The Post-2015 Global Agenda:
A Framework for Country Diagnostics

Susanna Gable

Hans Lofgren

Israel Osorio-Rodarte

Development Prospects Group
World Bank[*]

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Executive Summary

With the 2015 deadline for the current Millennium Development Goals (MDGs) drawing near, the global community is shaping a new set of international development goals for the longer term. The process has involved consultations led by the UN Open Working Group guided by the 2013 report, "A New Global Partnership" of the UN High-level Panel. The work so far indicates that the post-2015 development agenda will encompass goals for social, economic, and environmental sustainability with broader coverage than the current MDGs.[1] This paper refers to these post-2015 development goals as Sustainable Development Goals, or SDGs.

The World Bank Group is developing a diagnostic framework to assess the implications of implementing the post-2015 global development agenda at the country level. This framework has been applied to a pilot case study on Uganda, and some of the results of this study are highlighted here for illustrative purposes. The WBG has also developed a multi-country database that provides a starting point for similar diagnostics in other countries. Subject to data availability, the framework may be used to analyze likely progress in SDGs and their determinants and to discuss policy and financing options to accelerate their progress. This work has been shared with the Intergovernmental Committee of Experts on Sustainable Development Financing.

The purpose of this paper is to demonstrate the application of this framework, drawing on the pilot study of Uganda. The framework consists of four steps:
- Step One benchmarks the current level of progress for each SDG for the country being analyzed relative to other countries, given GNI per capita, a variable that is highly correlated with most development indicators, including SDGs and their determinants. Accordingly, in this analysis, GNI per capita is treated as a summary indicator of the capacity of a country to achieve outcomes, for both SDGs and their determinants.
- Step Two projects the country's business-as-usual (BAU) GNI per capita and values for SDGs by 2030.
- Step Three turns to the determinants of SDG outcomes—many of these are related to policies, including those that affect the efficiency and levels of public spending—pointing to ways of achieving outcomes that are more ambitious than those of the BAU projections. Policies may influence an SDG directly—health services may promote better outcomes for health SDGs—or indirectly, such as when measures that promote growth in household incomes per capita or increased access to sanitation have an indirect positive influence on health SDGs. In this step, therefore, we benchmark Uganda's current levels of SDG determinants in relation to its GNI per capita and discuss potential changes in policies and spending in priority areas.
- Step Four discusses ways to expand fiscal space for priority SDG spending, including additional domestic or foreign financing (including taxes and foreign aid) and efficiency gains (achieved by reallocating spending from areas of lower priority and/or reducing spending in areas with technical efficiency gains without any service reduction). This analysis is applied to the specific case of Uganda: how and to what extent may it be able to create room for increased public

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[1] According to the HLP, the overall goals are to: end poverty; empower girls and women and achieve gender equality; provide quality education and lifelong learning; ensure healthy lives; ensure food security and good nutrition; achieve universal access to water and sanitation; secure sustainable energy; create jobs, sustainable livelihoods and equitable growth; manage natural resource assets sustainably; ensure good governance and effective institutions; ensure stable and peaceful societies; and create a global enabling environment and catalyze long-term finance. The Open Working Group is currently discussing a set of 17 development goals.

spending in priority areas?   Would such adjustments be advisable? What trade-offs may be involved?

Empirically, the results for Uganda indicate that BAU performance would fall substantially short of the ambitious goals of the evolving global SDG agenda. However, the country could make stronger progress by 2030 in key areas, including poverty reduction, education, health, and infrastructure development. This would depend on policy changes that raise per capita income growth, generate greater fiscal space for needed expenditures, and enhance the efficiency of public spending. Improved creditworthiness would further increase Uganda's capacity to borrow from international financial markets.

In primary education, net enrollment is higher and completion lower than expected given Uganda's GNI per capita, findings that may be explained by low spending per student and/or low efficiency. In secondary education, enrollment and completion rates are both lower than expected, although spending per student is as expected. These findings may be explained by a combination of few entrants from primary school and a high dropout rate; given that spending is as expected, it is also a sign of inefficiency.

In health, Uganda's key indicators for under-five and maternal mortality rates are as expected. Total (public and private) health spending as a percent of GDP is higher than expected (9.5 compared to an expected 5.9 percent of GDP), above the expected level for private but below for public spending. At the same time, however, the level of dollar spending per capita is well below the recommended minimum for achieving even current health MDGs, and even if projected growth rates are maintained, Uganda is not expected to achieve this minimum spending level before 2020. On the other hand, the ability of the health sector to absorb additional spending while maintaining efficiency in the short to medium term is severely constrained by a lack of qualified manpower while waste is substantial. Accordingly, policymakers need to assess alternative ways of making progress: What can be done to increase absorptive capacity in the public health sector? Could partnering with the private sector enhance absorptive capacity?

In addition to investment in education and health, infrastructure development—in water, sanitation, roads, electricity, communications and internet technology—is a major SDG-related spending area for a low-income country like Uganda. Despite infrastructure spending over the last several years averaging over 10 percent of GDP, or US$1 billion per year, the country continues to lag in electricity provision, while shortcomings remain severe in sanitation, water and roads (especially secondary roads). Given high costs and public financing limitations, could part of the needs gap be met via mobilization of private investments, leveraged by the allocation of additional fiscal space to infrastructure?

The fiscal space analysis suggests that Uganda will be able to increase fiscal space for priority spending during the period up to 2030. This assessment is highly dependent on expected but highly uncertain oil revenues. Among other fiscal space sources, foreign aid (as percent of GDP) is expected to decline. Increases in spending on human development and infrastructure of this magnitude (or more) could easily be advocated considering the size of unmet needs. However, the government faces the challenge of increasing spending at the same time as it maintains and preferable improves government efficiency, translating additional spending into services that significantly contribute to more rapid progress on the SDG agenda.

The framework used in this paper and the accompanying database offer analysts in developing countries and the broader international community useful starting points for assessing SDG targets and related

policy and financing priorities to achieve them for virtually any low- or middle-income country. Such diagnostics can be conducted at fairly moderate cost, given that the multi-country database is readily accessible and can be used for cross-country analysis and benchmarking. However, it is important to note that, in order to permit more specific policy conclusions, the cross-country diagnostics that the framework offers should be linked to more detailed country-specific studies at country and sector levels.

Introduction[2]

With the 2015 deadline for the current Millennium Development Goals (MDGs) drawing near, the global community is shaping a new set of international development goals for the longer term. The process involved consultations led by the UN Open Working Group guided by the 2013 report, "A New Global Partnership" of the UN High-level Panel (HLP). The work so far indicates that the post-2015 development agenda will encompass social, economic, and environmental sustainability goals with broader coverage than the current MDGs.[3] This paper refers to these post-2015 development goals as Sustainable Development Goals, or SDGs.

In setting the post-2015 SDGs, the global community will need to take cognizance of various 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.[4] The ability to leverage diverse financing will differ from country to country, typically with less ability for low-income and/or conflict-affected countries.[5] Given the vastly different capabilities, histories, starting points and circumstances of the countries concerned, the HLP has suggested that each government be allowed to choose the appropriate level of ambition for each target, since every country cannot be expected to reach the same absolute target.

Against this background, the World Bank Group has developed a framework, with Uganda as the pilot study, to provide an initial understanding of the challenges policymakers will face in implementing key parts of the global SDG agenda in their 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. 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: (i) poverty reduction and shared prosperity, (ii) infrastructure (water, sanitation, electricity, roads, and information and communications technology, or ICT), access to (iii) education, (iv) health, and (v) 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. Given that the aim of the current paper is to concisely present the analytical framework and selected results for Uganda, it is more selective in terms of both SDGs and the indicators used.[6]

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

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[2] This paper was prepared as part of collaborative work on the post-2015 global agenda, involving DECPG and the Office of the World Bank Group President's Special Envoy on MDGs and Financial Development, led by Mahmoud Mohieldin.

[3] According to the HLP the overall goals are to: end poverty; empower girls and women and achieve gender equality; provide quality education and lifelong learning; ensure healthy lives; ensure food security and good nutrition; achieve universal access to water and sanitation; secure sustainable energy; create jobs, sustainable livelihoods and equitable growth; manage natural resource assets sustainably; ensure good governance and effective institutions; ensure stable and peaceful societies; and create a global enabling environment and catalyze long-term finance. The Open Working Group is currently discussing a set of 17 development goals.

[4] World Bank Group, "Financing for Development Post-2015", October 2013.

[5] Ibid.

[6] We will strive to contrast SDGs according to their closeness of linkage to GNI per capita, and in terms of whether Uganda is over- or under-performing.

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.[7] Our use of this tool is very 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 an assumption of GNI being a direct determinant of outcomes—it is merely a benchmark and starting point for discussion about 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 (the 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.

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 business-as-usual (BAU) assumptions? What policy areas should the country's government consider in order to accelerate progress? How could it create the fiscal space needed to achieve more ambitious development outcomes?

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. An SDG analysis for any given country is expected to make selective use of the data. The database will become part of the public domain, making it possible for analysts to draw on it in analyses of the SDG agenda for any low- or middle-income country.

The purpose of this paper is to illustrate our framework, drawing on the more detailed case study application to Uganda. The analysis is made up of four steps. In each step, we explain the methodology and present an excerpt from the more comprehensive Uganda paper, with a focus on education. Throughout the paper, we emphasize how the framework can be used as a tool to identify priority policy areas and fiscal alternatives to progress on the post-2015 agenda at the country level. The paper is structured as follows:
- Step One benchmarks Uganda's current SDG outcomes against those of other countries, given the levels of GNI per capita.
- Step Two projects 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

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[7] 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 policymakers. 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).

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

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 provides the rationale.)

Box 1: Using GNI per capita for SDG Benchmarking

GNI per capita plays a central role in the analysis. Its level is highly correlated with SDG indicators for several reasons, perhaps most importantly due to the fact that GNI per capita is highly correlated with determinants of SDGs, including (i) per capita household incomes, parts of which is spent on items that contribute to SDGs (for example, on health, education, and electricity); and (ii) tax revenue, 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—i.e., to assess whether a country is over- or under-performing for an SDG relative to its GNI per capita.[8] 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.

Here we will exemplify the SDG benchmarking approach analysis of primary and secondary education in Uganda.[9] Figure 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 under-performing relative to their GNI per capita. Hence, for Uganda, net enrollment in primary is significantly higher than expected, while primary completion rates are

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[8] 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.

[9] 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.

significantly lower than expected. Figure 2 shows similar information for secondary education in Uganda: gross enrollment rates are significantly lower than expected but completion rates are as expected.[10]

Figure 1: Uganda—Primary School Net Enrollment/GNI per capita (left); Primary School Completion/GNI per capita (right)
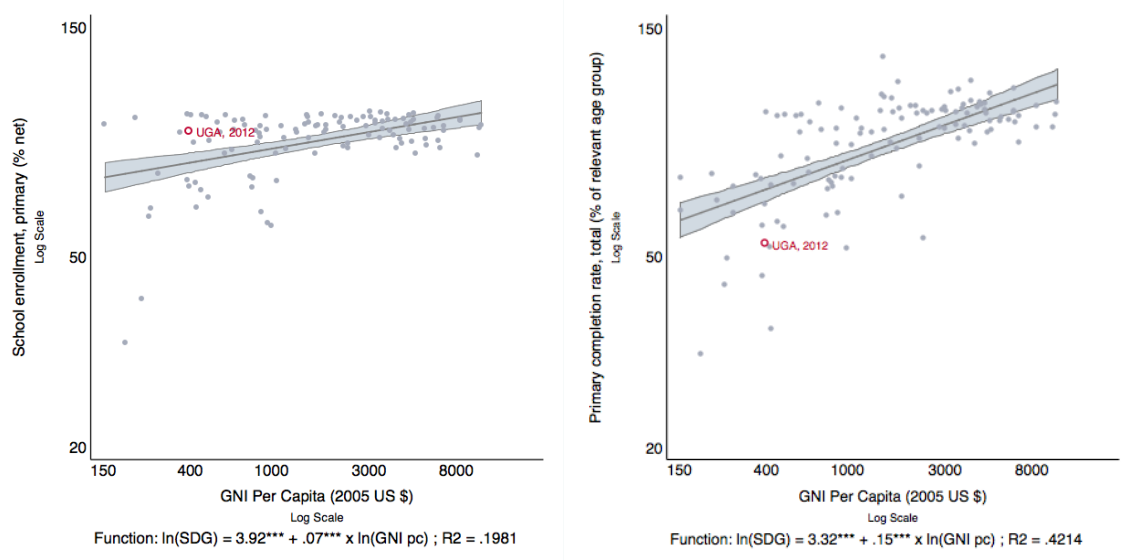
Sources: WDI, EdStats

Figure 2: Uganda—Secondary School Gross Enrollment/GNI per capita (left); Secondary School Completion/GNI per capita (right)
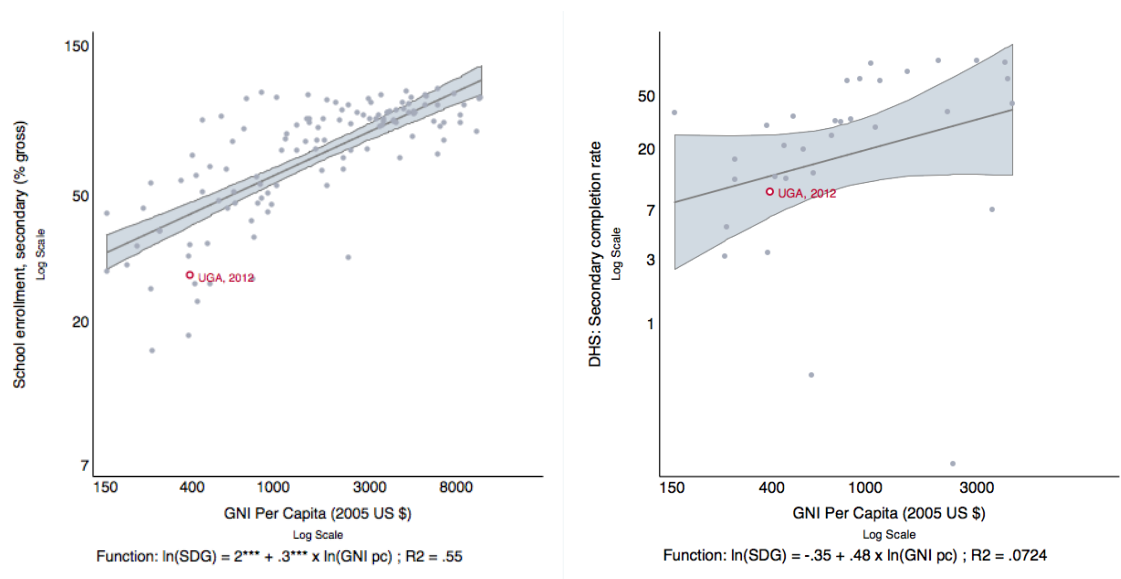
Sources: WDI, EdStats

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[10] 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.

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 is used, not only to benchmark the initial SDG outcome but also to project business-as-usual SDG outcomes for 2030. For this, we need projections of GNI per capita.

Box 2 discusses alternative sources for GDP and GNI projections, which are available for most countries. Figure 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 presents growth rates. We opted for the CEPII projection, which for Uganda has a growth rate for GNI per capita of 4.0 percent per year (at constant 2005 US dollars), 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.[11] 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.

<div align="center">Box 2: Projecting GDP and GNI</div>

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 only project GDP while this paper 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 dollars).[12] In any country case study, it is good practice to compare different projections and, if necessary, refine what is available.

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[11] We chose the projections of CEPII due to a combination of factors, including a transparent model structure, clear documentation, and comprehensive country coverage.

[12] 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 3: Uganda—Historical Data and Projections for Real GDP per capita (2011=100)
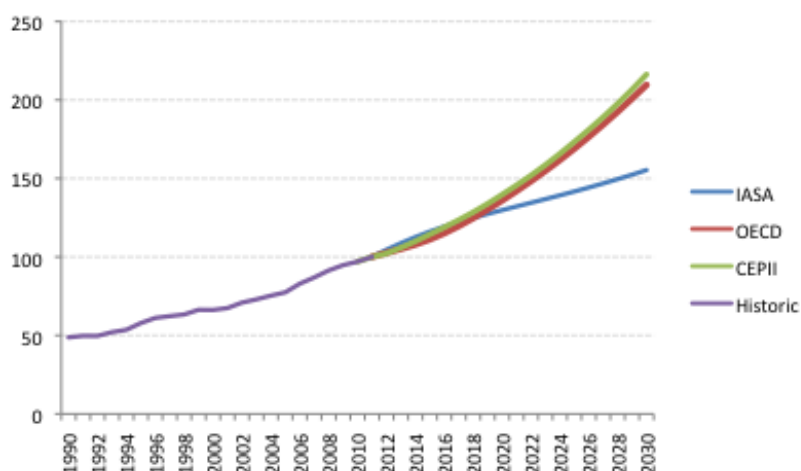
Sources: WDI, IIASA, OECD, and CEPII

Table 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 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	2013-2030	GDP per capita	
OECD	3.8	2013-2030	GDP per capita	
IIASA	2.5	2013-2030	GDP per capita	
IMF (2013)	3.7	2013-2030	GDP per capita	Including oil revenues, adjusted for population growth
Hausmann et al. (2014)	3.3	2009-2020	GDP per capita	Based on the Economic Complexity Index
Republic of Uganda 2014, pp. 27, 30, 53	5.6	2014-2040	GDP per capita	Calculation based on data for GDP growth and population in Uganda's Vision 2040

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.[13] For any SDG, projections are presented only if the fit between GNI per capita and the SDG is considered sufficiently tight (Box 3).

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[13] Given that (i) SDGs have extreme values (such as 100 percent for improved water access) and (ii) 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 over-performs in water access,

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 tight or moderately tight relationship refers to a significant GNI per capita variable and a good enough explanatory power of the regression ("tight" R2 > 0.3, "moderately tight" 0.1 < R2 < 0.3).

Table 2 presents recent values and BAU projections to 2030 for Uganda for a set of SDG indicators, including those shown in Figures 1 and 2, using a 2030 GNI per capita of US$817. As explained under Step 1, Uganda is currently over-performing in its primary school net enrollment rate (indicated by green text in Table 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 under-performing (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.

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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.

Table 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, preprimary (%)	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	
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	109
CO2 emissions per capita	0.11	0.39

Note: Green = Currently significantly over-performing; Red = Currently significantly under-performing; Black = Performing as expected; No projection = Too loose 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 over-performance and under-performance are used normatively; for example, with regards to the maternal mortality rate, a lower-than-expected rate is reflected as over-performance.

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). 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: (i) raising the level of GNI per capita, which in turn, through various channels, affects SDGs, and (ii) 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
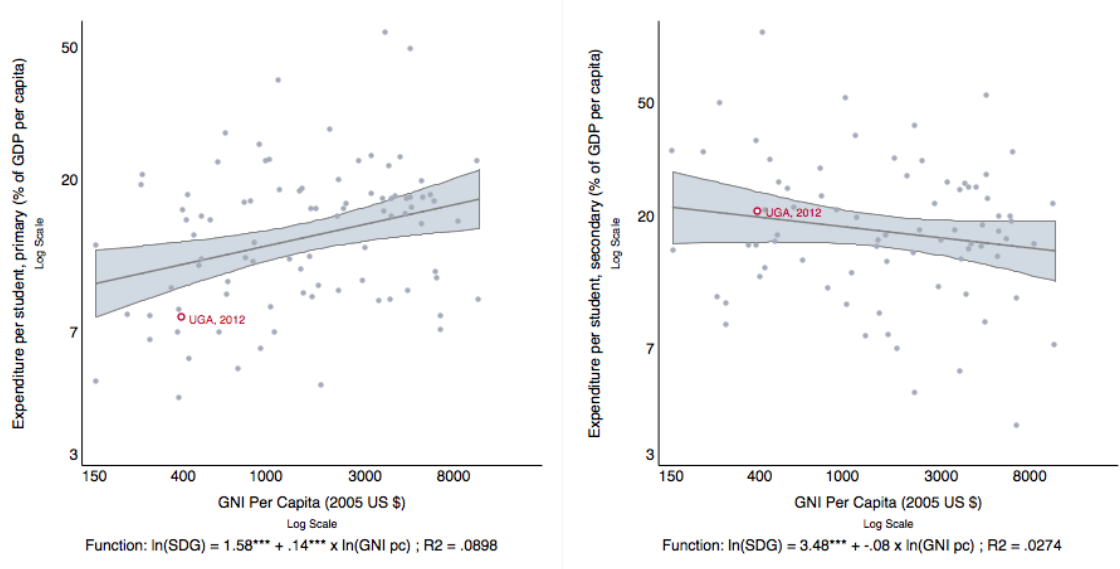
areas and the related provision of inputs crucial to SDG progress. Such policies may have an influence directly (by having a direct bearing on specific services—e.g., health services targeted to reduce maternal mortality) and/or indirectly (by contributing to capacity-creating economic growth). The discussion 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 mainly as indicating insufficient levels of efficient investments. Shared prosperity is not addressed in a separate section but rather highlighted throughout. Wherever data allows, the results of the sample of the bottom 40 percent is 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.[14] 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 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. 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.
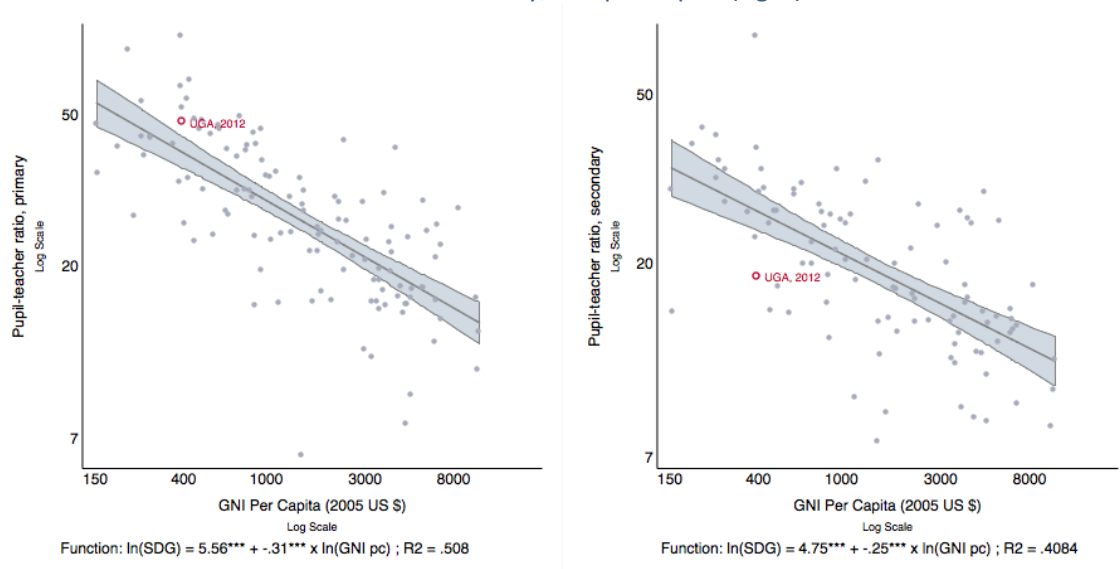
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[14] For example, access to electricity is an SDG in its own right and is likely also to influence both education and health SDGs.

Function: ln(SDG) = 1.58*** + .14*** x ln(GNI pc) ; R2 = .0898

Function: ln(SDG) = 3.48*** + -.08 x ln(GNI pc) ; R2 = .0274

Sources: EdStats, World Bank

Figure 5: Uganda—Primary Pupil-Teacher Ratio/GNI per capita (left); Secondary Pupil-Teacher Ratio, secondary/GNI per capita (right)

Function: ln(SDG) = 5.56*** + -.31*** x ln(GNI pc) ; R2 = .508

Function: ln(SDG) = 4.75*** + -.25*** x ln(GNI pc) ; R2 = .4084

Sources: EdStats, World Bank

Table 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.

Table 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 over-performing; Red = Currently significantly under-performing; Black = Performing as expected; No projection = Too loose relationship with GNI per capita. The terms over-performance and under-performance are used normatively; for example, with regards to the maternal mortality rate, a lower-than-expected rate is referred to as over-performance.

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 constrained capacity to scale up spending with retained efficiency.

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 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.[15] 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.[16]

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 at al. 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 2005/2006 (Okwero at al. 2010, pp. 47, pp. 65-68). Meanwhile, the level of spending on current health 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 2001-2009— 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

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[15] In 2011, at PPP in constant 2010 US dollars, 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).

[16] 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 over-enrollment 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.

may require annual spending of an additional US$400 million per year (in 2011 US dollars) 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.

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. 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. In order to raise spending in priority areas, additional fiscal space is needed. 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.

Here we primarily address fiscal space from a budgetary perspective since, by definition, budget resources are most directly controlled by policymakers. 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—i.e., 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 (which, of course, may be difficult) 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.[17]

Table 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.

Drawing on the summary in Table 4, among the potential sources of fiscal space for priority spending, we find the following:

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[17] The challenges of raising government efficiency in service delivery in general, and for services benefitting 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 policymakers, 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 ODI 2014).

- Non-oil taxes. Tax revenues are the main source of government financing in Uganda. Figure 6 shows how they have evolved since 1990, and benchmarks their current GDP share against those of other countries.[18] 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 non-oil 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.[19]
- 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 2016-2030, oil revenues may amount to an average of roughly 4.9 percent of GDP per year (IMF 2013, 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 capita and ODA (as percent of GNI, or GDP) suggests that Uganda's ODA will decline relative to both GNI and GDP (Figure 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 2016-2030, around 6.1 percent of GDP, i.e., 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 2013).
- Government efficiency. A number of government efficiency measures are available (Box 4). According to both the health and education indices, Uganda's performance is below the expected levels; among these two indices, 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 indices measure different aspects of government performance, such mixed findings may not be

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[18] Figure 6 suggests, interestingly, that ODA per capita is unrelated to GNI per capita—i.e., there is no significant tendency to give higher aid per capita to the countries where needs are highest.
[19] IMF (2013) suggests that, by 2018, an increase of 1.5 percentage points of GDP for non-oil would be feasible; Uganda would still remain within its expected range.
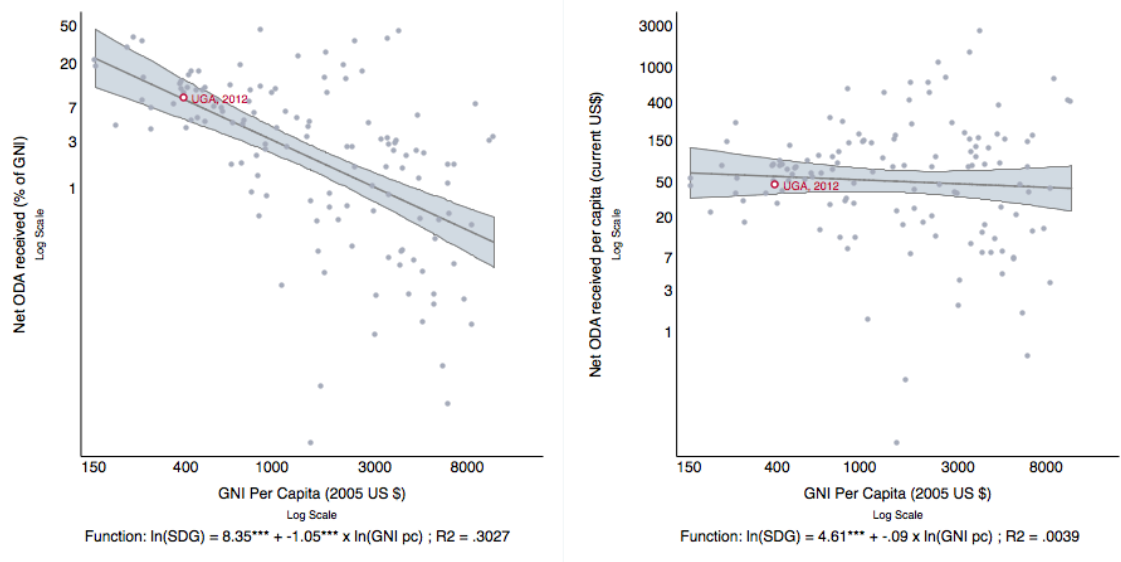
inconsistent. Among other country-specific sources, scattered survey evidence also points to inefficiencies. For example, on any given day, roughly 15-20 percent of the teachers (including head teachers with supervisory responsibilities) are absent, with illness accounting for an almost-negligible share 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 2013b, p. xiii). In sum, even though they are unpredictable, efficiency gains have the potential to add considerable fiscal space.

Figure 6: Uganda—Tax Revenues 1990-2011 (% of GDP) (left); Tax Revenues (% of GDP)/GNI per capita (right).
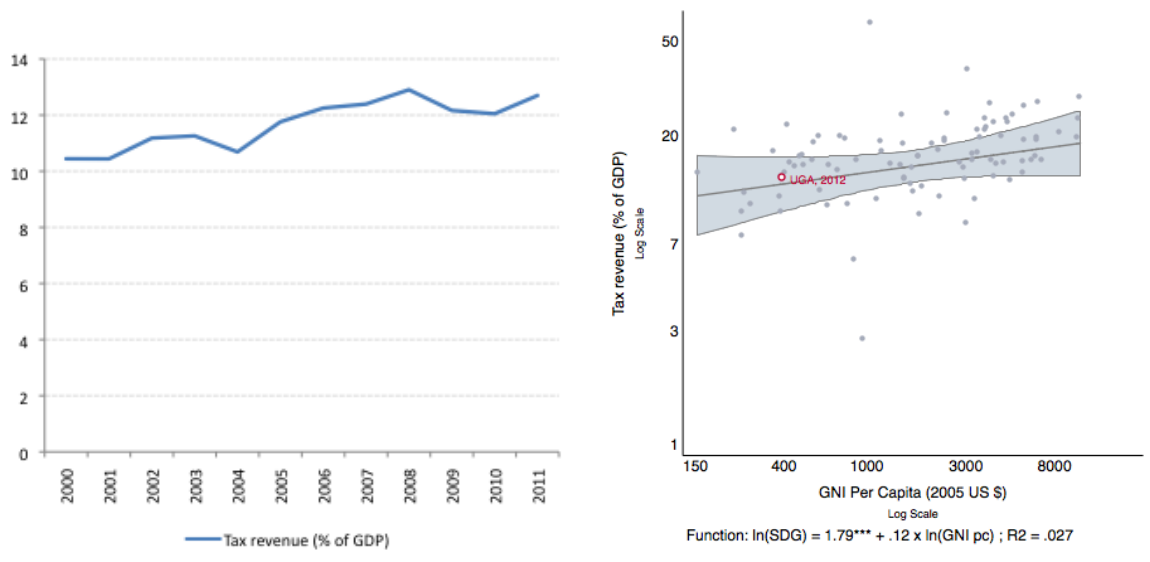
Sources: WDI, World Bank

Figure 7: Uganda—ODA (% of GNI)/GNI per capita (left); ODA (per capita)/GNI per capita (right)

Function: ln(SDG) = 8.35*** + -1.05*** x ln(GNI pc) ; R2 = .3027

Function: ln(SDG) = 4.61*** + -.09 x ln(GNI pc) ; R2 = .0039

Sources: WDI, World Bank

Box 4: Measures of Government Effectiveness

On the basis of relationships between inputs and outputs, Grigoli and Kapsoli (2013) and Grigoli (2014) constructed indices 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.

On balance, this information suggests the fiscal space for SDG priority spending could increase by as much as 4-5 percent of GDP.[20] 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 2013, 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

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[20] 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 2016-2030): 4.9 (oil taxes) + 1.5 (non-oil 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).

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.

Conclusions

In this paper, we present a framework for analyzing the implications for the SDG agenda at the level of individual low- and middle-income countries in order to enable countries to assess which numerical targets to pursue for 2030. 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 et al. 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 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 (UN 2013).[21]

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 (e.g., 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, policymakers 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 framework used in this paper and the accompanying database is intended to give analysts in developing countries and the broader international community useful pointers for assessing policy priorities, targets, and financing options for virtually any low- or middle-income country. The marginal cost of additional applications of this diagnostic framework is relatively low since the cross-country database and related regressions and graphs have already been done and are easy to access and use. The framework does not say what policymakers should do but it should help them pose important questions and find answers, also drawing on more detailed, country-specific studies.[22] Together, this information should provide helpful guidance for stronger SDG accomplishments.

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[21] 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 2014).

[22] 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.

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