

## Macroeconomics & Fiscal Management

# MFM PRACTICE NOTES

## Guinea-Bissau and the Cashew Economy

Marek Hanusch<sup>1</sup>

**Guinea-Bissau is a West African country with a population of 1.7 million. Growth has been anemic and poverty is high.** Following a long and brutal liberation war, Guinea-Bissau gained independence from Portugal in 1974. Since then, GDP per capita growth has been low, partly interrupted by a brief civil war in 1998/99 and a history of frequent government turnover and military coups. Guinea-Bissau is a fragile country and the IMF estimates the country's GDP per capita could have been 65-90% higher had it not been for fragility.<sup>2</sup> In the years of 2001-2009, a period of heightened political instability, GDP per capita growth averaged 0.5% per annum. During a relative period of calm, the economy picked up, growing 2.3% in 2010 and 7.1% in 2011, only to be plunged into recession in 2012 as the army toppled the government yet again. The economy has been slow to recover since – partly as a consequence of the suspension of donor programs after the coup. Yet the restoration to democracy in mid-2014 has somewhat brightened the prospects for growth again. The low growth, marked by a stop-and-go character due to frequent political tensions has translated into high poverty. Poverty at the national poverty line of US\$ 2 per day stands at 70 percent. Inequality is high too, with a Gini coefficient of 0.49. The challenge to improve the lives of the poor is formidable.

**The cashew sector forms the core of Guinea-Bissau's economy.** Data from 2010 household survey (ILAP II) show that cashew accounts for 26% of income (net of remittances) for female headed households and for 35% for male headed households. As such, cashew is the most important source of monetary income, and this is especially true for poor households. Although other crops are grown to an extent, they tend not to be exported. Rice is another important commodity in Guinea-Bissau, largely grown on a subsistence basis and increasingly imported. Cashew is traded for rice, with considerable reliance on a barter system. The cashew sector is thus at the core of both economic performance and poverty reduction. This note lays out some of the ways in which cashew matters for the Bissau-Guinean economy.

### Cashew – production, prices, and the economy

**Raw cashew nuts are Guinea-Bissau's main export. Cashew exports have been increasing over the past decade, especially when accounting for smuggling.** Harvesting cashew is the most dominant economic activity among Bissau-Guinean households. A limited amount of the harvested cashew is processed, mostly for domestic consumption: the cashew apple is turned into wine and the cashew nut is roasted

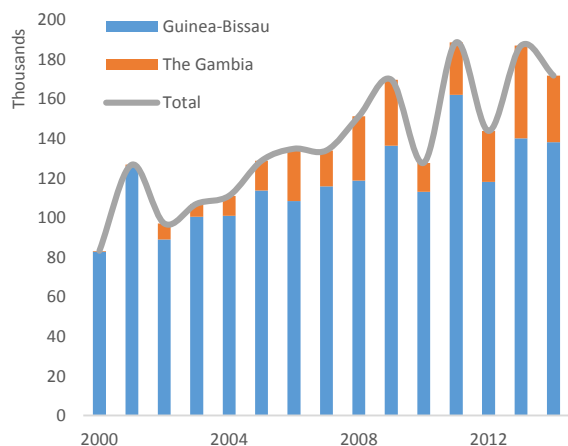
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<sup>2</sup> IMF, Article IV for Guinea-Bissau, July 2015.

and de-shelled. Yet the vast majority of cashew production is geared to the export of raw cashew kernel. Between 2000 and 2014, official exports increased from about 80 thousand to about 140 thousand metric tons (Figure 1). However, official cashew exports are believed to be underreported due to smuggling. For example, trade data reveal that the Gambia exports cashew nuts although it only marginally produces them. This is suggestive of smuggling. Although neighboring Senegal also grows cashew nuts, incentives to smuggle cashew are particularly strong in Guinea-Bissau which taxes cashew exports at 11% of the government-determined reference price—while the other countries do not. Accounting for cashew likely smuggled through the port of Banjul, Guinea-Bissau’s cashew exports are closer to 190 thousand metric tons. This is close to the government estimate of annual cashew production in the range of 200 thousand metric tons, depending on weather conditions.

**Figure 1:** Cashew exports from Guinea-Bissau have increased, especially when accounting for likely smuggling. (thousand metric tons of exported cashew)



Source: Bissau-Guinean cashew exports: IMF; Gambian cashew exports: COMTRADE.

**Smuggling appears to increase in particular when farmers only receive a small share of the international cashew price in Guinea-Bissau.** Cashew traders in Guinea-Bissau buy cashew from producers (farmers) and sell it on to

exporters, mostly foreign nationals, who ship raw cashew kernel to other countries, India most notably, for processing and onward sale mainly to developed countries. Both traders and exporters are relatively concentrated, meaning that competition is distorted to the disadvantage of farmers. This means that most of the cashew rents are collected by traders and exporters.<sup>3</sup> The government estimates farm-gate prices at the beginning of each cashew season (April 17 in 2015), in an attempt to protect farmers from such competitive pressures. These estimated prices tend to lie between 40 and 60% of the international price although they are not easily enforced. World Bank estimates suggest that the brunt of taxes on cashew exports are borne by farmers.<sup>4</sup> In the case of a surcharge of originally 50CFAF/kg to finance a fund for agribusiness development (known by its Portuguese acronym FUNPI), actual farm-gate prices are estimated to have fallen by 20% in response to the FUNPI tax.

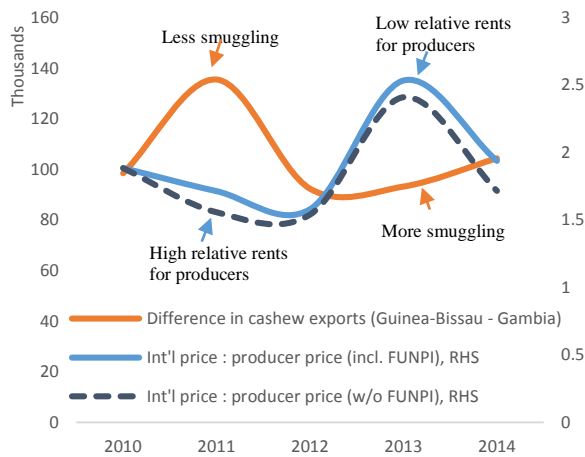
**There is some evidence from the years 2010-2014 that suggests that smuggling especially increases when the rents captured by producers are relatively low.** Figure 2 demonstrates that the difference between cashew exports from Guinea-Bissau and from the Gambia (an inverse proxy of smuggling) is smaller when international prices relative to farm-gate prices (an inverse proxy for producer rents) are high—in other words, smuggling is high when producer rents are low. A plausible reason is that smuggling increases competition along the supply chain, now also covering the Senegalese or Gambian market. This in turn increases the relative bargaining power of farmers, allowing them to extract a higher price. It suggests that when rents for exporters and traders are too high in Guinea-Bissau, competition enters from neighboring countries, although likely illegally. Although this is bad news for the government since smuggling means foregone revenue, it is good news for the farmers who receive higher incomes, and thus for poverty reduction.

<sup>3</sup> See also G. Porto and W. Cont, “Measuring the Impact of a Change in the Price of Cashew Received by Exporters on Farm-Gate Prices and on Poverty in

Guinea-Bissau,” World Bank Policy Research Working Paper (2014).

<sup>4</sup> Ibid.

**Figure 2:** Smuggling of cashew increases when producer prices are low compared to international prices. (thousand metric tons (LHS), price ratio, RHS)



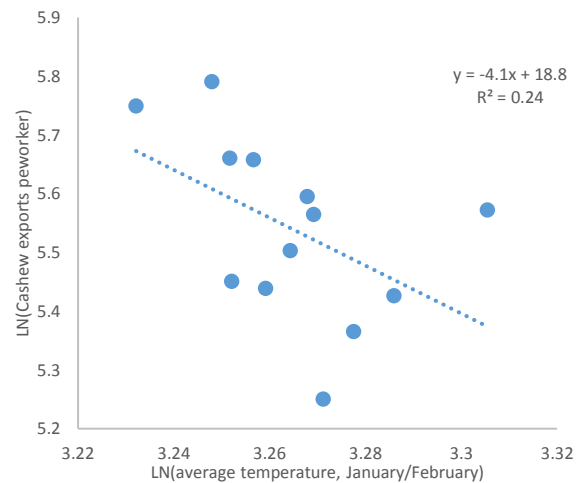
Source: IMF and COMTRADE.

**Including estimated smuggling, Guinea-Bissau is the second largest exporter of raw cashew nuts, making the country an important player in the global cashew market.** In 2013, only Cote d’Ivoire exported higher volumes of raw cashew than Guinea-Bissau. Overall, Guinea-Bissau accounts for about 20% of global raw cashew exports, when taking into account smuggling. This number may in fact be substantially higher if potential smuggling through Senegal is taken into account in addition. It is important to bear in mind that exports do not equal cashew production. Apart from the weight of the shells that is lost during processing, part of this difference is also explained by the fact that many large cashew producers have sizeable domestic markets for cashew consumption (e.g. India’s exports of processed cashew only correspond to a third of its imports of raw cashew, partly a consequence of domestic consumption). However, Guinea-Bissau’s weight in the global cashew value chain cannot be disputed.

**As in all agricultural sectors, the climate plays an important role for production in Guinea-Bissau.** Following the rainy season which begins in late May and ends in early November, the cashew trees absorb the soil’s nutrients. In January and February, the trees bloom after which the blossoms turn into the cashew fruit that is harvested between April and June. High temperatures—resulting in dry earth and

increased dust particles in the air—and wind cause damage to blossoms. Indeed, Figure 3 demonstrates the destructive consequences of high temperatures in January and February, reducing raw cashew exports per worker. Between 2000 and 2012, the temperature in these two months alone explained 25% of the variation in cashew exports per worker.

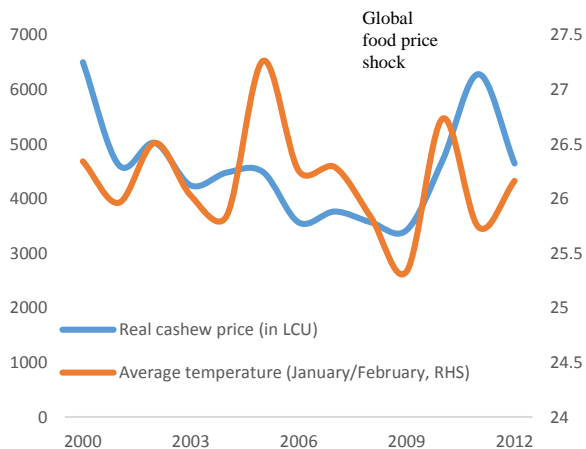
**Figure 3:** Cashew production—and thus exports—are highly dependent on climatic conditions. (cashew exports per worker and average temperature in Celsius, natural logarithms)



Source: World Bank Climate Change Knowledge Portal, IMF, and World Bank staff calculations.

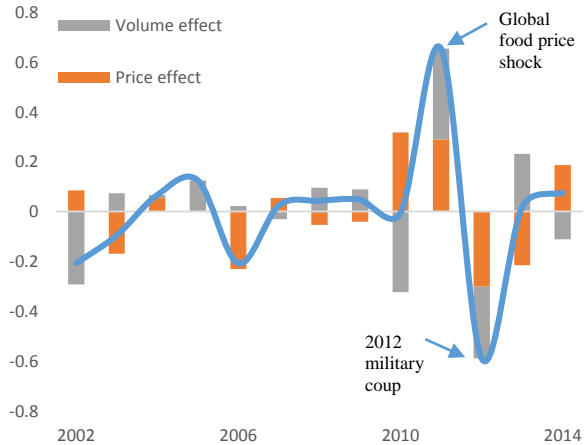
**Given the country’s weight in the global cashew market, production shocks in Guinea-Bissau affect international cashew prices.** So long as cashew demand is not perfectly elastic, a positive shock to supply will result in lower prices and vice versa. This can be observed in Guinea-Bissau. High temperatures adversely affect the cashew harvest and accordingly production is lower and cashew prices are higher (Figure 4). This relationship is noticeable, with the exception of 2011 when it temporarily breaks down. This is likely due to the global food price crisis of that year when commodities, including food products, increased sharply across the world in response to multiple factors, such as structural shifts to supply, climatic shocks, and speculation in financial markets. Overall, however, the relationship between temperature, production, and prices, suggests that Guinea-Bissau has an effect on prices in the global cashew market.

**Figure 4:** Through its effect on production, the climate also affects international cashew prices.  
(cashew prices in constant LCU and average temperatures in Celsius (RHS)).



Source: World Bank Climate Change Knowledge Portal, IMF, and World Bank staff calculations.

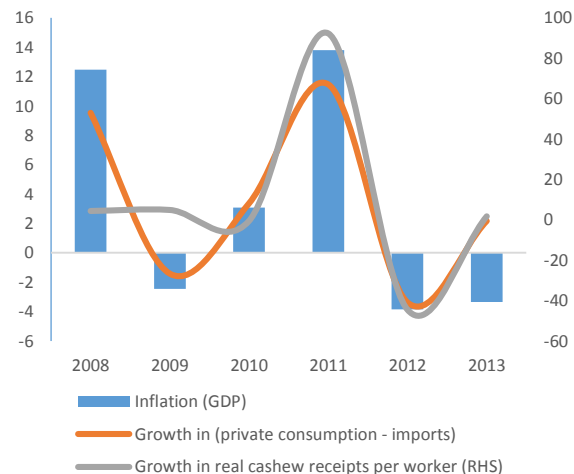
**Figure 5:** Prices mitigate the effect of production shocks on export receipts in Guinea-Bissau.  
(growth in real exports per worker in local currency terms decomposed into growth in real prices and volumes per worker)



Source: COMTRADE, IMF and World Bank staff calculations.  
Note: Cashew prices are deflated by the Manufacturing Unit Value (MUV).

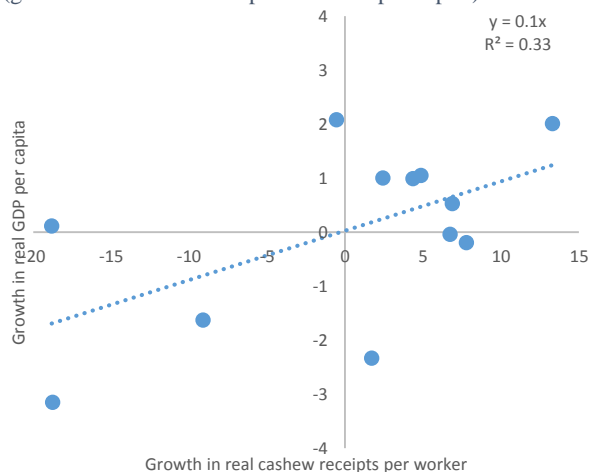
On the one hand, responsive cashew prices mitigate production shocks on incomes. On the other, they somewhat reduce the return on cashew during bumper harvests. Figure 6 disaggregates the value of cashew export per worker into independent price (in constant local currency terms) and volume effects. In 2011, both volumes and prices increased – this is likely due to the fact that the global food price crisis overshadowed food markets, muting the usual

**Figure 6:** Cashew receipts determine private domestic consumption...  
(inflation, growth in private consumption and cashew receipts per worker)



Source: World Bank staff calculations.

**Figure 7:** ... and are strongly correlated with GDP growth.  
(growth real cashew receipts and GDP per capita)



Source: World Bank staff calculations.  
Note: Excludes outliers of 2011 and 2012.

supply and demand factors. In 2012, a military coup derailed the cashew campaign both with respect to volumes and prices. In all other years depicted, however, the strong relationship between countering price and volume effects is evident. During a poor cashew campaign, prices rise. This means that real export receipts (and in response the incomes of the poor) do not fall by as much – or may even remain stable, as they did in 2010. In a good year, on the other hand, prices

fall, and receipts do not increase by as much as they would if Guinea-Bissau was just a price taker in the international market. For example, in 2013 real export receipts barely increased although export volumes were high. The net effect of prices and volumes tends to be positive, albeit small: excluding the years 2011 and 2012 which were anomalies, real cashew receipts per worker grew by 0.1 percent on average.

**Cashew receipts drive domestic consumption and inflation—as well as GDP per capita.**

Cashew is the most important economic activity in Guinea-Bissau and as the proceeds from higher cashew receipts trickle down to households their domestic consumption rises. As supply does not fully respond to higher demand, prices increase, limiting overall purchasing power of households. Although inflation reduces purchasing power, there is a clear link between cashew receipts per worker and domestic private consumption (Figure 6). It is noteworthy that cashew receipts affect investment and public consumption less strongly. Private consumption accounts for 86% of GDP. It is thus not surprising that cashew receipts are a key driver of the country's annual production per capita (Figure 7).

**Global cashew exports have increased substantially over the past decade, reducing prices.** Between 2000 and 2013 global raw cashew exports rose six-fold. As supply expanded, the price has been falling. This is likely the consequence of supply growing at a faster rate than demand. Indeed, compared to food prices more broadly, cashew has not kept up with price developments. With the exception of the food price shock of 2011, cashew prices have been trailing general global food prices.

**Weaker cashew prices have been worsening the terms of trade, especially given the country's high reliance on rice imports.** Rice is Guinea-Bissau's main staple food and families barter it for cashew. Although Guinea-Bissau cultivated rice for export in the distant past, it is now mostly grown on a subsistence basis. Climate data suggest that heavy and variable rains affect the

rice harvest in the following year. Poor harvests then require the import of rice. Yet given falling real cashew prices and somewhat increasing rice prices, the ratio of cashew to rice prices—the most meaningful interpretation of the terms of trade in Guinea-Bissau—has fallen.

**Domestic rice production has not picked up significantly to meet domestic demand. The weaker terms of trade and the limited supply response in domestic rice are likely to have reduced household welfare.**

Although rice prices have risen relative to cashew prices, import data suggest that domestic rice cultivation may have stagnated or even fallen over the past decade. Stakeholders in Guinea-Bissau have indeed expressed concern with the lack of rice production in the country. Although the World Bank's 2015 Country Economic Memorandum (CEM) argues that Guinea-Bissau has a comparative advantage in rice, market failures are likely at the root of an imperfect supply response. Overall, given that farmers do not grow more rice, including for auto-consumption when rice prices have increased relative to cashew prices suggest that household welfare has fallen in turn.

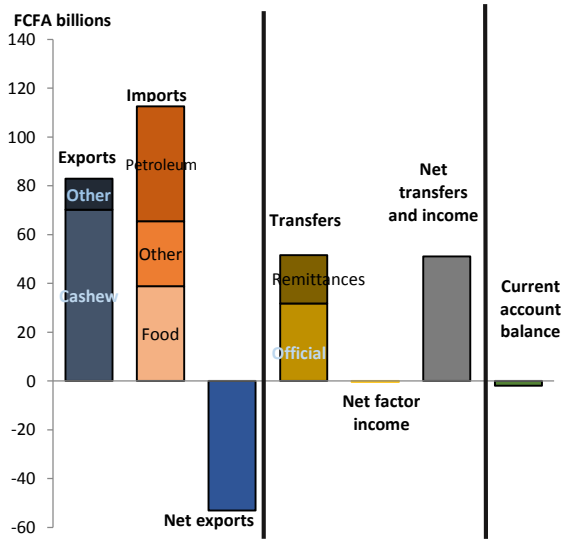
**Cashew prices have a strong effect on the current account—and on domestic savings.**

Higher cashew prices tend to improve the Terms of Trade, in particular with respect to rice, the country's main import next to fuel (Figure 8). This is reflected in a strengthening current account balance (Figure 9). When the current account improves the need for foreign financing falls translating into higher domestic savings.

**Yet savings tend to be small, explaining the country's low investment levels.**

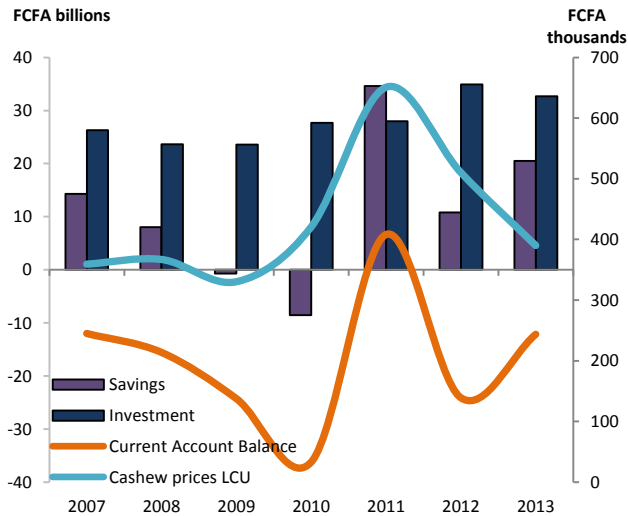
When cashew prices were exceptionally high in 2011, savings barely reached 7% of GDP, one of the lowest in the world (Figure 10). In most years, savings were lower. Low savings translate into weak investment—further hampered by an undeveloped banking sector reducing the scope for financial intermediation. Both savings and investments in Guinea-Bissau are exceptionally low by international standards. Investment in

**Figure 8:** Cashew nuts dominate exports while food and petroleum are Guinea-Bissau's most important imports. (local currency units)



Source: IMF, and World Bank.

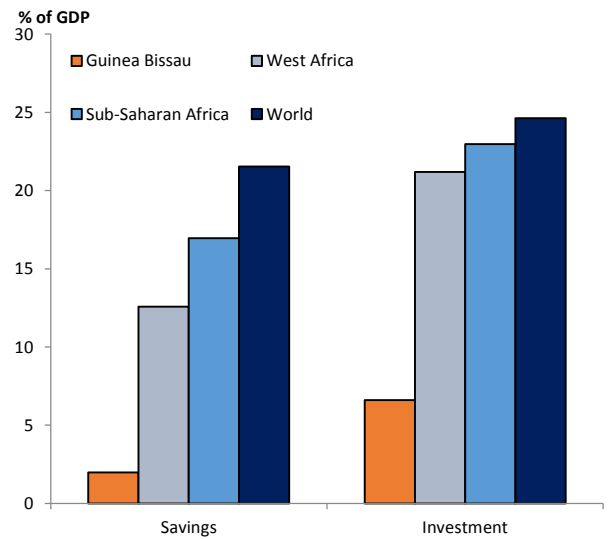
**Figure 9:** The cashew prices is an important determinant of the current account balance, savings, and investment. (savings, Investment, Current Account Balance and Cashew Prices in local currency (RHS))



Source: INEC, IMF, and World Bank.

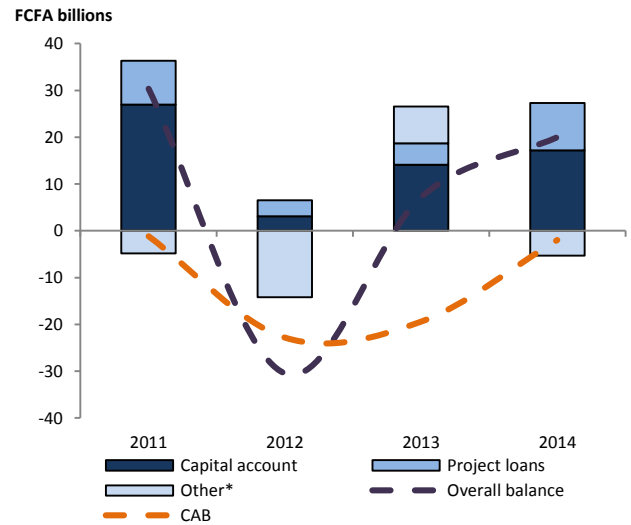
Guinea-Bissau is mostly financed through public external borrowing which supports the country's international reserve position and helps finance the current account (Figure 11). About 40% of investment in Guinea-Bissau is financed by the government, underlining weakness of financial intermediation in support of private sector investment (Figure 12).

**Figure 10:** Both savings and investments are low in Guinea-Bissau. (savings and investment in percent of GDP, 2004-2013 average)



Source: IMF, World Economic Outlook, April 2015.

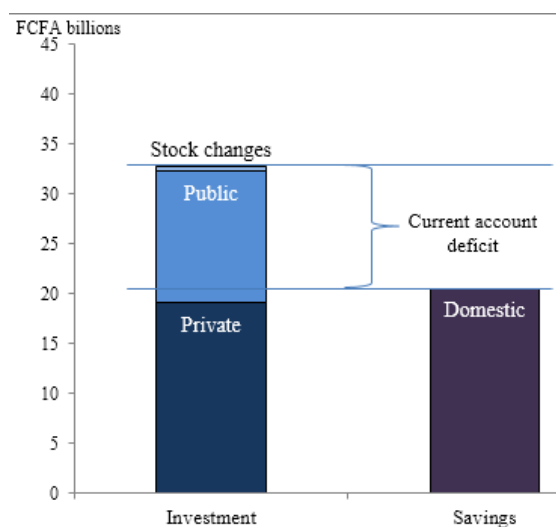
**Figure 11:** The capital and financial accounts are dominated by government borrowing, strengthening the reserve position... (local currency units)



Source: IMF and World Bank. (CAB: Current Account Balance)

**While public investment is an important source of investment for the country, it is highly dependent on donor support – which hinges on political stability.** Most of Bissau-Guinean public investment is financed by donors. Domestic revenue tends to hover around 10% of GDP, one of the lowest in the world and barely enough to cover current expenditures. International aid has thus been crucial. However, aid tends to be pro-cyclical: military coups result in the suspension of donor programs and public

**Figure 12:** ...financing the current account, and supporting public investment.  
(local currency units)

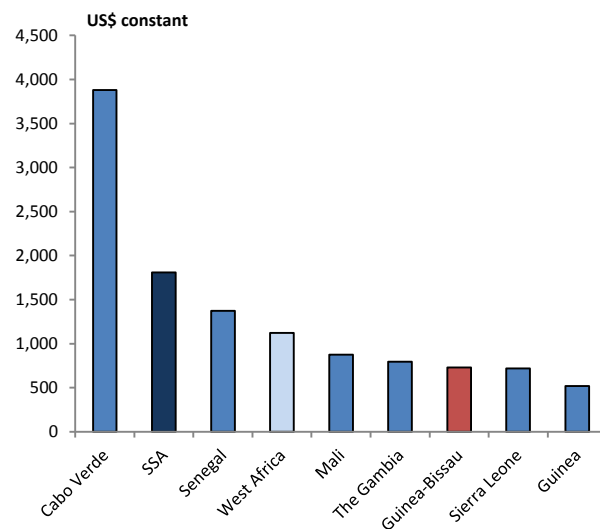


Source: INEC, IMF and World Bank.

investment grinds to a halt in turn. Indeed, the drop in donor support in times of political crisis is a major reason for economic downturns in Guinea-Bissau (see 2015 CEM), adding to the stop-and-go character of the country's development marked by political fragility, including military coups. In this sense, the volatility of international aid is a major source of vulnerability for Guinea-Bissau.

**It is no surprise that against adverse trends in cashew prices, low savings, and low investment, productivity growth is stagnating.** Real cashew exports have only increased moderately and given its centrality in the economy, GDP per capita growth has been small. Growth in labor productivity closely traces GDP per capita growth. Both have been very small, about 0.2% and 0.7% respectively between 2000 and 2014. Unfavorable developments in the cashew market, including lower prices for the country's most important export mean that real GDP per worker has barely been increasing. In addition, low investment rates—partly a consequence of weak savings and limited financial intermediation—have not sufficiently raised yields in cashew or resulted into shifts in activities with higher value added (be it cashew processing or diversification away from cashew). Overall, low productivity growth means that

**Figure 13:** Guinea-Bissau is one of the least productive countries in the world.  
(GDP (in US dollars) relative to working age population)



Source: World Bank.

Guinea-Bissau's labor force is among the least productive in Africa (Figure 13) and, indeed, the world.

### Cashew, labor markets, productivity, and poverty

**Low labor productivity also is an obstacle to poverty reduction.** Guinea-Bissau's poverty rate is commensurate with its GDP per capita level. This relationship is robust to the exclusion of resource rents from GDP. Thus, for Guinea-Bissau to reduce poverty, increasing its labor productivity will be key.

**Raising productivity, not only in the cashew sector, will be important to accommodate increasing numbers of Bissau-Guinean job seekers.** Demographic projections suggest that pressure on the labor market will result from more young Bissau-Guineans becoming of working age. While this is an opportunity and could result in a 'demographic dividend' for the country, it also entails risks. The demographic dividend will only occur if young labor market entrants find jobs. Given the absence of investments, limited land and no access to financing, more workers may share the same assets. In this case, labor productivity would

decline, resulting in lower incomes for households and raising poverty.

**Diversifying into activities other than cashew will be key.** Real cashew prices have been falling and are now trailing other food prices. This suggests that supply has grown faster than demand. Welfare gains from increasing cashew thus have decreasing marginal returns. The 2015 CEM suggests that there is considerable room for Guinea-Bissau to compete in the *processed* cashew market. Thus, the export of processed cashew (rather than raw cashew) is likely to be productivity-enhancing. On the other hand, it will be crucial to create an environment for new jobs. Some of these may be in rice, which, as the 2015 CEM argues, the country has a comparative advantage in. There may also be scope to enhance cashew production. This would also allow Guinea-Bissau to diversify incomes, further reducing vulnerability to terms-of-trade shocks (especially against the backdrop of the relative increase in rice prices).

## Conclusion

**From a macroeconomic perspective, Guinea-Bissau faces two major challenges: low productivity and high vulnerability.** Apart from a history of fragility which has been underlying Guinea-Bissau's stop-and-go character of development, structural economic challenges keep the country from growing at a faster pace that would enable progress toward reducing the high levels of poverty. The dominant cashew sector at least partly lies at the heart of the structural challenges. Whilst export volumes have increased, deteriorating Terms of Trade—especially with respect to rice for which cashew is bartered—have been undermining incomes, domestic savings, and in turn investment. This at least partly explains low productivity levels and the structural slack in the economy. It leaves the country dependent on

international aid which is volatile and aggravates the effect of military coups through plummeting public investment—especially given the low levels of domestic revenue. Both Terms of Trade shocks and political shocks are thus amongst the most important sources of vulnerability for Guinea-Bissau's economy.

**Investments to make the cashew sector more productive, but especially to diversify the economy, will be crucial for Guinea-Bissau.** The country requires both more jobs and more productive jobs. This is especially true given expected pressures on the labor market from demographic change. Whilst there is room to improve the productivity of the cashew sector, for example by moving into processing rather than raw exports (see 2015 CEM), many of these new jobs will have to be located in other activities. The 2015 CEM and the latest national development plan identify rice, fisheries, tourism, and even mining as potential areas to add productive jobs. The production of groundnuts or sesame are other alternatives.

Switching into these areas can not only raise productivity but also diversify the economy, reducing its vulnerability to the cashew price. Attracting FDI by improving the business climate can reduce the country's dependence on donors for investment and generate knowledge spillovers that can help with the country's economic transformation.

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