



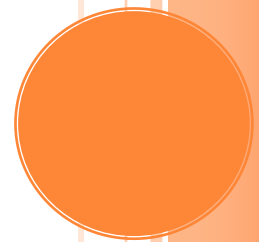
MACROECONOMIC
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Ghana's Business Cycle, 2009-2019: A Sectoral Financial Balances Analysis

FAIR Working Paper: SFB/CS/2023

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November 2023



GHANA'S BUSINESS CYCLE, 2009-2019: A SECTORAL FINANCIAL BALANCES ANALYSIS

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Introduction

Ghana is a West African country with a rich and complex economic history. In terms of the Human Development Index (HDI), Ghana has shown a steady improvement towards becoming a medium developed country with a current rank of 133. Ghana like most developing economies is heavily reliant on commodity and raw material exports; the three key exports for the nation being cocoa, gold, and oil. However, like most developing nations it struggles with what can be considered domestic secondary sector growth and is heavily reliant on imported equipment, refined oil and even food grains. Ghana faces a constant issue with its dependence on foreign-currency denominated financial support, which often means loans from the International Monetary Fund (IMF). Ghana has also encouraged the opening of domestic markets for international firms to conduct their business activities along with the government through Public Private Partnerships (PPP) in order to alleviate the imbalances in its balance of payments (BOP).

On the growth front, even a cursory look at Ghana's long-term growth pattern is striking. Wide fluctuation in growth rates between 1960 and 1985 are followed by stable but low growth rates of about 4% to 5% until the GFC of 2008, and then a return to a period of oscillating growth rates over the last 15 years. However, in 2011 Ghana achieved a monumental feat in its recent history; it witnessed an economic boom that put it amongst the fast-growing nations in the world that year.² The economy "experienced a sudden acceleration in gross domestic product growth — from 7.9 percent in 2010 to 14 percent in 2011"³, prompting the IMF to dub Ghana as a "rising growth star and a beacon of hope in West Africa." This "strong economic growth over the past two decades [since 1991] led

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² [Ghana: The World's Fastest Growing Economy in 2011 \(ghanaweb.com\)](http://ghanaweb.com)

³ [The story behind Ghana's economic boom-bust | Business Day Ghana](http://businessdayghana.com)

to a near doubling of GDP per capita, lifting the country through the threshold for middle-income status in 2011.”^[3] The euphoria was short-lived; from then on, Ghana’s growth began showing a decline immediately and though there was a brief revival in 2017, its growth began stalling even before the Covid-19 pandemic struck, dragging it into one of its worst ever crisis by 2022.

This paper focuses on the period in which Ghana growth rates between the post-GFC and the pre-pandemic period, i.e., 2009 and 2019. Utilizing the Sectoral Financial Balances (SFB) model, we investigate and analyze the reasons behind Ghana’s unstable growth pattern during this critical period. In which it witnessed its greatest boom with a growth rate of almost 14% in 2011 but collapsed to just about 2% by 2015.

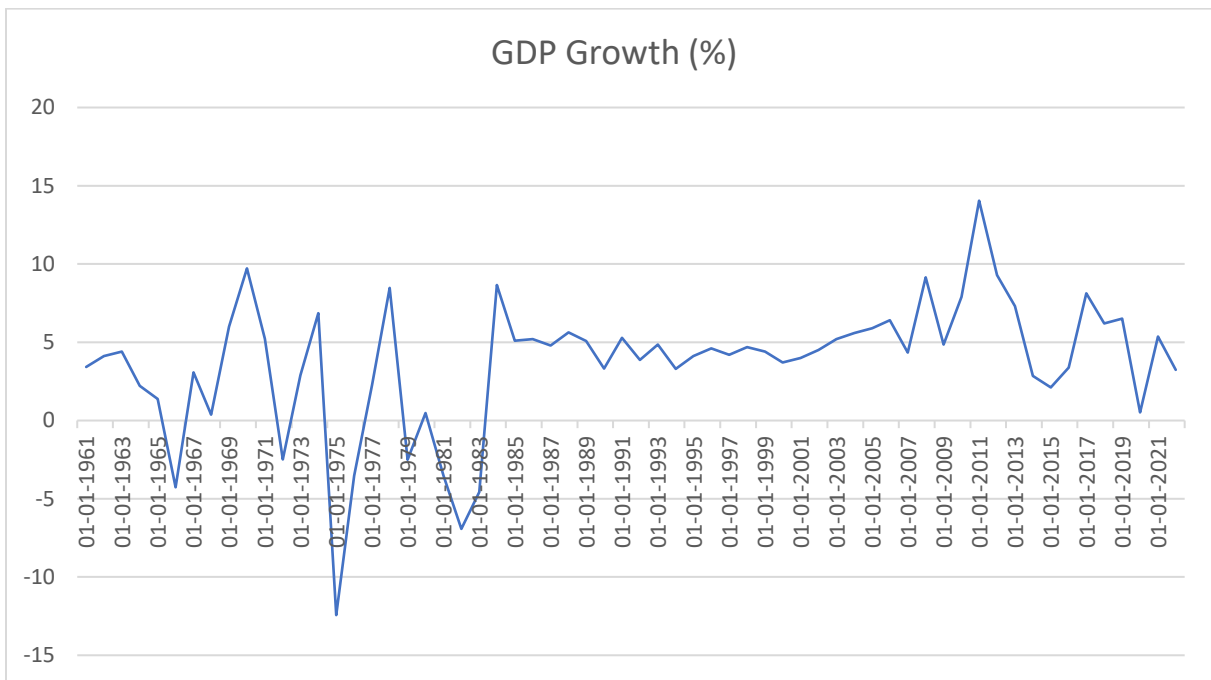


Figure 1: Ghana GDP growth rates 1961-2021⁴

The paper is organized as follows: we begin with a brief introduction of the SFB model, perform an SFB breakdown of the Ghanaian economy followed by an analysis of the drivers, the monetary and fiscal policy responses to the crisis, and the implications of our findings

⁴ Source: [World Bank GDP growth \(annual %\)](#)

on the other key macroeconomic parameters of the economy including its fall into an external debt trap and predicament of seeking an IMF bailout.

The Sectoral Financial Balances (SFB) Model⁵

The SFB model builds on the work of the heterodox economist Wynne Godley. A fundamental basis for the model is the double entry bookkeeping rule that for every debit there is a corresponding credit. This accounting principle maintains stock-flow consistency across the key sectors of an economy namely, the domestic private sector, the government, and the external sector (which consists of both the private and public sector).

For stock-flow consistency, net financial asset accumulation across all three sectors must be equal to zero. In other words, an accumulation of financial assets outside of one sector requires a corresponding accumulation of financial liabilities by at least one sector. Therefore logically, all three sectors cannot simultaneously accumulate financial assets if stock flow consistency is to be maintained.

Thus, the SFB equation is written as:

$$(S - I) + (T - G) + (M - X) = 0 \quad \dots (1)$$

Where S = private sector savings, I = private sector investment, T = the government's tax receipts, G = government expenditure, X = exports and M = imports. It is important to note that a current account deficit or CAD, i.e., $(M - X) > 0$ or $(X - M) < 0$, implies an inflow of capital in to the domestic economy so that the domestic economy accumulates financial liabilities or equivalently, the foreign sector accumulates assets in the domestic economy. Similarly, a current account surplus or CAS, i.e., $(M - X) < 0$ or $(X - M) > 0$, implies an outflow of capital from the domestic economy so that the domestic economy accumulates financial assets abroad or equivalently, the foreign sector accumulates liabilities. At the same time, a fiscal deficit or $(G - T) > 0$ implies that the government is accumulating net financial liabilities. Thus, we can rewrite equation (1) as the following:

⁵ This section draws extensively from the country studies carried out at the Foundation to Aid Industrial Recovery (FAIR) - [Research & Publications – Maps – Macroeconomic Analysis & Policy Studies \(thefairindia.org\)](http://www.thefairindia.org)

$$(S - I) = (G - T) + (X - M) \quad \dots (2)$$

Let us suppose that the private sector wishes to accumulate net financial assets. This is possible only if either the government accumulates liabilities through a government deficit, and/or the foreign sector accumulates liabilities in the form of current account surpluses.

The question then arises as to why would the domestic private sector want to accumulate assets *outside itself*? The answer is simply due to the default risk in holding private sector assets. In other words, the private sector is weary of the bankruptcy of private sector entities since their financial assets are ultimately backed by real assets of the domestic sector that could lose value. For this reason, the private sector may desire to hold the liabilities of the government in the form of bonds (since government debt is not backed by real assets but the ability of state to create money) or hold even foreign financial assets (including debt of foreign governments). Domestic sector households and corporations while they may hold the financial liabilities of other agents in the private sector, they would seek to hold safe financial assets like government bonds.

Government debt, however, can arise only if the government runs a fiscal deficit. At the same time, a CAD as faced by most developing countries implies the desire of the foreigners to accumulate financial assets in that economy, which must be accommodated either by the government sector (fiscal deficit or $G - T > 0$) or by the domestic private sector $(S - I) < 0$. If the latter is positive, i.e., $S - I > 0$ then the government deficit must be large enough to accommodate the desire of both, the domestic private sector as well as foreigners.

Although the SFB equation is an identity and must always hold true, it does not establish cause and effect. Nonetheless, a key insight that can be drawn from the SFB model is that the desire of the domestic private sector to accumulate net financial assets can drive the government into a deficit and the foreign sector into a surplus. This operates through the paradox of thrift; net financial asset accumulation implies a rising marginal propensity to save and/or a fall in the desire to invest. This may drive the economy into a recession (slow down) and consequently, a larger government deficit given that it is an automatic stabilizer. A contraction in imports can also mean a smaller CAD or even a current account surplus (CAS). The underlying premise of this paradoxical phenomena is when people begin to

save a greater amount of their income, the outcome is everyone is going to end up worse off rather than better off.

Countries such as Norway or Saudi Arabia are special cases. The domestic private sector as well as the government may simultaneously accumulate financial assets, i.e., $S - I$ and $T - G > 0$ since they are able to run substantial current account surpluses $(X - M) > 0$. i.e., net accumulation of financial liabilities by foreigners. This gives enough fiscal space to the government to be able to run fiscal surpluses $(G - T) < 0$.

Regarding values for the computation of the SFB equation, data pertaining to the government and the external sector are usually available. From this it is possible to calculate the figures of the financial asset/liability accumulation by the domestic private sector. Richard Koo outlined this exact method in his book with regards to the US private sector, but this can generally be applied to all economies "... because the data for these two sectors are relatively accurate, subtracting the sum of the two from zero gives a fairly accurate estimate of the U.S. private sector as a whole."⁶ Nonetheless, separate data of private sector savings and investment rather than composite $(S - I)$ is useful for the purpose of analysis.

The SFB Equation for the Ghanaian economy

Table 1 below presents the data from the periods of 2009-2019. Since equation (2) also holds for all figures as a percentage of GDP, we compute relevant parameters for Ghana accordingly in Table 1. The data from Table 1 is mapped on to the SFB template in Figure 2. All points on the line SI_0 are where $S - I = 0$. In quadrant 1, a point such as $(G - T) = -2$ or $(T - G) = 2$ along with a CAS $(X - M)$ of 2 implies $(S - I) = 0$. Lines to left of SI_0 , say, SI_{-1} show $(S - I) < 0$ or leveraging by the domestic private sector (net accumulation of financial liabilities) while lines to the right of SI_0 , say, SI_1 show $(S - I) > 0$ or deleveraging by the domestic private sector (net accumulation of financial assets).

⁶ Koo, R. C. (2014), The Escape from Balance Sheet Recession and the QE Trap: A Hazardous Road for the World Economy, <https://ci.nii.ac.jp/ncid/BB1772323X>

Year	Difference of domestic private sector (S – I) computed from separate data of S and I	Difference of domestic private sector (S – I) computed from SFB equation	Net government spending (G – T)	Net Current Account Balance (X – M)
2009	-2.1	3	7	-4
2010	-6.7	0	8.2	-8.2
2011	-5.9	-6.5	2.5	-9
2012	1.1	-0.1	11.6	-11.7
2013	-2.5	-1.4	10.3	-11.7
2014	2.3	0.6	10.1	-9.5
2015	-1.5	-0.7	7	-7.7
2016	2.9	2.7	9.4	-6.7
2017	0.7	1.4	4.8	-3.4
2018	3.8	3.9	7	-3.1
2019	4.4	4.8	7.5	-2.7

Table 1: The SFB model parameters

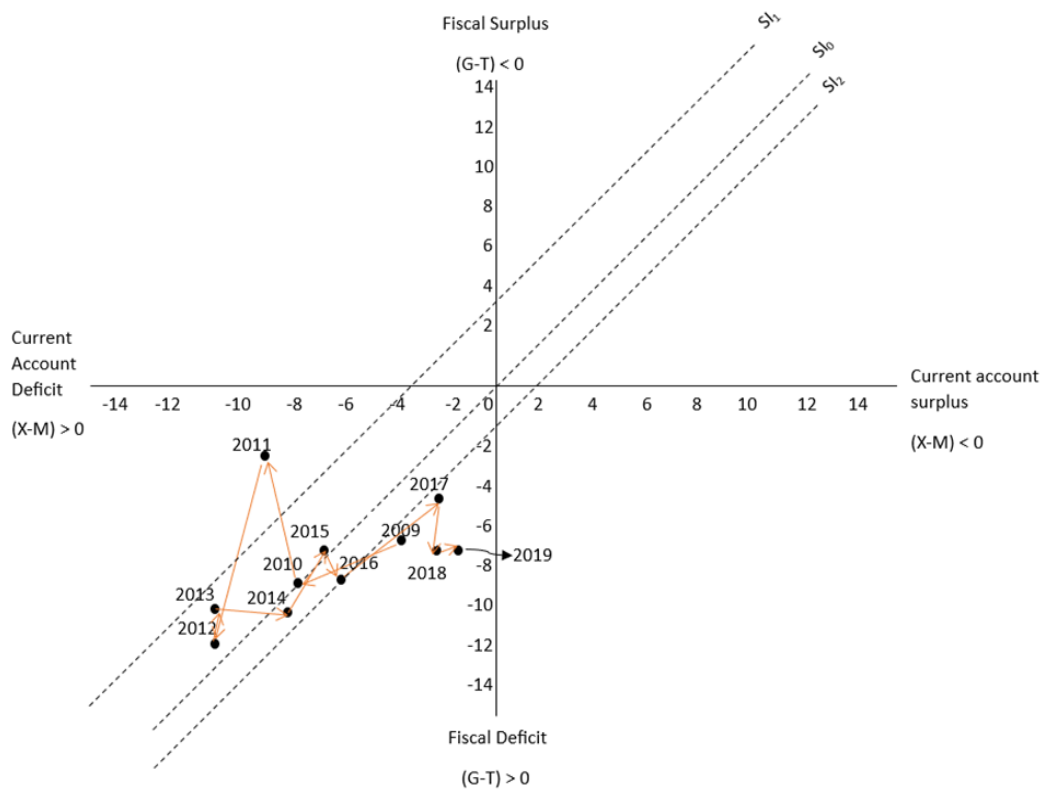


Figure 2: The SFB template

Initial Observations from the SFB template

The SFB template reveals a stark and unequivocal leveraging-deleveraging cycle by Ghana's domestic private sector which may have in turn driven the economy through a volatile business cycle, with phenomenally high and abysmally low growth rates.

Starting from 2009 until 2011 there was a massive private sector investment boom – a leveraging cycle – that was reflected in a rising current account deficit from imports of foreign physical assets – with many foreign firms accumulating assets through investing in Ghanaian companies. Consequently, the burden on the government deficit to accommodate the private sector was absent so that its fiscal deficit was at an all-time low while the private sector was accumulating vast amounts of liabilities.

The scenario changed drastically in 2012 when the private sector almost abruptly went into a deleveraging cycle so that the government turned to major accumulator of financial liabilities. Soon after this U-turn, Ghana saw a momentarily revival of leveraging by the private sector but one that couldn't could not recreate the high of the 2009-11 leveraging cycle, resulting in a severe decline of its growth rate.

It is important to note that the SFB model does not give the reasoning or causes of economic phenomena; rather, it shows us the path the economy takes with respect to who is accumulating financial assets and financial liabilities. Thus, we need to analyse all parts of the economy and through macro-economic indicators to understand what factors drove Ghana's domestic private sector investment leveraging-deleveraging cycle.

The FDI Inflow Boom and its Implications for Ghana's Domestic Economy, 2009-2011

Although the SFB template shows a leveraging-deleveraging cycle by the domestic private sector, the trigger for this must be seen in FDI inflows, in particular into the oil industry. In 2007, Ghana struck oil and soon saw its production and infrastructure develop on a larger scale in 2010.⁷ The opening of Jubilee Field (named after the fifty-years celebration of

⁷ [AdecadeofOilDiscoveryinGhana.pdf](#)

Ghanaian Independence) was treated as a joyous occasion. It meant that the country could finally eliminate a significant portion of balance of payment issues through the export of crude oil.

Ghana's economic boom was driven by investments in the oil industry when the government decided to form a partnership with various other organisations which came to be known as the Jubilee partners. The partners comprised of private sector players including Tullow, Kosmos Energy, Anardako and Sabre as well as the state-owned, Ghana National Petroleum Company (GNPC).⁸ The GNPC was a government organisation that existed to ensure that the revenues from the collection of oil were to be directed towards national interests, and to hold the private players accountable to some degree.⁹

Foreign corporate involvement in Ghana's oil sector was significant, beginning in 2009. This is apparent from the websites of the companies involved. For instance, Tullow Oil is an Irish company that was one of the first private oil exploration companies to strike a large oil deposit in what is now known as the Jubilee Field.¹⁰

In 2011 Tullow Oil has agreed to pay \$305m to increase its shareholding in Ghana's giant Jubilee offshore oil field to 36.5 per cent. Tullow also acquired Ghana's EO Group, formerly controlled by allies of John Kufour, Ghana's former president, for a mixture of cash and shares.¹¹

Kosmos Energy, a US-headquartered company and a leading deepwater exploration and production company, was largely responsible for being the technical operator in the Jubilee oil project. Kosmos and partners discovered the significant Tweneboa gas-condensate accumulation in 2009, followed by the Enyenra oil field in 2010 and the further discovery of oil at the Ntomme field and oil and gas-condensate at Wawa in 2012.¹²

⁸ [CAR 16 2012-13 - OneDrive \(sharepoint.com\)](#)

⁹ Report No. 47321-GH Ghana Economy-Wide Impact of Oil Discovery in Ghana

¹⁰ [Jubilee field | Tullow Oil plc \(LSE: TLW\) \(Jubilee Field - Ghana - Offshore Technology \(offshore-technology.com\)\)](#)

¹¹ [Tullow pays \\$305m for Jubilee stake \(ft.com\)](#)

¹² [Ghana - Kosmos Energy | Deepwater Exploration and Production](#)

JUBILEE UNIT AREA PARTICIPATING INTEREST	
TLW (Op)	38.98%
KOS	38.61%
GNPC	19.69%
PETRO SA	2.72%
Total	100%

Table 2: Jubilee Unit Area, Participating Interest¹³

Another US-based company, Anadarko Petroleum Corp. was a key operator in oil exploration along with Tullow and Kosmos. Before its sudden take-over by the French oil company TOTAL SA, Anadarko owned a 23.49-percent working interest in the Jubilee Unit.¹⁴

A smaller foreign participant in Ghana's oil sector was Sabre Oil and Gas holding, later taken over by PetroSA the national oil company of South Africa in hopes of gaining access to the profitable and prospective region at the time.¹⁵

The inflow of foreign investments in the oil sector can be seen from the sharp increase in FDI inflows between 2009 and 2012, roughly doubling from \$1.5 billion to more than \$3 billion.

¹³ Source: [Ghana - Kosmos Energy | Deepwater Exploration and Production](#)

¹⁴ [Anadarko Announces First Oil at the Jubilee Field Offshore Ghana \(nbcnews.com\)](#)

¹⁵ [PetroSA acquires stake in Ghana's Jubilee field \(oilreviewafrica.com\)](#)

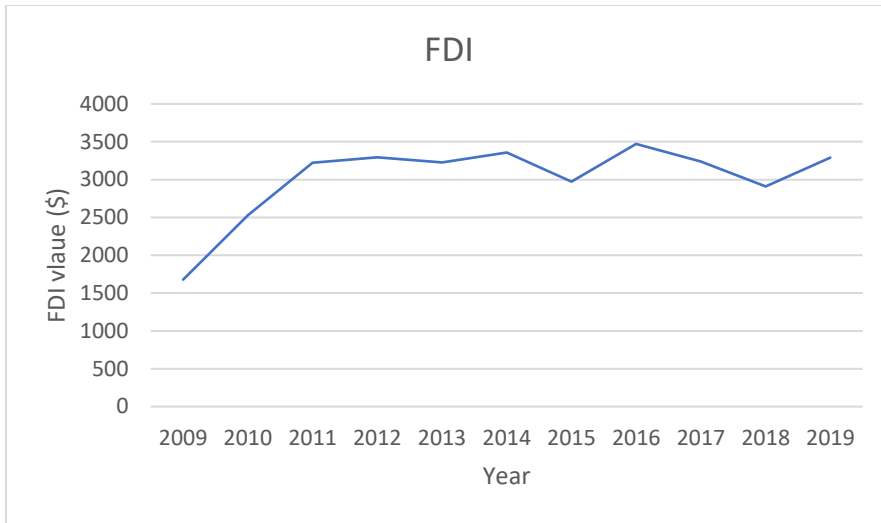


Figure 3: FDI net inflows into Ghana, 2009-2019¹⁶

As a percentage of GDP, FDI grew from 7.8% in 2010 to 8.3% in 2011.

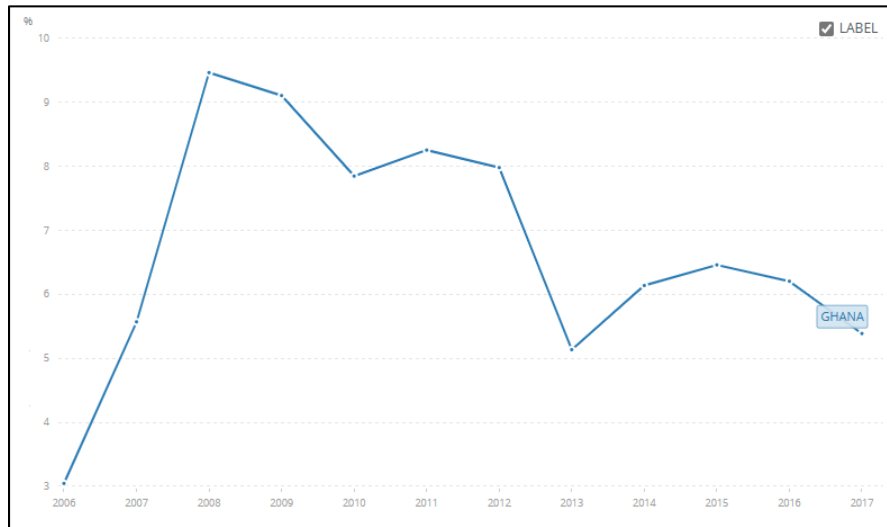


Figure 4: FDI net inflows as a percentage of GDP¹⁷

The inflows in FDI were matched by a significant increase in Ghana's CAD from the import of equipment and machinery for oil exploration and production, from about 2% of GDP to almost 6% in 2013.

¹⁶ Source:

¹⁷ Source: [Foreign direct investment, net inflows \(% of GDP\) - Ghana | Data \(worldbank.org\)](https://data.worldbank.org/SD/SD.FY.MK.ZS.GH)

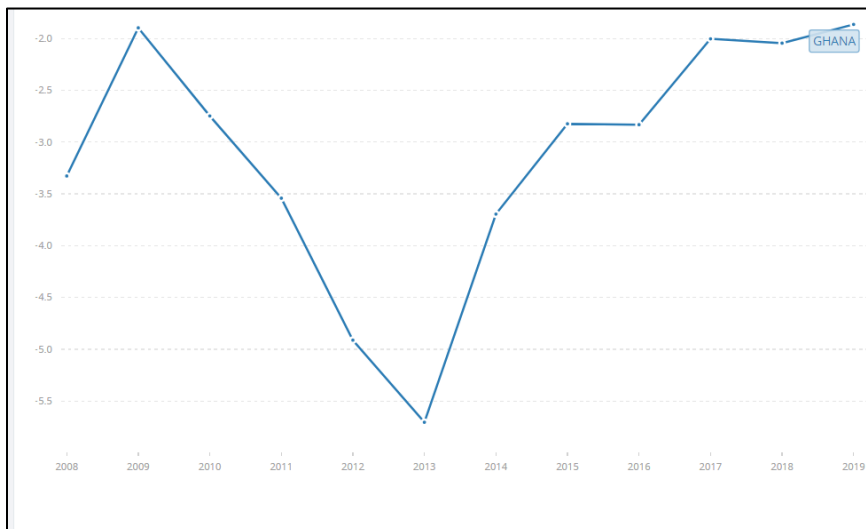


Figure 5: Ghana's current account balance, 2009-2019¹⁸

In spite of the large CAD, foreign exchange rate remained fairly stable at about 2 cedi to the US dollar, which was mainly due to the strong inward FDI flows.

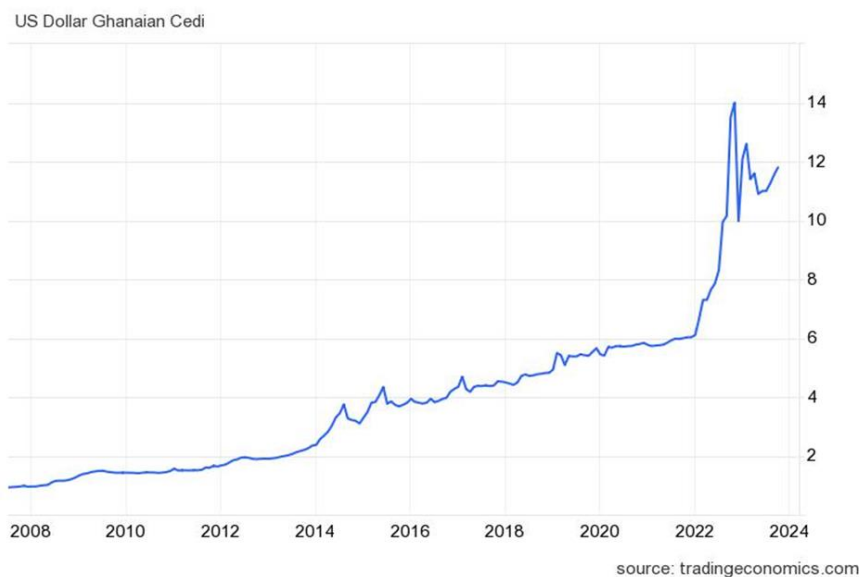


Figure 6: Exchange rate, cedi to the dollar, 2009-2019¹⁹

¹⁸ Source: [Current account balance \(BoP, current US\\$\) - Ghana | Data \(worldbank.org\)](https://data.worldbank.org/SD/CA.BD.GH)

¹⁹ Source: [USDGHS US Dollar Ghanaian Cedi - Currency Exchange Rate Live Price Chart \(tradingeconomics.com\)](https://tradingeconomics.com/ghana/us-dollar-ghanaian-cesi-currency-exchange-rate-live-price-chart)

Ghana's strong GDP growth between 2009 and 2011, which continued in 2012 Ghana's domestic private sector investments between 2009-2012 (see Table 3). The SFB template (Figure 2) shows the strong leveraging cycle by the domestic private sector between 2009 and 2011 as the economy moved on to an SI line that lies further leftwards from SI_0 .

Year	Domestic private sector savings	Domestic private sector investment
2009	13.4	15.5
2010	9.1	15.8
2011	13.6	19.5
2012	23.3	22.2
2013	15.1	17.6
2014	14.6	12.3
2015	9.2	10.7
2016	11.8	8.9
2017	19.7	19
2018	17.2	13.4
2019	22.1	17.7

Table 3: Ghana's private sector savings and investment rate, 2009-2019.²⁰

The two domestic sectors that saw significant increase in their share as a percentage of GDP was mining and quarrying (without oil) and the construction sector.

²⁰ Source: IMF Article IV Consultative Reports

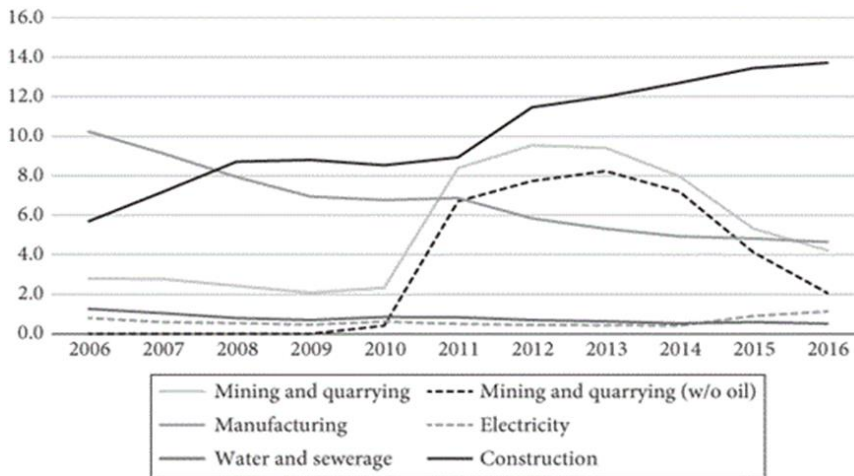


Figure 2: Domestic sectoral investments²¹

The strong external sector investment flows coupled with the domestic leveraging cycle pushed Ghana’s growth rate in GDP during this period, 2009-2012 to a phenomenal height, peaking at 14% in 2011 and sustaining more than 8% levels until 2013.

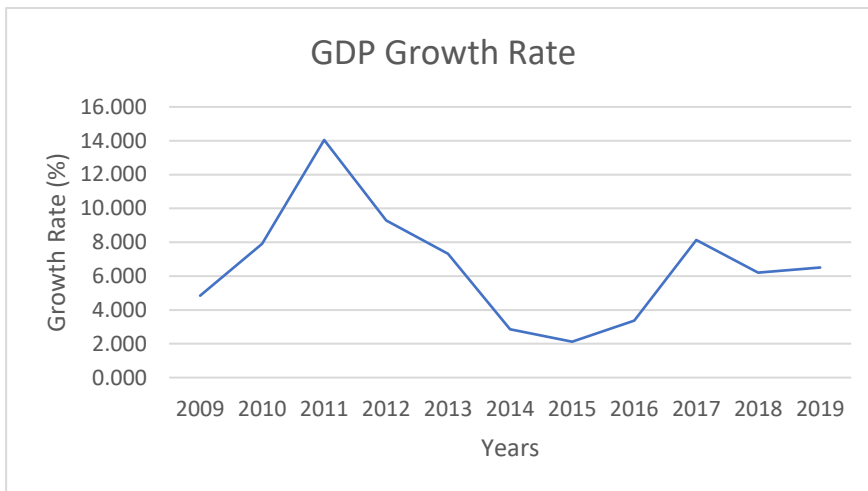


Figure 10a: GDP growth rates, 2009 to 2019

²¹ Source: <https://academic.oup.com/book/40396/chapter/347206880>

With these high growth rates, Ghana's GDP saw an 50% increase in a matter of just four years between 2008 and 2012 from approximately US\$ 30 billion to US\$ 47 billion (at constant 2015 dollars).

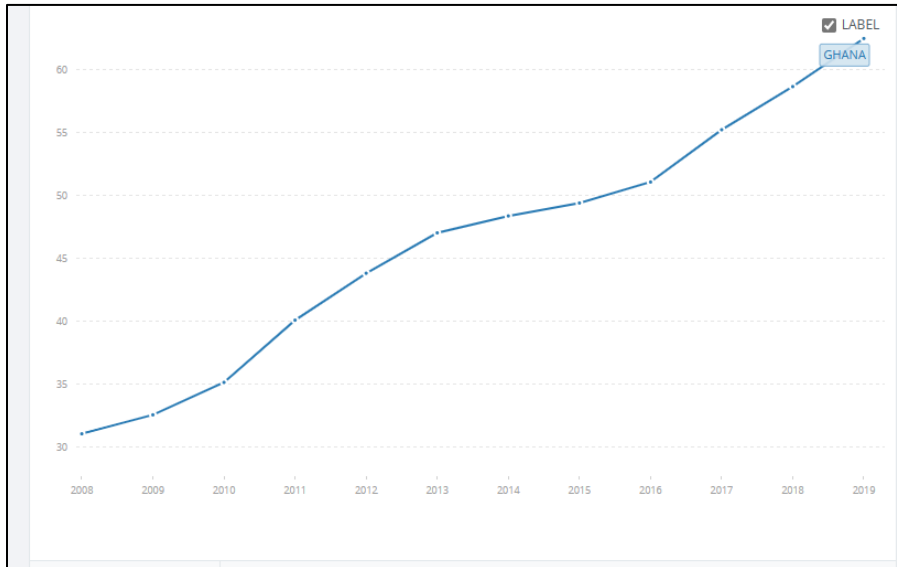


Figure 10b: Ghana's GDP at constant 2015 US\$²²

However, the boom triggered by FDI in the oil sector coupled with the domestic leveraging cycle was short-lived as the FDI inflows as a percentage of GDP fell from 8-9% levels to just 5% in 2013 (see Table 4). Note that the 8-9% levels between 2008 and 2012 were on a growing GDP (denominator) whereas the 2013 figures of FDI as a percentage of GDP was on lower rate of growth of GDP.

The FDI Inflow Slowdown and Domestic Private Sector Deleveraging Cycle, 2012-2015

The figure below shows crude oil prices for the period between 2009 and 2019, the focus years for the paper.

²² Source: [GDP \(constant 2015 US\\$\) - Ghana | Data \(worldbank.org\)](https://data.worldbank.org/SD/GY.GD.KD?locations=GH)

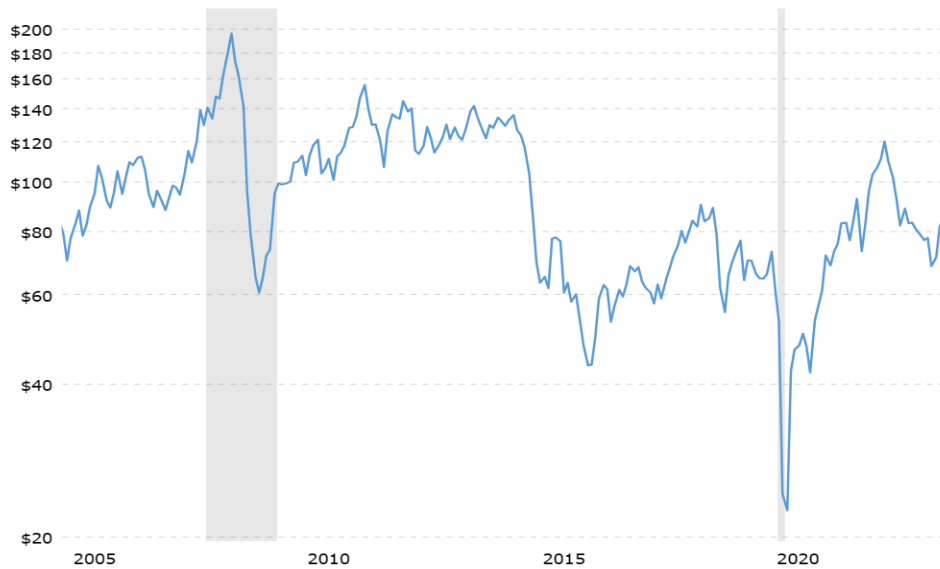


Figure 11: Crude oil prices, 2005-2020²³

It is common knowledge that oil prices are volatile by nature and the figure above illustrates this fact with oil prices reaching extreme highs of almost \$200/barrel and extreme lows of close to \$20/barrel. Around 2011, just at the heights of FDI flows and the domestic private sector leveraging cycle, there was an oil price drop of almost 30% from \$155 (when adjusted for inflation) to \$107 (when adjusted for inflation). This monumental fall triggered a slowdown in FDI inflows and at the same time, induced a deleveraging cycle by the domestic private sector.

As far as we can tell this structural break that appeared after 2011 was sudden, something that was caused by a shock in the oil markets that effectively ruined investment confidence for nearly a decade after. However, even as the investments in oil fell drastically, investments in other sectors domestically improved significantly, especially the housing sector, propelled perhaps because of the high GDP growth that had taken place in the preceding years.

On the domestic leveraging cycle, Table 3 shows that between 2009 and 2011 there was a slight dip in domestic private sector savings but a steady and noticeable rise in domestic

²³ Source: <https://www.macrotrends.net/1369/crude-oil-price-history-chart>

private sector investments. This rise can be attributed in large part to the oil boom and strong GDP growth between 2009 and 2011 that benefitted local industries. However, after the oil price shock there was a lagged whiplash that drove investment down from a high of more than 22% of GDP in 2012 to just above 10% in 2015. Meanwhile, the gradual decline in savings rate as seen in table 3 can be attributed to the strong GDP growth that Ghana was experiencing, resulting in a consumption boom as reflected in the sharp growth in household spending.²⁴

The oil price shock also took a toll on FDI inflows, which had grown from 7.8% of GDP in 2010 to 8.3% in 2012, saw a massive drop to 5.1% of GDP in 2013. Moreover, it must be noted that this decline was also on a slower growth in GDP.

During the investment bubble collapsing one of the more noticeable outcomes was the ‘improvement’ of the current account over time especially after 2014 well into 2019 (Figure 5). This would have been caused because of a decline in FDI inflows and the consequent imports in the oil sector exploration and production.

The exchange rate between 2009 and 2014 had been relatively stable with no wild swings to brew uncertainty (Figure 6). This stability can be attributed to the remittances being a significant aspect of their foreign exchange inflows, which in 2011 saw a rise from a negligible amount to 2% of GDP and remained around that figure until 2015 during the commodity crisis that hit the world with the tanking of oil prices.

²⁴ [Ghana Household Spending - 2023 Data - 2024 Forecast - 2007-2022 Historical - Chart \(tradingeconomics.com\)](https://tradingeconomics.com)

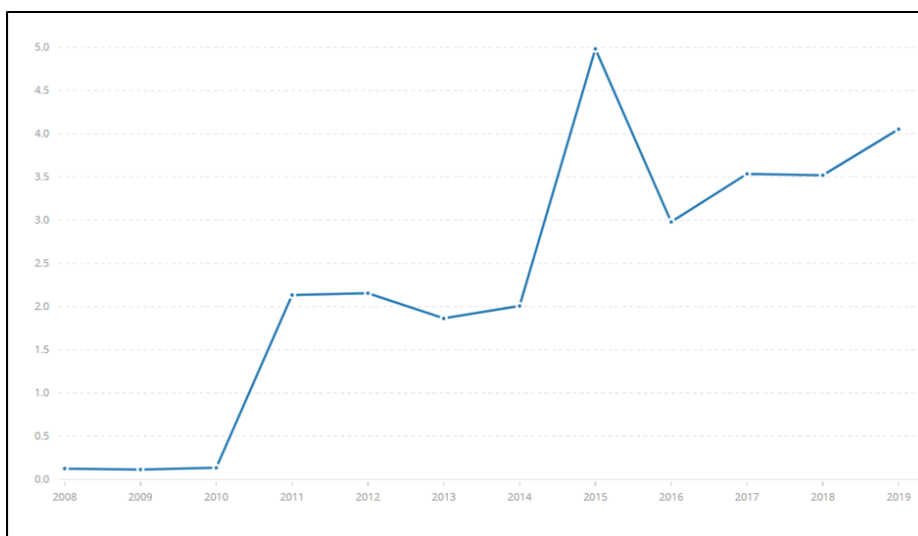


Figure 12: Personal remittances as a percentage of GDP²⁵

Fiscal and monetary policy responses to the GDP growth decline, 2012-2015

Some key observations on the fiscal and monetary policy front can be discerned from an analysis of the SFB equation (Table 1) and template (Figure 2) for Ghana.

First, during the period of high growth between 2009 and 2012, fuelled by large FDI inflows (high CAD) but along with a strong domestic private sector leveraging desire ($S - I < 0$), fiscal deficits remained strong. However, as domestic leveraging cycle began to turn sluggish, and in spite of the CAD decreasing, the Ghanaian government was forced to accommodate the domestic private sector's desire to accommodate net financial assets through increasing fiscal deficits.

Second, the rising fiscal deficits ended up with an increase in domestic government debt to GDP ratio (Figure 13) that must take into account the significantly higher absolute GDP levels (denominator) between 2009 and 2015.

²⁵ Source: [Personal remittances, received \(current US\\$\) - Ghana | Data \(worldbank.org\)](https://data.worldbank.org/SH.UY.CD)

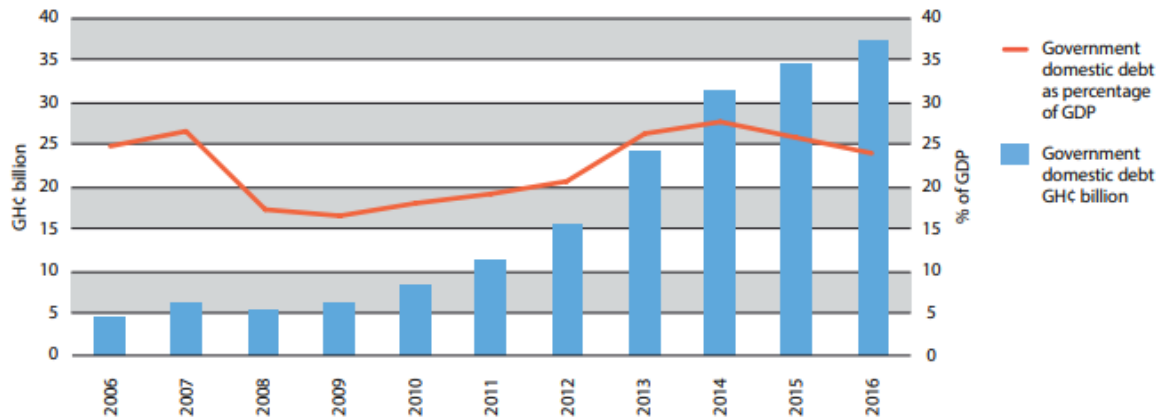


Figure 13: Ghanaian government domestic debt (percentage of GDP and cedi billions), 2006–2016²⁶

Third, depreciation of the cedi after 2012, began to exert pressure on inflation rate (Figure 14) on account of higher cedi-denominated imports), consequently inducing the Bank of Ghana to increase interest rates (Figure 15).

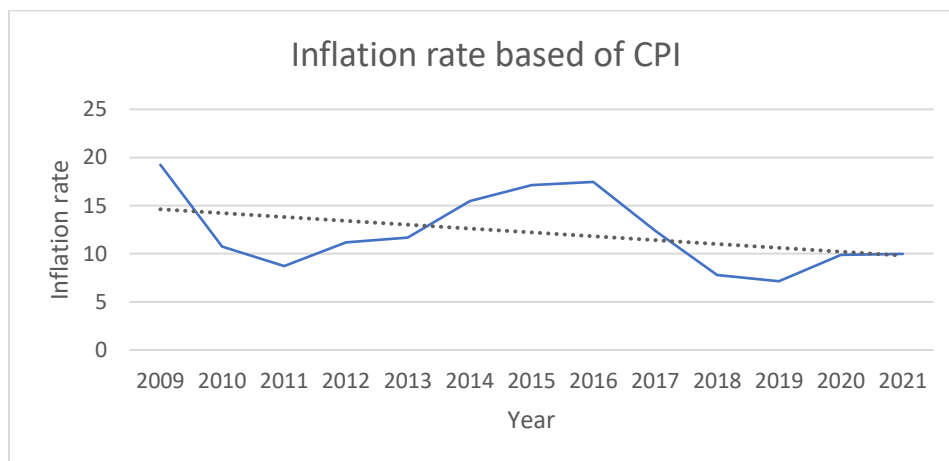


Figure 14: Ghana inflation rates, 2009-2021²⁷

²⁶ Source: [The-fall-and-rise-of-Ghanas-debt_10.16.pdf \(debtjustice.org.uk\)](https://debtjustice.org.uk/wp-content/uploads/2016/10/The-fall-and-rise-of-Ghanas-debt-10.16.pdf) (p. 14).

²⁷ Source: <https://fred.stlouisfed.org/graph/?g=19AC8>

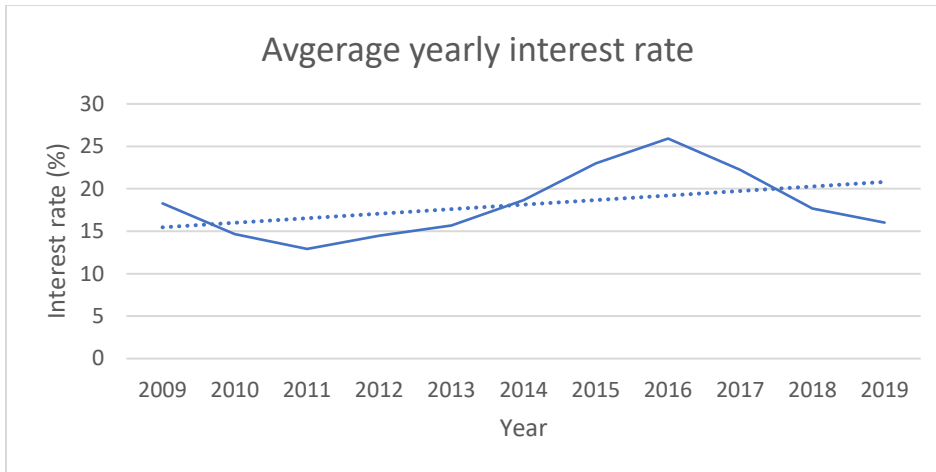


Figure 15: Ghana interest rates, 2009-2019²⁸

The commodity price crisis of 2014-15 and after

The crash in commodity prices, in particular of cocoa, gold and oil, the primary exportables of Ghana (Figure 16) drove the economy close to stagnation with GDP growth rates plummeting to just 2% in 2015. Moreover, the stagnating levels of net FDI inflows and forex inflows from exports pushed Ghana into an external debt crisis (Figure 17). The cycles of borrowing to fix the country, only to borrow again have set in motion the case of a debt trap. A report published in 2016 stated that “Ghana is in a debt crisis. Despite having had significant amounts of debt cancelled a decade ago, the country is losing around 30% of government revenue in external debt payments each year.”²⁹ However, the new loans being taken are being used to pay off pre-existing interest on older loans; in essence it has devolved into a quasi-Ponzi scheme which is tied to its dependence on commodities and lack of complexity in the economy. Nonetheless, debt traps however, are not the sole fault of developing countries like Ghana; rather it is the predatory or pushing of loans by lenders that also accentuates a fall into a debt trap.

²⁸ Source: <https://www.bog.gov.gh/economic-data/interest-rates/>

²⁹ [The-fall-and-rise-of-Ghanas-debt_10.16.pdf \(debtjustice.org.uk\)](#)

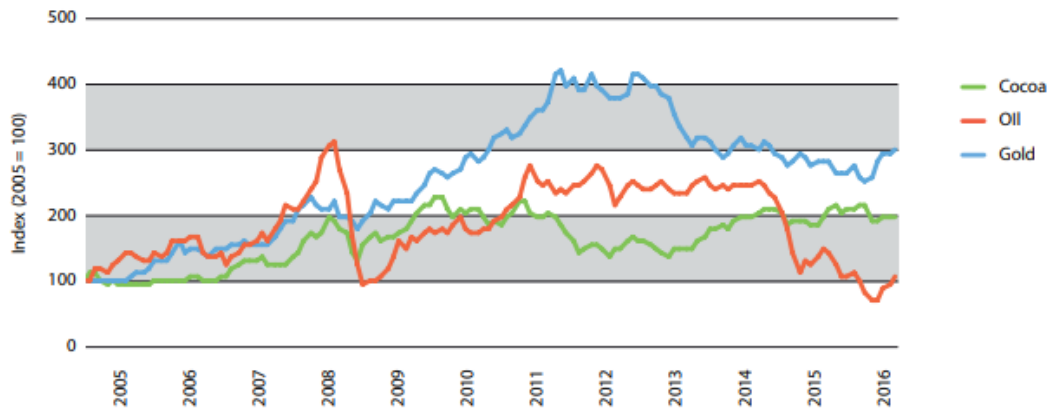


Figure 16: Index of prices for cocoa, gold and oil (2005 = 100)³⁰

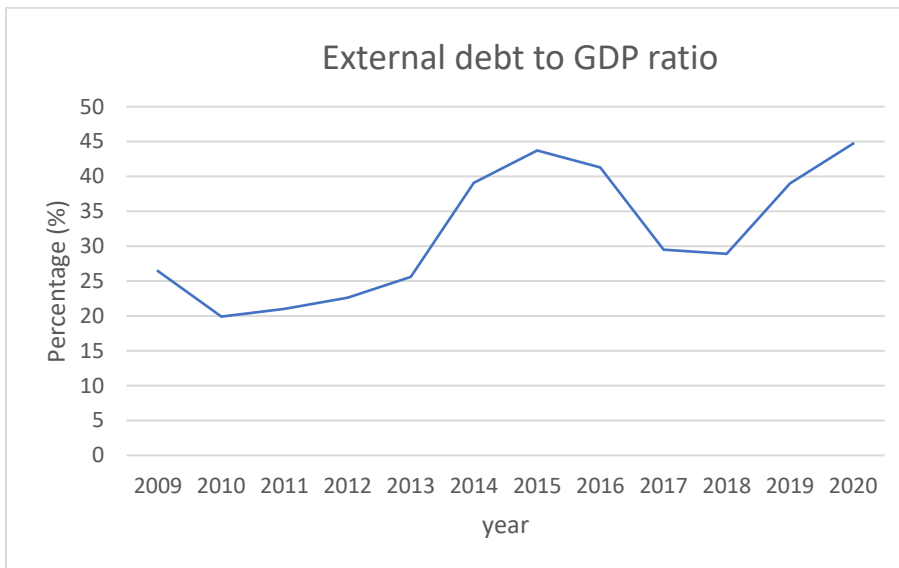


Figure 17: External debt to GDP ratio, 2009-2020

The only compensating source of foreign exchange remittances for Ghana was through inflows of remittances from abroad (Figure 12), which rose to 5% of GDP.

In 2016, Ghana experienced a revival in its growth rates, albeit on a stagnating base. However, a return to the SFB equation (Table 1) and the SFB template (Figure 2) clearly reveals that the growth was induced not because of significantly higher FDI inflows but because of higher government fiscal deficits that accommodated the domestic private sector's desire for net asset accumulation.

³⁰ Source: [The-fall-and-rise-of-Ghanas-debt_10.16.pdf \(debtjustice.org.uk\)](https://debtjustice.org.uk/wp-content/uploads/2016/10/The-fall-and-rise-of-Ghanas-debt_10.16.pdf) (p. 11)

The side-effect of the larger fiscal deficits and stronger GDP growth resulted in higher inflation and a depreciating cedi.

Conclusion

The SFB model paints a relatively clear picture as to how different economic players react to changes in the economic conditions of the country. However, as in the case of a country such as Ghana which encompasses an extensive and complex economic history and equally complex political economy space, it is bound to limit the model.

The limitation is restricting the model to a broad picture analysis, which requires an analysis from various perspectives to understand what situations breed economic instability domestically. This complexity is reflected heavily in the political economy of the country and moreover of the continent transiting from its dark colonial history with to neo-colonialism in the form of dependency as articulated in the works of Ruy Mauro Marini.

Several triggers of the business cycle were identified including FDI inflows, the domestic private sector's leveraging-deleveraging cycle as well as global commodity cycles. A more all-encompassing and in-depth analysis of the Ghanaian economy requires study of data and events at an industry and perhaps even firm-level. However, this lies beyond the scope of this paper, which has served as an *introductory* exploration of the interlinkages between various variables that drove Ghana's macroeconomic business cycle between 2009-2019 using the SFB model.

Acknowledgement:

This research was carried out at the Foundation to Aid Industrial Recovery (FAIR), Bangalore, India. I have drawn extensively from the methodology adopted by FAIR for the several macroeconomic country-studies undertaken by them.