



# TOGO

## SELECTED ISSUES

November 2015

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## SELECTED ISSUES

October 7, 2015

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The African Department  
( In consultation with other departments)

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# ASSESSING ECONOMIC ACTIVITY IN COUNTRIES WITHOUT QUARTERLY GDP SERIES: THE CASE OF TOGO<sup>1</sup>

## A. Background

Assessing macroeconomic developments in the absence of quarterly GDP series can be a difficult task. Togo compiles only annual GDP series, which are published with long lags. The latest publicly available GDP series correspond to 2010 and were published in 2015. The Ministry of Finance provides GDP estimates for the interim period 2011–14.

A high-frequency index of overall economic activity can inform macroeconomic policy decisions in the course of the year and improve the budgetary process. For example, identifying an economic downturn can alert economic policymakers of a possible reduction in fiscal revenues and prevent cash-flow problems. This note fills this gap by constructing a high-frequency economic activity index that is highly correlated with annual GDP. This index uses a rich set of economic activity indicators, available on a monthly basis with relatively short lags.

## B. Analytical Framework

In Togo, there are about 40 macroeconomic indicators that are collected on a monthly basis and span a wide range of sectors of the economy (e.g. electricity consumption, fuel products sales, activity in the Port of Lome (PAL), airport traffic, international trade, and public finances).<sup>2</sup> This note presents a methodology to select the set of indicators that best describe the behavior of GDP in Togo.

The selection of the variables to be included in the economic activity index is done by finding the combination of variables that minimize the errors when compared to actual GDP growth and maximize the correlation with GDP growth. The indicators are aggregated into an index using a methodology used by the Conference Board.<sup>3</sup>

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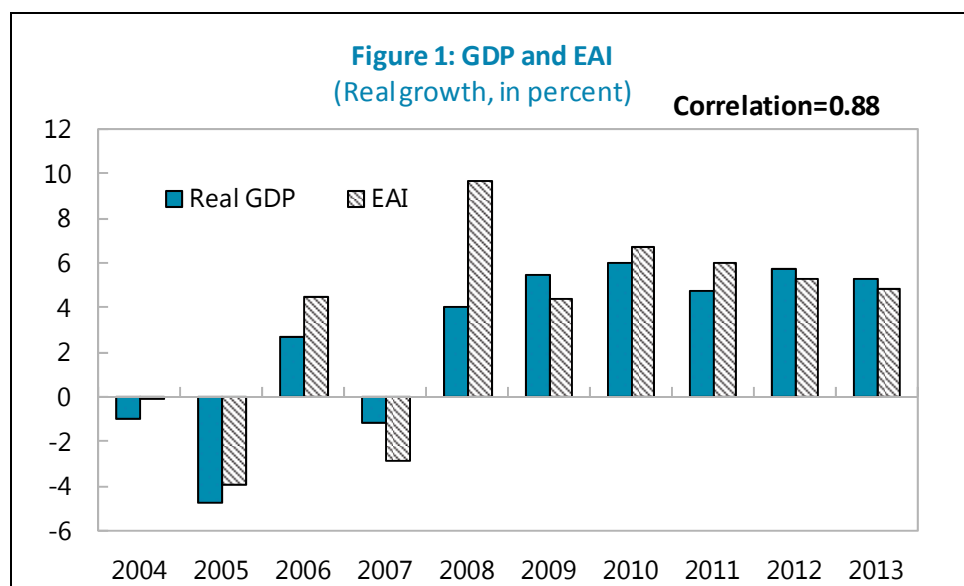
<sup>1</sup> Prepared by Francisco Arizala, based on Arizala and Traore (2014).

<sup>2</sup> Tableau de Bord de l'Économie Togolaise.

<sup>3</sup> See Appendix for details.

### C. Results: the Case of Togo

An economic activity index that replicates well the historical growth rates of real GDP in Togo is constructed. The selected index minimizes the deviations (Mean Square Error, MSE) between the growth rates of the indicator and actual real GDP growth over 2002–13.



The variables included in the final Economic Activity Index (EAI) represent the primary, secondary and tertiary sectors (Table 1).<sup>4</sup> Given the importance of agriculture in the primary sector, the indicator includes proxies for the developments in this sector such as exports and rainfall in important agricultural regions.<sup>5</sup> The secondary sector is represented by the industrial energy consumption, imports (reflecting capital goods and intermediary goods), and the industrial production index. Selected variables reflecting activity in the tertiary sector are non-industrial electricity consumption, tax collection, and airport passenger arrivals.<sup>6 7</sup>

<sup>4</sup> A similar approach is presented in Anguyo (2001).

<sup>5</sup> Togo's exports include cash-crops (cotton, coffee and cacao). The region of Tabligo produces mainly corn, beans and cassava, and Dapaong mainly millet (cereal) and cotton. These regions resulted as the best candidates to be included in the indicator using a statistical approach. Alternatively, it is possible to select the regions based on their contribution to total agricultural production.

<sup>6</sup> Each sector (I, II, and III) is represented in the EAI reflecting its respective weight in GDP national accounts. Variables within each sector are represented by the weights described in the Appendix.

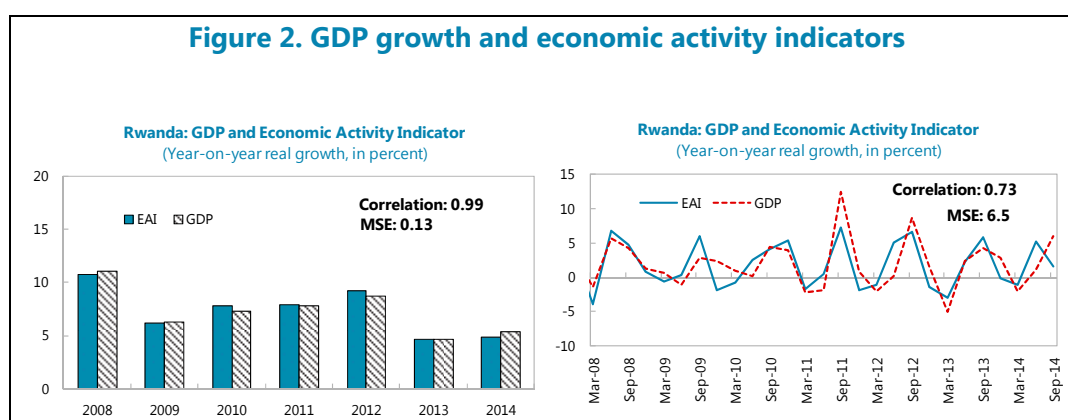
<sup>7</sup> Airport passenger arrivals can be thought as a proxy for business activities and other services connected activities such as hotels and restaurants. Tax collection does not capture informal activities that are likely to be large in the tertiary sector. All variables were selected based on their high historical correlation with GDP.

**Table 1. Togo: Variables included in the Economic Activity Index by Sector**

Economic Activity Sector	Indicator	Weight
<b>Primary sector (35%)</b>	Exports	0.55
	Rainfalls in the Dapaong region	0.22
	Rainfalls in the Tabligo region	0.23
<b>Secondary sector (25%)</b>	Industrial electricity consumption	0.53
	Imports	0.26
	Industrial production index	0.21
<b>Tertiary sector (40%)</b>	Electricity consumption	0.60
	Tax collection	0.24
	Total airport passengers arrivals	0.15

## D. Robustness: the Case of Rwanda

As quarterly GDP series are not available in Togo, this section attests the robustness of the methodology for Rwanda, a country that has quarterly GDP series. The EAI, which includes a different set of indicators for Rwanda, exhibits a low MSE and a high correlation with both annual and quarterly GDP (Figure 2).<sup>8</sup> The proposed methodology hence appears to be adequate to assess economic activity on a high frequency basis in countries where quarterly GDP series are not available.



## E. Recent Developments in Togo

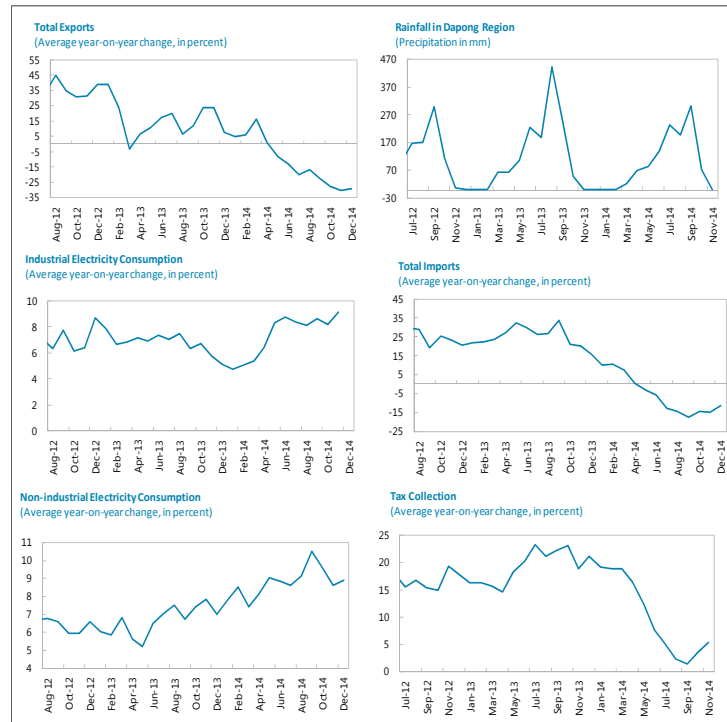
Based on variables included in the EAI for Togo introduced in Section 3, Figure 3 presents recent developments in the Togolese economy.<sup>9</sup> Some of the variables included in the EAI, such as

<sup>8</sup> The variables included in the EAI for Rwanda are consumption imports, exports of coffee, electricity production, breweries turnover, and VAT receipts.

<sup>9</sup> The variables included in the EAI for Togo are Exports, rainfall in the Dapaong and Tabligo region, industrial electricity consumption, imports, industrial production index, electricity consumption, tax collection, and airport passenger arrivals.

exports, imports, and tax collection suggest a slowdown in economic activity in the most recent period. On the other hand rainfall in the Dapaong region was in line with recent years, and industrial and non-industrial electricity consumption continued growing at a steady pace.

**Figure 3. Togo: Recent developments in selected economic indicators**



## F. Policy Implications

This note constructs a high-frequency Economic Activity Index that is highly correlated with Togo’s GDP and is available with short lags. The proposed methodology would allow policymakers and market participants to assess economic activity in countries where quarterly GDP series are not available. It would hence inform economic policy decisions, including budgetary processes. Using these tools would inform forecasts of revenue performance and allow implementing adjustments such as increasing revenue mobilization efforts or reducing expenditures if needed to avoid liquidity risks and accumulation of arrears.

## Appendix—Computation of the Index

### Selection of the variables to be included in the index

As explained in section II the variables included in the EAI are determined such that their combination maximizes the correlation with GDP growth or minimizes the Mean Square Error (MSE) with respect to the actual GDP growth rates, as proposed in Arizala and Traore (2014). Algebraically:

$$\begin{aligned}x_1 &= \text{Argmax}_{x_i} [\text{corr}(y, x_i)] \\x_2 &= \text{Argmax}_{x_i} [\text{corr}(y, \text{index}\{x_1, x_i\})] \\x_3 &= \text{Argmax}_{x_i} [\text{corr}(y, \text{index}\{x_1, x_2, x_i\})] \\&\vdots \\x_n &= \text{Argmax}_{x_i} [\text{corr}(y, \text{index}\{x_1, x_2, \dots, x_n\})]\end{aligned}$$

where  $y$  corresponds to real GDP growth rate and  $\text{index}\{x_1, x_i\}$  refers to an index including variables  $x_1, x_2 \dots$  until  $x_i$ . The combination with the highest correlation or the one that minimizes the MSE is ultimately selected as the final EAI. This combination can be a couple, a triplet, etc. A total of  $\sum_{k=1}^n C_k^n$  combinations can be considered.

### Arithmetical computation of the index

For the computation of the indices using solely the correlation approach we follow closely the U.S. Conference Board (2012) methodology and Opoku-Afari and Dixit (2012). The steps are detailed below:

- deflate the nominal variables to reflect real values;
- compute symmetric changes of all variables; this allows for an equivalent treatment of positive and negative percentage changes.

We define a symmetric changes as  $\alpha_t$ :

$$\alpha_t = 100 \times \frac{X_t - X_{t-1}}{X_t + X_{t-1}}$$

where  $X_t$  corresponds the underlying variable.

- Calculate the standard deviation for each variable ( $\sigma_x$ );
- the weight of each variable in the aggregate index is penalized by the series' volatility, more volatile series have a lower weight in the aggregate index.

$$w_x = \frac{1}{\sigma_x}$$



- compute the changes in the aggregate index by taking the weighted sum over changes in the individual series;

$$mt = xt * \frac{wx}{\sum_{x=1}^n wx}$$

- Sum the aggregate changes to obtain the aggregate level of the EAI.

$$I1 = 100$$

$$It = It - 1 * \frac{200 + mt}{200 - mt} \quad \forall t > 1$$

- Calculate the growth rate of the index ;

In addition of being highly correlated with annual GDP and being coincident with the sign of real economic growth as much as possible, the indicator should reflect the magnitude of the changes in real economic growth. To do this, Arizala and Traore (2014) propose an adjustment factor (AF) to improve the performance of the indicator in terms of characterizing the magnitude of economic growth:

$$AF = \frac{\sum_{t=1}^T \text{Abs}\left(\frac{\Delta rGDP_t}{rGDP_{t-1}}\right)}{\sum_{t=1}^T \text{Abs}\left(\frac{\Delta It}{I_{t-1}}\right)}$$

- Compute the Economic Activity Indicator (EAI) following the formula :

$$EAI_t = AF * It$$

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Anguyo, F. (2001) "A Model to Estimate a Composite Indicator of Economic Activity (CIEA) for Uganda", Bank of Uganda Working Paper 11/11.

Arizala, F. and K. Traore (2014) "Assessing Economic Activity in Countries without Quarterly GDP Series: The Case of Togo," mimeo.

Opoku-Afari, M. and S. Dixit (2012) "Tracking Short-Term Dynamics of Economic Activity in Low-Income Countries in the Absence of High-Frequency GDP Data", International Monetary Fund Working Paper, 119.

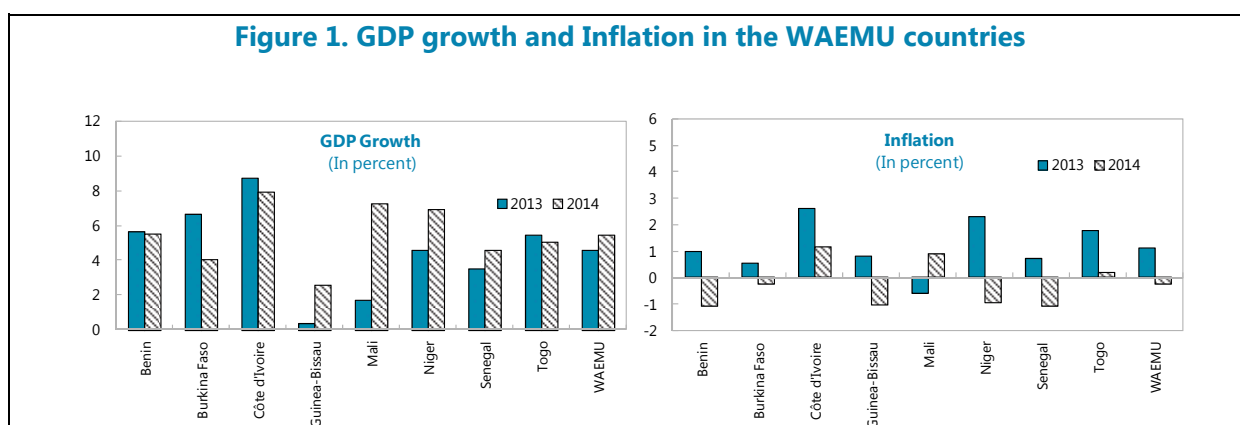
The Conference Board (2012) "Calculating the Composite Indexes" in <https://www.conference-board.org/data/bci/index.cfm?id=2154>.

# WHAT EXPLAINS INFLATION DYNAMICS IN TOGO? THE IMPORTANCE OF FOOD PRICES<sup>1</sup>

## A. Background

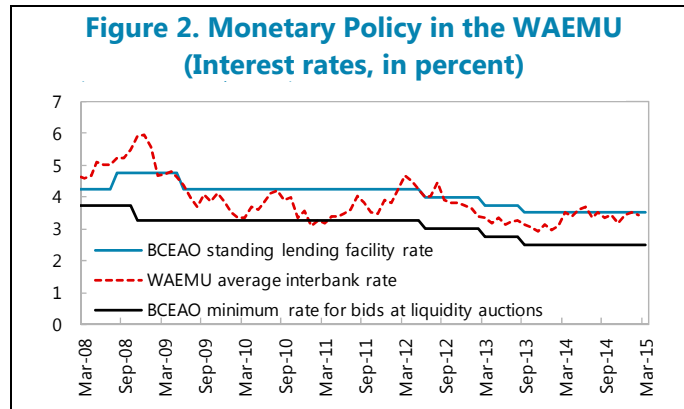
Inflation has been particularly low in Togo and the WAEMU in the last 12 months, while WAEMU countries experienced high growth rates and accommodative monetary policies. This apparent inconsistency between high growth rates, expansionary monetary policies, and low inflation can be largely explained by the behavior of food prices in the sub-region.<sup>2</sup> Given the large and persistent effects of food inflation on overall inflation in Togo, policymakers should avoid basing their analysis on measures of only core inflation.

Food inflation has been mostly negative since the second half of 2013 in Togo and the WAEMU. Figure 1 shows that regardless of the acceleration of growth in the WAEMU, inflation was low or negative. Figure 2 presents the increasingly accommodative monetary policy set by the BCEAO in recent years.

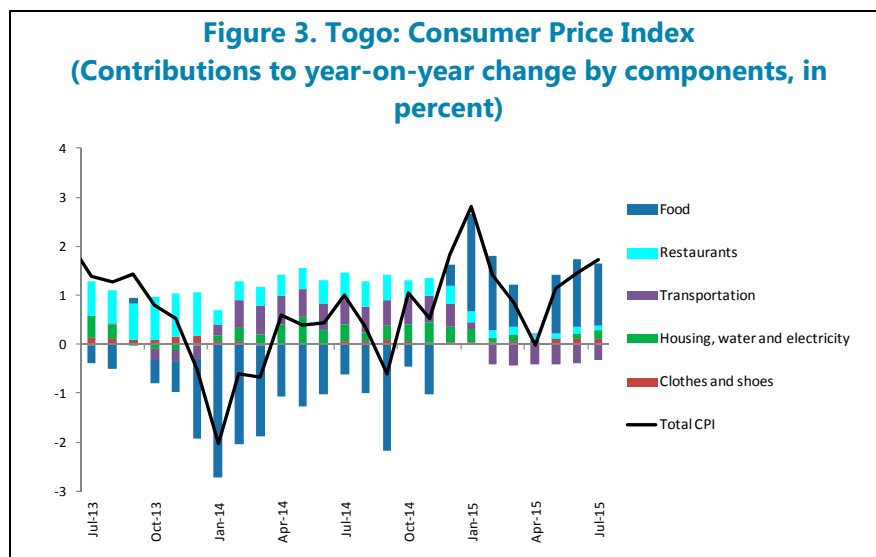


<sup>1</sup> Prepared by Francisco Arizala.

<sup>2</sup> The transmission channel between monetary policy and inflation has been found to be weak in the WAEMU (Kireyev, 2015).



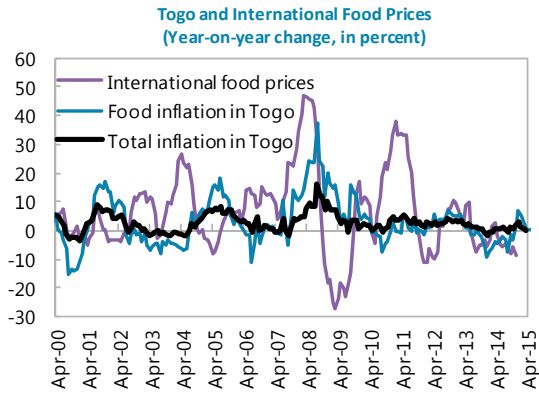
Food inflation in Togo has been the main driver of total consumer price variations contributing negatively to overall inflation between April 2013 and November 2014 (Figure 3). Average food inflation was -4.4 percent in 2014 contributing to -1.2 percent to average overall inflation, which was 0.2 percent at end-2014. Food inflation has been picking up since December 2014, bringing total overall annual average inflation to 1 percent in July 2015.



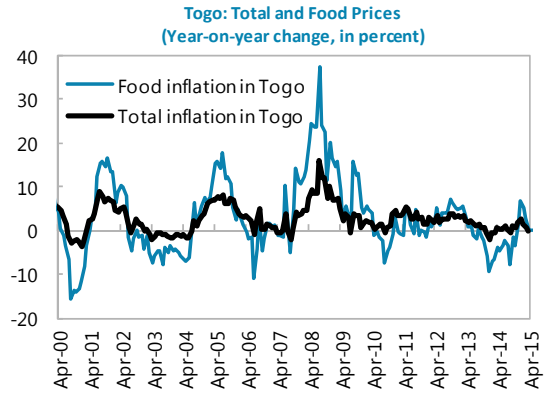
Negative food inflation in Togo and other WAEMU countries coincides with global food prices dynamics. Indeed, food prices in Togo correlate well with swings in international food prices (Figure 4). In addition, food inflation has driven CPI volatility (Table 1).

**Figure 4. Togo: Total and Sub-Components of Inflation**

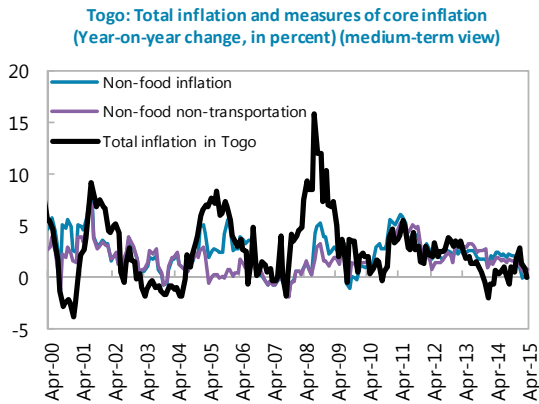
Food prices in Togo are correlated with global food fluctuations...



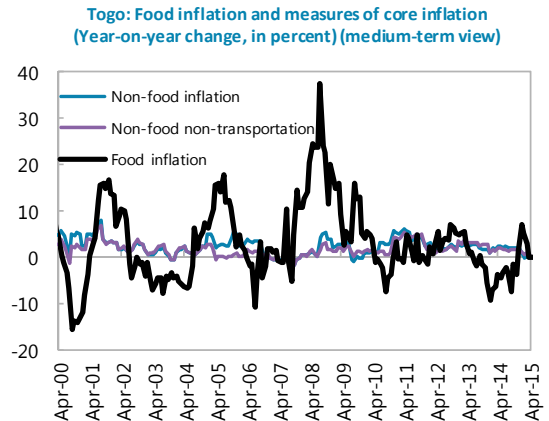
... in turn food prices have driven overall inflation swings...



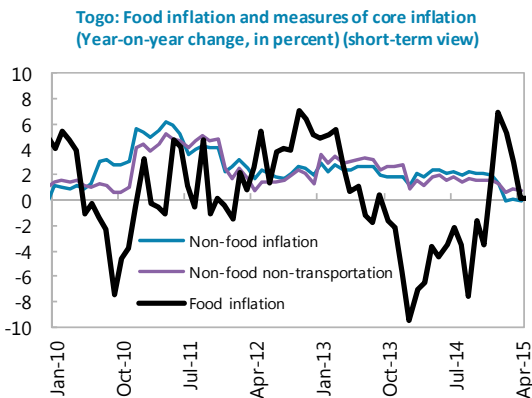
... core measures of inflation have been less volatile than overall inflation...



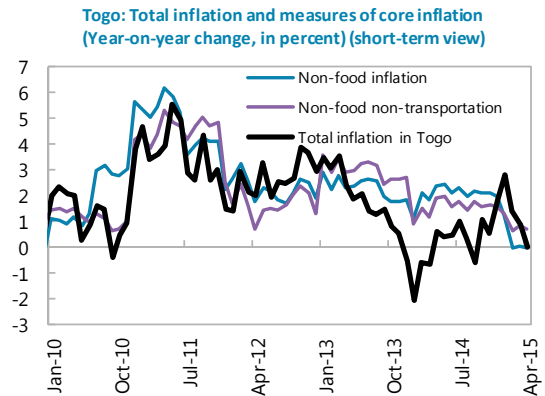
... and food inflation.



Food inflation was negative during most of 2014...



... and core inflation measures also showed a declining trend...



**Table 1. Togo: Mean and Volatility of Total and Sub-Components of Inflation**

	<b>Total</b>	<b>Food</b>	<b>Excl. food</b>	<b>Excl. food &amp; trans.</b>
<b>Mean</b>				
1997-2001	1.1	-2.6	3.3	2.6
2002-2006	2.9	3.5	2.3	1.6
2007-2011	3.5	7.0	1.4	0.8
2012-2015	2.0	0.3	2.7	2.5
<b>1997-2015</b>	<b>2.4</b>	<b>2.3</b>	<b>2.4</b>	<b>1.8</b>
<b>Volatility</b>				
1997-2001	3.3	7.7	1.6	1.3
2002-2006	3.5	8.0	1.6	1.4
2007-2011	3.7	9.8	1.8	1.0
2012-2015	1.6	4.0	1.4	1.3
<b>1997-2015</b>	<b>3.2</b>	<b>8.4</b>	<b>1.7</b>	<b>1.4</b>

## B. Analytical Framework

Recent literature has argued that, in the case of low income countries, special attention should be given to food prices to analyze inflation dynamics. Notably, Walsh (2011) and Anand et al. (2015) argue that in the case of low income countries, it is particularly important that monetary authorities do not exclude food items when defining their policy objectives given that food inflation is often more volatile, has a larger weight in the Consumer Prices Index (CPI), and is more persistent than in emerging and advanced economies.

Food inflation affects overall inflation directly (which is measured by its weight in the CPI basket) and indirectly which can be identified as the pass-through from changes in food prices to changes in other sub-components of inflation (Rangasamy, 2011).

## C. Econometric Evidence in the Case of Togo

### Persistence of headline, food and core inflation

Recently, Walsh (2011) and Thamae and Letsoela (2014) have argued that for the purposes of monetary policy, central banks should analyze headline inflation and its sub-components taking into account their persistence and their level of pass-through to different sectors of the economy, and not only their relative volatility. The persistence of inflation sub-components is important because it has an impact on the duration of a shock to a specific component, e.g. to food prices, for overall inflation.

Table 2 presents persistence coefficients estimates for different components of inflation in Togo.<sup>3</sup> Consistent with the literature, food inflation in Togo is more persistent than headline inflation, with a first-order autoregressive coefficient of 0.88 in the case of food prices *versus* a 0.86 for overall inflation. Measures of core inflation present lower persistence.

**Table 2. Persistence estimates for Total Inflation and Sub-Components in Togo**

Model	Persistence
<b>Total</b>	0.86***
<b>Food</b>	0.88***
<b>Excl. food</b>	0.82***
<b>Excl. food &amp; trans.</b>	0.81***

\*\*\* denotes significance at the 1 percent level.

### Transmission of shocks from food inflation to core inflation

As mentioned before, for the purposes of informing policy decisions, it is also relevant to quantify how much shocks to food prices are transmitted to other prices in the economy. In this context Walsh (2011) and Thamae and Letsoela (2014) estimate a vector autoregressive model (VAR) including food inflation and a measure of core inflation. Using monthly data for Togo for the period 1997-2015, the following VAR is estimated:

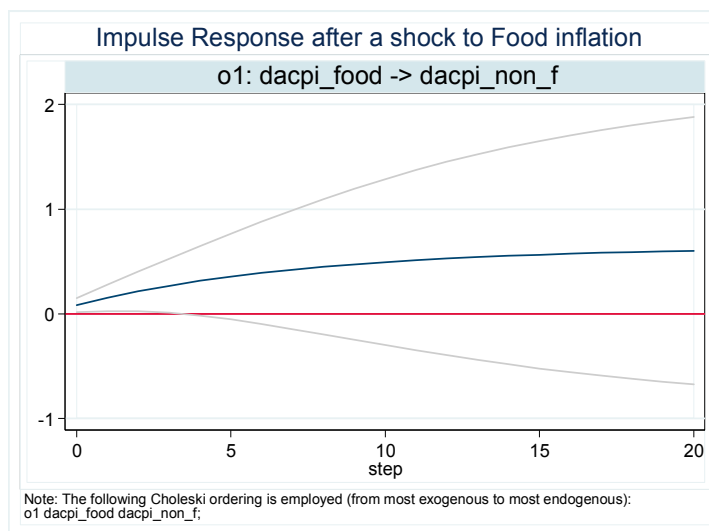
$$\pi_t^F = \beta^{FF} \pi_{t-1}^F + \beta^{NF} \pi_{t-1}^N + \varepsilon_t^F \quad (1)$$

$$\pi_t^N = \beta^{FN} \pi_{t-1}^F + \beta^{NN} \pi_{t-1}^N + \varepsilon_t^N \quad (2)$$

where  $\pi_t^F$  corresponds to food inflation,  $\pi_t^N$  refers to non-food inflation, and  $\varepsilon_t$  is an error term.

Using the regression estimates it is possible to quantify the extent of the transmission of shocks between different sub-components of inflation. Figure 4 shows that a one standard deviation shock to food inflation (about 4 percent change in food inflation) translates into a 0.5 change in non-food inflation after 10 months.

<sup>3</sup> The persistence estimate correspond to the sum of the AR(.) coefficients that are significant (Andrews and Chen (1994)).

**Figure 5. Transmission of shocks from food inflation to core inflation**

## D. Policy Implications

Food inflation has large and persistent effects that feed into overall inflation in Togo. Policymakers should bear in mind that shocks to food prices can translate into inflationary dynamics in other sub-components of inflation and affect the overall level of inflation. In this context, at the national level, policies affecting food prices such as export permits, subsidies of fertilizers, and control of food prices, need to bear in mind the implications for overall inflation. At the regional level, monetary authorities should take into account the evolution of food prices for their monetary policy decisions and not only core measures of inflation. As explained in Walsh (2011), taking monetary policy decisions based on inadequate inflation measures can result in lags in policy responses and in higher inflation expectations.



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## POLICIES FOR SUSTAINABLE GROWTH<sup>1</sup>

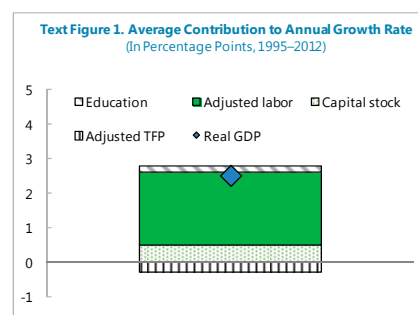
*This note explores how the government of Togo can foster higher level of growth through structural transformation. It derives three main considerations for Togo's current economic policies based on a review of countries' experience. First, the impact of public investment on economic growth is a function of its efficiency. Second, spending on public investment is a necessary but not sufficient condition for sustainable growth. Other actions are needed to translate such spending into durable growth. Lastly, it is important to invest in "soft" infrastructure (e.g., business environment).*

The note is organized as follows. First, we review some stylized facts about structural transformation in Togo. Then, we provide an order of magnitude of the additional growth that enhanced structural transformation could provide to Togo. Third, we explore the relevance for Togo of what we know from countries' experience on structural transformation.

### A. Stylized Facts on Structural Transformation in Togo

Growth in Togo has been weaker and more volatile than in peer countries (Figure 1). Despite a lower initial income per capita, Togo has grown more slowly on average over the past two decades relative to comparator countries. With real per capita growth averaging only 1.8 percent over the past 25 years, Togo's growth performance has been weak relative to peer countries in both Sub-Saharan Africa (SSA) and Asia which had a similar level of per capita income as Togo in 1990 but are now two to three times richer in PPP terms.<sup>2</sup> This underperformance in growth has been most pronounced since the mid-1990s, when growth took off in many low-income countries while Togo was in the midst of a political crisis. Notwithstanding exiting the crisis and succeeding in accelerating economic growth, the growth differential with comparator countries did not narrow in the last 10 years. Growth volatility derives from Togo's exposure to exogenous shocks, such as droughts.

Growth has been driven mainly by labor utilization (Text Figure 1). A growth decomposition exercise suggests that four fifths of Togo's growth over the past two decades can be attributed to labor accumulation, while capital accumulation accounts for a fifth. In contrast, low human capital contribution and negative productivity

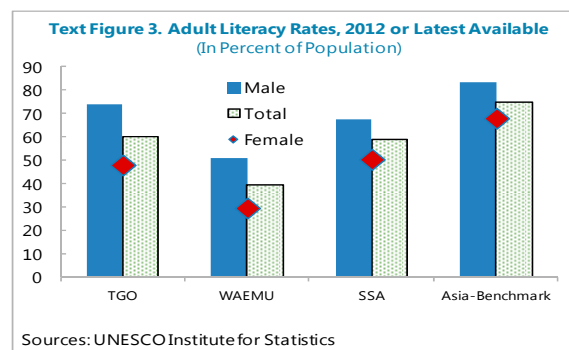
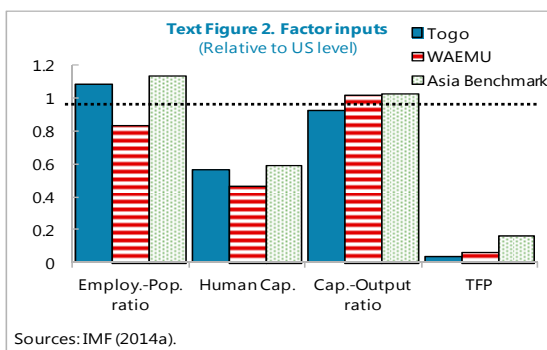


<sup>1</sup> Prepared by Edgardo Ruggiero, David Corvino, and Sana Rafiq.

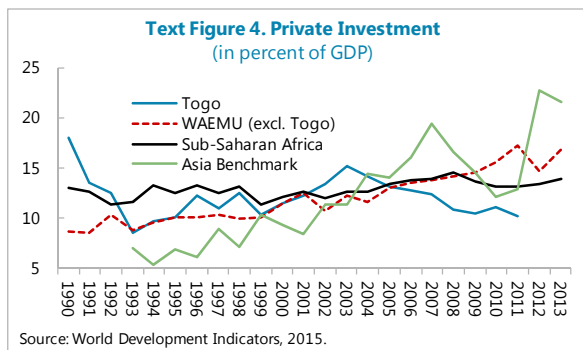
<sup>2</sup> Throughout this note, we use comparator countries to benchmark Togo. These comparators are WAEMU countries, Sub-Saharan Africa, and Asian countries whose level of per capita income was broadly comparable to Togo's in 1990. Togo had a per capita income in PPP terms of US\$767 in 1990 and \$1,137 in 2014. SSA countries had an average per capita income of \$1,245 in 1990 and \$2,673 in 2014. LIC and fragile states in SSA had an average per capita income of \$685 in 1990 and \$2,136 in 2014. An Asian peer group of Cambodia, Vietnam and Lao P.D.R. had an average per capita income of \$636 in 1990 and \$3,440 in 2014.

growth appear to have been the main drivers of the low growth performance.

How does Togo compare to other countries in terms of labor utilization? Togo lags in physical capital and productivity relative to other countries, but appears well endowed in labor force participation and human capital (Text Figure 2). Indeed, Togo has a relatively highly educated labor force although, as we have seen above, its contribution to growth is not large (Text Figure 3). Returns to higher education are low in Togo and unemployment rates are higher for those with more education, indicating that insufficient job opportunities exist for those with more skills and education (Pole de Dakar, 2013). This suggests that while labor force quality is high, the issue resides with labor demand, rather than supply. What could generate this under-utilization of skilled labor?



In recent decades Togo has been unable to unleash a virtuous circle of private investment and productivity growth. Since the turn of the millennium, private investment as a percent of GDP has remained low relative to comparators (Text Figure 4). The rate of entry of new formal firms, a proxy for firm dynamism, is also extremely low (Text Figure 5).



Togo's low private investment and productivity growth have a direct effect on the labor market, reducing formal demand for labor and employment. Most employment is informal. The 2011 household budget survey data indicates that under-employment rate is 22.8 percent, in addition to an unemployment rate of 7.4 percent. This is an increase over 2006, when unemployment was 6.7 percent, despite a higher pace of economic growth and an apparent drop in labor

participation rates from 79 to 70 percent over this period.<sup>3</sup> Most workers are self-employed—35 percent of workers in farming and 39 percent of workers in sectors outside of agriculture.<sup>4</sup>

## B. Recent trends in the structure of output and exports

There has been limited structural change in Togo over time (Figure 2). In 2013, agriculture accounted for 34 percent of economic activity, trade and services (including public services) for 47 percent, and construction, manufacturing, and mining and utilities sectors for 4, 10 and 5 percent, respectively. The main changes in Togo's output structure since 1970 have been a modest decline in the share of the mining sector and an increase in agriculture. The construction sector has also almost doubled its share of output over this period. The level of overall output diversification is also low. After improving in the 1970s, it worsened during the crisis years, only to hover at broadly constant levels thereafter—much lower diversification levels than in other WAEMU countries. Asian benchmarks show a much higher level of output diversification.

Export diversification has improved during most of the 2000s, although export quality has been stagnant on average (Figure 3). Diversification of export products has increased over the past decade and the level has generally been higher than for benchmark countries. In contrast, diversification of export partners has remained stable although Togo appears more diversified than its peers. Relative commodity export quality has decreased steadily since 1990, although it is in trend with benchmark countries. While not far from benchmark country levels, agriculture export quality has decreased and has been highly volatile in the 2000s.

## C. Gains from Structural Transformation

Structural transformation and diversification of output has the potential to boost output growth and reduce volatility in Togo. Through the reallocation of resources from low productivity sectors, such as agriculture, to higher productivity sectors such as manufacturing, 'between-sector' structural transformation can boost overall productivity. Structural transformation can also occur 'within sectors' creating productivity gains through, for example, implementing quality improvements to existing products and services, focusing production on relatively high value-added activities, or diversifying into new high value-added products. Output diversification can yield growth benefits and also reduce the volatility of growth, since new products and services are likely to be subject to different demand and supply shocks than existing ones.

Benefits of structural transformation could be substantial (Figure 4). A one percentage point reallocation of labor from agriculture to manufacturing (keeping sectoral productivity levels

<sup>3</sup> République Togolaise (2011) and Pole de Dakar (2013).

<sup>4</sup> Farming employs 42 percent of workers, while all non-farm sectors employ 58 percent of workers. Among these, the percentage of wage-employed workers is around 27 percent (7 percent in farming and 19 percent in non-farm).

constant) could raise output by 1.9 percent; such is the gulf in labor productivity levels between the two sectors (average productivity in manufacturing is around 6 times higher than in agriculture).<sup>5</sup> Similarly, a one percent increase in agricultural productivity (keeping resource allocation constant) could raise aggregate output by 0.3 percent, given the concentration of labor in this sector. Increasing output diversification to the level of benchmark countries could increase average growth by 1.1 to 1.6 percent.

## D. Determinants of Structural Transformation: Relevance for Togo

While there is no silver bullet for reforms to foster structural transformation, general policies have emerged from successful country case studies and cross-country evidence (Box 1). These policies are: 1) efficient investment in education; 2) macroeconomic stability; 3) investment scaling up; 4) market entry; 5) institutions and business environment; and 6) industrial policies.<sup>6</sup> Evidence suggests that policies focusing on addressing weaknesses that hinder entry into new lines of economic activity or competition can be successful in fostering structural transformation and diversification. The evidence is more mixed concerning the success of industry-focused, sector targeted measures and debt-finance driven scaling up of public investment.

### Box 1. Stylized Facts: policies fostering structural transformation<sup>7</sup>

- **Investing efficiently in education.** Education has been associated with higher levels diversification and export quality. In Vietnam, years of education increased by about 50 percent in just two decades. In Rwanda, education has been expanded through ninth grade for all students.
- **Macroeconomic stability.** In Vietnam, Rwanda, Malaysia and Tanzania successful diversification has coincided with stronger macroeconomic policies and a greater degree of stability.
- **Scaling up.** Big infrastructure and public capital drives have had limited success in accelerating economic growth in developing countries (Warner, 2014). Public investment drives that tend to be financed by borrowing also tend to be plagued by poor project preparation and analytics and incentive problems. Efficiency of public investment should be improved.
- **Market entry.** Reduced entry barriers can motivate entrepreneurs to expand their activities. In Vietnam, the reversal of collectivization led to the emergence of a more diverse agricultural sector. In Rwanda, a large divestment of state enterprises stimulated private sector activity. In Tanzania, the dismantling of the state distribution system positively affected the private sectors. The liberalization of the electricity market has also been associated with higher degrees of structural transformation.
- **Institutions and the business environment.** Henn et al. (2013) report that a one standard deviation increase in institutional quality is associated with a 0.3 standard deviation increase in the quality of exports.

<sup>5</sup> Average labor productivity levels are used as a proxy for marginal productivity levels in this thought experiment. In the case of manufacturing, McMillan and Harttgen (2014) argue this is a reasonable assumption for SSA, where labor share in manufacturing and agriculture are likely to be similar.

<sup>6</sup> In this note we will not discuss education as this area is more within the World Bank's domain. We will also not discuss macroeconomic stability, as the main staff report already discusses the economic policies that foster growth while maintaining a sustainable debt and balance of payment.

<sup>7</sup> This box is based on IMF 2014a, Dabla-Norris and others 2013, and Hooley 2015.

### Box 1. Stylized Facts: policies fostering structural transformation (concluded)

In Bangladesh, the removal of red tape has been associated with large investments in export processing zones.

- **Industrial policies.** The support of specific industries has shown mixed results. In Malaysia and Bangladesh, the targeting of specific industries has been successful, but the targeted sectors have become dominant, decreasing export diversification. In natural resource dominated economies, however, such targeting may help the economy to diversify.

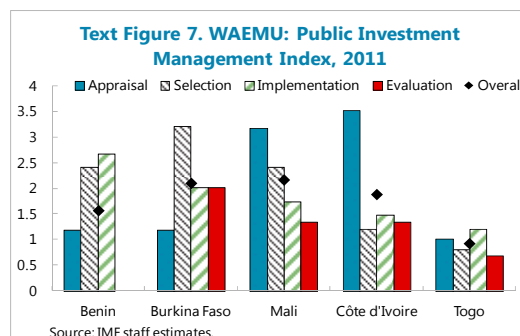
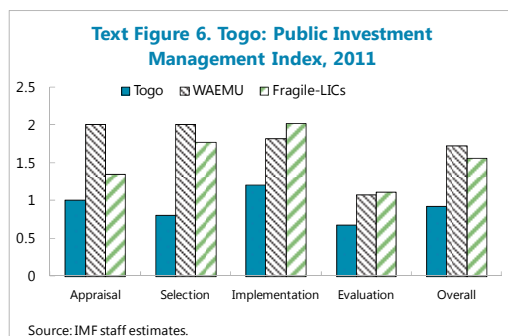
One overriding consideration is that the key to structural transformation is to facilitate, rather than direct, the shift of resources from low-productivity to high-productivity activities. As inputs shift to more productive uses, overall productivity increases and the economy grows even if there is no productivity growth *within* sectors. However, one of the striking findings of the literature on structural transformation is that in SSA countries (and Latin America) broad patterns of structural change have served to *reduce* rather than increase economic growth since 1990 (McMillan and Rodrik, 2011). Labor has moved in the wrong direction, from more productive to less productive activities, including, most notably, informality. The challenge for Togo is, thus, to channel labor use towards more productive activities. More generally, obstacles that hinder entry into new lines of economic activity or reduce competition should be addressed.

### Scaling up of public investment

Togo's economic development strategy centers on infrastructure development and public investment to support it. It is therefore important to review what we know on the impact of investment spending on growth.

The impact of public investment on growth depends on its efficiency. The impact of public investment on growth is well documented (Aghion and Howitt, 2009; and Ghazanchyan and Stostky, 2013).<sup>8</sup> The IMF (2014b) argues that the growth dividend from investment can be significant, but it is limited when the investment process is inefficient. Regardless of the relationship between public investment efficiency and growth *across* countries, improving efficiency *within any given country* has an unambiguously positive impact on growth. The most efficient public investors see twice the growth impact compared to the least efficient. In the area of efficiency in public investment, Togo does not score highly (Text Figures 6 and 7). To obtain a higher growth yield from each FCFA invested, it is thus important to "invest in investing" (Collier, 2007) by strengthening public investment management.

<sup>8</sup> The main text refers to the relationship between public investment and economic *growth*. We do not discuss the relationship between public investment and *output*. Much of the theoretical and empirical literature supports the idea that public investment raises output through both demand and supply effects. The IMF (2014b) finds that, in developing countries, public investment raises output by around 0.25 percent in the same year, and 0.5 percent after four years.



Even in the presence of infrastructure gaps, increasing public investment is a necessary but not sufficient condition to unlock growth (Figure 5). A recent IMF study reviewed investment scaling-up episodes over the period 1990–2013 for about 80 countries and divided them into episodes that, after the investment scaling up, resulted in higher economic growth or in lower economic growth and high debt (Mansoor, 2015). The paper suggests that, without complementary policies, increase in public investments may result in lower growth and more debt. These complementary policies include having in place a good public investment management system, as discussed above. Countries that achieved high growth had a much higher Public Investment Management Index than countries that ended up with high debt and little additional growth to show for it. However, it is also important for the public sector to design policies that crowd in private investment and widen economic space for small and medium-sized enterprises. Also, successful countries attract FDI and boost exports. High-growth countries were able to more than double the amount of FDI that they received before the investment scaling up. The high-debt countries saw FDI increase only by 20 percent. High growth-low debt countries succeeded in boosting exports after scaling up, while the high debt countries did not. In short, when increasing spending for public investment, it is essential to establish conditions for the private sector to grow and trade with the rest of the world. Otherwise, it is easy to slip into a high-debt trap.

## Market entry

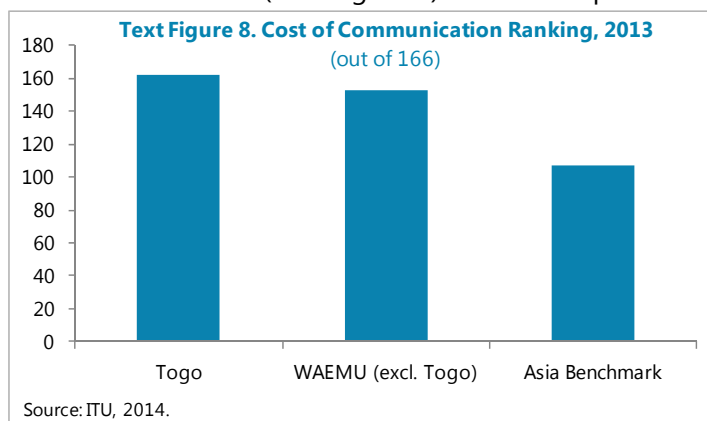
Low entry barriers stimulate entrepreneurs' expansion. The examples of Vietnam, Rwanda, and Tanzania confirm that private companies can flourish if the dominant position is removed from the state distribution or production systems or from the incumbent public company. A case in point is the telephony and internet sector in Togo.

In Togo's telecommunication sector, the scope for private sector is limited, with negative consequences for competitiveness, economic growth, and inclusion.<sup>9</sup> The cellular market is a duopoly composed of the government-owned Togocel (47 percent of market) and foreign-

<sup>9</sup> The fixed line operator, the state-owned Togo Telecom, is in financial difficulties. According to the findings of a state-led enquiry into the operations of Togo Telecom and his subsidiary Togocel, Togo Telecom's decline is due to the 'poor management' and systemic failure by the council that was set up by the government to monitor the operator's performance and protect the interests of the state.

owned Moov (53 percent). Discussions have been underway for several years to permit entry of a third operator, but progress has stalled in each instance. Moreover, the ability of Moov to compete has been impeded by regulatory red tape. As a result, costs are high and quality of service is poor even in Lomé (World Bank, 2015). Togo's cost of communication is among the highest in the world—162<sup>nd</sup> out of 166 countries in 2013 (Text Figure 8). Mobile telephone costs are especially high at 37.2

percent of GNI per capita in 2011 (average for West Africa was 21.1 percent and world average was 5.7 percent). The cost of calls is much lower in African markets where there are more private competitors, such as Kenya, Tanzania, and Ghana.<sup>10</sup> Quality is also poor in the broadband internet sector in Togo. Togo



Telecom dominates this sector, but its service is expensive and unreliable.<sup>11</sup> The missed opportunities for positive spillover effects on the rest of the economy are important, particularly given Togo's aspirations to become a regional service hub. Without a more efficient information and communication technology (ICT) market, opportunities for mobile-based innovation in the financial, logistics, and transport sectors are lost. Mobile banking could be a means to provide improved savings and credit products to rural areas, as well as effecting social transfers at minimal transaction costs.

### **Institutions and business environment**

Investing in soft infrastructure is as important as improving physical infrastructure to sustain growth. Here, soft infrastructure refers to the business environment; i.e., the rules of the game for the private sector to operate in. From this perspective, the role of the public sector is one of facilitator, which sets up the rules of the game for private investors to allocate resources where returns are highest, without regulations unduly raising the cost of doing business. There is ample evidence supporting the view that institutions are a major determinant of wealth and long-term growth.<sup>12</sup> Even in the short- to medium-term—which is more relevant for this note—economic growth tends to respond positively to regulatory reform. In particular, Haidar (2012) finds that, on average, each business regulatory reform is associated with a 0.15 percent increase in growth

<sup>10</sup> The cost per minute of mobile calls in 2012 was 0.18 US\$ in 2012, compared to 0.10US\$ in Ghana, 0.04US\$ in Kenya, and 0.05US\$ in Tanzania.

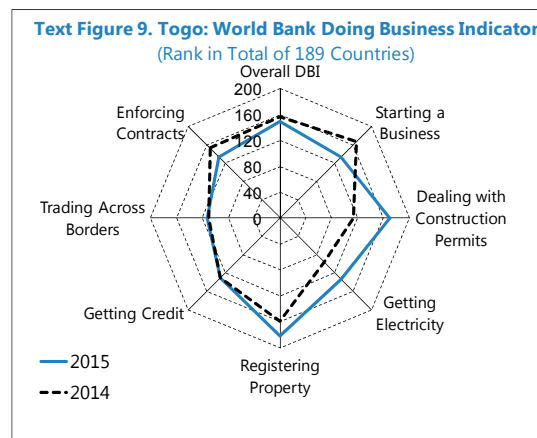
<sup>11</sup> Internet connectivity in Togo has been criticized as the “most unstable and inconsistent in the continent (TeleGeography, September 11, 2013).

<sup>12</sup> Hall and Jones (1999), Acemoglu and others (2001), Djankov and others (2002, 2003, 2004, 2006).



rate of GDP.<sup>13</sup> With regard to country examples, in Bangladesh, the removal of red tape has been associated with large investments in export processing zones.

In recent years, Togo has substantially reformed its procedures to start a business. As a result of progress in this area, as well as improvements in getting credit and registering property, it has been rated as one of the 10 most reforming countries in 2015, having jumped from 164<sup>th</sup> in 2014 to 149<sup>th</sup> in 2015 in the ranking of Doing Business Indicators. However, Togo still lags behind other SSA and WAEMU countries, as well as Asian benchmarks, in several other indicators. (Text Figure 9 and Figure 2). The main question is: will these improvements suffice to substantially raise the low level of private investment and entry of new formal firms?



The private sector response to these reforms would depend on how much space it is given to operate. While the minimum capital requirements to start a business have been lowered and procedures have been substantially shortened, investment is permitted only in certain sectors, and investment in these sectors is screened on a case by case basis (World Bank, 2012). Foreign exchange accounts require formal government approval, and some prices are centrally administered.<sup>14</sup> The government presence in the economy is also substantial, as it retains a strong presence in key sectors, including phosphates, cotton, telecommunication, banking, and is a dominant provider and distributor of certain agricultural inputs. Such presence, and the possibility of its preferential treatment in the regulatory and judicial domain, will tend to discourage private entry and stifle private sector growth. Furthermore, lack of competition will tend to dis-incentivize productivity growth.

A possible blueprint to improve business environment for Togo could be the approach followed by Rwanda. Togo has used Rwanda's policies as a model before, for example in the case of the Revenue Authority (OTR). Rwanda moved from 143<sup>rd</sup> in 2009 to 46<sup>th</sup> in 2015 in Doing Business Indicators. How did they achieve this? The government made a conscious effort to target each one of the Doing Business Indicators (DBI) and assigned a government unit to improve each of the indicators. Annual objectives were set and monitoring was in place. Now, Rwanda ranks better than Italy, Greece, China and Luxembourg in DBI.

<sup>13</sup> Regulatory reforms are derived from the Doing Business Indicator survey.

<sup>14</sup> A full list is not available, but it includes cement, iron bars, fertilizer, and petroleum products.

## Industrial policies

The support of specific industries has shown mixed results. In Vietnam, state-owned enterprises have failed to become leaders in selected strategic industries. In Malaysia and Bangladesh, targeting specific industries (e.g., palm oil, ready-made garments, and electronics) has led to increased exports. The resulting export concentration, however, increased external vulnerability. Over time, technological progress and globalization are making it more difficult to pick winners. That said, certain types of industrial policies aimed at facilitating agglomeration (e.g., export processing zones in Vietnam and industrial zones) have proven effective at encouraging entrepreneurial activity when they harnessed *economies of scale* and skills and knowledge *spillovers*.

Togo's industrial policies are based on Export Processing Zone, tax exemption, and direct contracting with foreign investors in mining to develop the value chains locally. In this context, one issue to consider is that Togo's Export Processing Zones cannot achieve economies of agglomeration as its target market size is too small. Also, not surprisingly, mining investors have not yet developed the local value chain (e.g., cut marble blocks into slabs and into countertops of tiles), mainly because processing mining products is a different business from mining. There are also a number of unknowns that policy makers should try to clarify in their evaluations of the impact of these policies. Have these policies created enough employment? Have they created enough exports? The key question in this area is to evaluate if the original objective of implementing these policies have been achieved against their costs (e.g., tax revenue loss, and increased difficulties in tax and custom administration).

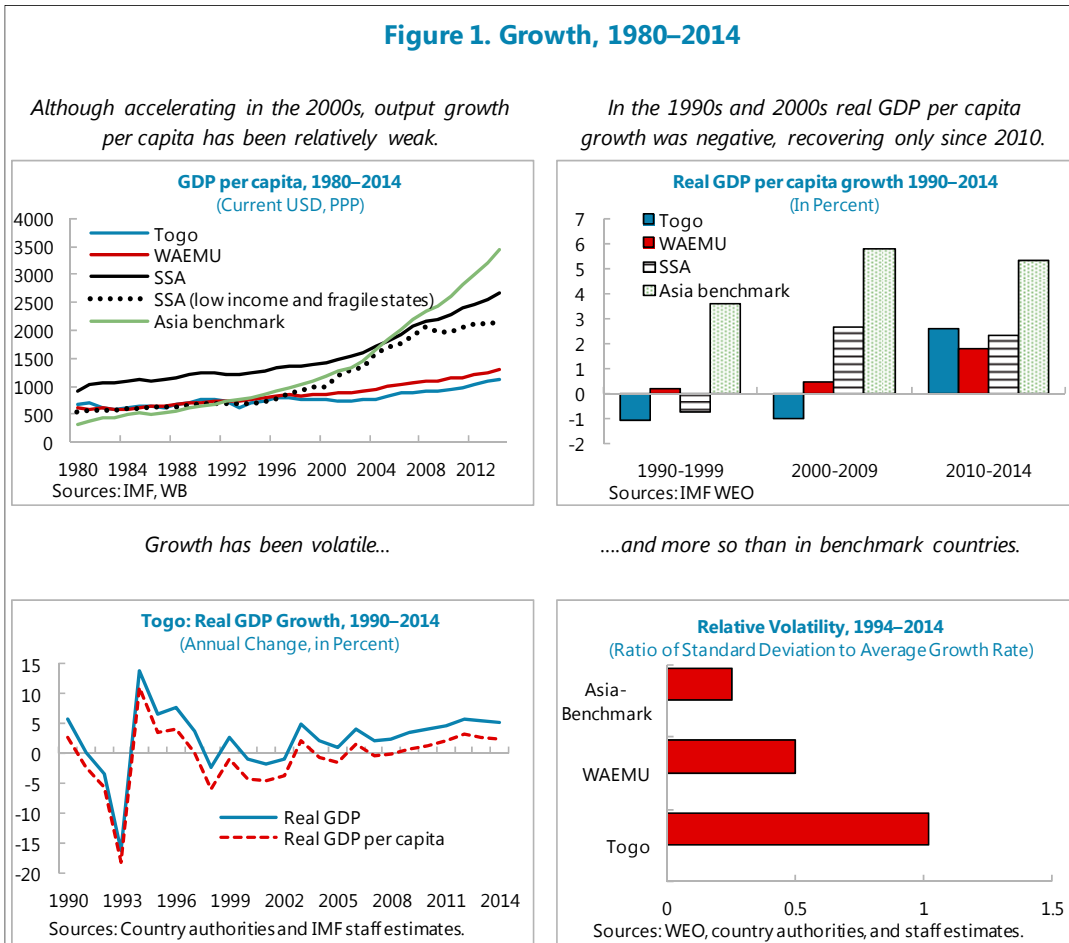
## E. Conclusions

Togo can reap substantial benefits, in terms of increased rate of economic growth, from enhanced structural transformation. The experience of countries that have successfully transformed their economies offers guidance to Togo's policy makers.

Togolese policymakers may want to consider the following policies as they endeavor to transform their economy and grow at sustainably higher rates:

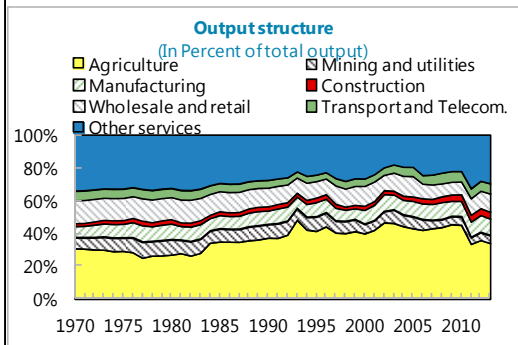
- Invest in investing. Improving the efficiency of public investment is crucial to promote growth while preserving debt and external sustainability.
- Reduce the direct role of government in the economy. The presence of dominant public sector companies tends to stifle private entrepreneurship, innovation, and often result in fiscal costs.
- Invest in soft infrastructure (e.g., business environment). This is at least as important as investing in physical infrastructure (e.g., roads).

- Conduct a review of benefits and costs incurred as a result of current industrial policies. International experience shows that these do not always result in large gains in employment and growth. At the same time, such policies results in costs that are often underestimated by policymakers (e.g., lower tax collections, mis-allocation of resources, and complications in revenue administration).

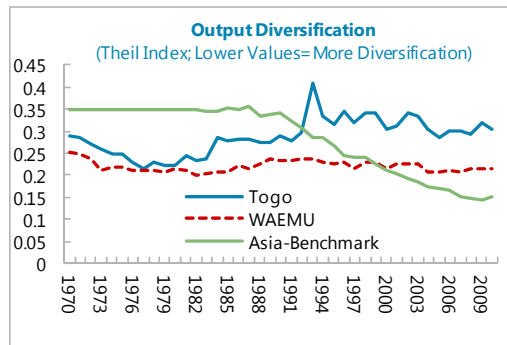


**Figure 2. Output Diversification**

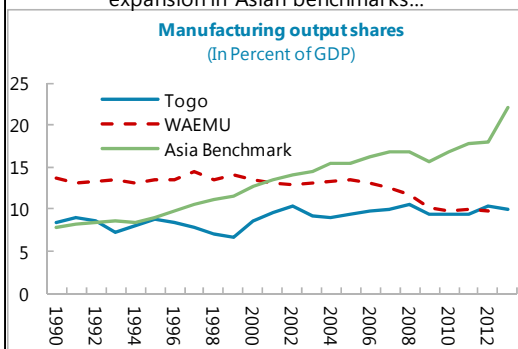
*The structure of output has changed little over time.*



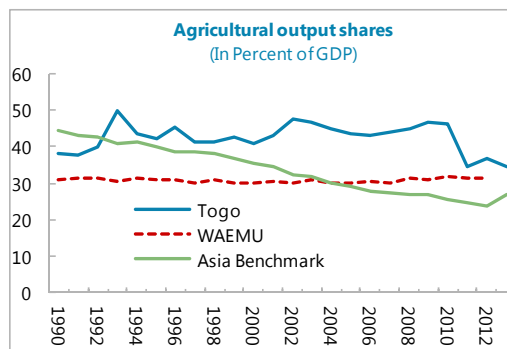
*Progress in output diversification has also been slower than in benchmark countries.*



*As in the WAEMU, the manufacturing sector has not visibly expanded compared to a strong expansion in Asian benchmarks...*



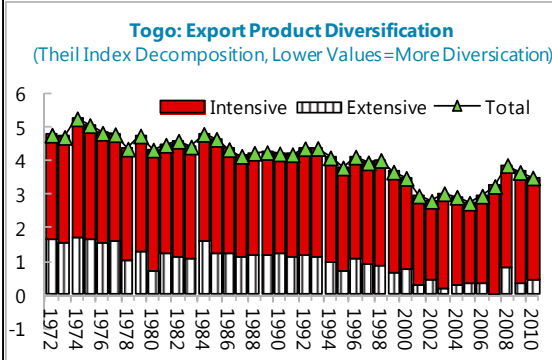
*...and the agricultural sector remains important.*



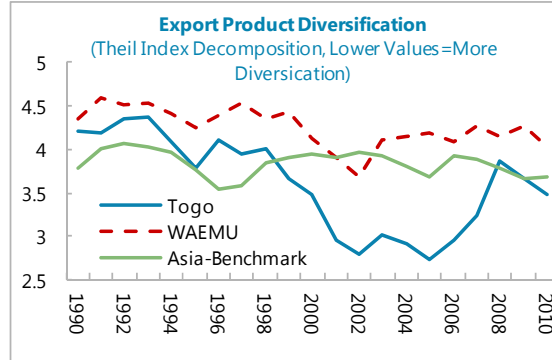
Sources: UN National Accounts and IMF (2014a).

**Figure 3. Export Product and Partner Diversification**

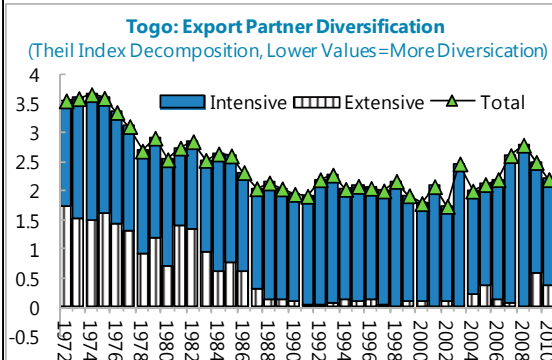
Togo's export diversification has increased in the 2000s...



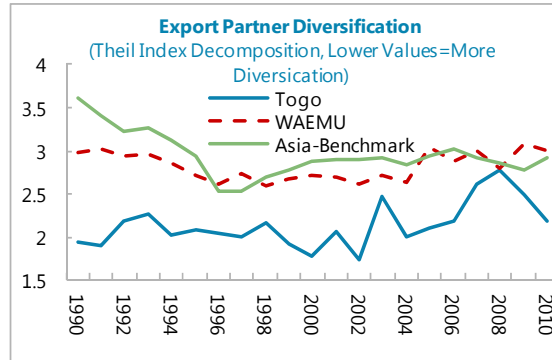
...generally being higher than in benchmark countries.



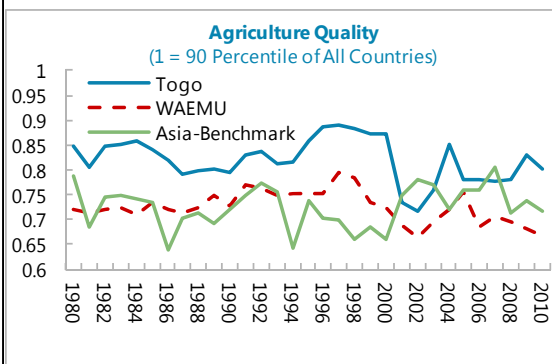
...Diversification of export partners has been generally stable...



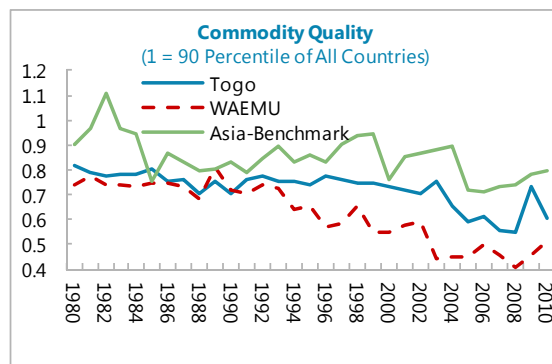
...but remains higher than in benchmark countries.



Agriculture quality has been declining and volatile....



...while commodity export quality has declined.

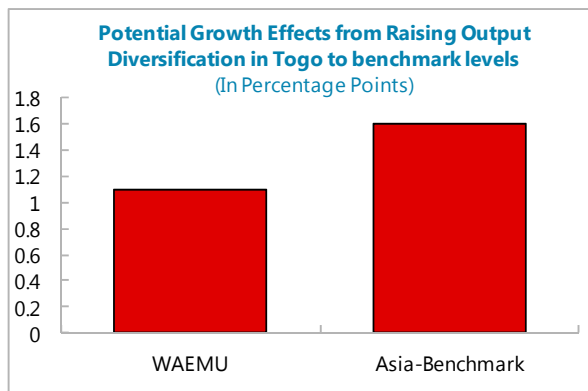
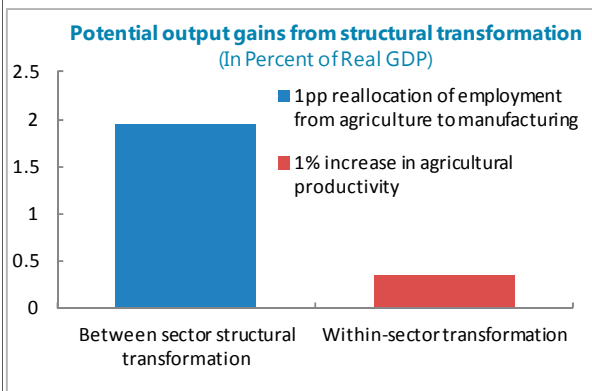


Source: IMF (2014a).

### Figure 4. Gains from Structural Transformation and Diversification

*Even relatively modest structural transformation could yield significant growth gains...*

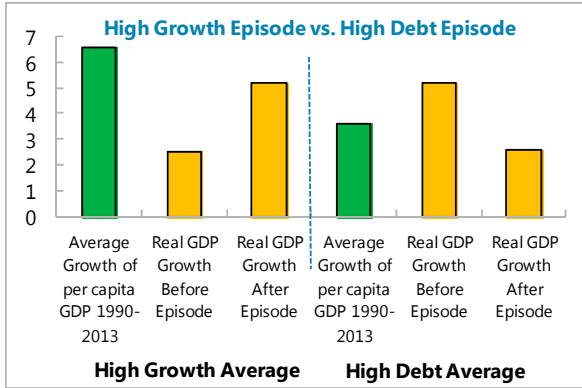
*...as could raising Togo's output diversification to benchmark levels.*



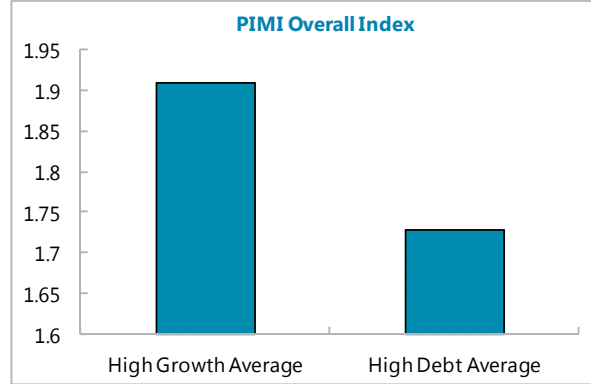
Sources: UN National Accounts, WDI and staff estimates.

**Figure 5. Scaling Up, Growth, Debt, and Investment Efficiency**

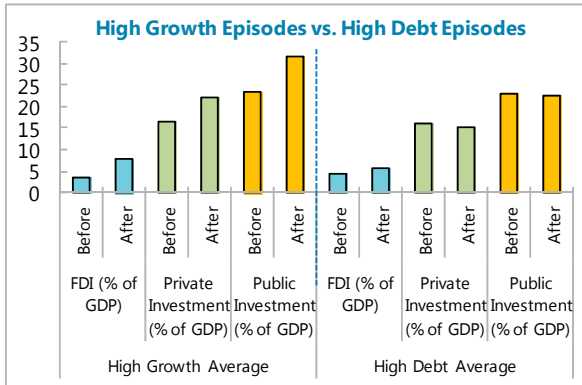
*Scaling up of investment can yield to high or low growth (with high debt).*



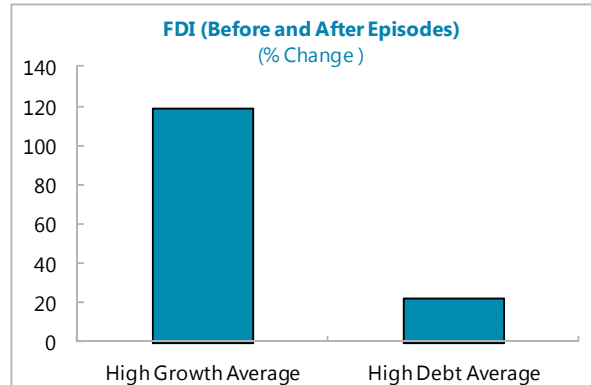
*Quality of investment spending is important for final outcome.*



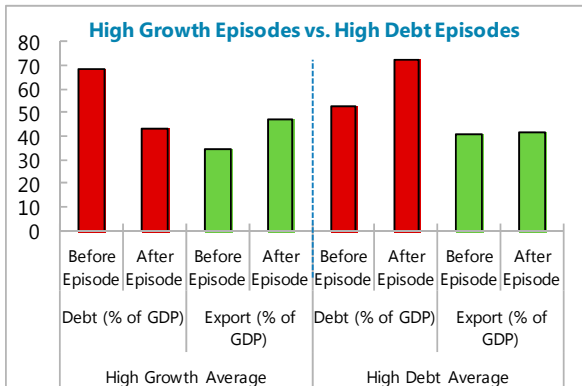
*Growth depends on crowding in private investment...*



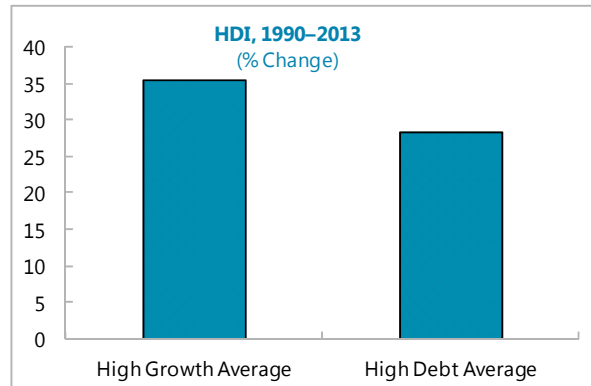
*...and FDI in particular.*



*Investments need to increase exports which are associated with lower debt.*



*Policies unlocking growth result in better human development indicators.*



Source: Mansoor, 2015.

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