		3,389	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 9.1 **The Philippines—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

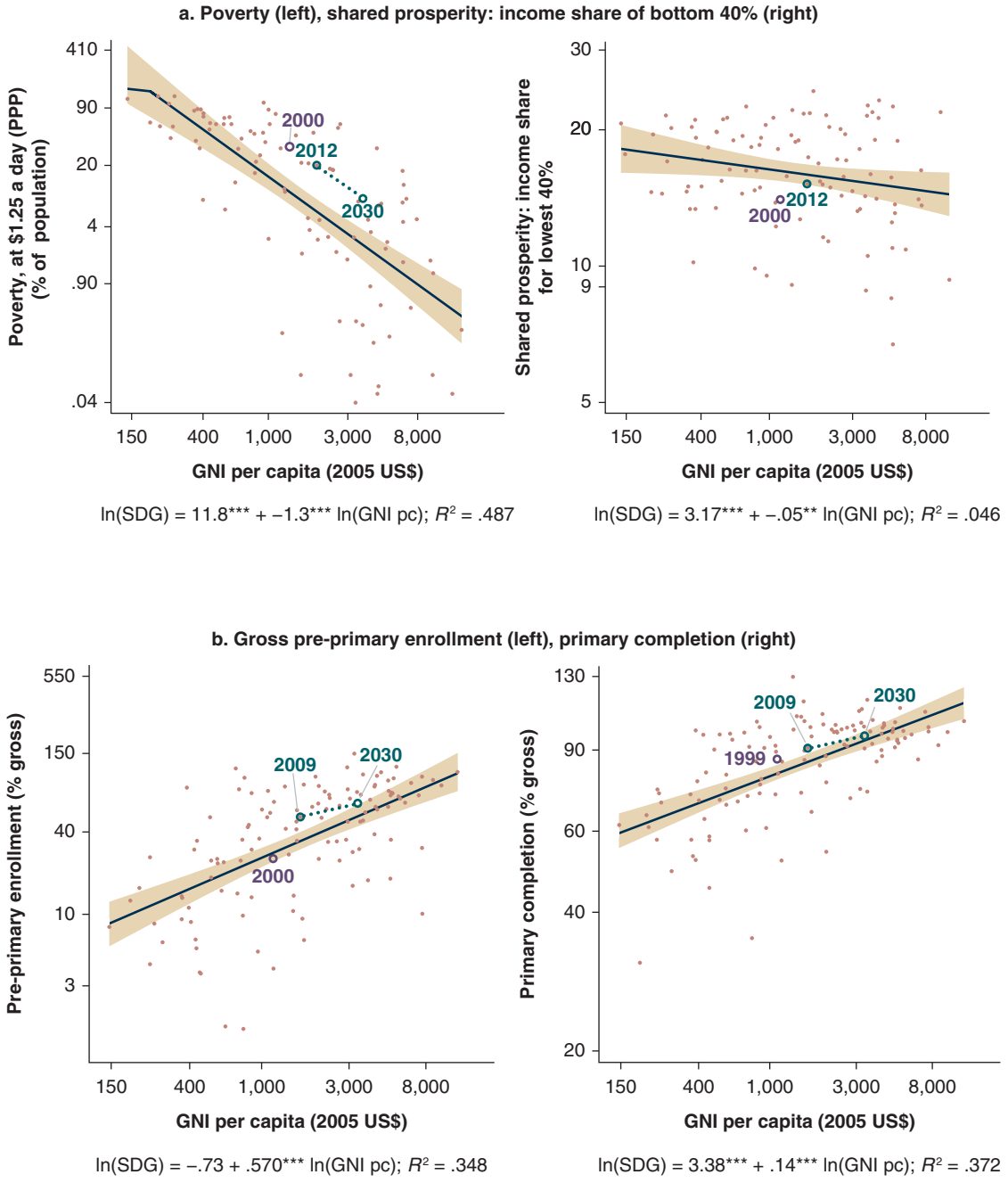
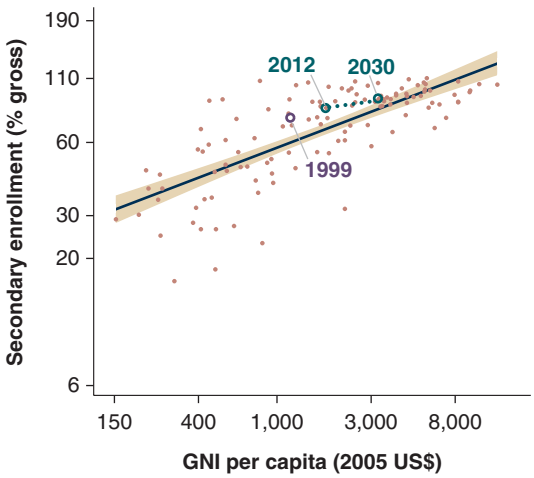


figure continues next page

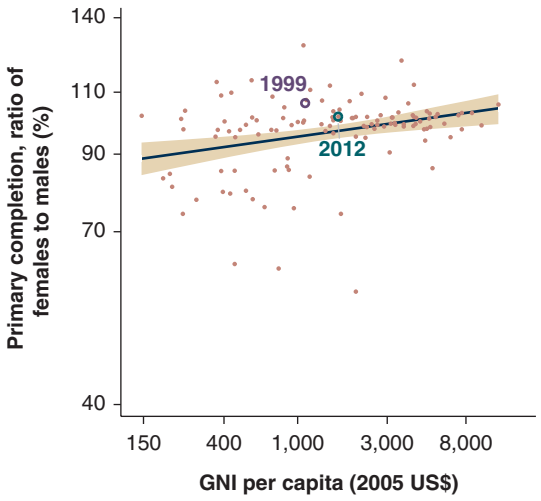
FIGURE 9.1 *continued*

c. Gross secondary enrollment

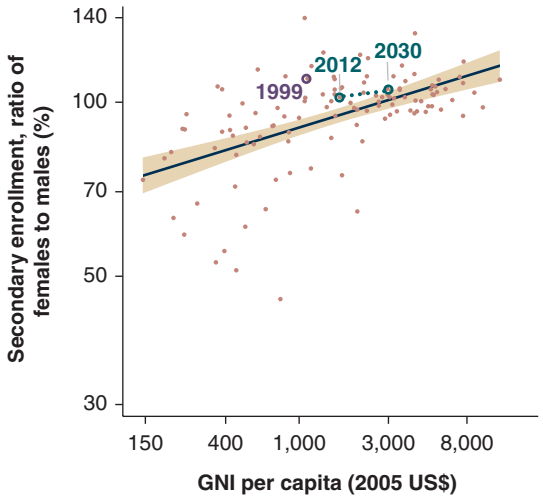


ln(SDG) = 1.9*** + .31*** ln(GNI pc); R^2 = .558

d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)



ln(SDG) = 4.31*** + .04*** ln(GNI pc); R^2 = .093



ln(SDG) = 3.82*** + .1*** ln(GNI pc); R^2 = .297

figure continues next page

FIGURE 9.1 *continued*

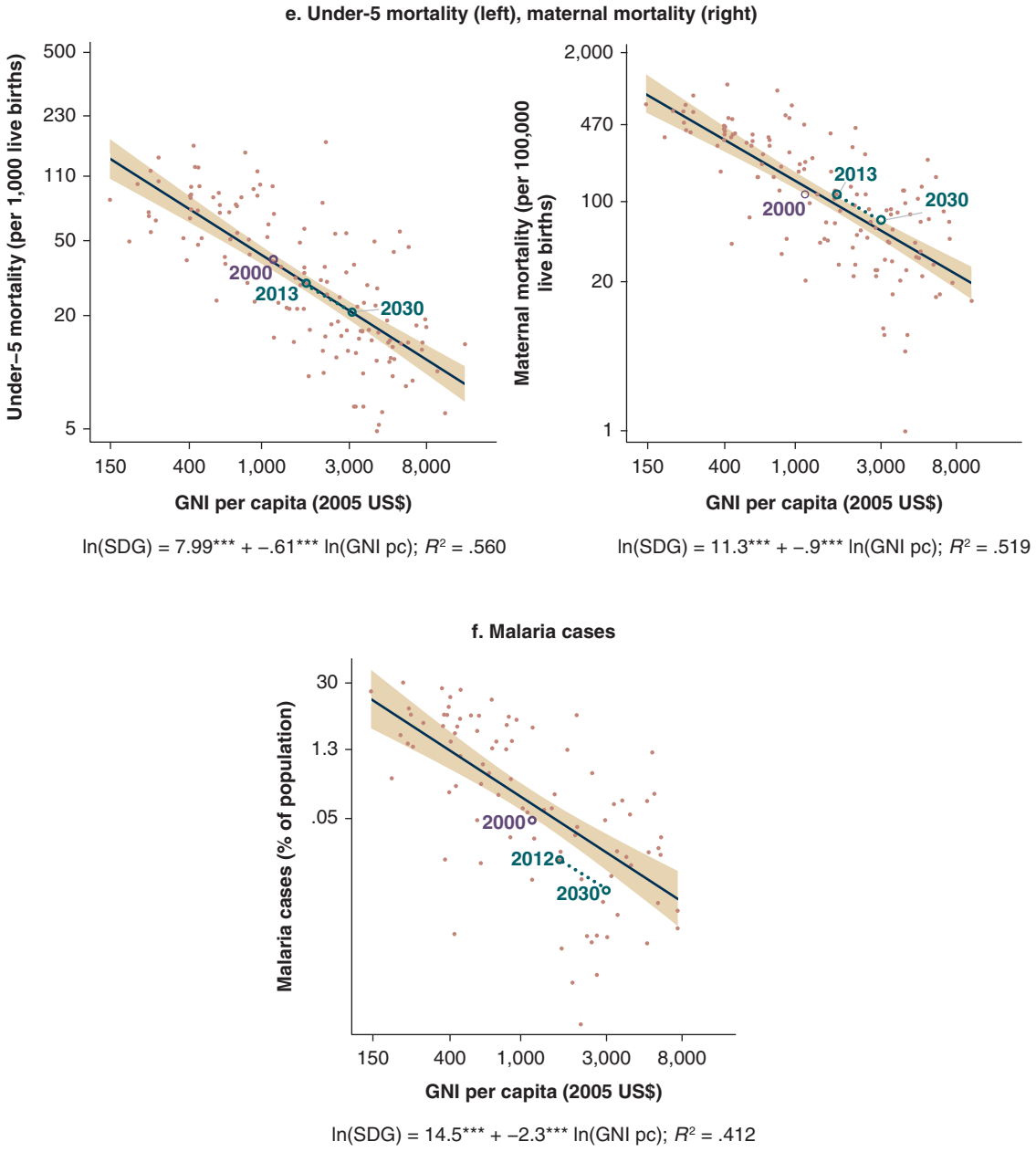
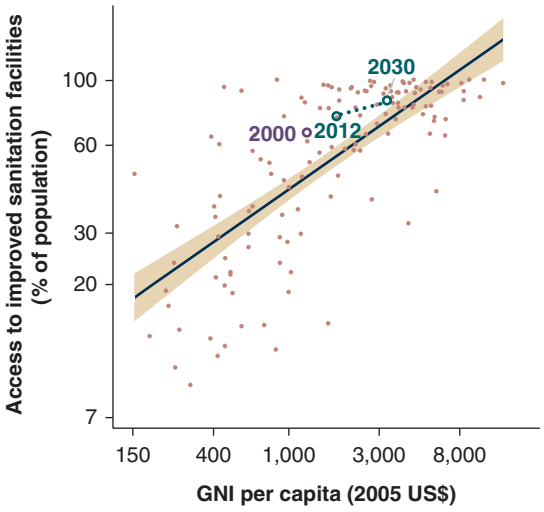


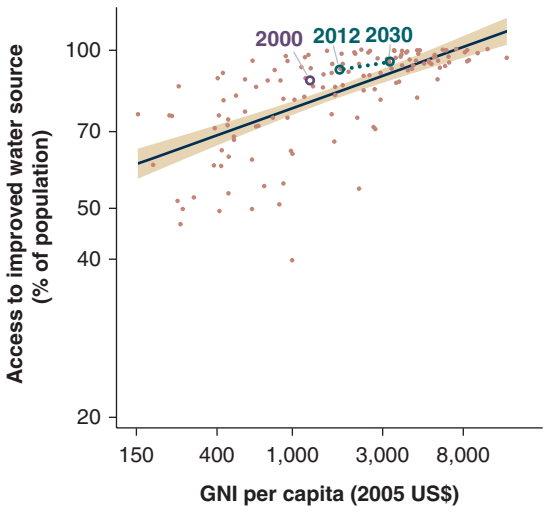
figure continues next page

FIGURE 9.1 *continued*

g. Access to improved sanitation (left), access to improved water source (right)

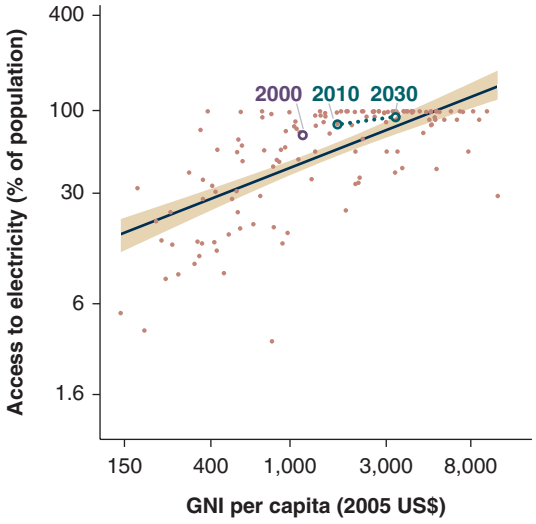


ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .535



ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .436

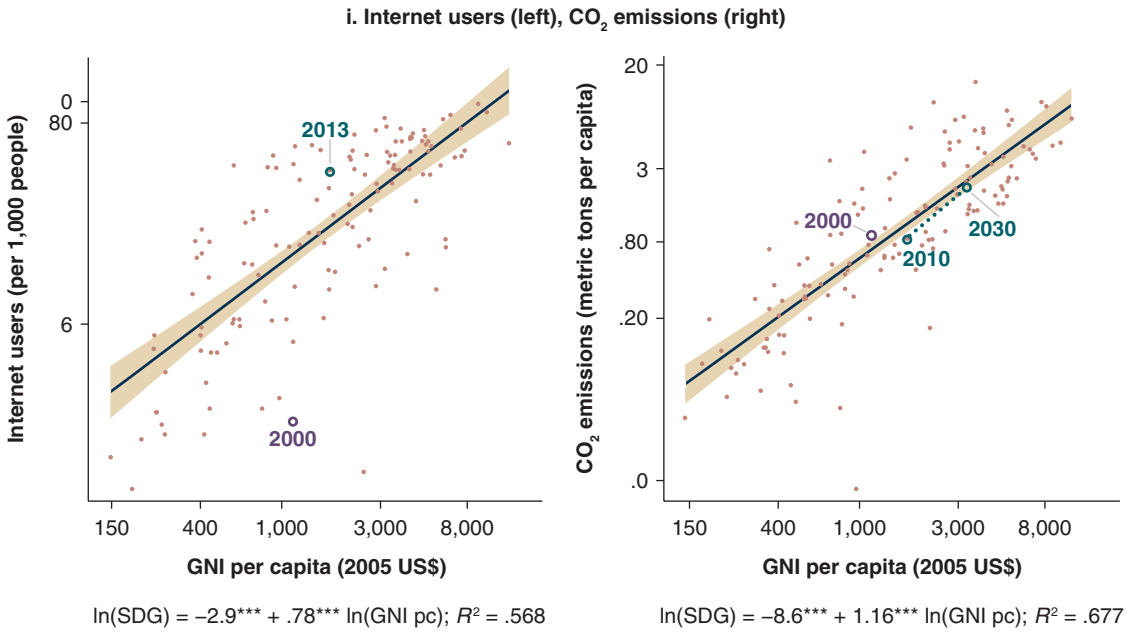
h. Access to electricity



ln(SDG) = .29 + .5*** ln(GNI pc); R^2 = .458

figure continues next page

FIGURE 9.1 *continued*



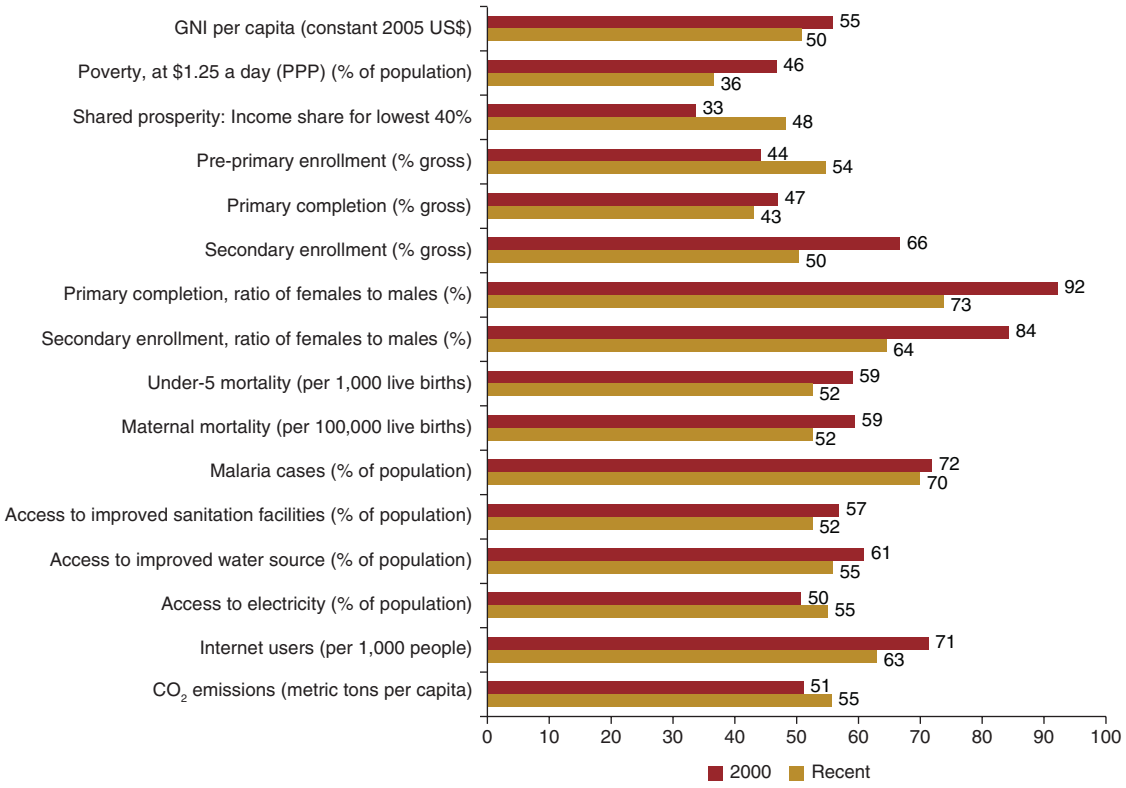
Note: Highlighted observations are for Philippines at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

indicators are presented only when the cross-country relationship between the indicator and GNI per capita is classified as tight.[7] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[8]

In sum, the Philippines' current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 10 indicators (pre-primary enrollment, primary completion, secondary enrollment, ratio of female to male primary completion, ratio of female to male secondary enrollment, malaria, access to improved water source, access to improved sanitation, access to electricity, Internet users, and CO_2 emissions).[9,10,11] For 2 of the indicators (under-5 mortality and shared prosperity), current outcomes are as expected. The country falls short of expectations for the remaining 2 indicators; poverty and, although only slightly, for maternal mortality. While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high, a possibility that calls for further analysis.

Figure 9.2 shows that, between 2000 and 2012, the Philippines' ranking among low- and middle-income countries deteriorated by 5 percentile points in terms of GNI per capita. During the same period, the Philippines' ranking rose for 4 of the selected SDGs: shared prosperity, pre-primary school enrollment, access to electricity, and CO_2 emissions; the ranking decline for malaria was with less than for GNI per capita. The ranking for another 5 indicators (primary completion, under-5 mortality, maternal mortality, access to improved sanitation facilities, access to improved water source) deteriorated to roughly the same extent as GNI per capita, while it dropped even further for the remaining 5 indicators (poverty, secondary enrollment, ratio of female to make primary completion, ratio of

FIGURE 9.2 The Philippines—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The ranking for an indicator is not reported if the available sample is less than 20. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however the data are never older than 1998 for "2000" or 2009 for "recent." Country-specific data years can be found in the respective graphs.

female to male secondary enrollment, and Internet use).

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few patterns emerge. First of all, for the majority of the indicators, the Philippines is performing better than expected, but, since 2000, progress has been much weaker than for GNI per capita in terms of percentile ranking for several indicators: secondary enrollment, ratio of female to male primary completion, ratio of female to male secondary enrollment, and Internet use. The SDG that has improved its ranking the most is shared prosperity, for which the Philippines now is performing as expected. However, for poverty, underperformance is combined with a performance that was weaker than GNI per capita in terms of changes in percentile ranking.

By 2030, considerable improvements are projected for most indicators (see table 9.1 and respective graphs in figure 9.1). Primary completion, ratio of female to male primary completion, ratio of female to male secondary enrollment, maternal mortality, malaria, and access to improved water source are all projected to either realize or get close to realizing the post-2015 global ambition (shown in the last column of table 9.1). However, for other SDGs to get closer to the realization of these ambitions, a break with the past is needed. This is also true for indicators, such as shared prosperity, for which a weak relationship with GNI per capita precludes projections. Such a break would be facilitated by a combination of more rapid growth (beyond the projected average growth of 3.5 percent) and improvements in policies that directly influence different SDGs.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure).[12] With regard to the Philippine fiscal space indicators, table 9.2 and figure 9.3 summarize the historical evolution, actual and expected recent values, and, when relevant, projected values.[13] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover three aspects of government activities: spending, receipts and debt, and governance and efficiency.

In terms of government spending in areas that may support the SDG agenda, the Philippines is below expected levels (compared to a typical country at the same GNI per capita level) for all reported categories; total public investments, total public consumption, secondary education, and health, except for primary education where spending is as expected.[14,15] However, when measuring education spending *per student* (as share of GDP per capita) then spending is lower than expected for both primary and secondary education. Fuel subsidies are the most obvious case of low-priority spending from the post-2015 agenda perspective; however, for the Philippines, the limited data that are available suggest that they are quite insignificant.[16]

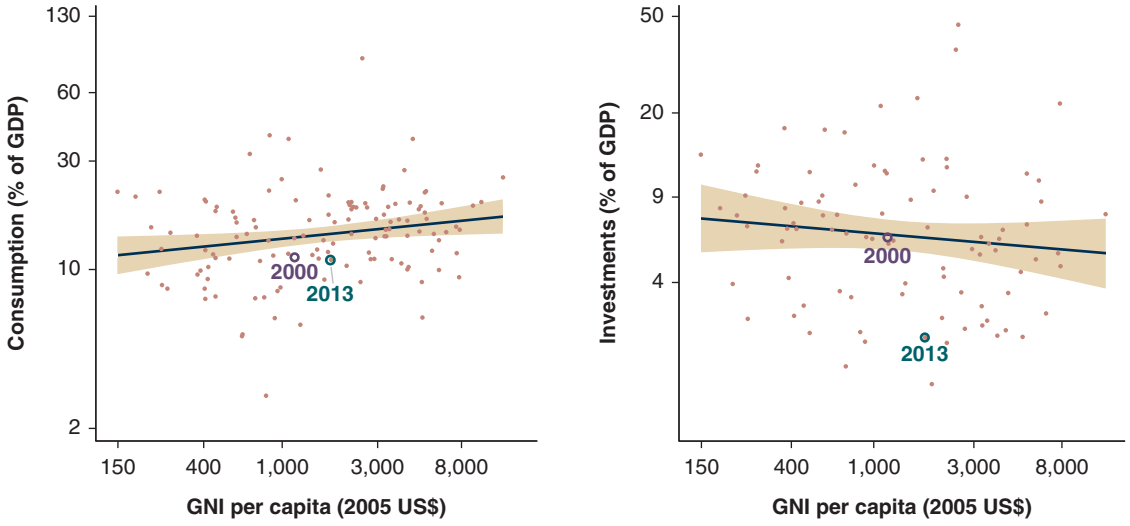
TABLE 9.2 The Philippines—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	11.4	11.1	14.5	—
Investments (% of GDP)	6.2	2.4	6.1	—
Primary education (% of GDP)	2.0	1.6	1.6	—
Secondary education (% of GDP)		0.9	1.3	—
Primary education per student (% of GDP per capita)	12.0	11.8	13.8	—
Secondary education per student (% of GDP per capita)	10.3	14.8	17.6	—
Health (% of GDP)	1.5	1.7	3.1	—
Government receipts and debts				
tax revenue (% of GDP)	12.8	12.9	14.7	—
Net ODA (% of GNI)	0.60	0.06	1.70	0.03
External debt (% of GNI)	61.6	18.6	36.4	—
Governance and government efficiency				
Government effectivness: percentile rank	50.2	56.9	28.5	62.0
Grigoli education efficiency score		0.72	0.56	0.85
Grigoli health efficiency score		0.96	0.95	—
Public investment management index		1.85	1.65	—
Memorandum item				
GNI per capita (constant 2005 US$)	1,247	1,789		3,389

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

FIGURE 9.3 The Philippines—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting

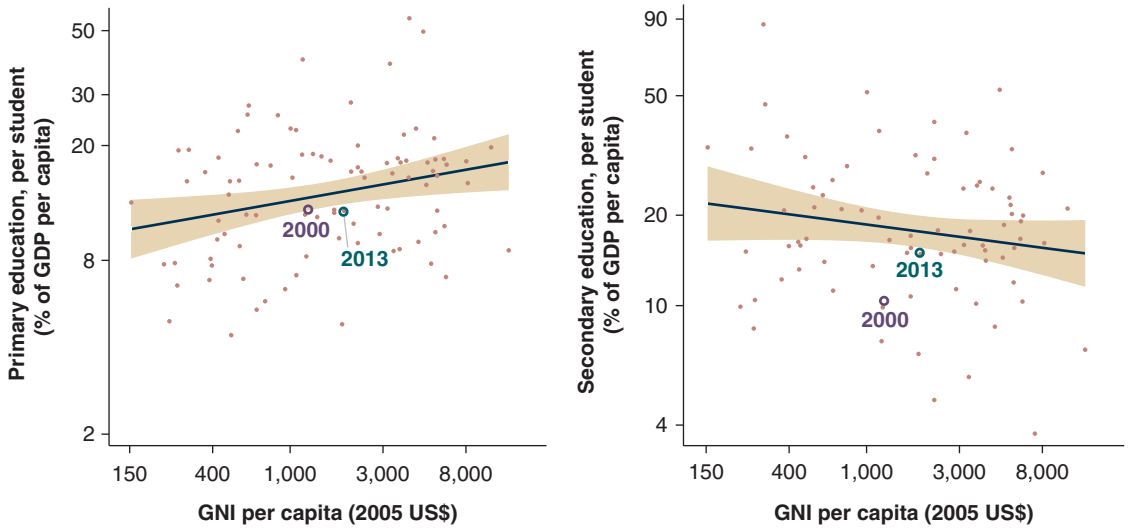
a. Government spending: consumption (left), investment (right)



ln(SDG) = 2.01*** + .09** ln(GNI pc); R^2 = .042

ln(SDG) = 2.34*** + –.07 ln(GNI pc); R^2 = .012

b. Government spending: primary education, per student (left), secondary education, per student (right)



ln(SDG) = 1.72*** + .12** ln(GNI pc); R^2 = .067

ln(SDG) = 3.51*** + –.09 ln(GNI pc); R^2 = .030

figure continues next page

FIGURE 9.3 *continued*

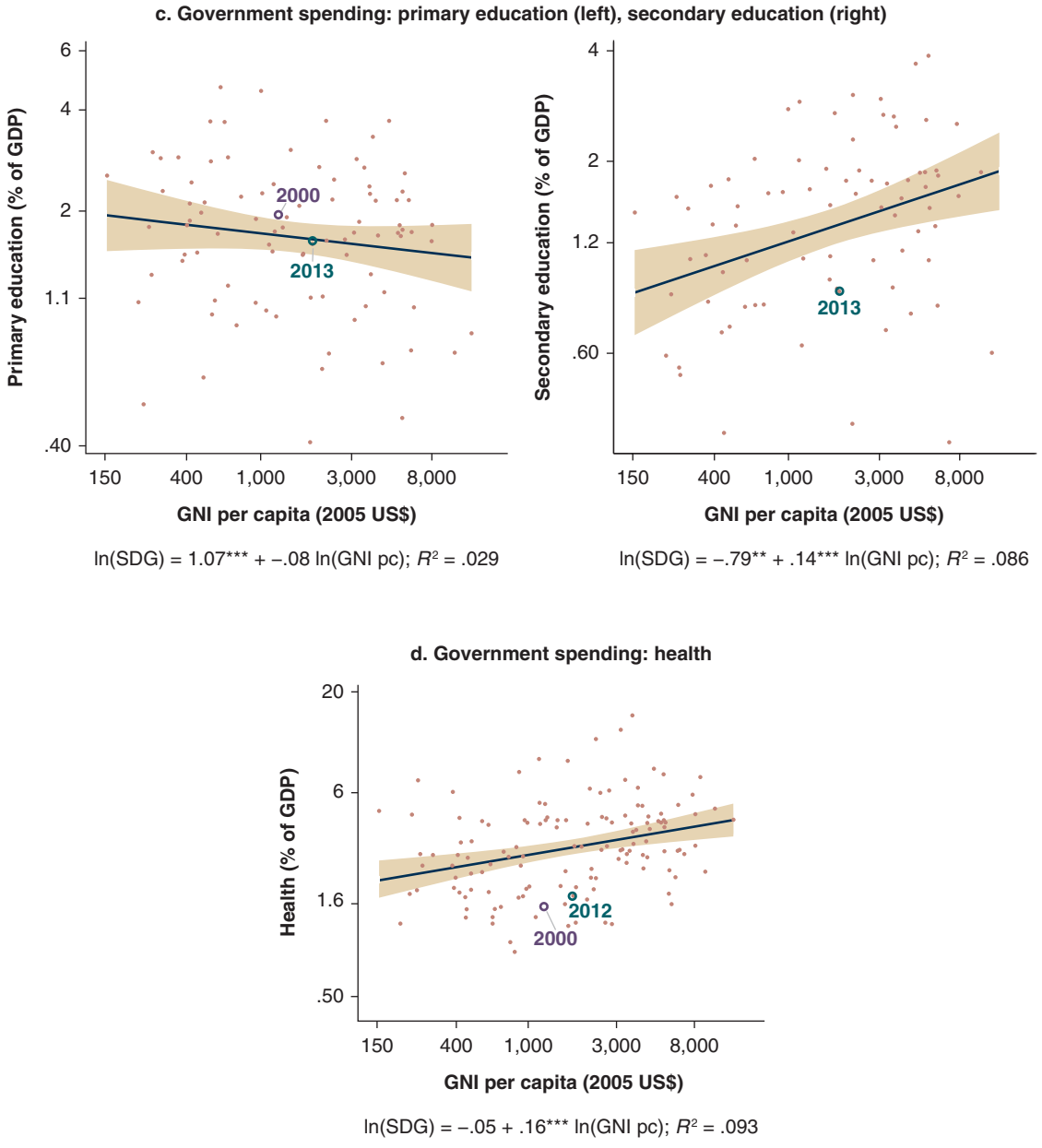


figure continues next page

FIGURE 9.3 *continued*

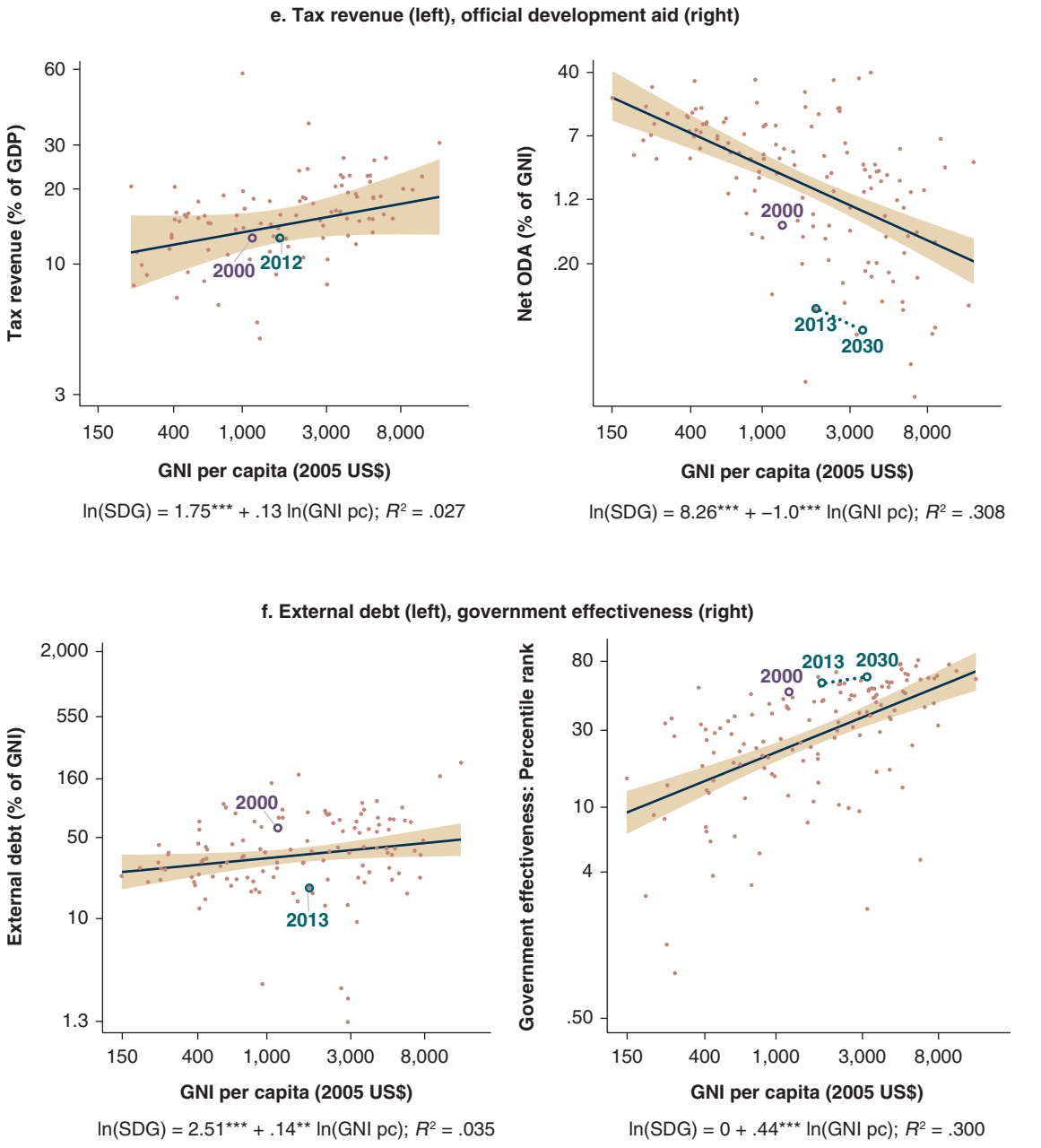
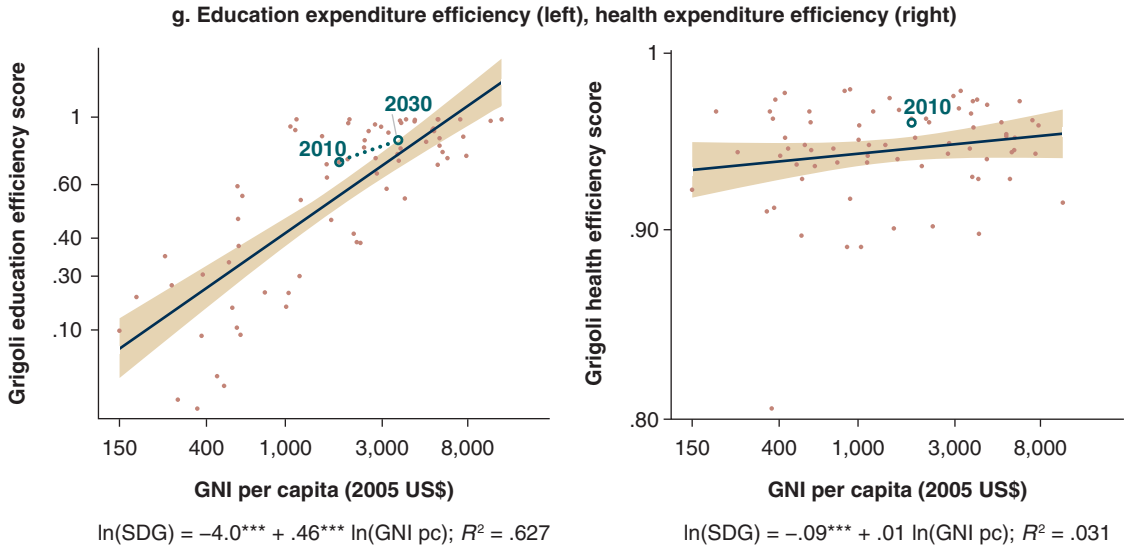
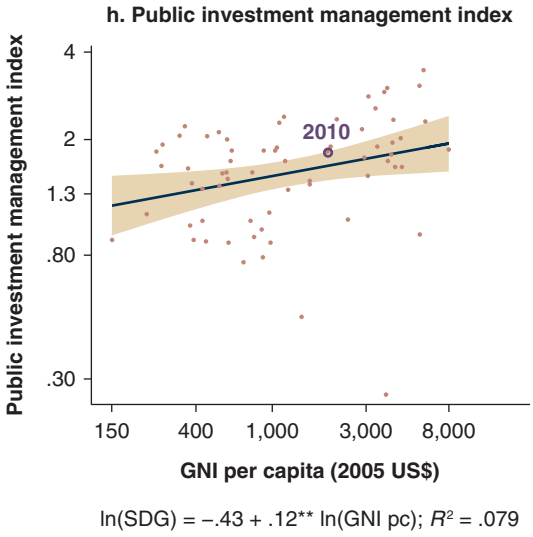


figure continues next page

FIGURE 9.3 *continued*





Note: Highlighted observations are for the Philippines in different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

Among current receipts, taxes are within the expected ranges, while net Official Development Assistance (ODA) is lower than expected. As further shown in table 9.2, cross-country patterns suggest that net ODA will decline as a percent of GDP (without changing significantly in per capita terms); however, for the Philippines, the level is already so low (0.06 percent of GNI in 2013) that this is of no significance.[17] However, while the cross-country relationship is tight, this does not mean that an increase in ODA is excluded for the Philippines: it depends on the priorities of donors and their relationships with the government. The relationship between tax revenues and GNI per capita, as well as the debt stock and GNI per capita, is not tight enough to project expected changes. However, the current intention in the Philippines is to expand tax revenues.[18] Higher taxes or lower subsidies would both reduce the resources controlled by domestic households and firms, pointing to the need to consider the combined impact on SDGs and other indicators from higher taxes and the spending increases that are financed by these taxes. The external debt stock is below the expected level. However, the current government goal is to lower borrowing further.[19]

Government efficiency is important to protect and, if possible, increase in order to add room for priority spending and enhance its impact on the SDG agenda. Table 9.2 displays data for some measures of government efficiency. According to both the health and the education indexes used in this study, the Philippines's performance is above the expected levels; among these two indexes, GNI per capita is strongly correlated with the education index but largely uncorrelated with the health index. The Philippines is also performing better than expected according to the more general World Bank Government Effectiveness indicator, and as expected in terms of the Public Investment Management Index. That is, according to these indicators, government efficiency appears to be better than expected given the GNI per capita of the Philippines, an observation that does not negate that considerable efficiency gains still may be feasible in different areas.

In sum, the most obvious source of additional fiscal space is a higher tax intake. Depending on the future decisions of the government, donors, and the actors of the international financial system, increases in ODA and/or foreign borrowing may also be forthcoming. Opportunities to improve government efficiency should be pursued, in particular given that higher taxes in themselves typically would have a negative impact on most SDGs. Nevertheless, the fact that, from a cross-country perspective, government spending is relatively low, both in general and in priority areas, while efficiency indicators are relatively strong, suggests that additional prioritized spending would yield positive payoffs.

However, decisions about the level and allocation of government spending should be made in light of government priorities and additional data that this note does not consider, including information about government capacity to efficiently expand activities in different areas and the scope to encourage complementary private sector activities. Remittances from the Philippines' large stock of workers abroad, which amounted to 9.8 percent of GDP in 2013 (World Bank), is one example of activities outside the government that may still have a strong impact on the SDG agenda. More broadly, from the perspective of this agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged.

4. Conclusions

As summarized in table 9.3, the current outcomes of the Philippines are better than expected (compared to a typical country at the same GNI per capita level) for most of the selected SDG indicators. For other indicators, they are as expected (under-5 mortality and shared prosperity) or below expectations as is the case for

poverty (using data until 2012) and, to a smaller extent, for maternal mortality. By 2030, considerable improvements are projected for most indicators and, for several of these, post-2015 global ambitions are realized or close to being realized. However, for others, such as poverty, a break with the past is needed.

Table 9.3 further shows that for most indicators, the relationship to GNI per capita is tight. Improvements in these SDGs will likely continue along with GNI per capita growth and increases in resources and capabilities. Note, however, that, for some of these SDGs, the Philippines' percentile ranking has deteriorated more than for GNI per capita, suggesting that the efficiency of policies through which resources are translated into SDG outcomes may be lagging. One indicator standing out is poverty; not only has the country's percentile ranking deteriorated since 2000 but the outcome is now weaker than expected given GNI per capita. The presence of a tight relationship to GNI per capita suggests that future improvements depend on a combination of rapid growth and better policies.

Special attention to policies is needed when the relationship between the SDG and GNI per capita is loose, which is the case for the ratio female to male primary completion and shared prosperity. Their loose relationships to GNI per capita suggest that these two indicators should not be expected to improve strongly or systematically to more rapid growth in GNI per capita but rather primarily depend on country-specific conditions and policies.

Given relatively low levels of government spending, both overall and in SDG areas with data, and levels of government efficiency that seem to be relatively good, increased prioritized government spending may yield positive payoffs if sufficiently high efficiency can be maintained. The main source of additional fiscal space may be higher taxes, even though other sources, such as increased ODA and efficiency improvements, also may contribute.

TABLE 9.3 The Philippines—Summary of Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Primary completion (×) • Secondary school enrollment (–) • Pre-primary school enrollment (+) • Ratio of female to male secondary enrollment (–) • Malaria (+) • Access to improved water source (×) • Access to improved sanitation (×) • Access to electricity (+) • Internet users (–) • CO_2 emissions (+)	• Under-5 mortality (×)	• Poverty (–) • Maternal mortality (×)
Loose	• Ratio of female to male primary completion (–)	• Shared prosperity (+)	

Note: (+) = larger country rank improvement (or smaller drop) 2000–12 than for GNI per capita; (–) = larger drop 2000–12 than for GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita.

Annex 9A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
Sustainable development goals indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	2012 data for the Philippines from the World Bank country team.
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	2012 data for the Philippines form DepEd BEIS.
Secondary completion (% gross)	EdStats. API ref: DHS: secondary completion rate [HH.DHS.SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS /SE.PRM.CMPT.MA.ZS*100]	2012 data for the Philippines form DepEd BEIS.
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	2012 data for the Philippines form DepEd BEIS.
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [SH.STA.MALR / SP.POP.TOTL *100]	
HIV Prevalence (% of population ages 15–49)	WDI. API ref: Prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	
Internet Users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	

annex continues next page

Indicator	Source	Comment
Secondary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: Health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	2013 data for the Philippines from the World Bank country team.
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStats = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. In 2012, the GDP shares for agriculture, industry, and services were at 12, 31, and 57 percent, respectively (WDI, World Bank).
2. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
3. This does not mean that GNI per capita is viewed as a direct or the only determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
4. Sources for the indicators are presented in annex 9A.
5. Projections from CEPII are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data

have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.

6. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that over-performs in water access, as GNI per capita increases the extent of over performance gradually declines, so that when the expected value is 100, over-performance has reached zero.
7. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ are defined as loose.
8. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for a specific country. The same observation applies to expected values for fiscal space indicators.
9. These data are from 2009. However, the latest trend is in line with the better than expected result. From 2013—through the Early Years Act—completion of kindergarten has become a requirement for a student to enter Grade 1; hence, the national statistics recorded a substantial increase in pre-primary enrollment in that year. However, while these data are not computed as gross enrollment but rather net enrollment (for 5 year old children), as of 2013, the enrollment for kindergarten for 5-year-old children has shot up to 77.4 percent.
10. Note that in the Philippines, there is a problem with males falling significantly behind females in terms of education. Hence, "better than expected" results for the ratio of female to male primary completion and the ratio of female to male secondary enrollment may be misleading since it reflects a problematic gender disparity.
11. With regard to CO_2, the Philippines's current and projected 2030 per capita emissions are 8.6 and 35.8 percent of the current OECD average.
12. There may also be cases where the solution to the low level of SDG is not a spending increase but rather improvements in how the money is spent (perhaps via a change in the policy mix).
13. The treatment is the same as in table 9.1 and related figures. That is, in table 9.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
14. Interest costs have tended to absorb a sizable share of revenue, compressing room to spend on health, education, and infrastructure (IMF 2013, p. 12).
15. The Philippines government health expenditure is now considerably above that which is recorded in latest WDI data, reflecting the fact that the budget of the Philippine Department of Health (at the national level) almost doubled between 2012 and 2014. When government national and local level health spending is added, this translates into a large increase in overall health spending.
16. Fuel subsidies are detrimental to the climate and encourage technologies that are less labor intensive, tending to generate employment for fewer workers at lower wages. Pretax spending is not available for the Philippines but post tax fuel subsidies (also including negative external effects) is currently at 1.1 percent of GDP, which is lower than expected.
17. Net ODA decreased from about 3 percent in the beginning of the 1990s to levels below 0.5 percent starting from the mid-2000s.
18. IMF (2013, p. 12) suggests that the Philippines tax revenues may be increased from its 2012 level of 12.8 percent of GDP to 16.0 percent by 2016. This is in line with the government's own development plan for 2011–16, where the overall strategy in the fiscal sector is to increase the tax effort to reach 16.1 percent by 2016 (NEDA 2014). Such an increase would still leave the Philippines within its expected range.
19. The 2013 IMF-World Bank Debt Sustainability Analysis (DSA) (IMF 2013, annex 48) for the Philippines finds the outlook for public debt dynamics favorable. Public debt is projected to continue a declining trend to 42 percent of GDP by 2017, which for the total external debt means a decline from 34.1 percent of GDP in 2011 to 22.3 percent in 2017 (IMF 2013, p. 37). This intention is confirmed in NEDA (2014), which states that the government aims to further decrease the debt to 43.4 percent of GDP in 2016, from 45.8 percent as of June 2013.

Chapter 10

Senegal

1. Introduction

Senegal is a lower middle-income country in West Africa. Since 2006, growth has been slow partly because of a series of exogenous shocks, including spikes in food and fuel prices, the global financial crisis, regional droughts and floods, and, more recently, the spillovers from Ebola. During 2001–12, Senegal's average annual growth rate for GNI per capita (at constant 2005 US$) was as low as 1.1 percent, compared to a developing (low- and middle-income) country average of 3.0 percent. During the same period, Senegal's ranking according to the UNDP Human Development Index (among countries included both in 2000 and in 2012) was unchanged at the 13th percentile). While there are numerous development constraints for Senegal, a few stand out; the fiscal deficit, bottlenecks in transport and energy, a poor business climate, stagnation in traditional exports, and inefficient government spending (IMF 2015c, p. 5).

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Senegal, serving as the starting point for a more complete country development diagnostic as well as a more comprehensive country-focused analysis. The note is built around tables and figures that provide data for a selection of SDG target indicators and indicators related to fiscal space—fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending. Drawing on the information in these tables and figures, this note briefly (a) summarizes Senegal's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, Senegal's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[1] The latter variable tends to be highly correlated with most SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[2]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 10.1 summarizes data for Senegal: historical evolution, actual and expected values for a recent year, and projected 2030 values.[3] In figure 10.1, data for Senegal are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Senegal, the projected average annual rate of GNI per capita growth is merely 1.2 percent.[4] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[5] Projections for SDG indicators are presented only when the cross-country relationship between the indicator and GNI per capita is classified as tight.[6] A loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are in practice also small

TABLE 10.1 Senegal—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	47.3	34.1	15.0	25.5	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: Income share for lowest 40%		16.4	16.7	—	By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)	2.8	14.3	21.8	17.2	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)	38.6	60.5	76.3	64.3	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	15.9	41.0	51.9	45.3	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary completion (% gross)		18.6	22.2		By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)	73.3	108.8	94.4	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment, ratio of females to males (%)	65.1	91.2	87.7	92.7	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	137.0	55.3	50.9	49.1	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	480	320	215	269	By 2030, reduce the global maternal ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	0.5	2.1	0.3	1.3	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	0.5	0.5	0.9	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	42.7	51.9	37.7	54.7	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defection, paying special attention to the needs of women and girls and those in vulnerable situations.

table continues next page

TABLE 10.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Access to improved water source (% of population)	66.4	74.1	74.9	76.2	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
Road density (km per 100 sq. km of land)	7.4	7.6	12.7	9.0	Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	36.8	56.5	37.6	59.4	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	0.4	20.9	9.8	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	0.40	0.55	0.43	0.66	Integrate climate change measures into national policies, strategies and planning.
Memorandum item					
GNI per capita (constant 2005 US$)	689	787		956	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent". The year for country specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 10.1 Senegal—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)

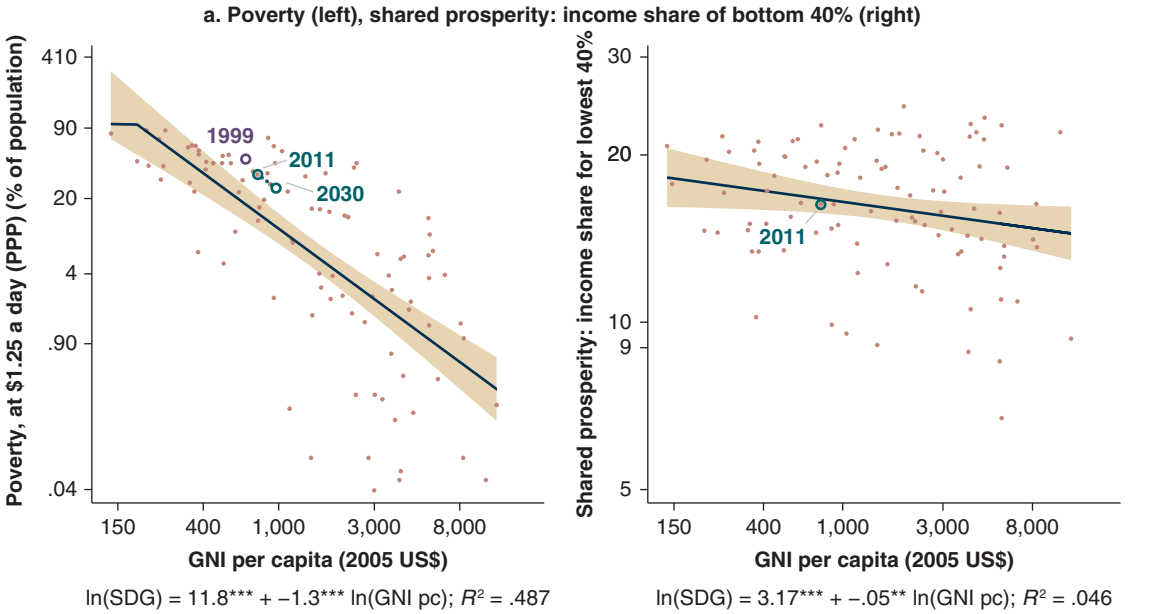
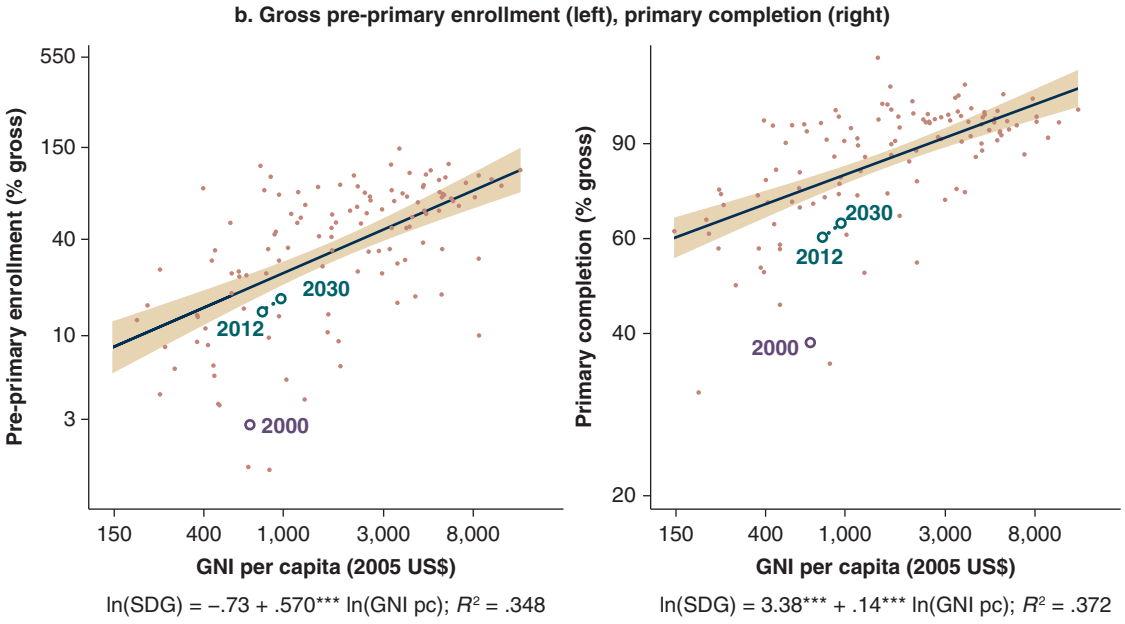


figure continues next page

FIGURE 10.1 *continued*



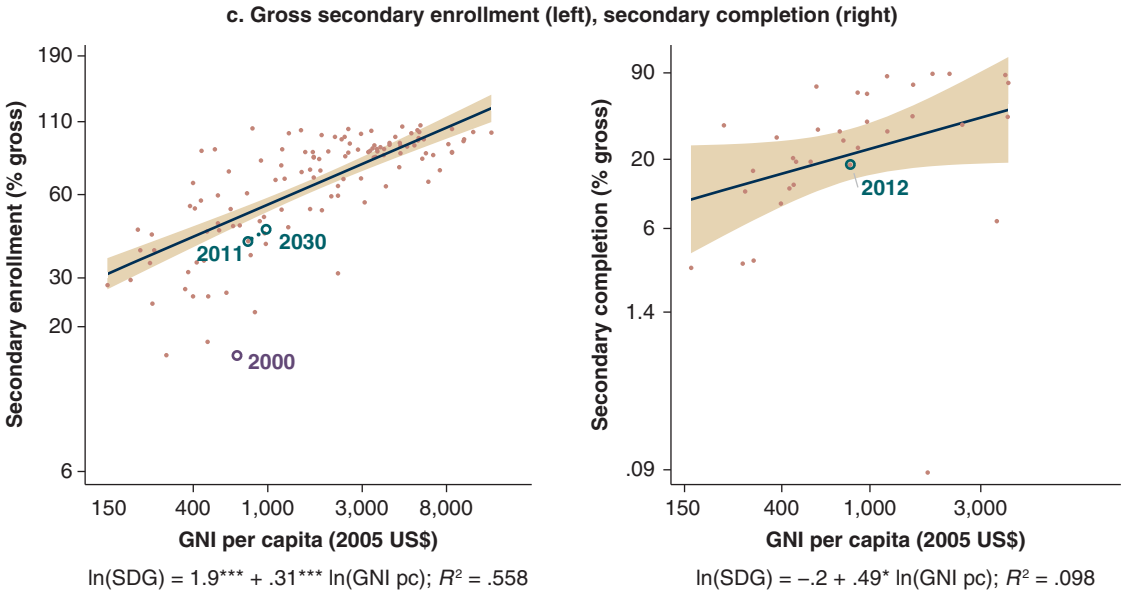


figure continues next page

FIGURE 10.1 *continued*

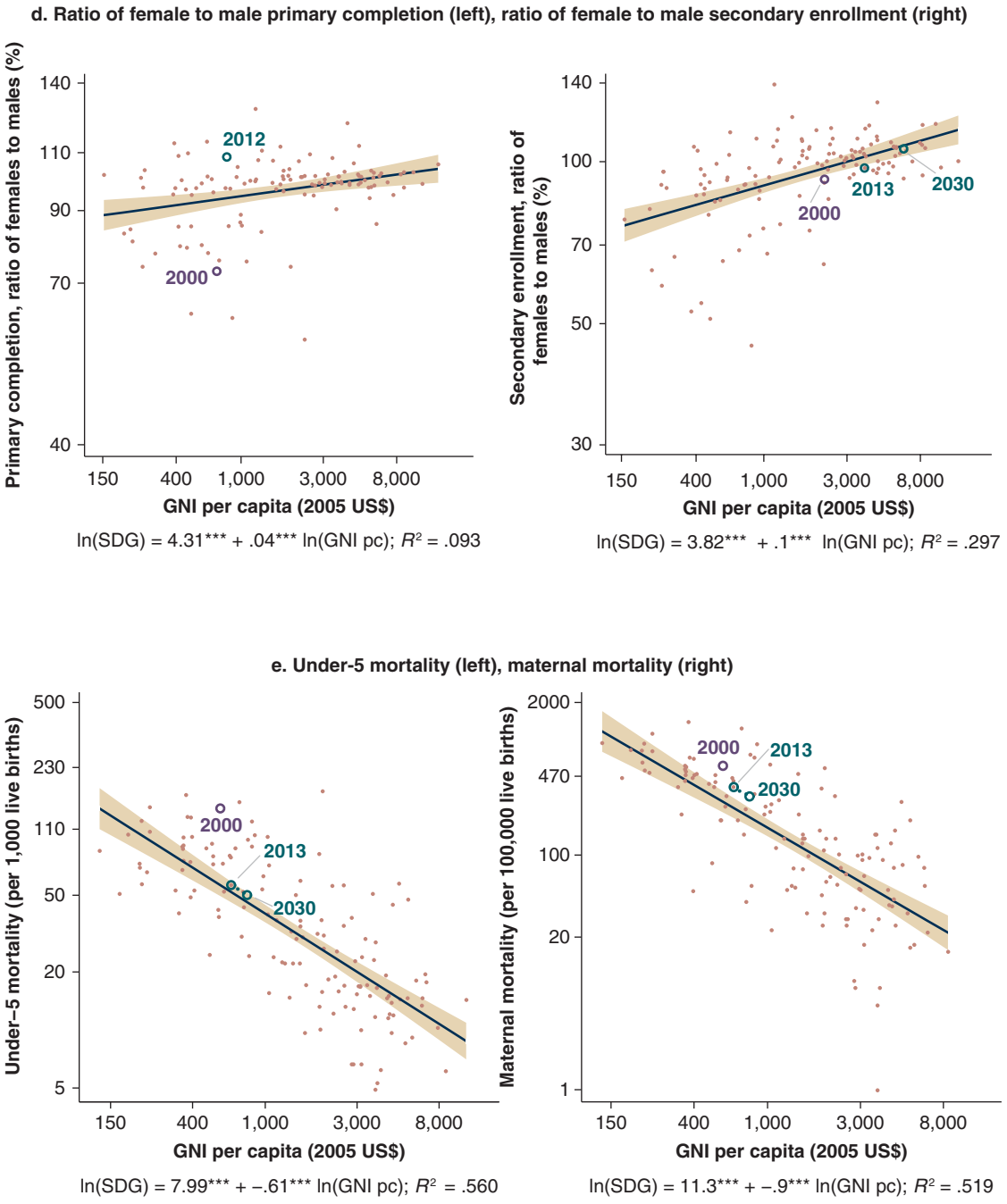


figure continues next page

FIGURE 10.1 *continued*

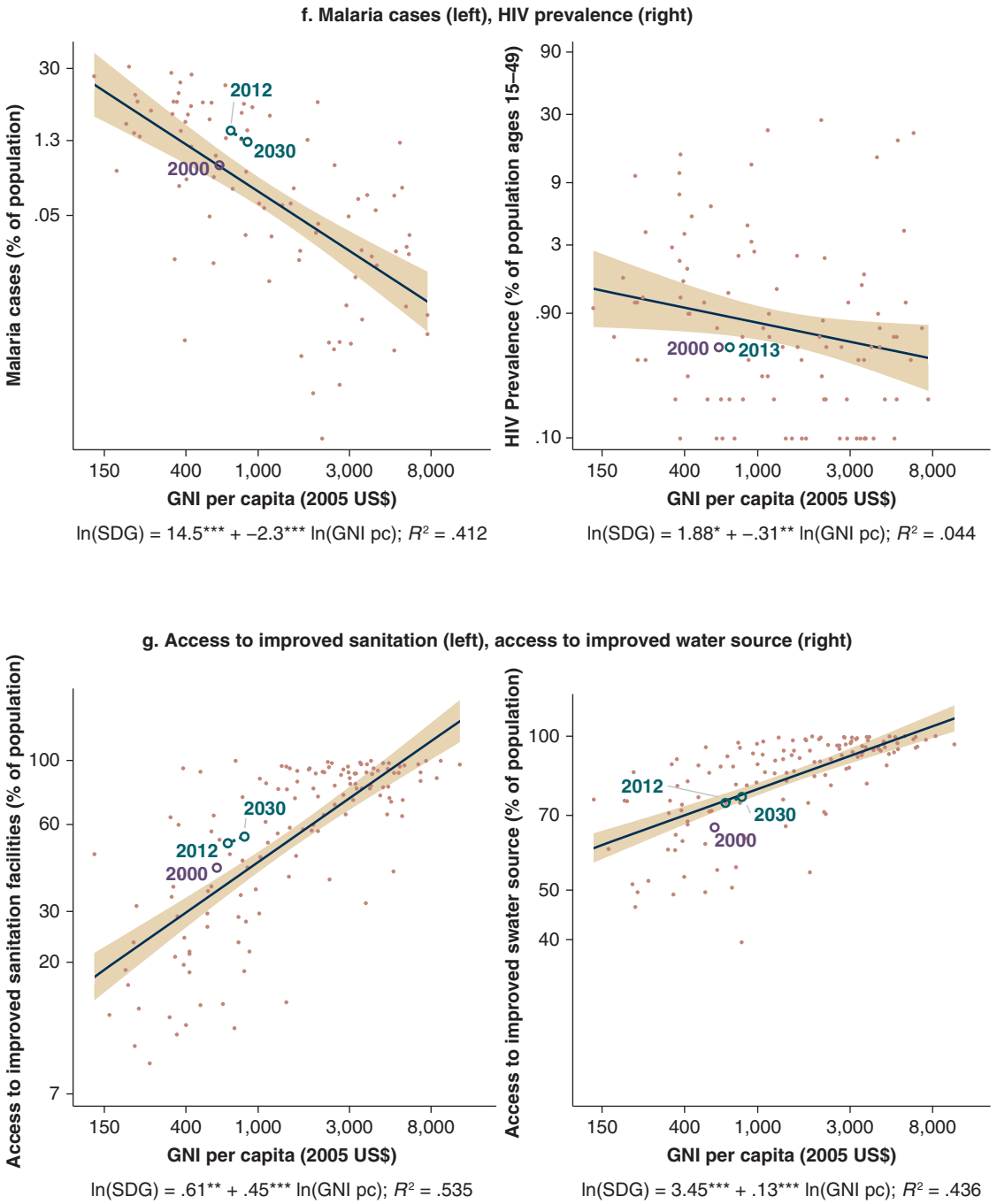
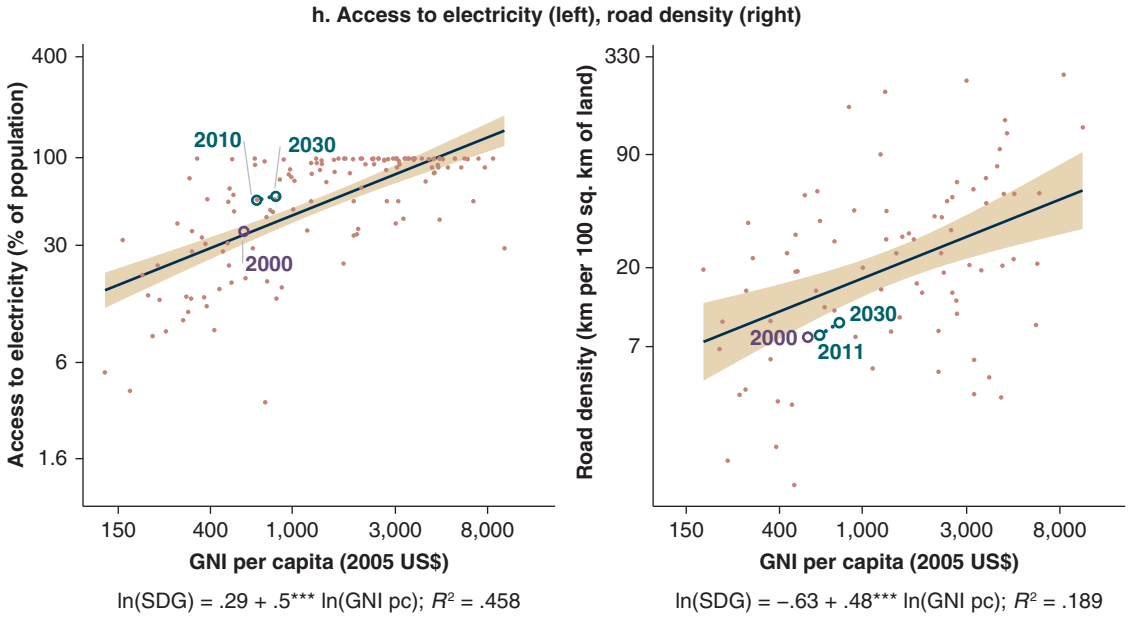
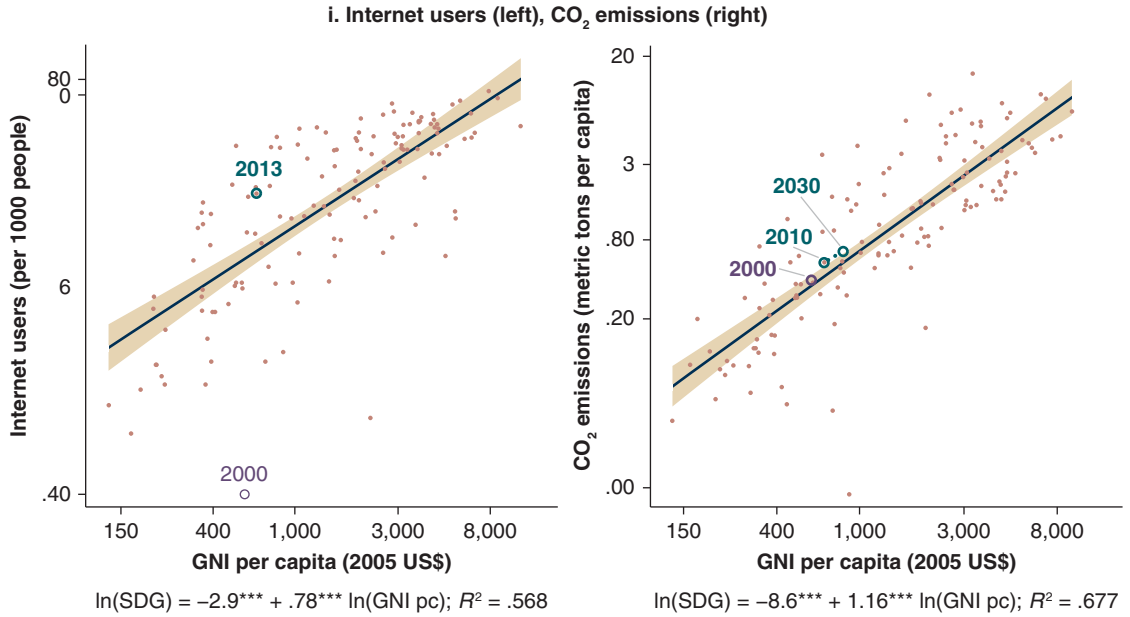


figure continues next page

FIGURE 10.1 *continued*





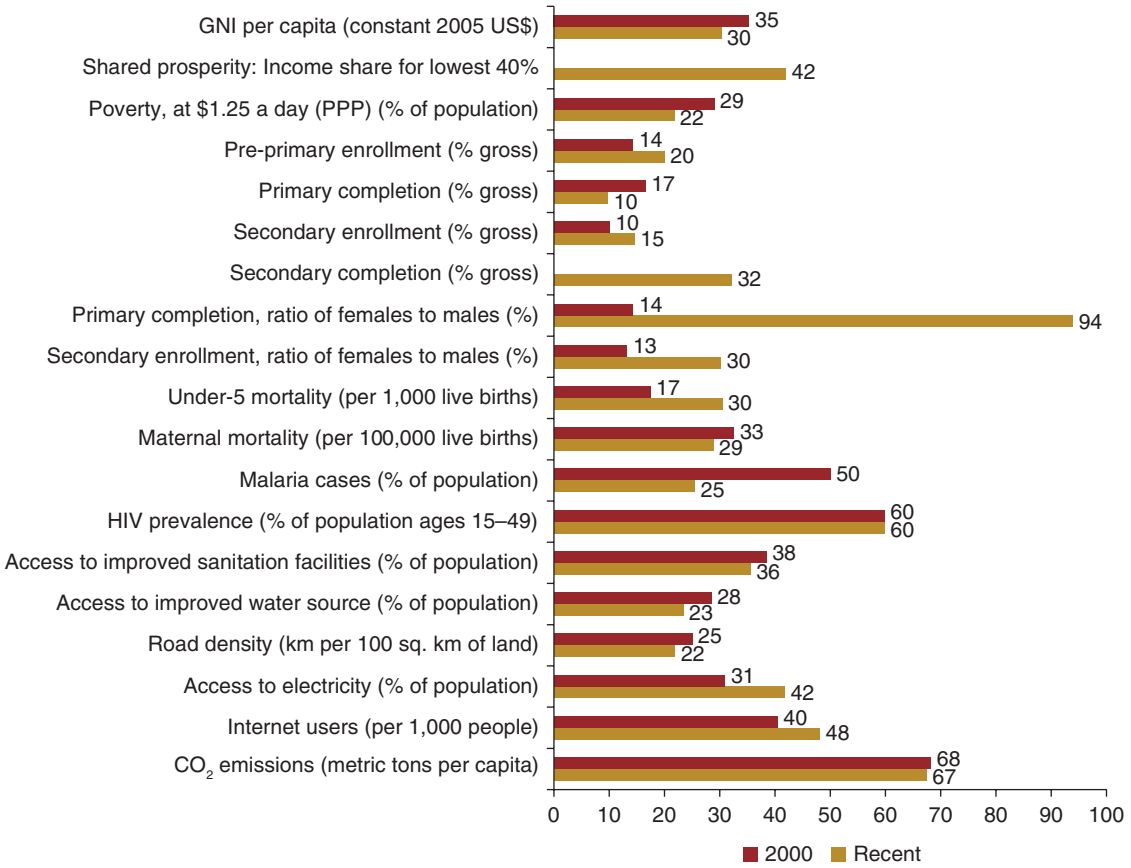
Note: Highlighted observations are for Senegal at different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

(in absolute terms); given this the "expected" values for a recent year are close to the average for all low- and middle-income countries.[7]

As indicated, Senegal's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 6 of the 18 indicators covered in table 10.1: ratio of female to male primary completion, ratio of female to male secondary enrollment, HIV prevalence, access to improved sanitation facilities, access to electricity, and Internet users. For 4 indicators—shared prosperity, secondary completion, under-5 mortality, and access to improved water source—current outcomes are as expected. The country falls short of expectations for 8 indicators: poverty, pre-primary school enrollment, primary completion rate, secondary school enrollment, maternal mortality, malaria, road density, and CO_2 emissions.[8] While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high, a possibility that calls for further analysis.

Figure 10.2 shows that, since 2000, Senegal's ranking among low- and middle-income countries has deteriorated by 5 percentile points in terms of GNI per capita. Nevertheless, among the 15 indicators with sufficient data, Senegal's ranking still rose compared to 2000 for 7 of the indicators: pre-primary enrollment, gross secondary enrollment, ratio of female to male primary completion (for the latter quite dramatically, by as much as 80 percentile points), ratio of female to male

FIGURE 10.2 Senegal—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The ranking for an indicator is not reported if the available sample is less than 20. Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent". The year for country-specific data can be found in the respective graphs.

secondary enrollment, under-5 mortality, access to electricity, and Internet users.[9] In addition, 3 indicators (HIV prevalence, access to improved sanitation facilities, and CO_2 emissions) stayed at the same ranking or deteriorated less than GNI per capita. For 5 of the indicators the ranking deteriorated roughly to the same extent as GNI per capita: poverty, primary completion, maternal mortality, access to improved water source, and road density. Only for 1 indicator—malaria—was the decline more severe than for GNI per capita.

By 2030, considerable improvements are projected for most indicators (see table 10.1 and respective graphs in figure 10.1). However, compared to global ambitions, the improvements for most indicators are moderate. This means that, to get closer to the realization of these ambitions, a break with the past is needed. Such a break would be facilitated by a combination of more rapid growth (beyond the projected 1.2 percent) and improvements in policies that directly influence different SDGs; such policies are particularly important for shared prosperity and other indicators that are largely unrelated to GNI per capita.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including but not limited to infrastructure).[10] With regard to Senegal's fiscal space indicators, table 10.2 and figure 10.3 summarize the

TABLE 10.2 Senegal—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	12.8	15.5	13.4	—
Investments (% of GDP)	4.5	6.4	6.4	—
Primary education (% of GDP)	1.3	2.2	1.7	—
Secondary education (% of GDP)	0.8	1.6	1.2	—
Primary education, per student (% of GDP per capita)	11.7	17.0	12.4	—
Secondary education, per student (% of GDP per capita)	35.2	29.0	18.8	—
Health (% of GDP)	1.9	2.8	2.8	—
Fuel subsidy (% of GDP)		2.3	1.9	—
Government receipts and debts				
Tax revenue (% of GDP)		19.2	13.2	—
Net ODA (% of GNI)	9.4	7.8	4.2	6.3
External debt (% of GNI)	79.6	34.9	32.1	—
Governance and government efficiency				
Government effectivness: percentile rank	51.7	37.8	19.3	39.1
Grigoli education efficiency score		0.27	0.38	0.31
Grigoli health efficiency score		0.94	0.94	—
Public investment management index		0.9	1.5	—
Memorandum item				
GNI per capita (constant 2005 US$)	689	787		956

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent". The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide.
Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

FIGURE 10.3 Senegal—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting

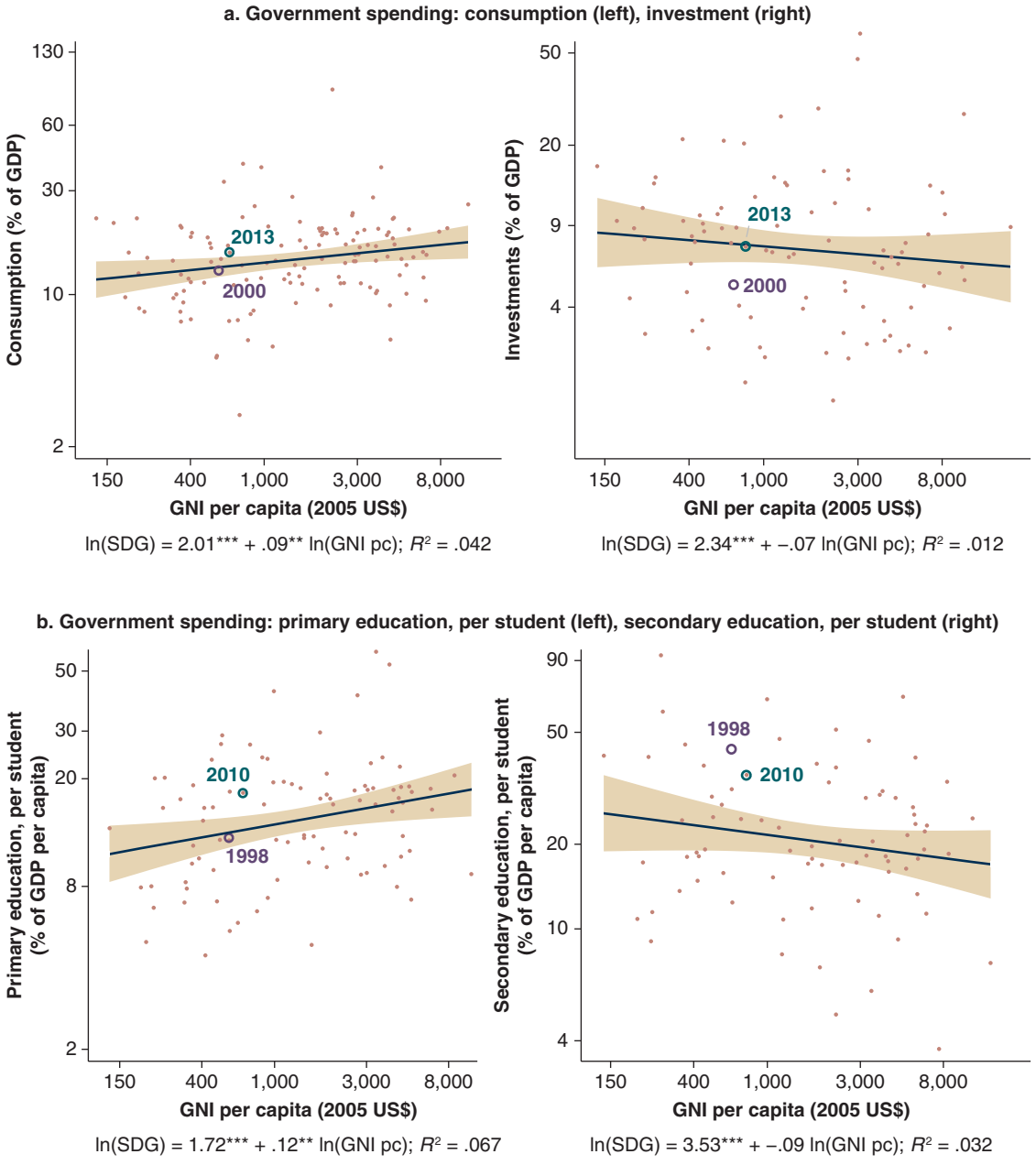


figure continues next page

FIGURE 10.3 *continued*

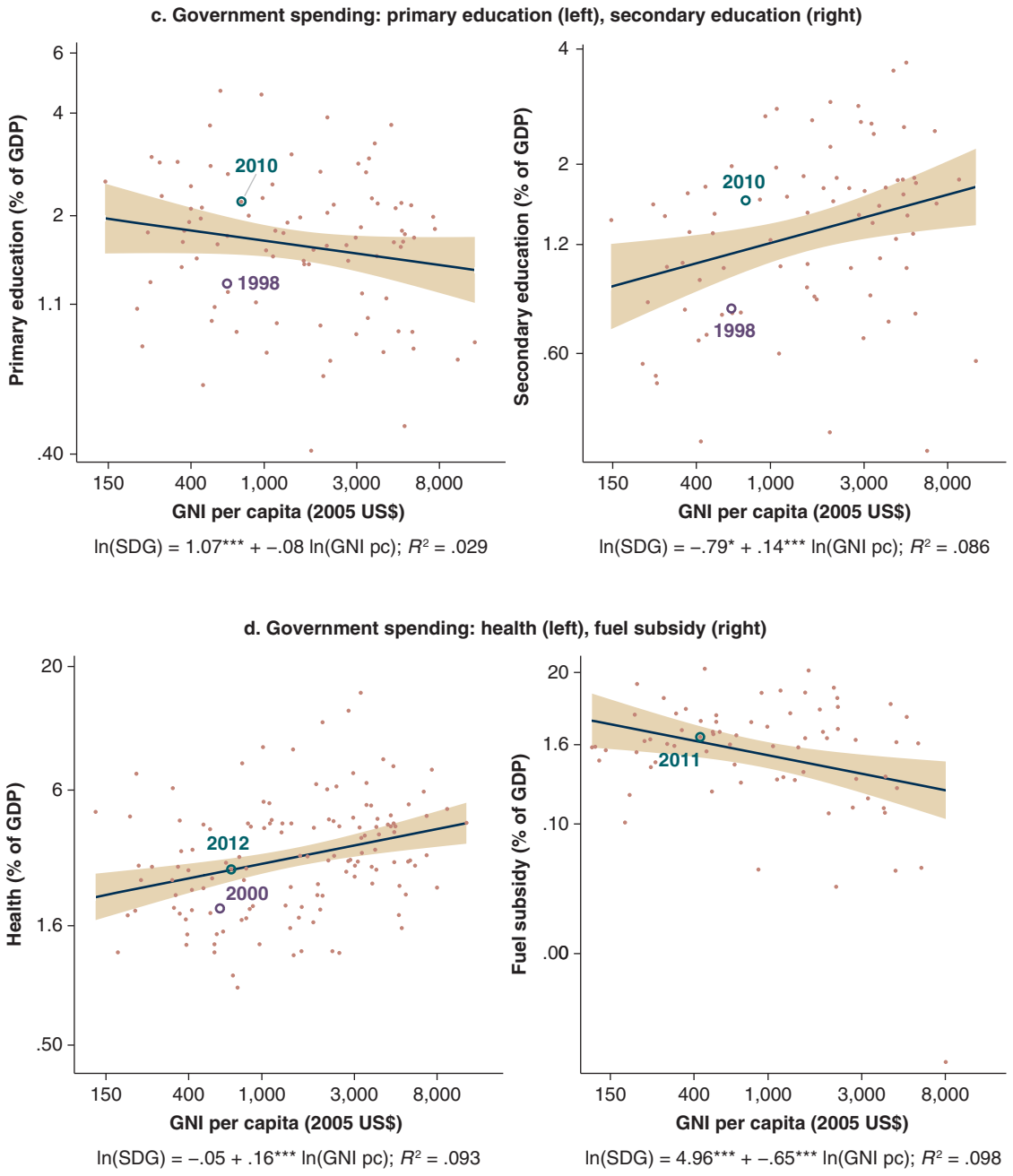


figure continues next page

FIGURE 10.3 *continued*

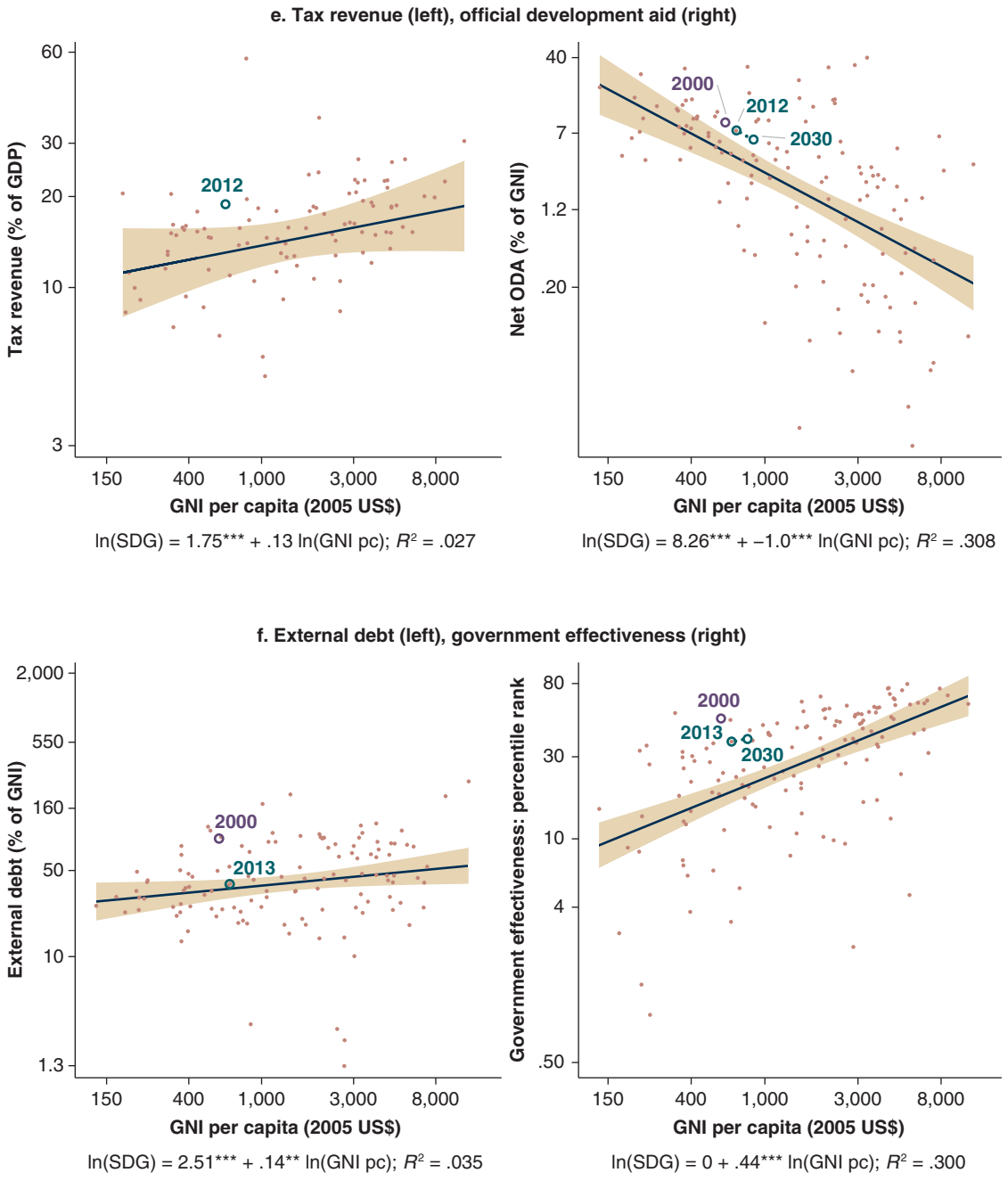
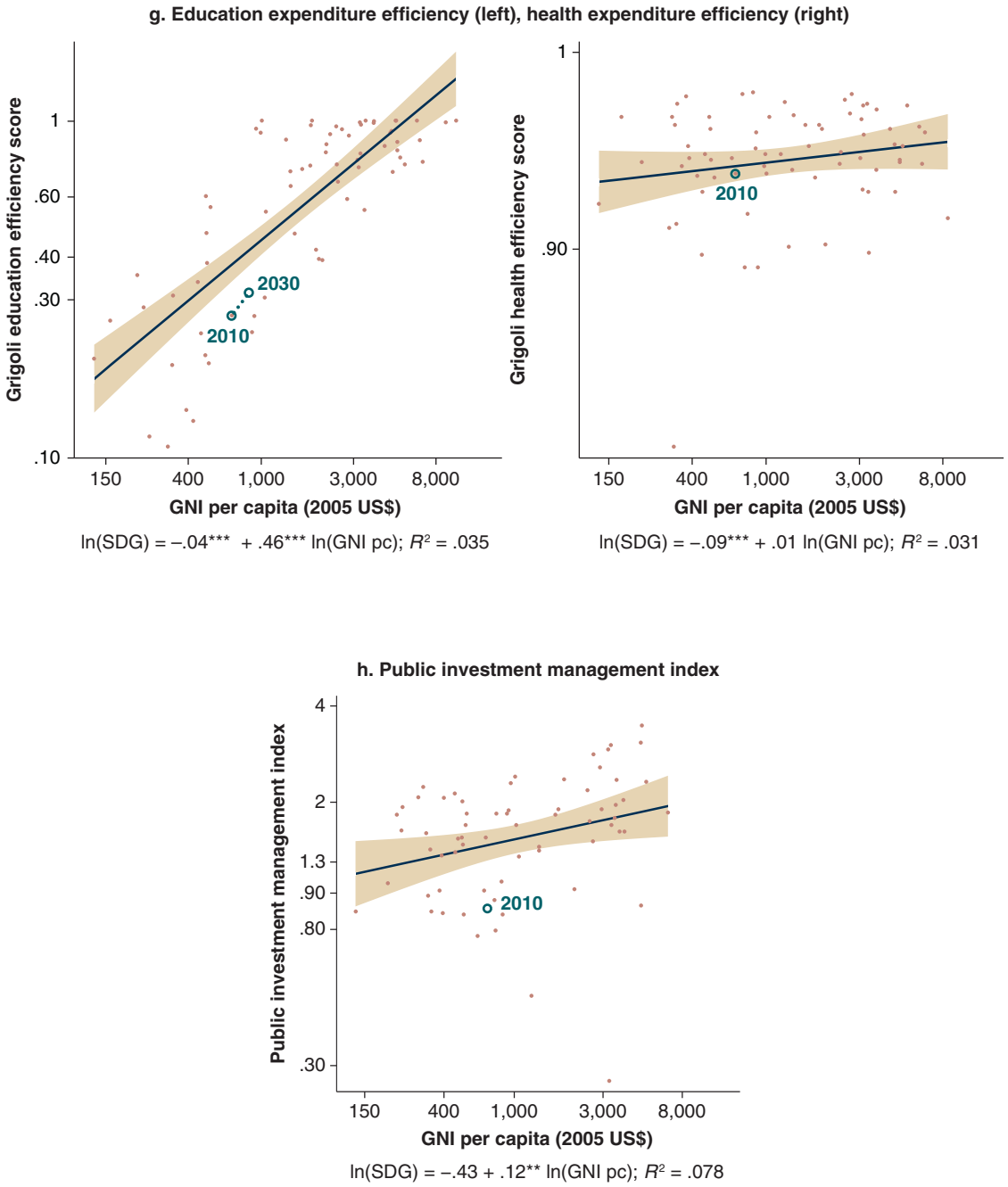


figure continues next page

FIGURE 10.3 *continued*



Note: Highlighted observations are for Senegal in different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

historical evolution, actual and expected recent values, and, when relevant, projected values.[11] When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover selected indicators related to three aspects of government activities: spending. receipts and debt, and governance and efficiency. While the findings of this country-at-a-glance note cannot guide policy on their own, they should be an input into the discussion about policy making.

In terms of government spending in areas that may support the SDG agenda, Senegal is above expected levels (compared to a typical country at the same GNI per capita level) for total public consumption, primary education, and secondary education. Spending on total public investment and health are as expected. Note that, for primary and secondary education, spending is measured in two ways: total as share of GDP and per student as share of GDP per capita; for both levels, spending according to both indicators is higher than expected. Fuel subsidies (at 2.3 percent of GDP in 2013)[12] are the most obvious case of low-priority spending from the post-2015 agenda perspective—elimination of these subsidies should be a top priority.[13] SDG-related areas in which the government currently is overspending while the associated SDG indicators are lagging need to be discussed in relation to improved efficiency and impact.

Among current receipts, tax revenues and net Official Development Assistance (ODA) as a share of GDP are both higher than expected.[14] As further shown in table 10.2, cross-country patterns suggest that net ODA will decline as a percent of GDP (without changing significantly in per capita terms); for Senegal, this would mean a decrease from the current level of 7.8 percent of GNI to 6.3 percent in 2030. However, the fact that cross-country patterns point to a likely decline in ODA does not mean that such an outcome should be taken for given: it depends on the priorities of donors and their relationships with Senegal's government.

The relationship between tax revenues and GNI per capita is not tight enough to project expected changes. However, Senegal's government has signaled that its intention is to expand tax revenues.[15] Higher taxes or lower subsidies would both reduce the resources controlled by domestic households and firms, pointing to the need to consider the combined impact on SDGs and other indicators from higher taxes and the spending increases that are financed by these taxes. The level of public foreign debt (as a share of GDP) is as expected (with a weak and slightly positive relationship to GNI per capita). Senegal continues to face a low risk of debt distress, but risks have increased. Hence, with an external debt stock at the expected level, increased external borrowing can only be expected to be marginal.[16]

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Table 10.2 displays data for some measures of government efficiency, with mixed results for Senegal. According to the education spending efficiency index used in this study, Senegal's performance is below expectations, while it is doing as expected for the health index; among these two indexes, GNI per capita is strongly correlated with the education index but largely uncorrelated with the health index. Senegal is also performing below expectations in terms of the more general Public Investment Management Index, but better than expected according to the World Bank Government Effectiveness index. Given that the different indexes measure different aspects of government performance, such mixed findings may not be inconsistent. The Senegal Public Expenditure Review 2012 also suggests the inefficiencies in Senegal's public spending are more severe than for many other countries and that these inefficiencies have been increasing over time (World Bank 2012, pp. 13–14). In addition, more qualitative evidence points to spending inefficiencies.[17]

In sum, while there are some areas standing out, such as decreased spending on fossil fuel subsidies, creation of additional fiscal space would probably require a combination of actions to decrease spending in areas of lesser priority, improve government and spending efficiency, and, possibly, take measures to increase tax revenues—although they are already higher than expected.[18] Among these, opportunities to improve government efficiency should in particular be pursued given that, other things being equal, higher taxation tends to have a negative impact on private consumption, savings, and investment. In general, decisions about the level and allocation of government spending should be made in light of government priorities and additional considerations beyond the scope of this note, including assessments about government capacity to efficiently expand activities in different areas and the scope to encourage complementary private sector activities. Beyond issues directly related to the government budget, remittances from Senegal's workers abroad were as high as 10.7 percent of GDP in 2013 (higher than expected for Senegal's GNI per capita level), significantly raising the living standards of many Senegalese. Measures that encourage even higher levels of remittances and channel them to income-raising investments may have high payoffs for the SDG agenda. More broadly, from the perspective of this agenda and given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that are biased in favor of the less advantaged.

4. Conclusions

As summarized in table 10.3, Senegal's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) in some areas but below expectations in others, including poverty and a number of education indicators (pre-primary enrollment, primary completion, and secondary enrollment). By 2030, improvements are projected for most indicators and a few of the post-2015 global ambitions may even be realized. However, for most, a break with the past would be needed.

Table 10.3 further shows that, for most indicators, the relationship to GNI per capita is tight. Given this, acceleration of growth, especially of the inclusive type, should be a top priority. Improvements in these SDGs will likely continue along with GNI per capita growth and related increases in resources and capabilities. From a multicountry perspective, performance has been particularly strong in terms or primary school gender equality (indicated by a strongly improved percentile ranking for the ratio of female to male primary completion). However, for malaria,

TABLE 10.3 Senegal—Summary of Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Ratio of female to male secondary enrollment (+) • Access to improved sanitation (+) • Access to electricity (+) • Internet users (+)	• Under-5 mortality (+) • Access to improved water source (×)	• Poverty (×) • Pre-primary school enrollment (+) • Primary completion (×) • Gross secondary enrollment (+) • Maternal mortality (×) • Malaria (×) • Road density (×) • CO_2 emissions (+)
Loose	• Ratio of female to male primary completion (+) • HIV prevalence (+)	• Shared prosperity • Secondary completion	

Note: (+) = larger country rank improvement (or smaller drop) 2000–12 than for GNI per capita; (−) = larger drop 2000–12 than for GNI per capita; (×) = the same country rank change 2000–12 as for GNI per capita.

Senegal is not only underperforming but has deteriorated by more in ranking than GNI per capita, suggesting that special attention should be given to the efficiency of related policies.

For indicators with a weak relationship with GNI per capita, strong and systematic improvements should not be expected to accompany economic growth; hence, policies affecting such indicators require additional attention. This is, for example, the case for shared prosperity and secondary completion, both of which currently are at expected levels. However, more rapid over-all growth would clearly promise to raise growth in the *level* of per capita incomes for the bottom 40 percent even though the impact of the growth acceleration on shared prosperity would depend on country and policy specifics.

Given relatively high levels of government consumption and tax revenues, opportunities to improve efficiency in government spending seem particularly important. The main source of additional fiscal space may be elimination of fossil fuel subsidies and decreased spending in low-priority areas.

Annex 10A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStat. API ref: DHS: secondary completion rate [HH.DHS.SCR]	
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS /SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/population, total *100 [sh_sta_malr/ SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	

annex continues next page

Indicator	Source	Comment
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStat. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the pretax subsidy
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE_PER_RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStat = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
2. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
3. Sources for the indicators are presented in the annex 10A.
4. Projections from CEPII (v 2.3) are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.
5. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, over-performance has reached zero.
6. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ are defined as loose.
7. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for Senegal. The same observation applies to expected values for fiscal space indicators.
8. With regard to CO_2, Senegal's current and projected 2030 per capita emissions are 5.4 and 8.2 percent of the current OECD average. In terms of CO_2 emissions per unit of GDP, Senegal's are also higher than expected.
9. If data are not available for 2000 or 2013, the closest earlier year with data is used. The year for country-specific data can be found in the respective graphs.
10. There are also cases where the solution to the low level of SDG is neither private nor public spending but more efficient policies or complementary policies.
11. The treatment is the same as in table 10.1 and related figures. That is, in table 10.2, projections are shown only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
12. Estimate for 2014 suggests fuel subsidies will drop under 1.4 percent of GDP, and it will be even less in 2015 due to the fall in oil prices (World Bank country team).
13. Fuel subsidies are detrimental to the climate and encourage technologies that are less labor intensive, tending to generate employment for fewer workers at lower wages.
14. Net ODA per capita is somewhat higher than expected for Senegal.
15. IMF (2015c, p. 38) suggests that Senegal's tax revenues may be increased from its 2013 level of 18.4 percent of GDP to 20.1 percent in 2019. The government has created a new tax code and continues to implement tax policy and revenue administration measures (IMF 2015c, pp. 7, 44).
16. Starting from a level of 32.7 percent of GDP in 2013, the external public debt is projected to be at 35.1 percent in 2019 and 30.1 in 2024; the total (domestic and foreign) public debt is projected to evolve from 47.1 percent of GDP in 2013 to 50.7 percent in 2019 and 40.9 in 2024 (IMF 2015c, p. 34, DSA annex). The Senegal debt sustainability analysis (IMF 2015c, DSA annex) shows that Senegal remains at a low risk of debt distress under the assumption of fiscal consolidation and a shift toward less concessional financing. Recently the government decided to keep the total debt-to-GDP ratio below 52 percent (IMF 2015c, pp. 10, 44).
17. The IMF and the government (IMF 2015c, pp. 11–12, 43) agree that successful development will require a significant improvement in

public spending efficiency. This includes substantial improvements in the regulatory framework and governance, as well as in the quality and efficiency of public investment together with actions to limit public consumption.

18. World Bank (2014c, p. 8) suggests that, given continued struggles with regard to revenue collection, the ability to create fiscal space will be driven by success in reducing low priority spending.

Chapter 11

Uganda

1. Introduction

Uganda is a landlocked low-income country in Sub-Saharan Africa. While suffering from a protracted civil war in the north, most of the country has enjoyed relative political stability since 1986. During 2001–12, Uganda's average growth rate for GNI per capita (at constant 2005 US$) was 3.8 percent, which may be compared to a developing (low- and middle-income) country average of 3.0 percent. During the same period, Uganda's ranking according to the UNDP Human Development Index (among countries included both in 2000 and 2012) remained unchanged (at the 11th percentile).

This country-at-a-glance note is designed to provide an initial picture of the challenges that the Post-2015 agenda poses for Uganda; its findings cannot guide policy on their own but should be seen as an input into policy discussions. The note may also serve as a starting point for a more complete country development diagnostic as well as more comprehensive country-focused analysis. The note provides data for a selection of SDG target indicators and indicators related to fiscal space,[1] and briefly (a) summarizes Uganda's SDG progress since 2000 and projects expected values for 2030; and (b) assesses options for increasing fiscal space. Sections 2 and 3 address SDGs and fiscal space, respectively, while findings are summarized in Section 4.

The analysis is done from a cross-country perspective: for the different indicators, Uganda's performance and prospects are benchmarked relative to other countries, considering its past, recent, and projected levels of GNI per capita.[2] The latter variable tends to be highly correlated with most of the SDGs and most of the factors that determine their evolution; given this, it is used as a summary indicator of country capacity to provide and efficiently utilize inputs that contribute to SDGs (for example, health and education services) and to achieve SDG outcomes (like strong health and education results).[3]

2. SDG Indicators: History and Projections

For selected SDG indicators, table 11.1 summarizes data for Uganda: historical evolution, actual and expected values for a recent year, and projected 2030 values.[4] In figure 11.1, data for Uganda are shown in the context of the estimated cross-country relationship between each SDG indicator and GNI per capita. For Uganda, the projected average annual rate of GNI per capita growth is 2.7 percent.[5] The projected SDG values reflect what can be expected given a country's starting point, projected growth in GNI per capita, typical rates of progress according to cross-country patterns, and a gradual convergence to close gaps between observed and expected values.[6] In table 11.1, projections are presented only when the cross-country relationship between the indicator and GNI per capita is classified as tight.[7] A very loose relationship suggests that progress in the indicator is primarily a reflection of country-specific factors and that it should not be expected to respond strongly or systematically to changes in GNI per capita. When the relationship to GNI per capita is loose the coefficients are typically small (in absolute terms); given this, the "expected" values for a recent year are close to the average for all low- and middle-income countries.[8]

In sum, Uganda's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) in 6 cases; ratio of female to male primary completion, access to improved water source, access to improved

TABLE 11.1 Uganda—SDG Indicators: Evolution since 2000 and Projections to 2030

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Poverty and shared prosperity					
Poverty, at $1.25 a day (PPP) (% of population)	59.4	37.8	34.2	20.1	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.
Shared prosperity: Income share for lowest 40%	15.8	15.1	17.3	—	By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average.
Education					
Pre-primary enrollment (% gross)		13.6	14.5	18.6	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Primary completion (% gross)		53.1	69.2	60.7	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Secondary enrollment (% gross)	16.4	27.6	41.4	36.9	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes. (OWG)
Secondary completion (% gross)	10.5	9.4	15.8	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Primary completion, ratio of females to males (%)		97.8	92.1	—	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to releavant and effective learning outcomes
Secondary enrollment, ratio of females to males (%)	77.1	83.3	81.6	87.4	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Health					
Under-5 mortality (per 1,000 live births)	147.0	66.1	73.4	50.0	By 2030, end preventable deaths of newborns and children under 5 years of age.
Maternal mortality (per 100,000 live births)	650	360	369	239	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
Malaria cases (% of population)	14.6	7.3	1.6	2.3	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
HIV prevalence (% of population ages 15–49)	7.3	7.4	1.0	—	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.
Infrastructure					
Access to improved sanitation facilities (% of population)	29.8	33.9	27.6	40.1	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
Access to improved water source (% of population)	56.5	74.8	68.5	78.4	By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

table continues next page

TABLE 11.1 *continued*

Indicator	Actual		Expected	Projection	Global ambition 2030
	2000	Recent	Recent	2030	
Road density (km per 100 sq. km of land)		32.2	8.8	34.8	Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
Access to electricity (% of population)	8.6	14.6	26.2	23.6	By 2030, ensure universal access to affordable, reliable, and modern energy services.
Internet users (per 1,000 people)	0.2	16.2	6.1	—	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.
Environment					
CO_2 emissions (metric tons per capita)	0.1	0.1	0.2	0.3	Integrate climate change measures into national policies, strategies, and planning.
Memorandum item					
GNI per capita (constant 2005 US$)	264	410		643	

Note: Recent refers to the latest year with data (typically 2011 or 2012). If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = currently significantly overperforming; red = currently significantly underperforming; black = performing as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note). For Internet use, a projection is not made, despite a tight relationship, since the expected line shifts significantly even in the medium run due to external forces, such as technological development. Global ambition is from the Open Working Group (UN 2014).

FIGURE 11.1 **Uganda—SDG Indicators (Log Scale) versus GNI per Capita in a Cross-Country Setting (Log Scale)**

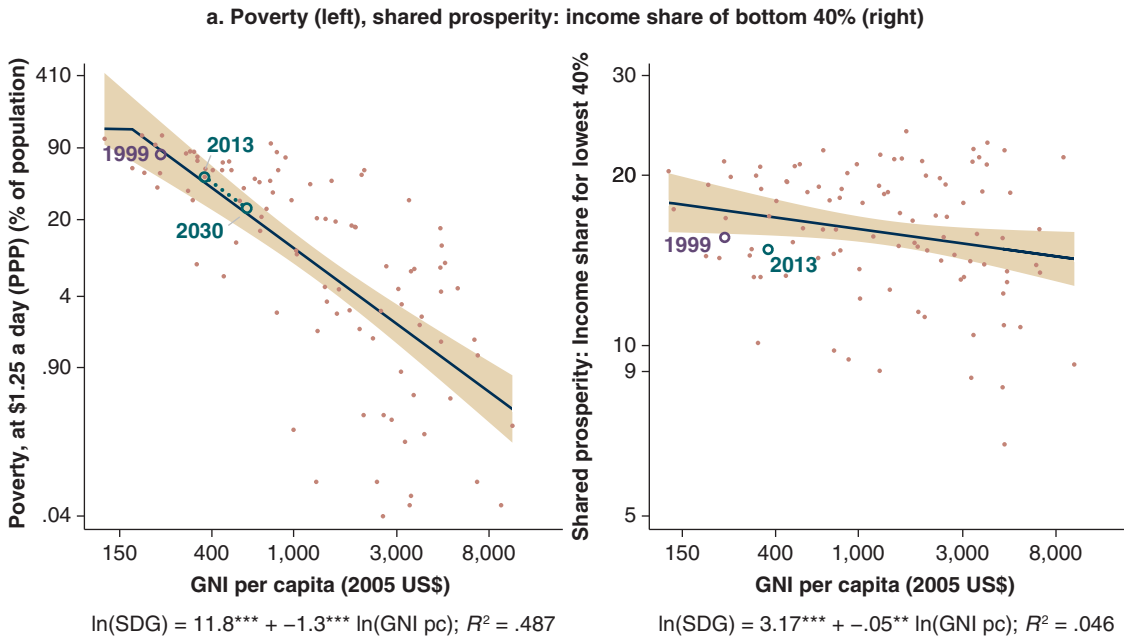
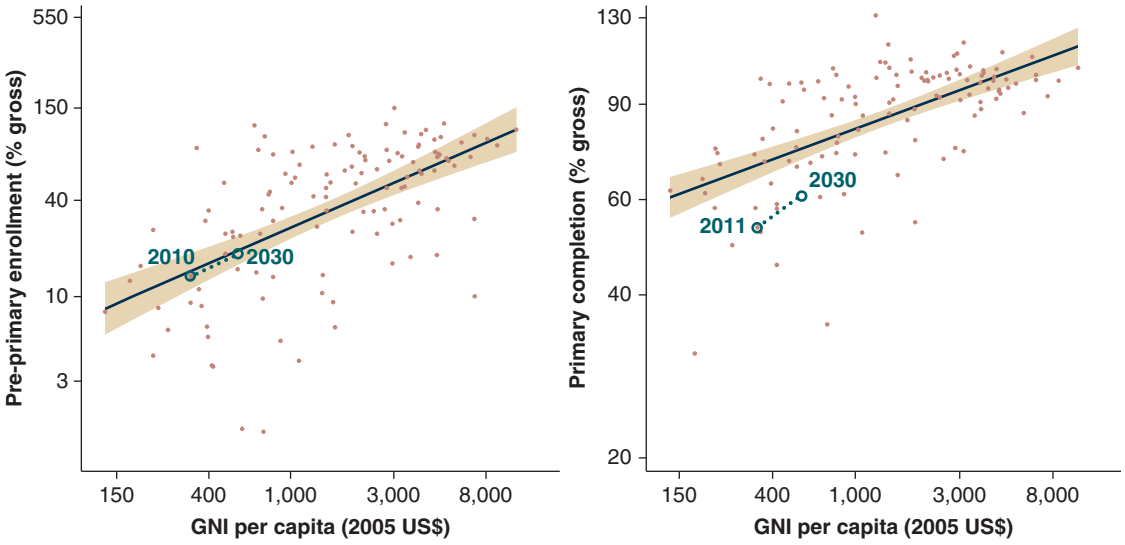


figure continues next page

FIGURE 11.1 *continued*

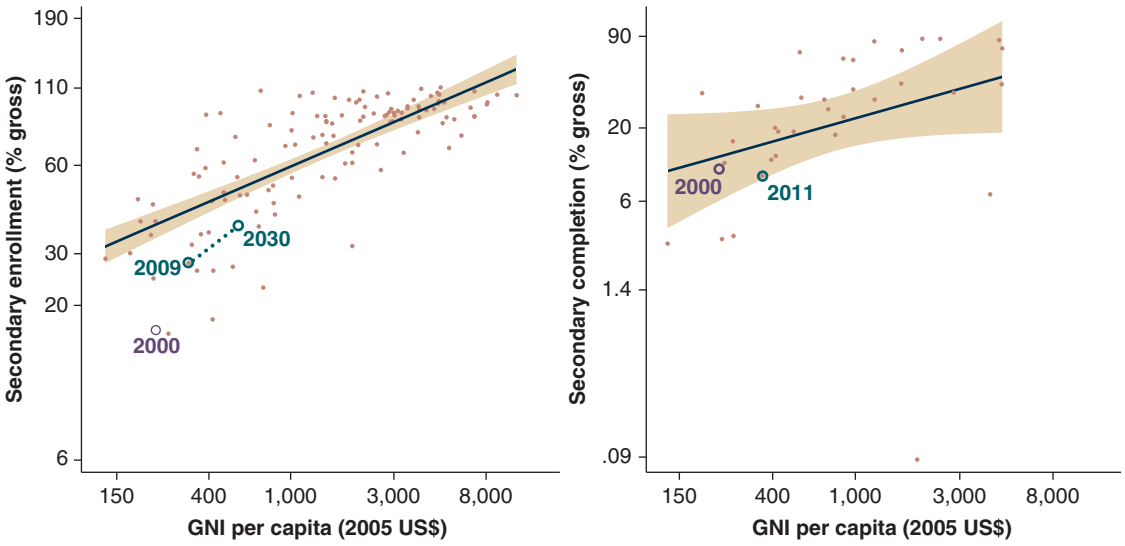
b. Gross pre-primary enrollment (left), primary completion (right)



ln(SDG) = –.73 + .570*** ln(GNI pc); R^2 = .348

ln(SDG) = 3.38*** + .14*** ln(GNI pc); R^2 = .372

c. Gross secondary enrollment (left), secondary completion (right)



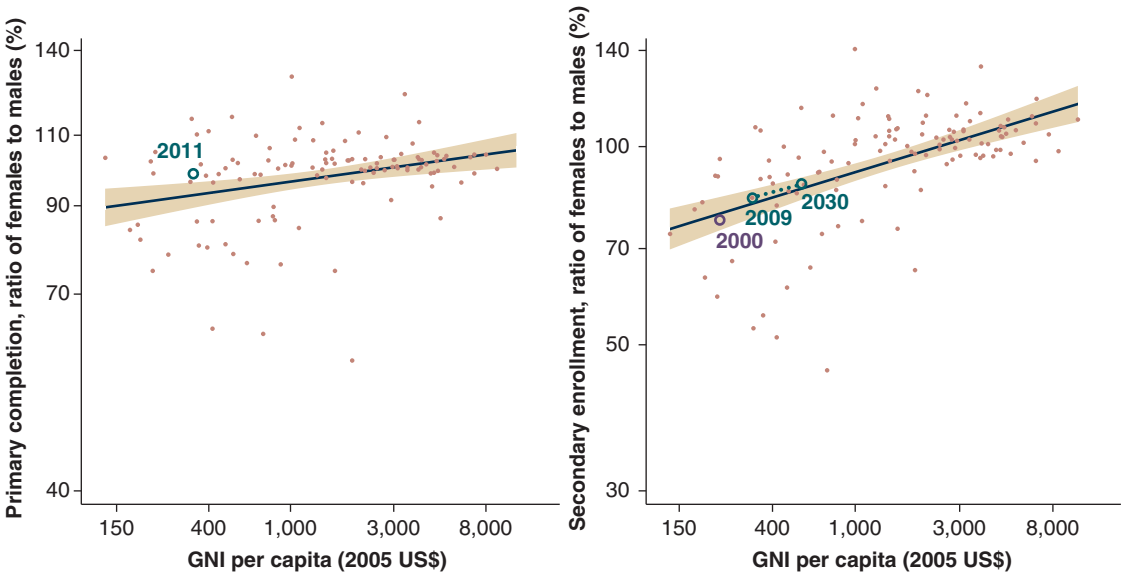
ln(SDG) = 1.9*** + .31*** ln(GNI pc); R^2 = .558

ln(SDG) = –.2 + .49* ln(GNI pc); R^2 = .098

figure continues next page

FIGURE 11.1 *continued*

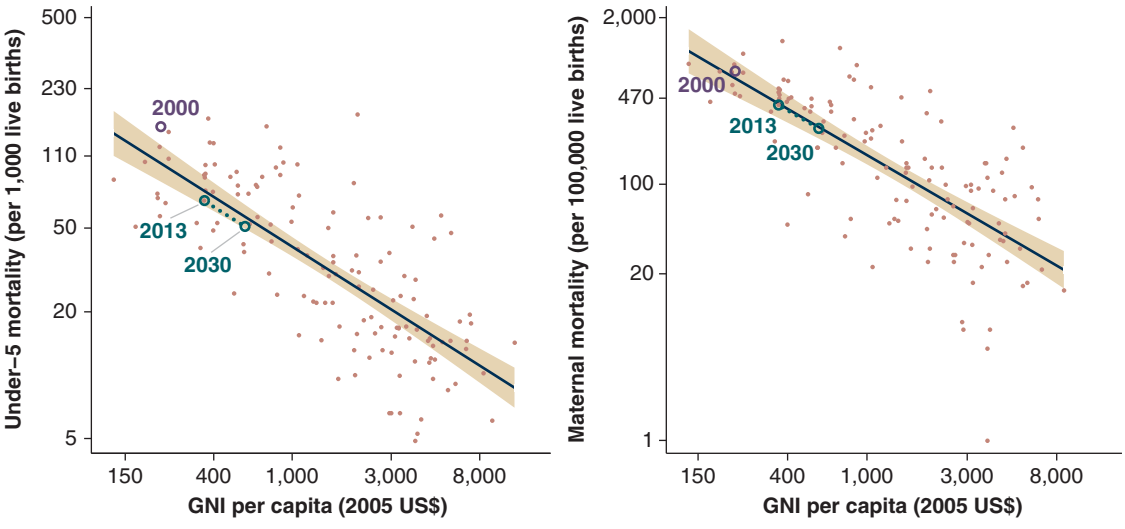
d. Ratio of female to male primary completion (left), ratio of female to male secondary enrollment (right)



ln(SDG) = 4.31*** + .04*** ln(GNI pc); R^2 = .093

ln(SDG) = 3.82*** + .1*** ln(GNI pc); R^2 = .297

e. Under-5 mortality (left), maternal mortality (right)



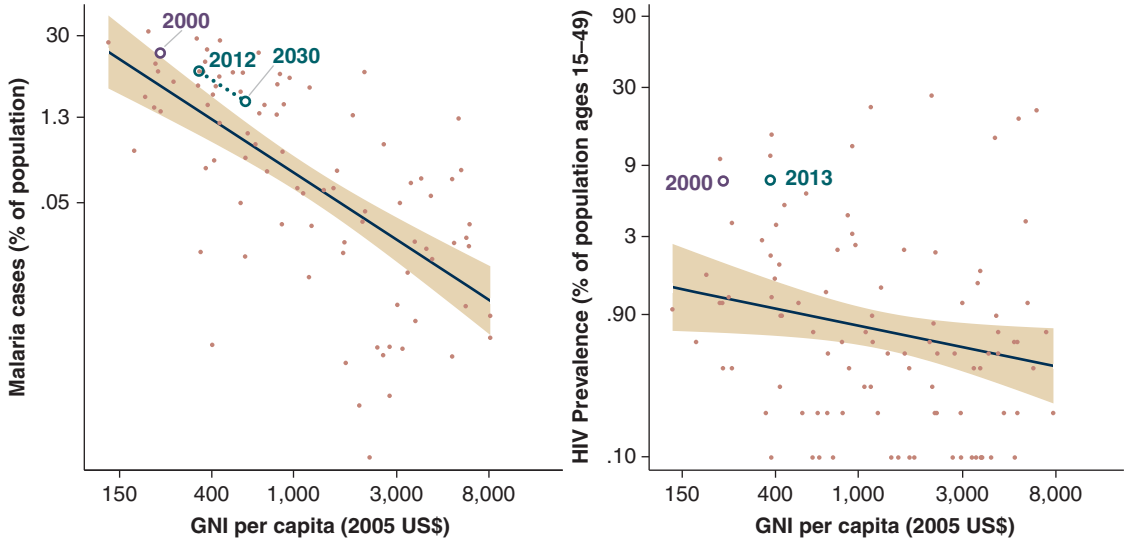
ln(SDG) = 7.99*** + –.61*** ln(GNI pc); R^2 = .560

ln(SDG) = 11.3*** + –.9*** ln(GNI pc); R^2 = .519

figure continues next page

FIGURE 11.1 *continued*

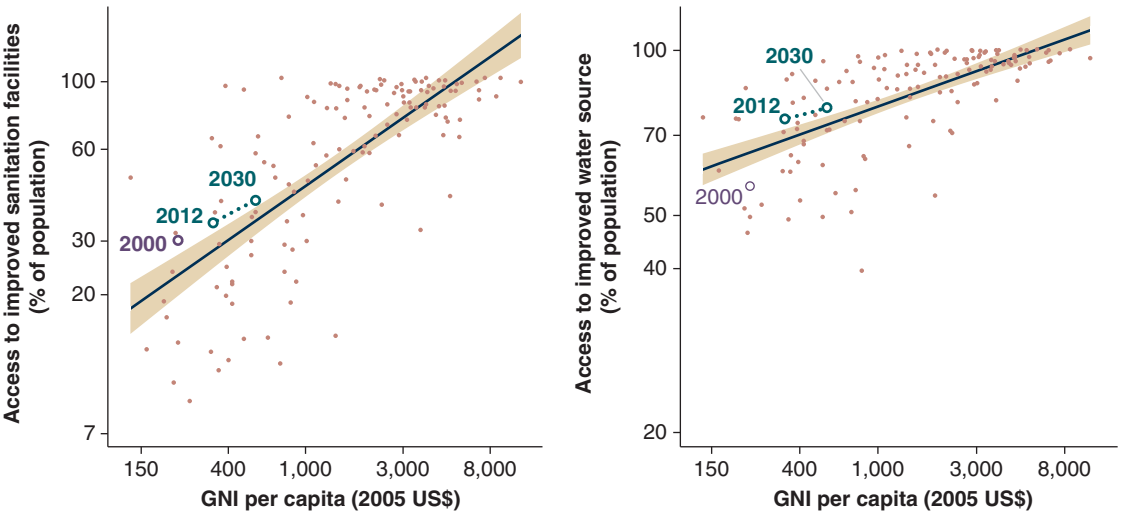
f. Malaria cases (left), HIV prevalence (right)



ln(SDG) = 14.5*** + –2.3*** ln(GNI pc); R^2 = .412

ln(SDG) = 1.88* + –.31** ln(GNI pc); R^2 = .044

g. Access to improved sanitation (left), access to improved water source (right)

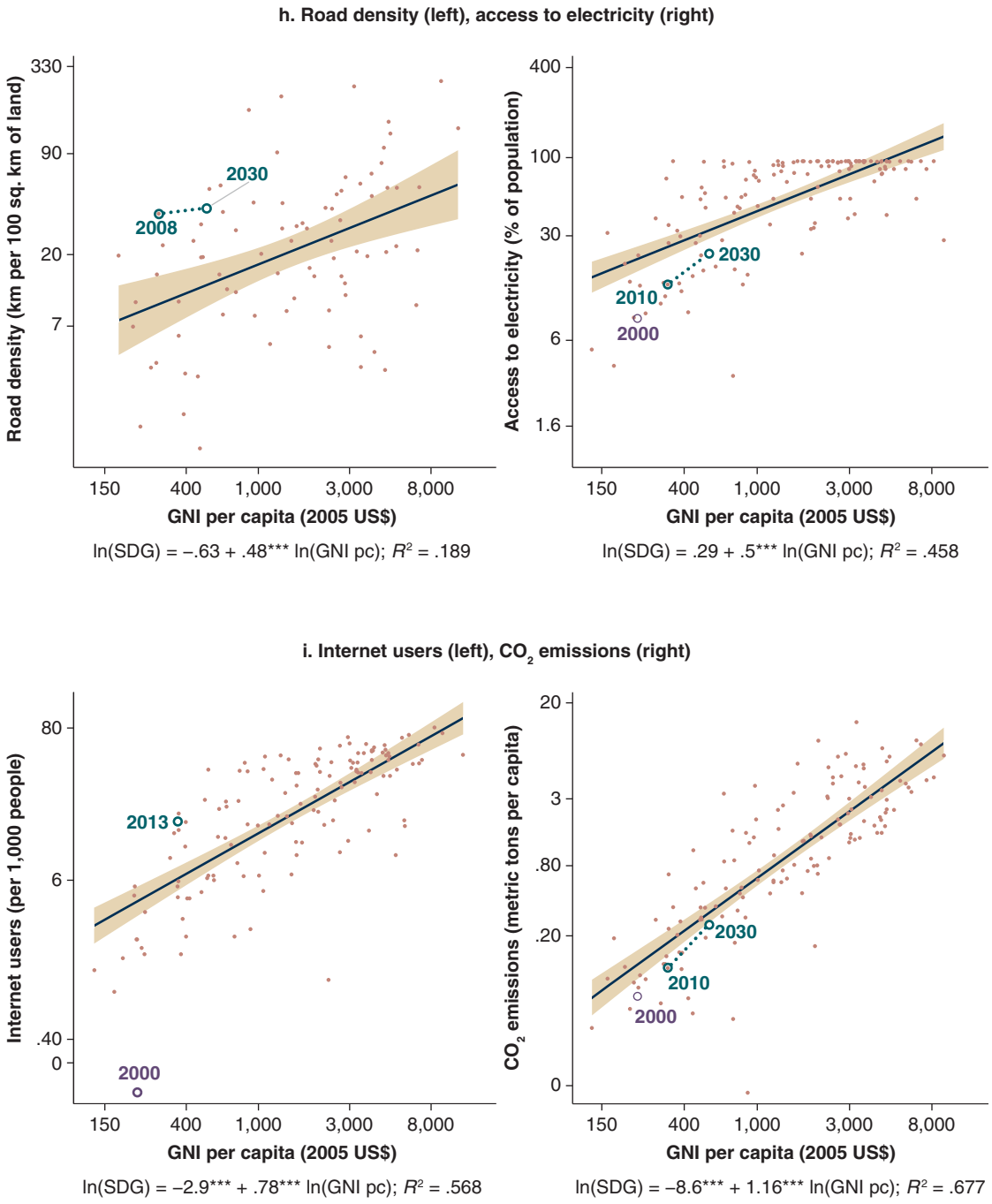


ln(SDG) = .61** + .45*** ln(GNI pc); R^2 = .535

ln(SDG) = 3.45*** + .13*** ln(GNI pc); R^2 = .436

figure continues next page

FIGURE 11.1 *continued*

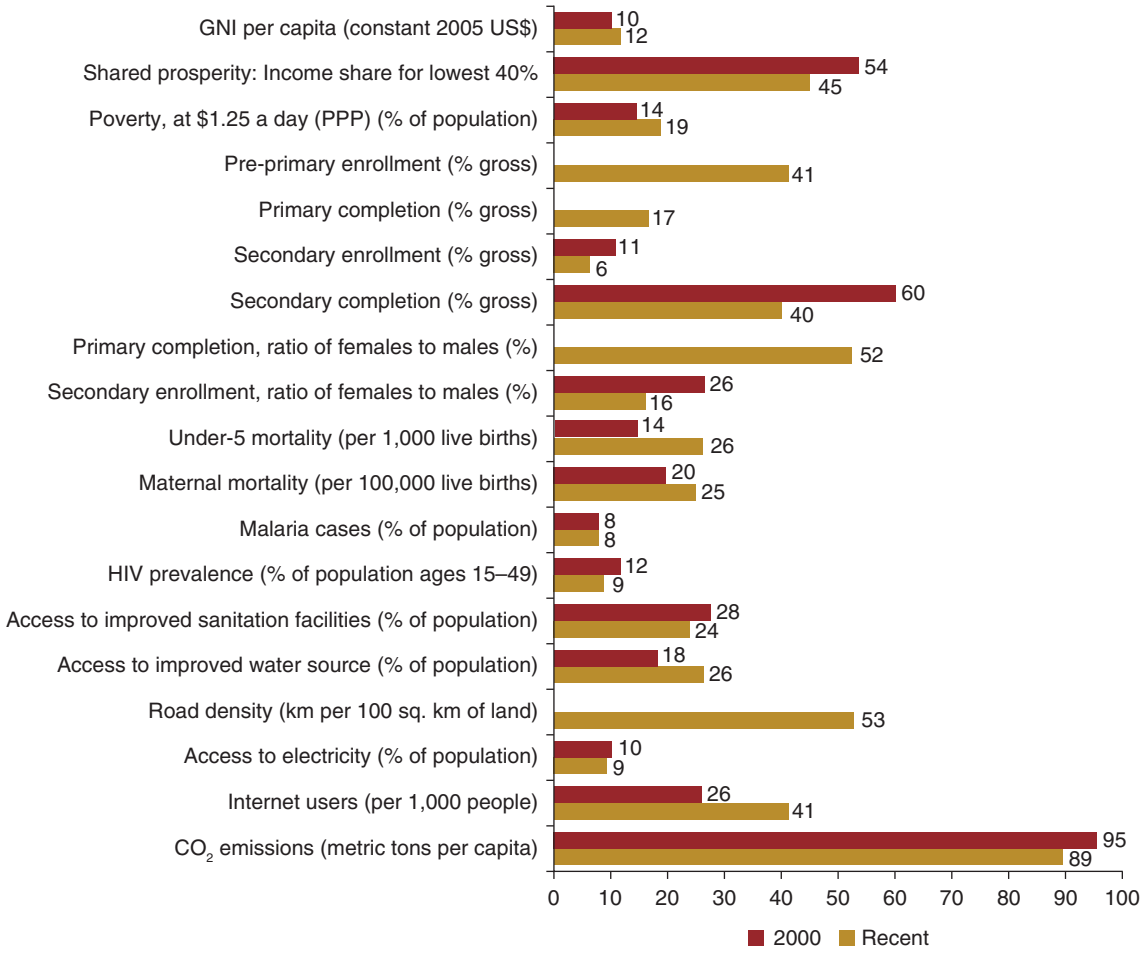


Note: Highlighted observations are for Uganda in different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

sanitation, road density, Internet use, and CO_2 emissions, while it falls short in 6 cases: shared prosperity, primary completion, gross secondary enrollment, malaria, HIV prevalence, and access to electricity.[9] For the other 6 indicators (poverty, gross pre-primary enrollment, secondary completion, ratio of female to male secondary enrollment, under-5 mortality, and maternal mortality), Uganda's current outcomes are as expected. While underperformance for an indicator may be due to country-specific conditions that are difficult to change, it may often point to areas in which payoffs from feasible policy change are relatively high, a possibility that calls for further analysis.

Figure 11.2 shows that, between 2000 and 2012, Uganda's GNI per capita ranking among low- and middle-income countries stayed more or less the same (improved by 2 percentile points).[10] During the same period, Uganda has seen its ranking improve more noticeably for 5 indicators (poverty, maternal mortality, under-5 mortality, access to improved water source, and Internet use) while, for malaria the change is negligible. Meanwhile, the rankings have deteriorated for 8 indicators (shared prosperity, gross secondary enrollment, secondary completion rate, ratio of female to male in secondary enrollment, HIV prevalence, access to electricity, access to improved

FIGURE 11.2 Uganda—Percentile Cross-Country Ranking for SDG Indicators 2000 and 2012



Note: A high ranking signals strong performance; for the underlying indicator, this may correspond to a relatively high value (for example, for the secondary enrollment rate) or a relatively low value (for example, for the poverty rate). The rankings are based on all low- and middle-income countries (according to the 2012 classification) with data. The country samples vary across indicators but are always the same for 2000 and recent for any given indicator. The ranking for an indicator is not reported if the available sample is less than 20 countries. Recent refers to the latest year with data. If data are not available for 2000 or 2013, the closest earlier year with data is used. Data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs.

sanitation, and CO_2 emissions). Among these, the result is not entirely unexpected for CO_2 emissions and shared prosperity given an *inverse* cross-country correlation with GNI per capita (only weak for shared prosperity, see figure 11.1, panels a and i); however, this direction of change is nevertheless problematic from the perspective of the twin goals. For the other five, a higher GNI per capita is linked to improved performance; given this, these ranking declines are unexpected, suggesting that policies in countries that otherwise are similar to Uganda are more apt to address these objectives.

When comparing the results from regressions on GNI per capita to changes in percentile rankings, a few patterns emerge. Although secondary completion, ratio of female to male in secondary enrollment, access to improved sanitation, and CO_2 emissions are either overperforming or performing as expected, they have fallen further in ranking compared to GNI per capita.[11] More alarmingly, for secondary enrollment, Uganda's underperformance is combined with a performance that is weaker than GNI per capita in terms of changes in percentile ranking.

By 2030, considerable improvements are projected for most indicators (see table 11.1 and respective graphs in figure 11.1). However, compared to global ambitions, also shown in table 11.1, the improvements are moderate. This means that, to get closer to the realization of these ambitions, a break with the past is needed. This is also true for indicators, such as shared prosperity, for which a weak relationship with GNI per capita precludes projections. Such a break would be facilitated by a combination of more rapid growth (beyond the projected average growth rate of 2.7 percent) and improvements in policies that directly influence different SDGs.

3. Fiscal Space

In most countries, accelerated progress on the SDG agenda will require efficient and growing public spending in prioritized areas, most importantly human development and infrastructure. Private spending is also of crucial importance, both household spending on SDG-related services and business investments in a wide range of areas (including, but not limited to, expected recent values and, when relevant, projected values for fiscal space indicators for Uganda).[12] With regard to Uganda's additional fiscal effort to reach the SDGs, table 11.2 and figure 11.3 summarize the historical evolution, actual, and expected (given GNI per capita) recent values, and, when relevant, projected values. When the relationship is loose, projections are not made and the expected value is in practice close to the average for the sample of all low- and middle-income countries (cf. discussion of expected values for SDG indicators). The variables cover three aspects of government activities: spending, receipts and debt, and governance and efficiency.

In terms of government spending as a percentage of GDP, in areas that may support the SDG agenda, Uganda performs as expected (compared to a typical country at the same GNI per capita level) for total public investment and primary education, but is below the expected level for total public consumption, secondary education, and public health. None of the SDG spending indicators (included table 11.2) is above the expected value. For secondary education spending, note that, even though Uganda's government falls below the expected value if spending is measured as share of GDP, spending is as expected if measured *per student* (due to a relatively low secondary school enrollment rate). For primary, the opposite is true; as a share of GDP, spending is as expected, but per student it is lower than expected (due to a relatively high primary school enrollment rate). Spending on fossil fuel subsidies (currently 1.3 percent of GDP in Uganda)—although lower than expected—is the most obvious case of low-priority spending from the post-2015 agenda perspective.[13]

Among current receipts, taxes and net Official Development Assistance (ODA) are both very important and within the expected ranges. As further shown in table 11.2, cross-country patterns suggest that net ODA will decline as a percent of GDP (without changing significantly in per capita terms), which in the case of Uganda

TABLE 11.2 Uganda—Fiscal Space: Revenue, Spending, and Government Efficiency

Indicator	Actual		Expected	Projection
	2000	Recent	Recent	2030
Government spending				
Consumption (% of GDP)	14.5	8.3	12.7	—
Investments (% of GDP)	6.1	5.5	6.8	—
Primary education (% of GDP)		1.8	1.8	—
Secondary education (% of GDP)		0.8	1.1	—
Primary education, per student (% of GDP per capita)		7.6	11.3	—
Secondary education, per student (% of GDP per capita)		20.7	20.2	—
Health (% of GDP)	1.8	1.9	2.5	—
Fuel subsidy (% of GDP)		1.3	3.0	—
Government receipts and debts				
tax revenue (% of GDP)	10.4	13.0	12.1	—
Net ODA (% of GNI)	14.0	8.5	8.5	5.1
External debt (% of GNI)	58.1	21.0	29.4	—
Governance and government efficiency				
Government effectivness: percentile rank	14.0	33.0	14.8	35.6
Grigoli education efficiency score		0.19	0.27	0.28
Grigoli health efficiency score		0.91	0.94	—
Public investment management index		1.4	1.4	—
Memorandum item				
GNI per capita (constant 2005 US$)	264	410		643

Note: Recent refers to the latest year with data. If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for country-specific data can be found in the respective graphs. Expected refers to the expected level of the indicator at the country's GNI per capita, given the cross-country pattern between the indicator and GNI per capita. If the relationship is loose, the confidence interval for the expectation in question is relatively wide. Green = current value significantly above the expected level; red = current value significantly below the expected level; black = current value as expected; — = no projection because the cross-country relationship is not considered sufficiently tight (see criteria earlier in the note).

translates into a reduction from 8.5 to 5.1 percent of GNI.[14] However, the fact that cross-country patterns point to a likely decline in ODA does not mean that such an outcome should be taken for given: it depends on the priorities of donors and their relationships with Uganda's government.

The relationship between tax revenues and GNI per capita, as well as the debt stock and GNI per capita, is not tight enough to project expected changes. However, tax revenues are currently within the expected range and the government is committed to increase tax revenues, a change that the IMF also includes in its projections.[15] Higher taxes or lower subsidies would both reduce the resources controlled by domestic households and firms, pointing to the need to consider the combined impact on SDGs and other indicators from higher taxes and the spending increases that are financed by these taxes. Uganda's external debt stock is relatively low, and the latest Debt Sustainability Analysis (DSA) suggests there may be room for increased external borrowing.[16] The fiscal impact would be fairly limited, however, as long as borrowing is limited to what is consistent with debt sustainability. The only other major receipt change, which is subject to considerable uncertainty, is related to the oil sector. According to one set of projections, with production starting in 2018, tax revenues from oil will reach 8 percent of GDP by 2023, after which they will decline gradually until 2045, when production ends and reserves are depleted; for the period 2016–30, oil revenues may amount to an average of roughly 4.9 percent of GDP per year (IMF 2013b, p. 57).[17] The advent of large oil revenues may lead to further aid cuts as donors turn to countries with more severe fiscal constraints. In sum, future fiscal space may be

FIGURE 11.3 **Uganda—Fiscal Space Indicators and GNI per Capita in a Cross-Country Setting**

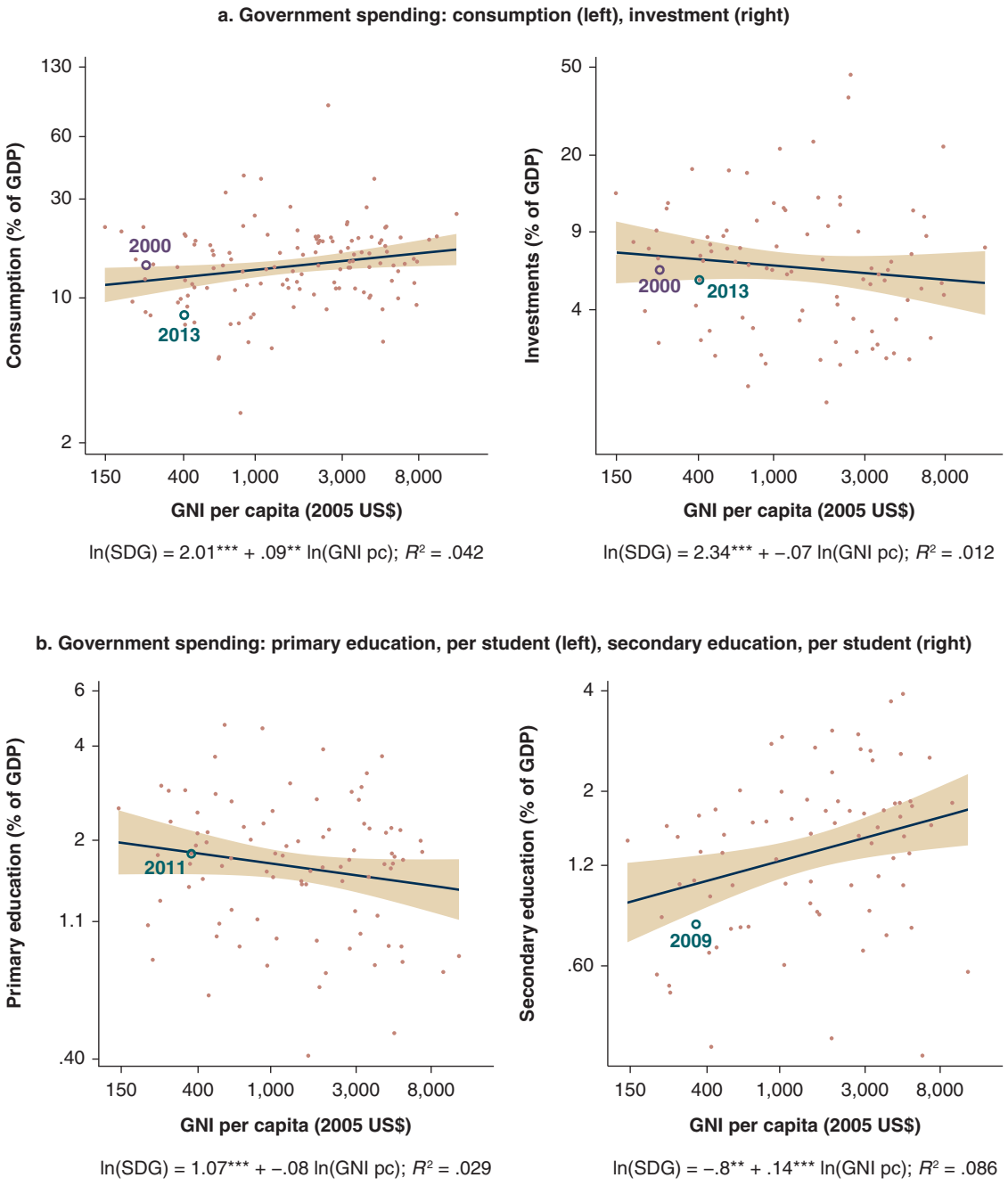
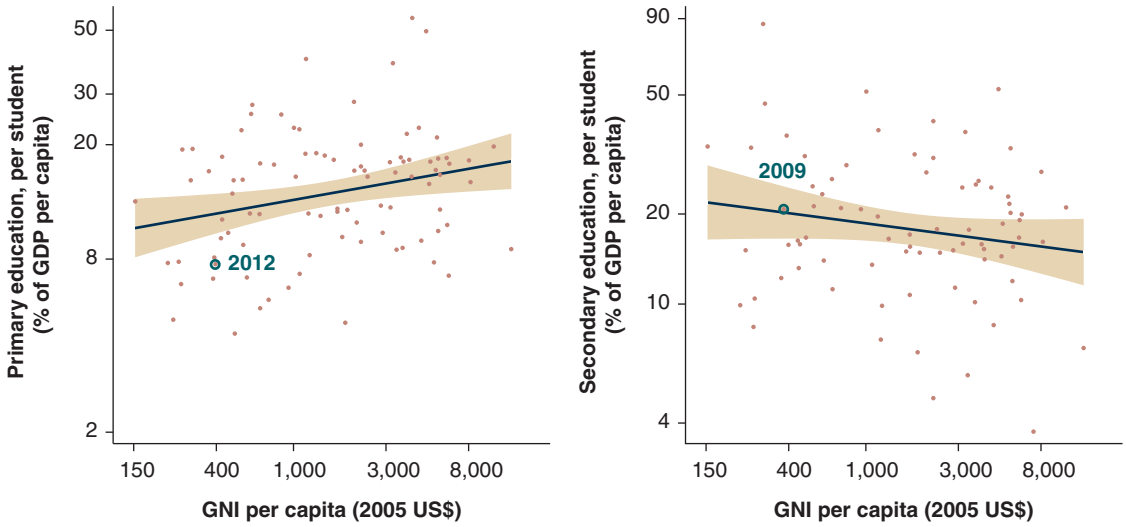


figure continues next page

FIGURE 11.3 *continued*

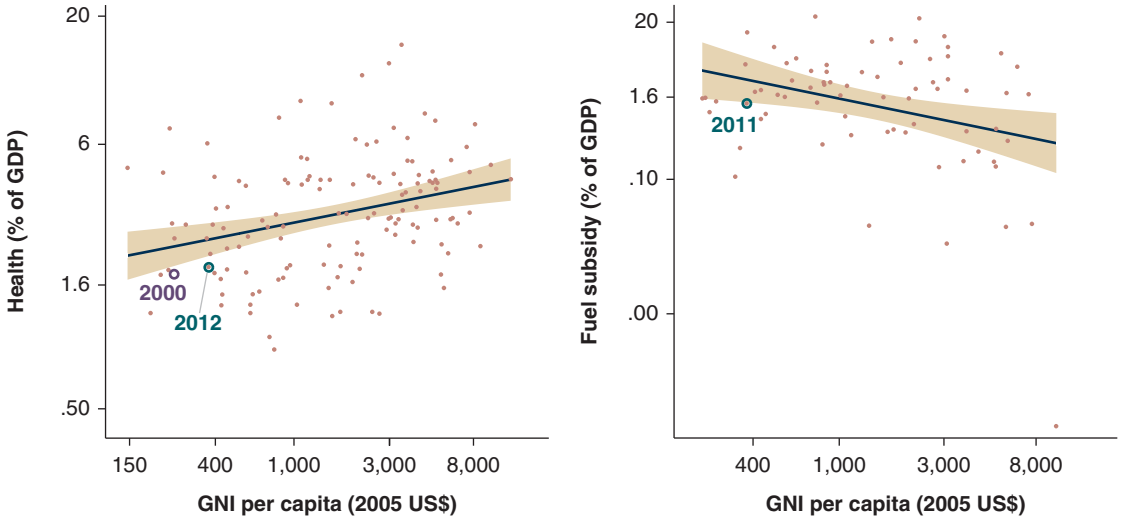
c. Government spending: primary education (left), secondary education (right)



ln(SDG) = 1.72*** + .12** ln(GNI pc); R^2 = .066

ln(SDG) = 3.53*** + −.09 ln(GNI pc); R^2 = .030

d. Government spending: health (left), fuel subsidy (right)



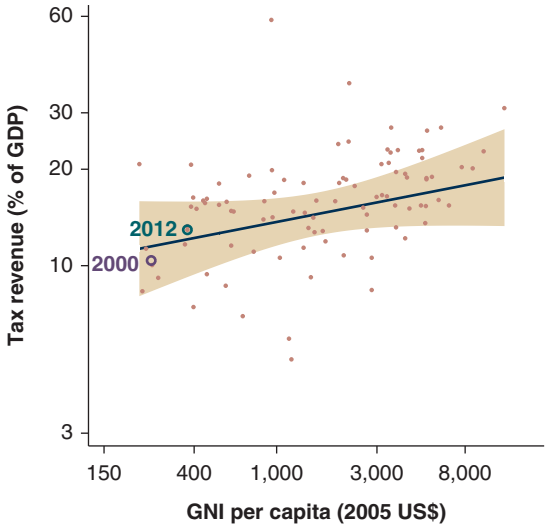
ln(SDG) = −.05 + .16*** ln(GNI pc); R^2 = .093

ln(SDG) = 4.96*** + −.65*** ln(GNI pc); R^2 = .098

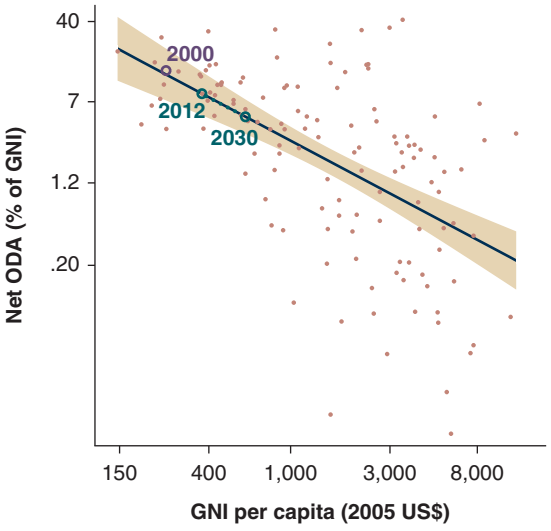
figure continues next page

FIGURE 11.3 *continued*

e. Tax revenue (left), official development aid (right)

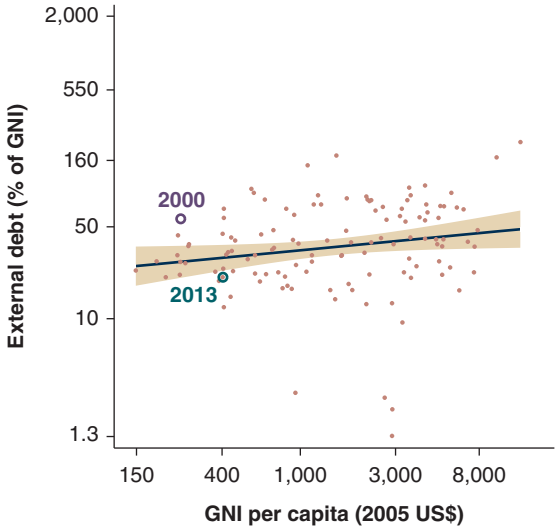


ln(SDG) = 1.75*** + .13 ln(GNI pc); R^2 = .027

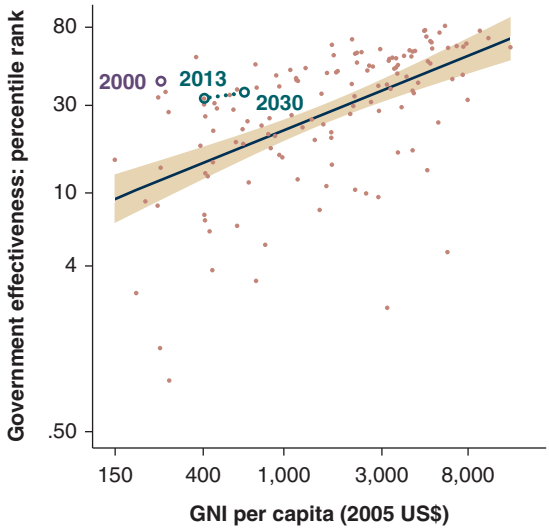


ln(SDG) = 8.26*** + −1.0*** ln(GNI pc); R^2 = .308

f. External debt (left), government effectiveness (right)



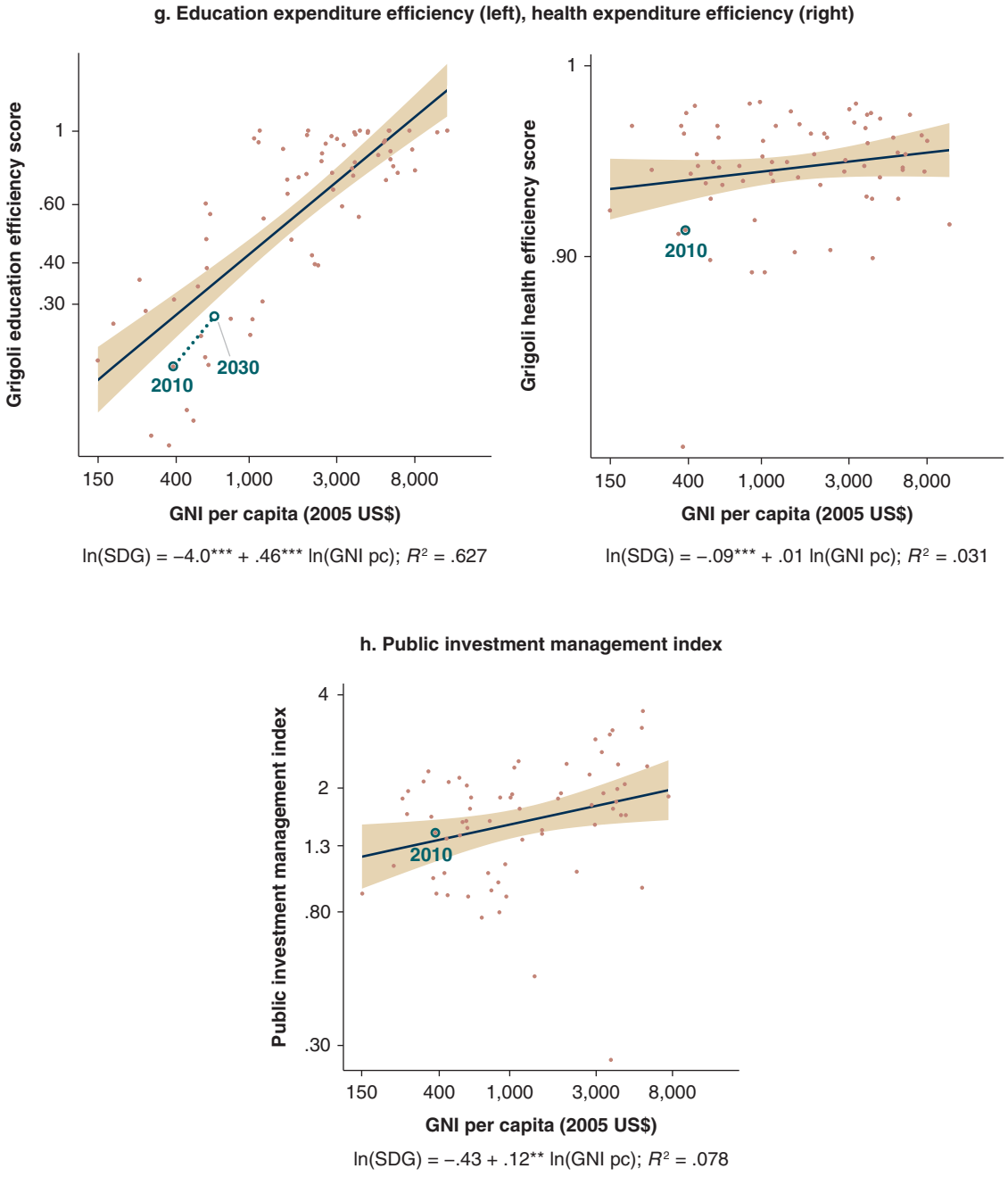
ln(SDG) = 2.51*** + .14** ln(GNI pc); R^2 = .035



ln(SDG) = 0 + .44*** ln(GNI pc); R^2 = .300

figure continues next page

FIGURE 11.3 *continued*



Note: Highlighted observations are for Uganda in different years, while the nonhighlighted country observations are the most recent observation for other low- and middle-income countries.

boosted by some combination of higher taxes and external borrowing while likely ODA changes would dampen such gains, leaving oil revenues as the main source of potentially significant fiscal space changes.

Government efficiency is important to protect and, if possible, increase in order to add to the room for priority spending and enhance its impact on the SDG agenda. Table 11.2 displays data for some measures of government efficiency. According to both the health and the education indexes used in this study, Uganda's performance is below the expected levels; among these two indexes, GNI per capita is strongly correlated

with the education index but largely uncorrelated with the health index. Uganda is performing as expected in terms of the more general Public Investment Management Index and better than expected according to the World Bank Governance Indicators. Given that the different indexes measure different aspects of government performance, such mixed findings may not be inconsistent. In addition, scatted Uganda-specific survey evidence also points to inefficiencies.[18] In sum, even though they are unpredictable, efficiency gains could potentially add considerable fiscal space.

Decisions about the level and allocation of government spending should be made in light of government priorities and would depend on numerous factors that are well beyond the scope of this note, including government capacity in different areas and the scope to encourage complementary private sector activities. For example, remittances from the country's workers abroad was a non-negligible 4.3 percent of GDP in 2013 (roughly as expected for Uganda's GNI per capita level); measures that encourage even higher levels of remittances and channel them to income-raising investments may have high payoffs for the SDG agenda. More generally, given strong linkages between private and government activities and incomes, it is crucial that policies and spending decisions promote a broad-based change that encompasses services related to human development, infrastructure investments, and other measures in support of strong long-run growth that is biased in favor of the less advantaged.

4. Conclusions

As summarized in table 11.3, Uganda's current outcomes are better than expected (compared to a typical country at the same GNI per capita level) for 6 indicators, as expected for another 6, while it falls short for the remaining 6, the latter covering shared prosperity, primary school completion, secondary school enrollment, HIV prevalence, and access to electricity. By 2030, considerable improvements are projected for most indicators. However, compared to the post-2015 global ambitions, the improvements are moderate. This means that, to get closer to the realization of these ambitions, a break with the past is needed.

Table 11.3 further shows that, for most of the indicators, the relationship to GNI per capita is tight. Improvements in these SDGs will likely continue along with projected GNI per capita growth and increases in resources and capabilities. However, among these SDGs, secondary enrollment, ratio of female to male secondary enrollment, access to sanitation, access to electricity, and CO_2 emissions have since 2000 declined in ranking compared to other countries while the GNI per capita ranking has stayed more or less the same. For these SDGs, the efficiency of policies through which resources are translated into SDG outcomes may need special attention.

Uganda is also underperforming for two indicators with a weak relationship to GNI per capita: shared prosperity and HIV prevalence. In both of these cases, the decline in ranking since 2000 has been larger than for GNI per capita. In general,

TABLE 11.3 Uganda—Summary Results for SDG Indicators

Cross-country relationship with GNI/cap	Overperforming	As expected	Underperforming
Tight	• Access to improved water source (+) • Access to improved sanitation (–) • Road density • Internet Users (–) • CO_2 emissions (–)	• Poverty (+) • Gross pre-primary enrollment • Ratio of female to male secondary enrollment (–) • Under-5 mortality rate (+) • Maternal mortality rate (+) • Road density	• Primary completion • Gross secondary enrollment (–) • Malaria (×) • Access to electricity (–)
Loose	• Ratio of female to male primary completion	• Secondary completion (–)	• Shared prosperity (–) • HIV prevalence (–)

Note: (+) = larger country rank improvement 2000–12 than for GNI per capita; (–) = smaller country rank improvement 2000–12 than for GNI per capita; (×) = the same country rank improvement 2000–12 as for GNI per capita.

the loose relationship to GNI per capita suggests that these indicators should not be expected to improve strongly or systematically to more rapid growth in GNI per capita but rather would depend on country-specific circumstances and policy interventions.

In terms of fiscal space, the main potential but uncertain gains are likely to stem from oil revenues and improvements in government efficiency. The anticipated decline in ODA (as a share of GDP) may be exacerbated by higher oil revenues as donors direct more resources to countries under more severe fiscal constraints. There may be some room to raise additional resources from external borrowing and, to a more significant extent, from higher taxes. However, the net impact on SDG progress from higher taxes would be positive only if, on the margin, the government increases spending and tax revenues with a sufficiently high efficiency.

Annex 11A: Data Sources

Indicator	Source	Comment
GNI per capita (constant 2005 US$)	WDI. API ref: GNI per capita (constant 2005 US$) [NY.GNP.PCAP.KD]	
SDG indicators		
Poverty, at $1.25 a day (PPP) (% of population)	WDI. API ref: poverty headcount ratio at $1.25 a day (PPP) (% of population) [SI.POV.DDAY]	
Shared prosperity: income share for lowest 40%	WDI. API ref: income share held by lowest 20% + income share held by second 20% [SI.DST.FRST.20+SI.DST.02ND.20]	
Pre-primary enrollment (% gross)	WDI. API ref: school enrollment, pre-primary (% gross) [SE.PRE.ENRR]	
Primary completion (% gross)	WDI. API ref: primary completion rate, total (% of relevant age group) [SE.PRM.CMPT.ZS]	
Secondary enrollment (% gross)	WDI. API ref: school enrollment, secondary (% gross) [SE.SEC.ENRR]	
Secondary completion (% gross)	EdStats. API ref: DHS: secondary completion rate [HH.DHS.SCR]	Drawing on population, enrollment, and repetition data in EdStats, data for Uganda was calculated for 2011.
Primary completion, ratio of females to males (%)	WDI. API ref: primary completion rate, female (% of relevant age group)/primary completion rate, male (% of relevant age group) *100 [SE.PRM.CMPT.FE.ZS/SE.PRM.CMPT.MA.ZS*100]	
Secondary enrollment, ratio of females to males (%)	WDI. API ref: ratio of female to male secondary enrollment (%) [SE.ENR.SECO.FM.ZS]	
Under-5 mortality (per 1,000 live births)	WDI. API ref: mortality rate, under-5 (per 1,000 live births) [SH.DYN.MORT]	
Maternal mortality (per 100,000 live births)	WDI. API ref: maternal mortality ratio (modeled estimate, per 100,000 live births) [SH.STA.MMRT]	
Malaria cases (% of population)	HNP. API ref: malaria cases reported/ Population, total *100 [SH.STA.MALR/ SP.POP.TOTL *100]	
HIV prevalence (% of population ages 15–49)	WDI. API ref: prevalence of HIV, total (% of population ages 15–49) [SH.DYN.AIDS.ZS]	
Access to improved sanitation facilities (% of population)	WDI. API ref: improved sanitation facilities (% of population with access) [SH.STA.ACSN]	
Access to improved water source (% of population)	WDI. API ref: improved water source (% of population with access) [SH.H2O.SAFE.ZS]	
Road density (km per 100 sq. km of land)	WDI. API ref: road density (km of road per 100 sq. km of land area) [IS.ROD.DNST.K2]	
Access to electricity (% of population)	WDI. API ref: access to electricity (% of population) [EG.ELC.ACCS.ZS]	

annex continues next page

Indicator	Source	Comment
Internet users (per 1,000 people)	WDI. API ref: Internet users (per 100 people) [IT.NET.USER.P2]	
CO_2 emissions (metric tons per capita)	WDI. API ref: CO_2 emissions (metric tons per capita) [EN.ATM.CO_2E.PC]	
Fiscal space indicators		
Investment (% of GDP)	WDI. API ref: gross fixed capital formation (% of GDP)-gross fixed capital formation, private sector (% of GDP) [NE.GDI.FTOT.ZS]-[NE.GDI.FPRV.ZS]	
Consumption (% of GDP)	WDI. API ref: general government final consumption expenditure (% of GDP) [NE.CON.GOVT.ZS]	
Primary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Primary [UIS.XGDP.1.FDINSTADM.FFD]	
Secondary education (% of GDP)	EdStats. API ref: total expenditure on educational institutions and administration as a % of GDP. All sources. Secondary and post-secondary non-tertiary [UIS.XGDP.234.FDINSTADM.FFD]	
Primary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, primary (% of GDP per capita) [SE.XPD.PRIM.PC.ZS]	
Secondary education, per student (% of GDP per capita)	WDI. API ref: expenditure per student, secondary (% of GDP per capita) [SE.XPD.SECO.PC.ZS]	
Health (% of GDP)	WDI. API ref: Health expenditure, public (% of GDP) [SH.XPD.PUBL.ZS]	
Fossil fuel subsidy (% of GDP)	IMF (2013a). Total pretax subsidy (% of GDP)	Subsidies are measured using a price-gap approach capturing both consumer (including implicit) and producer (except those that arise when suppliers are inefficient and make losses at benchmark prices) subsidies. Negative external effects are not included in the *pretax* subsidy.
Tax revenue (% of GDP)	WDI. API ref: tax revenue (% of GDP) [GC.TAX.TOTL.GD.ZS]	
Net ODA (% of GNI)	WDI. API ref: net ODA received (% of GNI) [DT.ODA.ODAT.GN.ZS]	
External debt (% of GNI)	WDI. API ref: external debt stocks (% of GNI) [DT.DOD.DECT.GN.ZS]	
Government effectiveness: percentile rank	WGI. API ref: government effectiveness: percentile rank [GE.PER.RNK]	Captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
Grigoli education efficiency score	Grigoli (2014)	Measure secondary education inefficiency in terms of how much additional output could be achieved at current levels of spending.
Grigoli health efficiency score	Grigoli and Kapsoli (2013)	Quantifies the inefficiency of public health expenditure using a stochastic frontier model that controls for the socioeconomic determinants of health.
Public investment management index	Dabla-Norris et al. (2011)	Four phases associated with public investment management are covered: project appraisal, selection, implementation, and evaluation.

Note: WDI = World Development Indicators, World Bank; API ref = reference and code when using the World Bank Open Data; EdStats = Education statistics, World Bank; HNP = Health Nutrition and Population statistics, World Bank; WGI = Worldwide Governance Indicators, World Bank.

Notes

1. Fiscal space matters since, while policy frameworks and the engagement of the private sector may vary widely, rapid progress on the SDG agenda will require efficient and carefully prioritized public spending.
2. While a cross-country perspective provides an important complement to analysis that is centered on an individual country, it is by definition limited to analysis of variables that are available in cross-country databases.
3. This does not mean that GNI per capita is viewed as a direct determinant of SDG outcomes; on the contrary, a major challenge for policy makers is to identify policies that improve SDG performance relative to what is expected given the level of GNI per capita. A second challenge is to raise growth in GNI per capita as it indirectly influences country SDG capacity.
4. Sources for the indicators are presented in annex 11A.
5. Projections from CEPII (v. 2.3) are used for this and other Country Development Diagnostics applications given their wide country coverage and well-documented methodology; OECD data have been used when projections have been missing. In the projections, it is assumed that future GNI growth will coincide with future GDP growth (both expressed in constant 2005 US$) given that that this is the variable that CEPII and other sources project.
6. Given that (a) SDGs have extreme values (such as 100 percent for improved water access) and (b) the current SDG level never is exactly as expected given GNI per capita, the projected values gradually converge toward the expected values. For example, for a country that overperforms in water access, as GNI per capita increases the extent of overperformance gradually declines, so that when the expected value is 100, overperformance has reached zero.
7. A tight enough relationship is defined as an $R^2 > 0.3$ (tight) or $0.3 > R^2 > 0.1$ (moderately tight), while $R^2 < 0.1$ is defined as loose.
8. In addition, the confidence interval is wide in the case of a loose relationship, suggesting that any conclusion on over- or underperformance is made with wide margins. Statistically, even though their confidence intervals are wide, as long as the estimated coefficient linking GNI per capita to the SDG indicator is nonzero, these values are closer than the cross-country average to what is expected for the specific country. The same observation applies to expected values for fiscal space indicators.
9. With regard to CO_2, Uganda's current and project 2030 per capita emissions are 1.1 and 4.1 percent of the current OECD average. For Uganda, the relatively high population density raises the need for and makes it easier to achieve high road density. Note that for CO_2 emissions when measured per unit of GDP, Uganda is still overperforming (that is, emitting less than expected).
10. If data are not available for 2000 or 2013, the closest earlier year with data is used; however, the data are never older than 1998 for "2000" or 2009 for "recent." The year for Uganda specific data is reported in the graphs.
11. For CO_2, lower emissions per capita than expected signals overperformance; similarly, the lower the per capita emissions, the higher the percentile ranking of a country.
12. The treatment is the same as in table 11.1 and related figures. That is, in table 11.2, projections are made only when the cross-country relationship between the indicator and GNI per capita is considered tight enough. Due to data limitations, we focus on government spending indicators; country-specific analysis is needed to consider policy in the context of the different roles of the government and private services and spending.
13. Fuel subsidies are detrimental to the climate and encourage technologies that are less labor intensive, tending to generate employment for fewer workers at lower wages.
14. To limit the ODA loss, it may be possible to tap into global initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria. Note that net ODA measured per capita is also as expected.
15. IMF (2014e, p. 20) suggests that, by 2018/19, tax revenues of 15.0 percent of GDP, up from their 2012/13 level of 12.6 percent, would be feasible. Such an increase would still leave Uganda within its expected range. The FY2014/15 budget, approved by parliament, removed many tax exemptions, and the government reiterated its commitment to increasing the tax-to-GDP ratio by 0.5 percent of GDP per year over the medium term (IMF 2014e, pp. 4, 7).
16. According to the recently updated IMF-World Bank Debt Sustainability Analysis (DSA), Uganda remains at low risk of debt distress. However, the

debt service-to-revenue ratio is high owing to the relatively low revenues and the short maturity of domestic debt, posing some sustainability risks (IMF 2014e, annex I). Uganda's external public or publicly guaranteed debt is projected to increase from 17.6 percent of GDP in 2014 to 24.9 percent in 2020 after which it decreases, reaching to 20.9 percent in 2035.

17. These projections of oil revenues are based on oil prices that are well above the levels of the spring of 2015.

18. On any given day, roughly 15–20 percent of the teachers (including head teachers with supervisory responsibilities) are absent, with illness accounting for an almost negligible share of absences (UNESCO 2014a, pp. 31 and 267–268). Similarly, an analysis of local governments suggests, if all districts could be brought up to the health and education outcome-to-spending ratios of the best performing districts, then about one third of their budgets could be saved (World Bank 2013b, p. xiii).

References

ADB (Asian Development Bank). 2006. *Key Indicators of Developing Asian and Pacific Countries*. Manila, Philippines.

Dabla-Norris, E., J. Brumby, A. Kyobe, Z. Mills, and C. Papageorgiou. 2011. "Investing in Public Investment: An Index of Public Investment Efficiency." IMF Working Paper 11/37. International Monetary Fund, Washington, D.C.

Devarajan, S. 2014. "What the 2004 WDR Got Wrong." Blog. http://blogs.worldbank.org/futuredevelopment/what-2004-wdr-got-wrong.

Doing Business. 2014. *Doing Business 2015: Going Beyond Efficiency. Economy Profile 2015. Kyrgyz Republic*. Washington, DC: World Bank.

Foster, V., and N. Pushak. 2011. "Nigeria's Infrastructure a Continental Perspective." Policy Research Working Paper 5686, World Bank, Washington, DC.

Fouré, J., A. Bénassy-Quéré, and L. Fontagné. 2010. "The Great Shift: Macroeconomic Projections for the World Economy at the 2050 Horizon." CEPII Working Papers 2012–03.

Gable, S., H. Lofgren, and I. Osario-Rodarte. 2014. *Country Development Diagnostics Post-2015: Uganda*. Washington, DC: World Bank.

Gable, S., H. Lofgren, and I. Osario-Rodarte. 2015. *Country Development Diagnostics Post-2015*. Washington, DC: World Bank.

Government of Ethiopia. 2010. *Growth and Transformation Plan (GTP) 2010/11-2014/15*. Ministry of Finance and Economic Development, Government of Ethiopia, Addis Ababa.

Grigoli, F. 2014. "A Hybrid Approach to Estimating the Efficiency of Public Spending on Education in Emerging and Developing Economies." IMF Working Paper 14/19, International Monetary Fund, Washington, DC.

Grigoli, F. and J. Kapsoli. 2013. "Waste Not, Want Not: The Efficiency of Health Expenditure in Emerging and Developing Economies." IMF Working Paper 13/187, International Monetary Fund, Washington, DC.

Hausmann, R., C. A. Hidalgo, S. Bustos, M. Coscia, S. Chung, J. Jimenez, A. Simoes, and M. A. Yıldırım. 2011. "The Atlas of Economic Complexity: Mapping Paths to Prosperity." Center for International Development; John F. Kennedy School of Government, Harvard University; and Macro Connections, MIT Media Lab, Cambridge, MA.

Hausmann, R., J. Matovu, R. Osire, and K. Wyett. 2014. "How Should Uganda Grow?" ESID Working Paper No. 30, Effective States and Inclusive Development Research Centre (ESID), Manchester, UK.

IMF (International Monetary Fund). 2012. *Liberia 2012 Article IV Consultation*. IMF Country Report 12/340. Washington, DC: IMF.

———. 2013a. *Energy Subsidy Reform: Lessons and Implications*. Washington, DC: IMF.

———. 2013b. "Uganda: 2013 Article IV Consultation and Sixth Review under the Policy Support Instrument, Request for a Three-Year Policy Support Instrument and Cancellation of Current Policy Support Instrument—Staff Report." Public Information Notice and Press Release on the Executive Board Discussion; and Statement by the Executive Director for Uganda, Country Report 13/215, July, Washington, DC.

———. 2013c. *Philippines: Article IV Consultations*. IMF Country Report 13/102. Washington, DC: IMF.

———. 2013d. *Kyrgyz Republic: 2013 Article IV Consultation and Fourth Review under the Three-Year Arrangement under the Extended Credit Facility, Request for Waiver of Nonobservance of a Performance Criterion, and Request for Modification of Performance Criteria—Staff Report; Public Information Notice and Press Release on the Executive Board Discussion; and Statement by the Executive Director for the Kyrgyz Republic*. IMF Country Report 13/175. Washington, DC: IMF.

———. 2014a. *Jamaica: 2014 Article IV Consultation and Fourth Review under the Extended Arrangement under the Extended Fund Facility and Request for Modification of Performance Criteria—Staff Report; Press Release; and Statement by the Executive Director for Jamaica*. IMF Country Report 14/169. Washington, DC: IMF.

———. 2014b. *Nigeria 2013 Article IV Consultation—Staff Report; Press Release and Statement by the Executive Director for Nigeria*. IMF Country Report 14/103. Washington, DC: IMF.

———. 2014c. *Peru: Staff Report for the Article IV Consultation*. IMF Country Report 14/21. Washington, DC: IMF.

———. 2014d. *The Federal Democratic of Ethiopia; Article IV Consultation—Staff Report; Press Release and Statement by the Executive Director for the Federal Democratic of Ethiopia*. IMF Country Report 14/303. Washington, DC: IMF.

———. 2014e. *Uganda: Third Review under the Policy Support Instrument—Staff Report and Press Release*. Country Report 14/344. Washington, DC: IMF.
———. 2014f. *Pakistan: First Review under the Extended Arrangement under the Extended Fund Facility, Request for Waiver of Nonobservance of a Performance Criterion and Modification of Performance Criteria*. IMF Country Report 14/1. Washington, DC: IMF.
———. 2015a. *Jamaica: Seventh Review under the Extended Fund Facility and Request for Modification of Performance Criteria—Staff Report; Press Release; and Statement by the Executive Director for Jamaica*. IMF Country Report 15/95, Washington, DC: IMF.
———. 2015b. *Peru: Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for Peru*. IMF Country Report 15/133. Washington, DC: IMF.
———. 2015c. *Senegal: Staff Report for the 2014 Article IV Consultation and Eighth Review under the Policy Support Instrument—Staff Report; Press Release; and Statement by the Executive Director for Senegal*. IMF Country Report 15/2. Washington, DC: IMF.
———. 2015d. *Pakistan: Sixth Review under the Extended Arrangement and Modification of Performance Criteria; Staff Report, Press Release and Statement by the Executive Director for Pakistan*. IMF Country Report 15/96. Washington, DC: IMF.
MoE Ethiopia. 2013. *Education Statistics Annual Abstract: November 2005E.C (2012/13 G.C)*. Addis Ababa: Ministry of Education, Government of Ethiopia.
Moller, L. and K. Wacker. Forthcoming. "Ethiopia's Growth Acceleration and How to Sustain It—Insights from a Cross-Country Regression Model." Policy Research Working Paper, World Bank.
NEDA (The National Economic Development Authority). 2014. "Philippine Development Plan 2011–16, Midterm Update; With Revalidated Results Matrices." NEDA, Pasig City.
Okwero, P., A. Tandon, S. Sparkes, J. McLaughlin, J. G. Hoogeveen. 2010. "Fiscal Space for Health in Uganda." Working Paper 186, Africa Human Development Series, World Bank, Washington, DC.
Overseas Development Institute (ODI). 2014. *The Impact of 2004 World Development Report*. http://www.odi.org/events/wdr-conference-making-services-work-for-poor-people.
Ranganathan, R., and V. Foster. 2012. "Uganda's Infrastructure: A Continental Perspective." Policy Research Working Paper 5963, World Bank Africa Region and Sustainable Development Department.
Republic of Uganda. 2014. *Uganda Vision 2040*. Kampala.
Task Force on Innovative International Financing for Health Systems. 2009. "More Money for Health, and More Health for the Money." World Health Organization, United Nations, New York.
UN (United Nations). 2013. *A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development*. Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, UN, New York.
———. 2014. "Open Working Group Proposal for Sustainable Development Goals." Open Working Group of the General Assembly on Sustainable Development Goals, Document A/68/970, UN, New York.
———. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. Finalized text for adoption.
UNESCO (United Nations Educational, Scientific and Cultural Organization). 2014a. *Education for All Global Monitoring Report 2013/2014*. Paris.
———. 2014b. Statistical Tables for UNESCO (2014a). http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/GMR/pdf/gmr2013/2013_Report_Statistical_tables-School_year_ending_2011.zip.
WHO (World Health Organization). 2010. "Constraints to Scaling Up the Health Millennium Development Goals: Costing and Financial Gap Analysis." Background Document for the Taskforce on Innovative International Financing for Health Systems, International Health Partnership, WHO and World Bank.
World Bank. 2003. *Making Services Work for Poor People*. World Development Report 2004, Washington, DC.
———. 2012. *Sénégal: Développer les outils des institutions de l'État pour une gestion plus efficiente de la dépense publique au Sénégal—Revue des Finances Publiques*. Rapport 59695-SN, Washington, DC.
———. 2013a. *Financing for Development Post-2015*. Washington, DC: World Bank.
———. 2013b. World Development Indicators (WDI) Database http://data.worldbank.org/data-catalog/world-development-indicators.
———. 2013c. *Republic of Uganda: Service Delivery with More Districts in Uganda; Fiscal Challenges and Opportunities for Reforms*. Public Expenditure Review, Report ACS4421, Washington, DC: World Bank.
———. 2013d. *Ethiopia Economic Update II: Laying the Foundation for Achieving Middle Income Status*. Report 78501. Washington, DC: World Bank.

———. 2013e. *Pakistan: Finding the Path to Job-Enhancing Growth—A Country Economic Memorandum*. PREM South Asia, Report 75521. Washington, DC: World Bank.
———. 2013f. *Republic of Uganda: Service Delivery with More Districts in Uganda Fiscal Challenges and Opportunities for Reforms*. Public Expenditure Review, Report ACS4421, June, Washington, DC.
———. 2014a. "MDG Dashboard." (accessed July 3), http://data.worldbank.org/mdgs/trends-and-projections-of-each-mdg-indicator-for-each-country.
———. 2014b. *3rd Ethiopia Economic Update: Strengthening Export Performance through Improved Competitiveness*. Washington, DC: World Bank.
———. 2014c. *Senegal Economic Update: Learning from the Past for a Better Future*. Washington, DC: World Bank.
———. 2014d. *The Economic Impact of the 2014 Ebola Epidemic: Short and Medium Term Estimates for West Africa*. Report 91219. Washington, DC: World Bank.

In September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development. Individual countries face the challenge of implementing strategies that help realize the ambitions of this agenda, embodied in the Sustainable Development Goals (SDGs). This book presents a Country Development Diagnostics Post-2015 framework, designed to assess country-level implications of the 2030 Agenda for Sustainable Development, and applications of the framework to ten countries.

The framework helps policy makers identify policies that may accelerate progress on the SDGs, and analyze sources of fiscal space to finance additional spending. Current levels of SDGs and their determinants are benchmarked on the basis of country per capita income, making it possible to compare the focus country to other countries. On the basis of current prospects for income growth, the framework also projects likely SDG outcomes for 2030 in the absence of accelerated progress.

WORLD BANK GROUP

SKU K8430