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EFFICIENCY OF SOCIAL SPENDING IN TOGO: AN OVERVIEW¹

Togo has initiated a major fiscal consolidation since 2017. So far, the adjustment has relied heavily on capital expenditure cuts and recurrent expenditure containment. In this context, preserving public social spending and achieving better social outcomes are essential. Closing some efficiency gaps in health and education sectors could help the task of fiscal consolidation. This Selected Issues Papers (SIP) provides an overview of Togo's public spending in health and education sectors and assesses the associated input and output technical efficiencies using a frontier analysis. We find that in general, Togo's social performances are below those of selected countries with similar development stage. With the current spending levels, Togo can improve its health and education outcomes by 4.8 percent and 6.3 percent respectively. In addition, the spending leakages, of about 10 percent and 14 percent respectively in the two sectors, could be reduced to maximize the impact of social spending. Achieving these efficiency gains will require a series of structural reforms over the medium term in the health and education sectors.

A. Introduction

- 1. Bold fiscal consolidation is underway.** Since end 2016, Togo has embarked on a major fiscal consolidation following a significant infrastructure upgrade through pre-financing. An IMF supported program has been agreed in May 2017. Since the onset of the program, public investment has been brought back to prior pre-financing levels and recurrent expenditure has been contained significantly. Domestic primary expenditure has been curtailed by 5 percentage points and Togo's public debt-to-GDP has been reduced by 7 percentage points between 2016 and 2018, from 81.1 percent in 2016 to 74.1 percent in 2018. This ratio is set to decline below the regional convergence criteria of 70 percent by end-2019.
- 2. The envelope for social benefits is increasingly under strains.** Public social spending has fallen short off the mark of the targets set under the ECF program. For 2017-18, the indicative target on social spending was missed mainly because of difficulties in budget execution. This contrasts with the key policy objective of Togo's fiscal adjustment to preserve and generate space for public social spending and implement targeted social spending.
- 3. Public social spending is a niche for longer-term human capital improvement.** Reducing inefficiencies in public social spending (education and health outlays) could improve substantially social services and human capital and therefore improve medium-term growth and productivity.
- 4. In this SIP, we shed lights on the recent developments of public social spending and assess its efficiencies both on the means and outcomes sides.** The remainder of the note is organized as follows. Section II discusses the definition of public social spending under Togo's ECF

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program. Section III presents some key stylized facts. Section IV assesses the input and output efficiencies of public social spending in Togo in comparison with the rest of sub-Saharan Africa (SSA) countries. Section V concludes.

B. Social spending in Togo: Measurements and Programs

5. General definition of social spending. Social spending includes public spending on education, health and social protection. Social protection includes contributory social insurance transfers (pension and unemployment benefits) and social assistance benefits (family benefits, unemployment assistance, and cash transfers). Given the low level of social safety nets program and the lack of comprehensive data, we focus in this SIP on education and health sectors.² Because of data availability, we use mostly data on General Government (central government and public entities) expenditures on health and education from the World Bank's World Development Indicators (WDI). According to the WDI, health expenditures include healthcare goods and services and expenditures on education include current, capital, and transfers expenses and cover all sectors (including health, education, social services, etc.).

6. Measuring social spending in Togo. For the ongoing ECF program in Togo, social spending is measured as follows. Total (current and capital) domestically-financed social spending is calculated for each category of current and capital accounts (wages, goods and services, transfers and subsidies, other) and capital accounts financed with domestic resources. In a national context, social spending is considered to be public expenditure targeting the following social sectors: (1) Ministry of Education; (2) Ministry of Health; (3) Ministry of Social Action, Advancement of Women, and Literacy; (4) Ministry of Grassroots Development, Crafts, Youth, and Youth Employment; (5) Ministry of Agriculture, Livestock, and Fisheries; (6) Ministry of Mines and Energy (rural electrification projects); (7) Emergency Program for Community Development (Programme d'Urgence de Développement Communautaire – PUDC); (8) Support Program for Vulnerable Populations (Programme d'Appui aux Populations Vulnérables – PAPV).³

C. Stylized Facts

7. Rising spending. Social spending steadily increased over the last fifteen years. Togo's social spending defined as the sum of health and education outlays grew from 5.4 percent of GDP in 2001 to 7.1 percent of GDP in 2016 (Figure 1a). This increase is mostly explained by the demographic trends, namely the increase of the share of the young (below 15) and old (above 65) populations, a key driver for social services *i.e* youth for education and elderly for health (see Annex I).

² For Togo, because of the lack of comprehensive database on social protection, social spending is measured as education and health expenditures. In 2015, social protection expenditure is estimated at 0.6 percent of GDP while pension funds amount to 1.8 percent of GDP (see Annex I).

³ Two social programs are under implementation. The program to support vulnerable groups (PAPV) is an emergency initiative aiming at renovating social infrastructure and expanding social projects. The program covers areas such as potable water, sanitation, electricity, education, health, housing, financial inclusion, and youth employment. The community development program (PUDC) aims at reducing social inequality by improving the living conditions of populations in remote places, with insufficient basic social infrastructure.

8. Shifting composition.

- *The share of social spending in total GG expenses has been broadly stable.* On average between 2001 and 2016 social benefits accounted for more than half of the budgetary expenses, about 29.1 percent (Figure 1b). The share of public social spending declined steadily from 33½ percent to 23½ percent between 2001 and 2016. This is related to the significant increase in public spending during the pre-financing episode. Nevertheless, public social spending accounts also for a large budget category and as such improving its efficiency in the medium term could deliver sizeable budgetary savings and improve social indicators.
- *In terms of composition, public social spending in Togo is skewed towards education outlays.* The share of the education sector stood at 20 percent of the GG expenditure on average whereas the health sector accounted for only 9.2 percent. This implies that efficiency efforts should concentrate on both sectors, with a stronger focus on the education sector (Figure 1b). Moreover, looking at the dynamic over the past 20 years, the increase in social spending trends is mostly attributed to education outlays Figure 1b. Education outlays picked up in 2009 from 4.1 percent of GDP to 5.1 percent of GDP in 2016. After increasing during the first half of the 2000s, health expenditure declined and stagnated since 2009 at around 2.0 percent of GDP.

9. Togo relative to SSA. Both health and education expenditures in Togo are on a par with the average of the SSA region, at around 2.1 and 5.1 percent of GDP in 2016, respectively. For health, in 2015 public funds accounted for 38.4 percent of the total, which was well below the average of the SSA region (Figure 1c). For the education sector, this share is estimated at about 18 percent (Figure 1d). As a result, out-of-pocket expenses for health and education are high by SSA standard.

Suboptimal Social Outcomes

10. In general, looking at cross-country data, the efficiencies of Togo's health and education sectors could be strengthened substantially.

- Togo's health performance is slightly below the average in SSA countries and Togo has a much lower spending level (Figure 1e). However, this outcome has been achieved at a relatively higher cost when compared with peers (for example Madagascar, Mauritania, Sudan, and Uganda). Togo spends about 2.0 percent of GDP for its health sector, while Madagascar and Uganda are devoting between 1.5 and 1.8 percent of GDP to achieve a better health adjusted life expectancy (HALE).⁴
- For the education sector, Togo's outcome is high by SSA standards but remain relatively costlier. In 2015 Togo's ranks among the top performers for net enrollment rates (Figure 1f). However, the related cost tends to be high. This conclusion holds with the primary completion rate as the education outcome (Annex I).

⁴ Health Adjusted Life Expectancy (HALE) is a measure of population health that accounts for mortality and morbidity. It adjusts overall life expectancy by the amount of time lived in less than perfect health. Health-adjusted life expectancy (HALE) is the average number of years that a person is expected to live in good health by considering years lived in less than full health due to disease and/or injury.

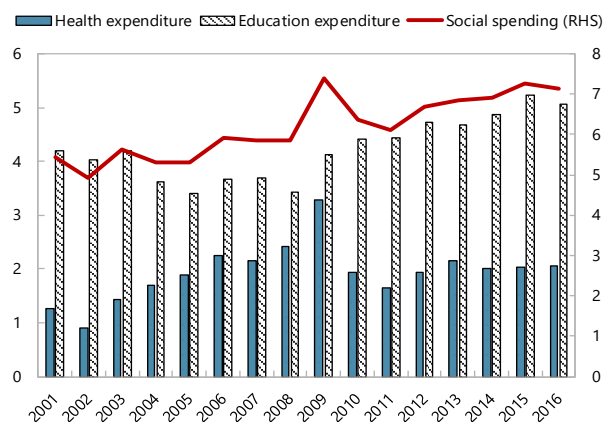
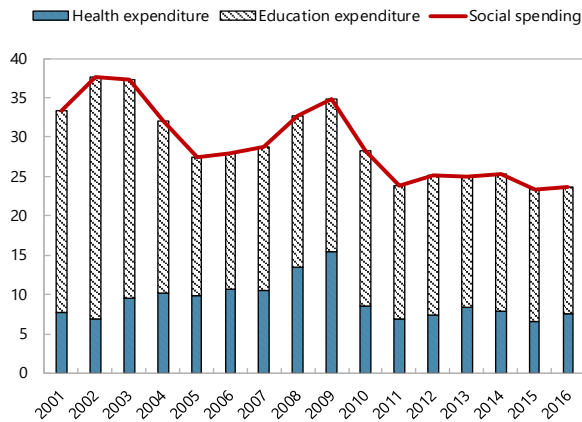
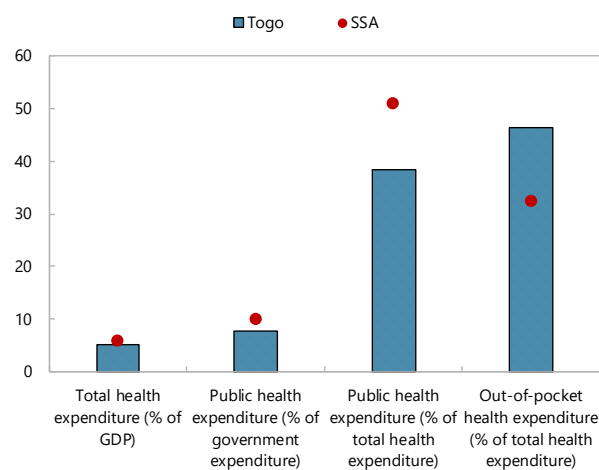
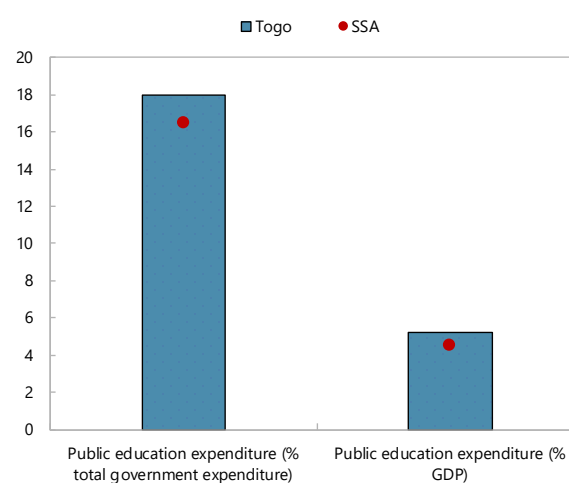
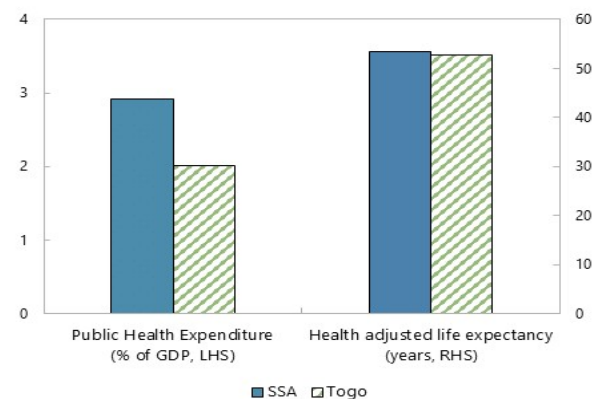
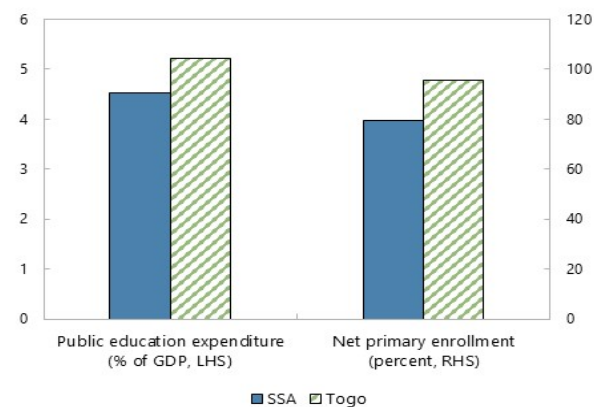
- Countries with analogous achievements (for instance Benin and Rwanda) are spending relatively less. Togo's education spending was estimated at 5.2 percent of GDP while Benin and Rwanda allocated between 3.6 and 4.4 percent for comparable outcomes.

11. These cross-country comparisons show that there is scope for strengthening the efficiency in Togo's health and education sectors. In the following section, we investigate the potential efficiency gains through a frontier analysis.

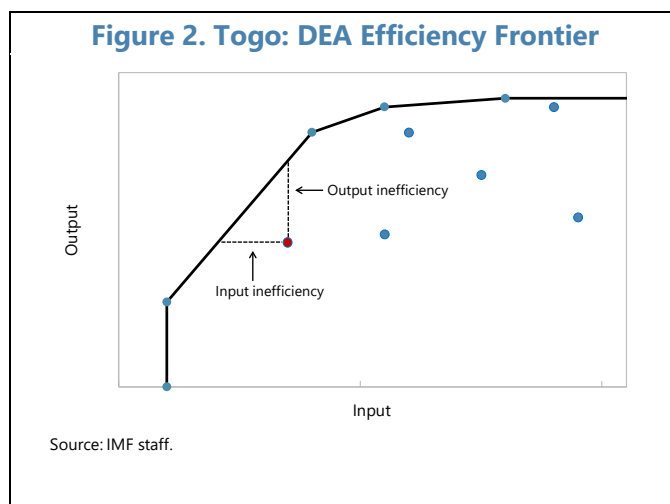
D. A Frontier Analysis

12. Methodology. A frontier analysis is used to assess the efficiency of Togo's health and education sectors. The methodology applied is the Data Envelopment Analysis (DEA).⁵ The DEA traces a "best practice frontier", populated by countries that provide the optimal combination of inputs and outputs. This frontier is constructed using linear programming techniques from the most efficient observations, which then "envelop" the less efficient ones. Efficiency gains are derived by measuring the distance from the frontier and expressing it as a ratio of an observation's distance from the efficiency frontier to the distance from the axis. These gains can be defined as the amount by which input could be reduced while holding constant the level of output (input inefficiency) or as the amount by which output could be increased while holding constant the level of input (output orientation), as shown in Figure 2. The efficiency score depends on the angle of efficiency examined. The input efficiency score measures the scope to produce the same level of output while streamlining the cost of production to be on the frontier. In contrast, the output efficiency captures the scope for improving the output to be on the frontier with the same cost. In the former, the input is minimized while the output is kept at its current level. In the latter, the output is maximized while the input is kept at its current level. The efficiency scores range from 0 to 1 and measures the conversion rate of input into output. Implicitly, the efficiency gains determine the size of potential savings. For each type of expenditure, Togo's conversion rate is then compared to that of other SSA countries. For this analysis, health adjusted life expectancy and the net primary enrollment rate are considered as the socially valuable outcomes for health (*i.e.*, longer life because of a good healthcare system) and education (*i.e.*, net enrollment in the primary as a product of good schools), respectively.

⁵ The DEA technique is more appropriate for homogeneous sample such as SSA countries. Indeed, as a relative measure of efficiency, DEA is highly sensitive to sample selection and measurement errors in terms of quality of production factors. Outliers can exert a large effect on the efficiency scores and shape of the frontier.

Figure 1. Togo: Overview of Health and Education Expenditures, 2001–16**Figure 1a. General Government Social Spending**
(percent of GDP)**Figure 1b. General Government Social Spending**
(percent of government expenditure)**Figure 1c. Health Expenditure, 2015****Figure 1d. Education Expenditure, 2015****Figure 1e. Overview of Health Indicators, 2015****Figure 1f. Overview of Education Indicators, 2015**

Source: World Development Indicators; and IMF staff estimates.



Health Sector

13. Using better HALE as the desired outcome of the health sector, Togo remains below the frontier implying that more output can be achieved with the current spending level.

- *Input efficiency*— In 2015, Togo allocated PPP\$ 76.3 per capita on the health system with a HALE of 52.3 years. This performance remains below peers with top performance (Figure 5). For instance, Guinea a country very close to the frontier, spends only PPP\$ 68.5 per capita on the health system with a similar HALE (51.7 years). This suggests Togo can save as much as PPP\$ 7.8 per capita to produce the same HALE. This is equivalent to an input-efficiency of about 10.2 percent.⁶
- *Output efficiency*—Ethiopia which is very close to the frontier spends on average PPP\$ 73 per capita on the health sector with a HALE of 56.1 years. The comparison with Ethiopia with a similar spending envelope implies that Togo can improve its HALE by as much as 3.3 years with a similar spending. This represents an output-efficiency of about 6.3 percent.⁷

Education Sector

- *Input efficiency*— Using net primary enrolment as the desired outcome, Togo is below the frontier. In 2015, Togo allocated PPP\$ 260.5 per capita on the education sector with a net enrolment of 95.4 percent. This performance remains below peers with top performance (Figure

⁶ The related calculation is as follows: $100 * ((76.3 - 68.5) / 76.3) = 10.2$.

⁷ The related calculation is as follows: $100 * ((56.1 - 52.8) / 52.8) = 6.25$.

(continued)

3). For example, Sierra Leone devoted PPP\$ 223.7 per capita to achieve an enrolment rate of 99.1 percent. The input-efficiency score is estimated at about 14.1 percent.^{8,9}

- *Output efficiency*—In terms of output efficiency, Togo can improve as much to 100 percent (per construction) with the same level of education spending. This means that Togo can still improve its enrolment rate by 4.8 percent with the current spending levels on the education system.^{10,11}

14. The frontier analysis suggests that Togo can do significantly more with the current spending levels.

E. Concluding Remarks

15. There is a scope for bold improvement outcomes in Togo's health and education sectors. A series of options should be considered.

- Immediate efforts should focus on continuing the implementation and expansion of various social benefits initiatives based on a targeting principle. These include the following actions: (i) finalize and implement the Unified Social Registry for social protection programs aiming at ensuring better coordination of social protection interventions; (ii) expand the implementation of the unconditional cash transfer (UCT) programs reaching 40,000 households and the school feeding program reaching 50,000 students; (iii) reinforce the implementation of the program to support vulnerable groups (PAPV) and the community development program (PUDC).
- A key step will be to continue improving the governance of the health and education sectors as planned in the sectoral strategies. In the health sector, focus should be on the equity in access to health services, affordability including expanding the prescription and use of generic drugs and cost-sharing mechanisms while ensuring necessary safeguards to prevent leakages. In the education sector, medium-term strategies should aim at achieving universal primary education and limit out of pocket expenses, expanding preschool coverage, and covering additional rural areas.
- It is also important to improve the execution of the budgeted social outlays. Allocations for social sectors in the budget are often characterized by a low execution. The insufficient

⁸ The related calculation is as follows: $100 \times ((260.5 - 223.7) / 260.5) = 14.1$.

⁹ A similar conclusion is reached with the completion rate (see Annex I). In 2015, Togo allocated PPP\$ 260.5 per capita on the education system with a primary completion rate of 82.9 percent. Countries close to the frontier such as Benin, spends only PPP\$ 194 per capita on the education system with a similar primary completion rate estimated at about 81.1 percent. This suggests Togo can save as much as PPP\$ 66.5 per capita for the same result. This is equivalent to an input-efficiency of 25.5 of about percent. The related calculation is as follows: $100 \times ((260.5 - 190) / 260.5) = 25.5$.

¹⁰ The related calculation is as follows: $100 \times ((100 - 95.4) / 95.4) = 4.8$.

¹¹ With the primary completion rate, Togo can improve its education outcome by 9.6 percentage points which is tantamount to an output-efficiency of about 11.6 percent. The related calculation is as follows: $100 \times ((92.5 - 82.9) / 82.9) = 11.6$.

execution of budgeted social expenses might explain the difficulty of reaching the IT in the program on social spending.

- Finally, strengthening protection of the most vulnerable can be achieved by ensuring a sustainable financing source—e.g. revenue mobilization or the reallocation of spending from other areas—or improvements in the efficiency of social spending. In most economies, there is ample room to improve the efficiency of public spending, including social spending.

