

# Trajectories for Sustainable Development Goals

## Framework and Country Applications

Susanna Gable, Hans Lofgren,  
and Israel Osorio Rodarte

*Foreword by Mahmoud Mohieldin*



## 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.<sup>1</sup>

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.<sup>2</sup> 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.<sup>3</sup> 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).

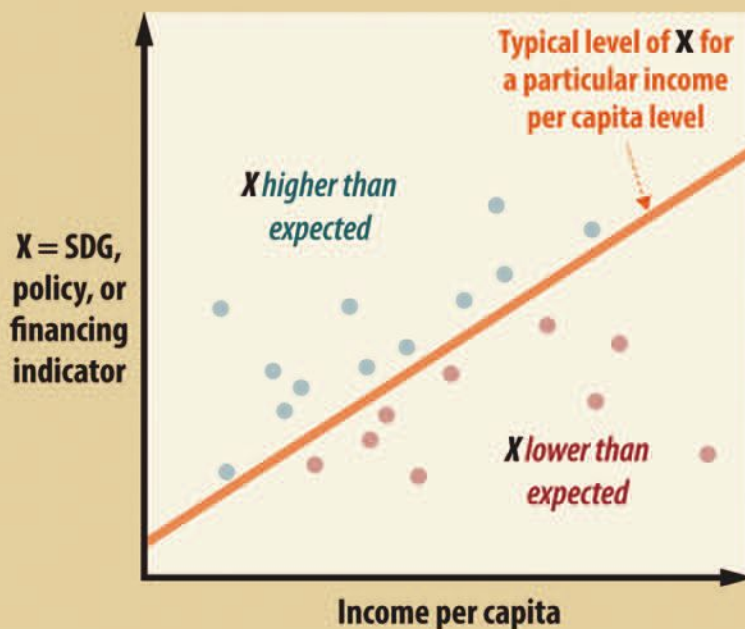
Here we will exemplify the SDG benchmarking approach by analyzing primary and secondary education in Uganda.<sup>4</sup> Figure 1.1 shows two scatter plots with each observation representing a country’s position relative to its GNI per capita and the SDG, the latter represented by primary school enrollment 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.<sup>5</sup>

# Framework for Country Development Diagnostics Post-2015

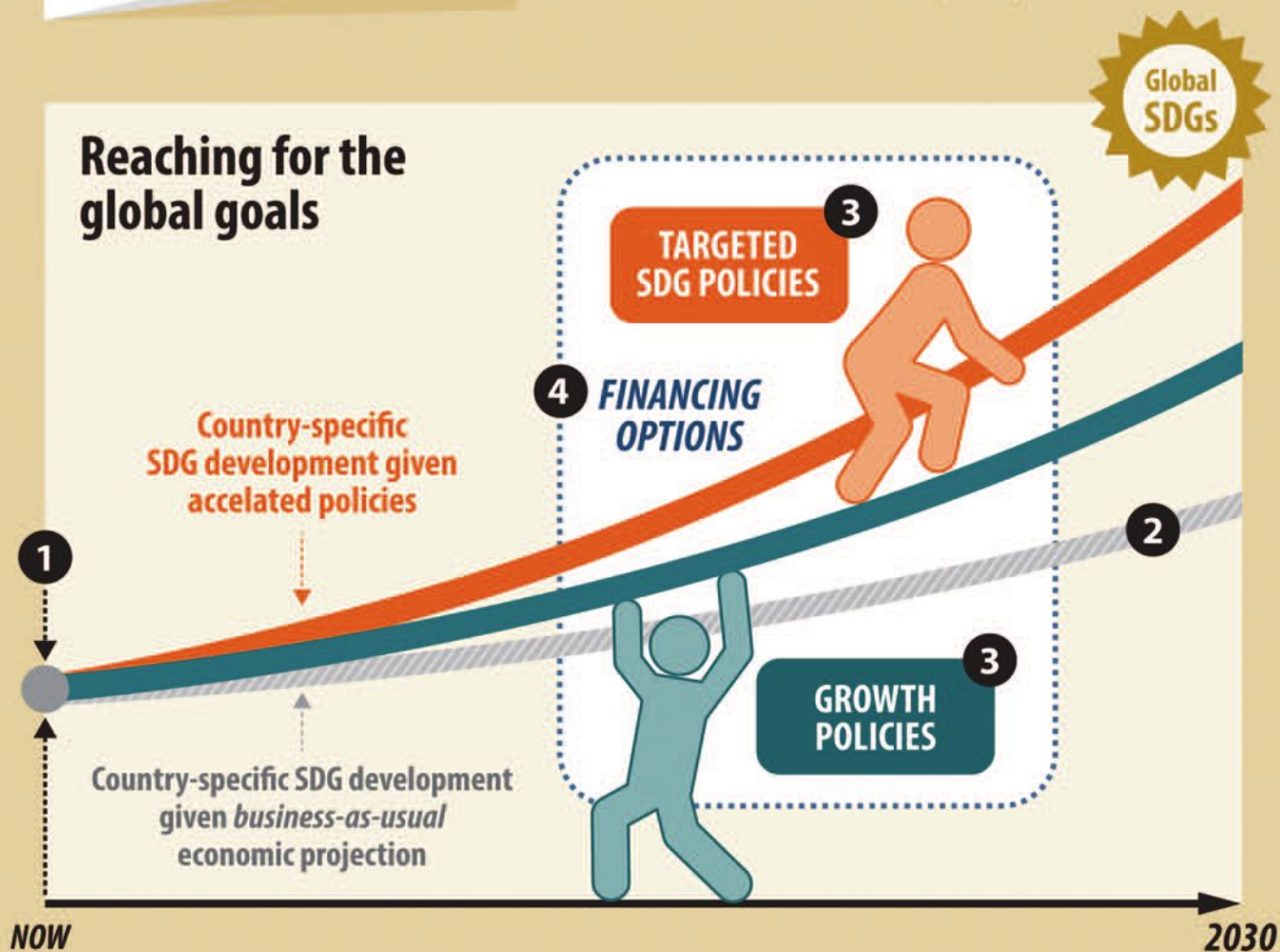
## Framework steps

- 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



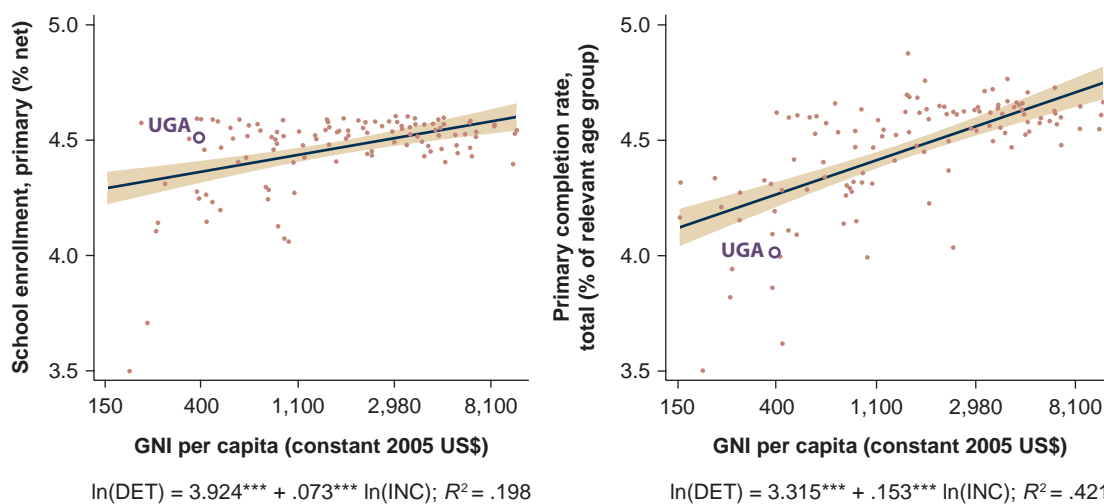
## BOX 1.1 Using GNI per Capita for SDG Benchmarking

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.<sup>a</sup> 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.

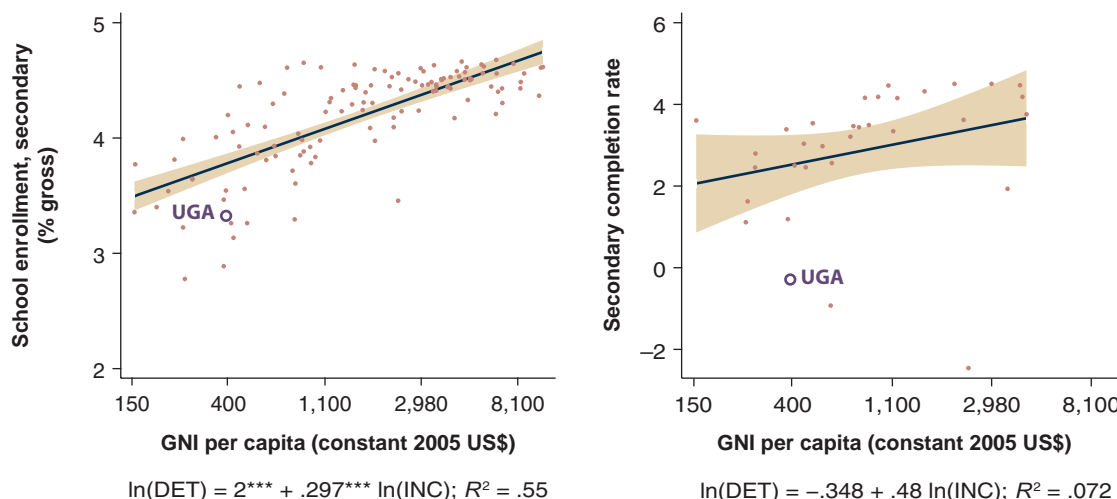
a. These simplified regressions are useful for current purposes (benchmarking and projections). However, they do not claim to sort out interactions between different indicators, a difficult task given high degrees of correlation, lagged effects, complex time- and space-specific relationships, and data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

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



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.<sup>6</sup> 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.<sup>7</sup> For any SDG, projections are presented only if the fit between GNI per capita and the SDG is considered sufficiently tight (box 1.3).

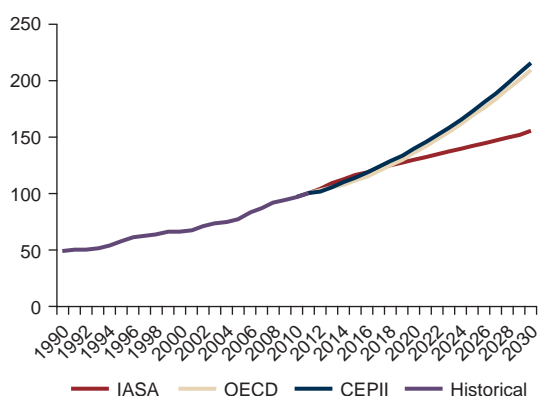
Table 1.2 presents recent values and BAU projections to 2030 for Uganda for a set of SDG indicators, including those shown in figures 1.1 and 1.2, using a 2030 GNI per capita of US\$817. As explained under Step 1, Uganda is currently overperforming in its primary school net enrollment rate (indicated 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\$).<sup>a</sup> 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.<sup>a</sup> 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.<sup>b</sup>

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 <sub>2</sub> 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.<sup>8</sup> 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

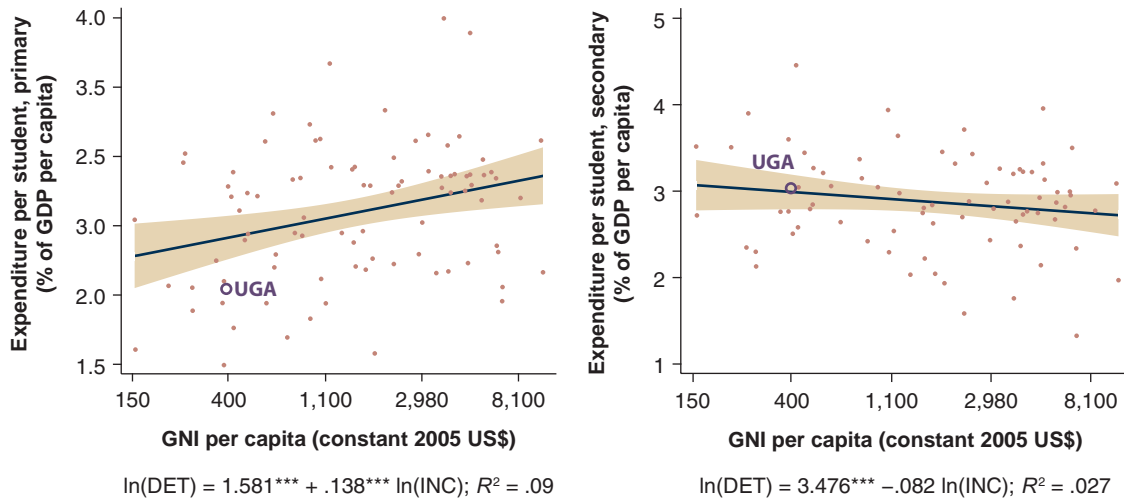
(figure 1.5). As for secondary schools, the expenditures per student are as expected but the pupil-teacher ratio is lower than expected. The fact that the completion rate is as expected while the enrollment rate is below expectations (both rates are computed relative to the total population in relevant 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

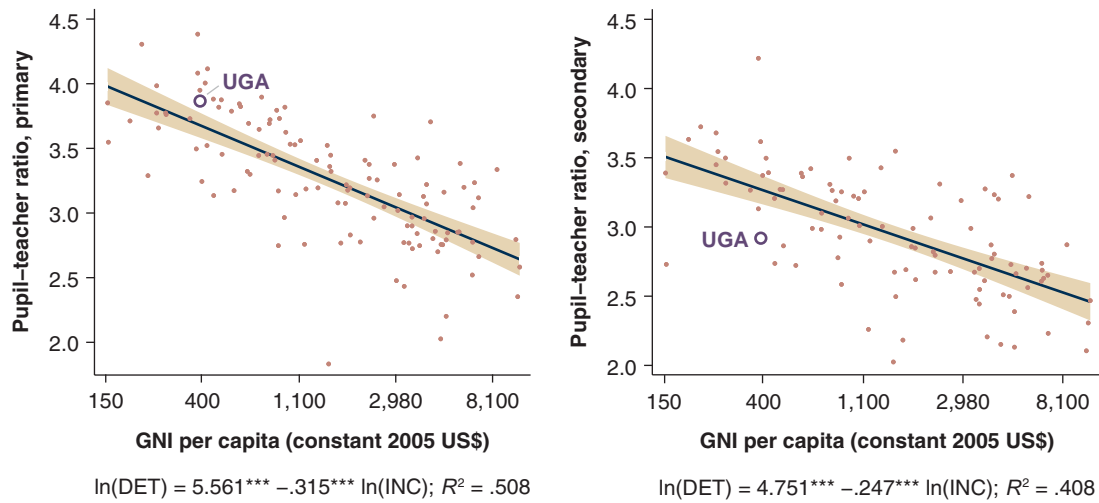
A cross-country perspective can shed useful light on spending decisions, which are especially difficult when made in a situation such as Uganda's, where large unmet needs coexist with a

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



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)



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.<sup>2</sup> 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.<sup>10</sup>

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 et 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.<sup>11</sup>

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.<sup>12</sup>

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.<sup>13</sup> 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.<sup>14</sup>

- 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

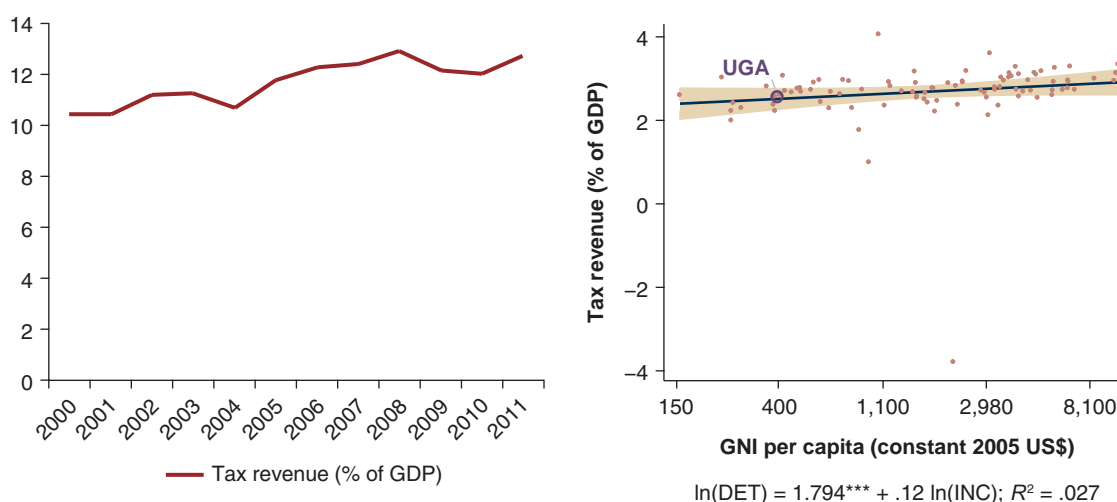
production ends and reserves are depleted; for the period 2016–30, oil revenues may amount to an average of roughly 4.9 percent of GDP per year (IMF 2013b, p. 57).

- 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.

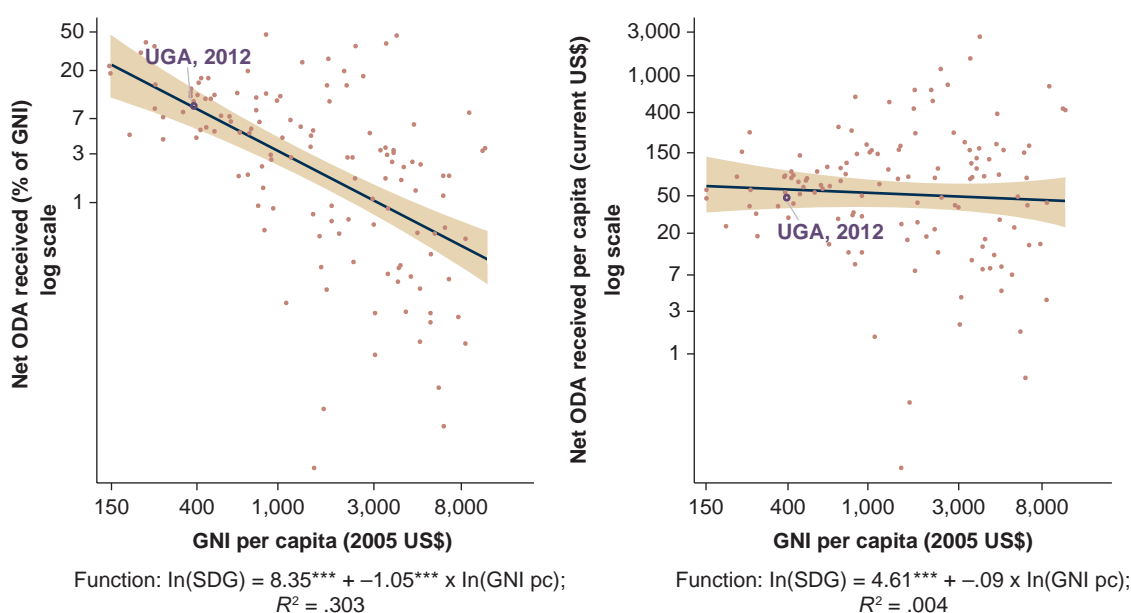
capita and ODA (as percent of GNI, or GDP) suggests that Uganda's ODA will decline relative to both GNI and GDP (figure 1.7, left panel) while remaining constant in per capita terms. The likely advent of large oil revenues may lead to further cuts as donors turn to countries with more severe fiscal constraints. 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.<sup>15</sup> 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.<sup>16</sup>

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.<sup>17</sup> 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](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](http://www.worldbank.org/mams).