FISCAL POLICY AND DEVELOPMENT: SPENDING NEEDS FOR ACHIEVING SELECTED SDGS[1]
METHODOLOGICAL NOTE

The IMF has estimated the additional spending that is needed in health care, education and selected areas of infrastructure for reaching the Sustainable Development Goals (SDGs). Findings are based on a new methodology applied to 155 countries—including advanced (34), emerging markets (72) and low-income and developing countries (49). Five country studies (Rwanda, Benin, Guatemala, Indonesia and Vietnam) were conducted to deepen the analysis.

The question is: how much additional is necessary to reach the SDGs in education, health care, and infrastructure (roads, electricity, and water and sanitation) by 2030? These investment-type sectors are key to improving social, human, and physical capital. Governments typically play a decisive role in these sectors: on average, about one-third of public budgets is devoted to these sectors. Furthermore, these sectors are synergetic across many SDGs, including with potential spillovers on poverty and inequality. In this sense, they are critical in generating inclusive and sustainable growth.

The methodology to estimate country-specific spending needs is based on a production function approach. It is applied to all sectors but water for which we use the WASH model from the World Bank. Spending needs are calculated as a share of GDP in 2030. For each sector, the main assumption is that a combination of *inputs* generates *outcomes* that can be ranked. The methodology follows three steps:

1. Identifying of main *inputs* and their associated *unit costs*. For example, in the case of education, these include the number of teachers per 100 students, teacher salaries, and the share of non-compensation in education spending.

2. Deriving *reference values* for these parameters by examining their values in countries with similar level of GDP per capita that have good outcomes today (see Figure). Outcomes are proxied by the relevant SDG index for education and health (2018 SDG Index and Dashboards report), the Rural Access index for roads (World Bank), and access for electricity and water. These indicators take values between 0 (lowest outcome) and 100 (highest outcome).

3. For each country, estimating 2030 spending as a share of GDP associated with these reference values, given projections of GDP per capita and population growth. For the infrastructure estimation, unit costs are derived from the literature.

---

[1] Prepared by M. Garcia-Escribano, D. Prady and M. Soto—all IMF.

**Figure 1. Reference Value for Teacher-Student Ratio Input
in Education Production Function**
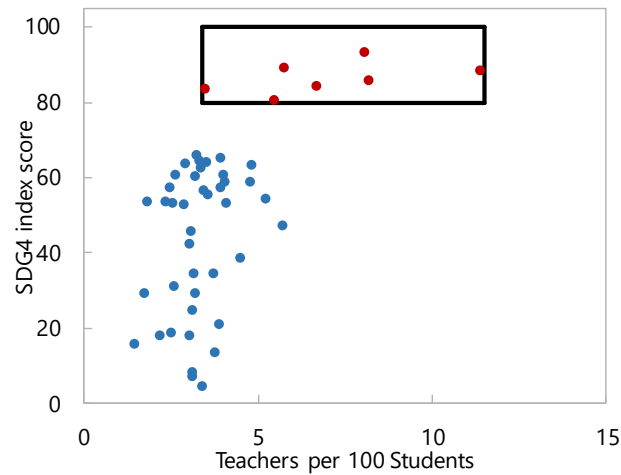
Source: IMF staff calculations.
Note: Countries with GDP per capita below US$ 3,000. The seven countries in the box are the ones used to derive the reference value for teachers per 100 students.

We report the results for the "additional spending needs" in percentage points of GDP and in dollars of 2016. For education and health care, additional spending needs are defined as the difference between spending in share of GDP in 2030 that is consistent with good performance and the current level of spending to GDP for each sector. For physical capital (roads, electricity, and water), we annualize the estimated costs. We express the additional spending needs in 2030 in percentage points of GDP and in constant dollars of 2016.