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POLICY BRIEF

DEBT FOR DEVELOPMENT: TOWARDS A MACROECONOMIC SUSTAINABILITY ANALYSIS[1]*

Jacob Assa

"I have found what economics is; it is the science of confusing stocks with flows."
Michal Kalecki (circa 1936)

Key Takeaways

Debt Sustainability Analyses (DSAs) are the most common tool to evaluate the status, causes and resilience of sovereign debt in developing countries. However, DSAs fail at this task as they use microeconomic logic borrowed from private banking practices.

DSAs look at the size of public deficits and debt in a vacuum, using arbitrary thresholds. Instead, a macroeconomic sustainability analysis looks at all three sectoral balances – public, external and private. This is critical since, as public deficits are mirror images of private surpluses (holding the external balance constant), fiscal consolidation will, ceteris paribus, impoverish the private sector and retard growth.

Another weakness of DSAs is their indifference to the function of public spending. A macroeconomic sustainability analysis looks at whether a deficit is productive (e.g. spent on increasing productive capacity), its impacts on unemployment, and inflation. This allows for a more realistic assessment of how specific deficits impact the debt burden (e.g. productive deficits can reduce debt burdens over time).

DSAs also ignore the economic sovereignty of nation states, lumping together foreign currency debt with domestic debt. The former has much greater default and exchange rate risks, while the latter is equivalent to private wealth (as the bonds are owned by domestic people and institutions). A macroeconomic sustainability analysis tracks this difference and recommends 'domesticating' foreign debt by investing in import-replacing productive capacity in key sectors such as food, fuel and fertilizers. As all successful developers have proven, less foreign debt makes for greater resilience to external shocks, while public domestic deficits and debt can be drivers of development and industrialization.

The policy implication of DSAs is usually fiscal consolidation, which can hurt development and even increase the debt burden. By contrast, our macroeconomic sustainability analysis recommends keeping the private sector balance positive, targeting public spending to productive purposes, and minimizing the ratio of foreign to total debt. Senegal's membership of WAEMU and its lack of currency-issuing power somewhat limit the extent to which these policies can be pursued. However, even some progress in these three areas can increase the country's monetary sovereignty and reduce its dependence on foreign financing, making it more resilient and accelerating its structural transformation.

1. Credit, Debt and Development

Debt is as old as civilization itself but is far less understood. It has been around for at least 5,000 years, much longer than commodity money such as gold or silver[2]. Credit and debt are especially important for the process of development. Modern economies are monetary, implying that most production is carried out for sale on markets rather than for self-consumption. An economy therefore needs an additional injection of funds - beyond the current level - in order to grow, either from abroad or domestically. Credit (debt) is therefore a necessary - albeit not sufficient- condition for development[3]. As we will show below, development is also a necessary condition for debt repayment.

The key point of this paper is that looking at debt outside of its macroeconomic and development context contributes to misleading analyses and counter-productive policy prescriptions such as recommending a fiscal consolidation that shrinks the economy faster than it reduces debt, leading to a higher debt burden.

Jacob Assa
New School for Social Research
(assaj401@newschool.edu)

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[1] This policy brief builds on two academic papers: 1) Assa, J., & Morgan, M. (2025). The General Relativity of Fiscal Space: Theory and Applications. Review of Political Economy, 1-35; and 2) Assa, J., & Morgan, M. (2026). The General Theory of Debt Sustainability: A Macroeconomic Approach. Forthcoming.

[2] Graeber, D. (2011). Debt: The First 5,000 Years. Brooklyn, NY: Melville House.

[3] Schumpeter, J. (1934). The theory of economic development. Harvard University Press, New York.

Debt Sustainability Analyses (DSAs) are the most common tool used to assess the trends and risks of debt for developing countries. From their first appearance in the 1990s, however, DSAs have come under criticism for their informational limitations. Part of the problem is that DSAs are based on complex forecasts of growth and discount rate dynamics, which are impossible to predict with any certainty[4]. While price stability or unemployment are easier to define and measure, debt sustainability is more ambiguous and depends on long-term trends of variables - such as growth, budget balances, interest rates, exchange rates - which are themselves endogenous to indicators of debt sustainability[5].

Additionally, the use of thresholds results in information loss, as debt distress risk is assessed as high if just one single indicator of debt burden crosses the threshold. This flaw results in the DSA predicting too many debt crises (type I error), even according to the IMF itself, and thus being too conservative and less accurate than other methods for aggregating debt information[6].

What all the above critiques have in common, however, is that they accept the scope of the DSAs as given (analyzing only debt) and focus on various epistemological and methodological problems, such as information loss, inappropriate aggregation and the reliability of projections. By contrast, in this paper we question the DSAs' ontology, posing the question of 'what' rather than just 'how'. Specifically, what is the appropriate scope for analyzing economic sustainability, and what sectors and dimensions of the economy are relevant?

2. Sustainability of What? A Macroeconomic Critique of DSAs

DSAs look at the debt of nations from a purely financial perspective, similar to how a bank would assess a private borrower. They compare the stock of debt to expected income and apply some threshold to decide if this ratio is sustainable. By definition, this is a microeconomic approach, since the debt of a single borrower (household or firm) will not normally affect the balance-sheets of the rest of the economy.

However, such analysis is inappropriate for assessing sovereign debt, either domestic or external. The spending, taxing and borrowing decisions of governments impact other sectors in the economy, which must be explicitly modelled. Without such macroeconomic analysis, DSAs misjudge sovereign borrowers' capacity to repay their debt, their main purpose. There are three main blind spots in DSAs as follows.

2.1 The Private Wealth of Nations

First, DSAs assess the size of sovereign debt (or deficits) in a microeconomic manner. DSAs use formulas based on debt-to-income ratios taken from banks' assessments of households and firms, an inappropriate method for a macroeconomic analysis of sovereign debt. For example, mortgage lending to households typically assesses the loan to be sustainable if the monthly repayment amount does not exceed 28% of the borrower's gross monthly income[7].

In DSAs, the size of the optimal public balance is usually conditioned on not exceeding a similar threshold, implying a small deficit or primary surplus. The use of such empirical thresholds has been tried and debunked in theoretical macroeconomics[8]. The use of the World Bank's Country Policy and Institutional Assessments (CPIAs) to differentiate debt

[4] Blanchard, O. J. (1990). Suggestions for a new set of fiscal indicators. OECD Working Paper no. 79.

[5] Wyplosz, Charles. (2011). Debt Sustainability Assessment: Mission Impossible. Review of Economics and Institutions, v. 2, n. 3, p. 37, October.

[6] Berg, A., Berkes, E., Pattillo, C., Presbitero, A.F. and Yakhshilikov, Y. (2014). Assessing Bias and Accuracy in the World Bank – IMF's Debt Sustainability Framework for Low-Income Countries. IMF Working Paper, No. 14/48.

[7] This is a liquidity criterion for debt sustainability, but is related to a solvency condition, usually expecting the borrower's income to be at least 25% of the amount borrowed.

[8] A 90% threshold for the debt-ot-GDP ratio was proposed by Reinhart, C. M., & Rogoff, K. S. (2010). Growth in a Time of Debt. American economic review, 100(2), 573-578. It was debunked by Herndon, T., Ash, M., & Pollin, R. (2014). Does high public debt consistently stifle economic growth? A critique of Reinhart and Rogoff. Cambridge Journal of Economics, 38(2), 257-279.

thresholds in the DSAs is another problem[9]. Using CPIAs as the sole criterion for this purpose ignores other critical information such as foreign exchange reserves[10].

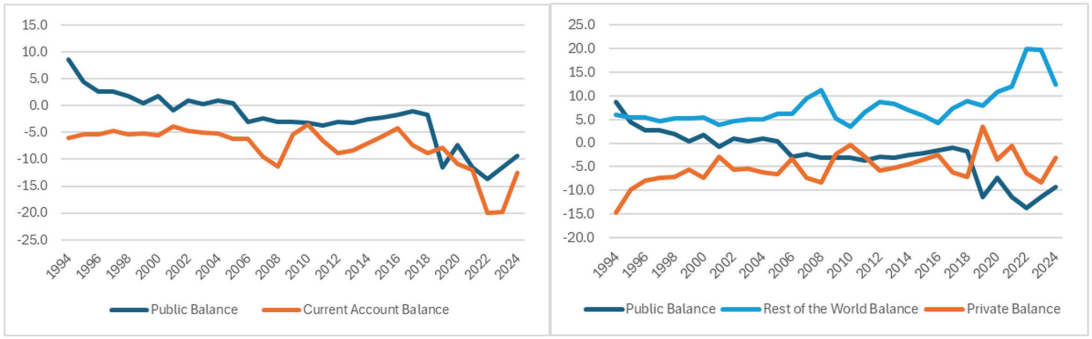
Furthermore, DSAs only look at public and external balances. As the system of national accounts shows[11], the macroeconomic balances of the public, private and external sectors are all related and must add up to zero by definition:

$$(T - G) + (S - I) + (M - X) = 0$$

Looking just at two of the three sectors (the 'twin deficits' lens) not only leaves out the flows and balance sheet of the private sector - the engine of growth and innovation - but also ignores the macroeconomic interactions of different sectors, creating a flow-flow inconsistency. For example, a 1% reduction of public deficits (fiscal consolidation), holding the external balance constant, directly translates to a 1% reduction in private surpluses, but the latter is omitted from the analysis in DSAs. The fact that private profits depend on government deficits as well as the external position is only acknowledged by a few economists[12], but is well known by investment banks[13]. In reality, public deficits create rather than crowd out private liquidity.

Figure 1 shows Senegal's economy using both the standard two-dimensional view and the macroeconomic sectoral balances lens. The former shows an improvement in both the current account balance and the public sector balance since 2022. However, by accounting definition, the private sector deficit has been growing since 2021, as shown in the second chart. In fact, Senegal's private sector has been continuously in deficit for three decades, with the exception of 2019.

Figure 1: Twin Deficits vs. Three Sectoral Balances* for Senegal, 1994-2024



Source: IMF for public and current account balances (as of February 2026), author's elaboration for private sector balance.

* The Rest of the World Balance is the (additive) inverse of the current account balance, and it is used here since all three balances must add up to zero.

Private sector deficits are unsustainable, since unlike domestic or foreign governments, the private sector cannot create net financial assets (bank loans create both an asset and a liability so they cancel out at the aggregate). While net exporters can maintain both a private sector surplus and a public surplus, net importers like Senegal are obliged to run a public deficit larger than their current account deficit to keep the private sector in surplus.

[9] United Nations (2007). Recent Developments in External Debt. Report of the Secretary-General, United Nations General Assembly, New York, NY; Rodrik, D. (2008). Second-Best Institutions. NBER Working Paper, No.14050, National Bureau of Economic Research, Cambridge, MA.

[10] Panizza, U. (2008). The External Debt Contentious Six Years after the Monterrey Consensus. G-24 Discussion Paper, No. 51.

[11] https://unstats.un.org/unsd/nationalaccount/sna.asp

[12] Levy, S. J. (2001). Profits: The views of Jerome Levy and Michal Kalecki. Journal of Post Keynesian Economics, 24(1), 17-30.

[13] Seydl, J. (2024). Is the deficit threat being overhyped? JP Morgan, Economy and Markets, Dec 9. https://privatebank.jpmorgan.com/nam/en/insights/markets-and-investing/ideas-and-insights/is-the-deficit-threat-being-overhyped; Vukovic, Vuk (2012): "The World's most important chart", courtesy of Goldman Sachs, December 14. https://im-an-economist.blogspot.com/2012/12/the-worlds-most-important-chart.html

Historically, rising private sector deficits and debts have preceded recessions and financial crises, as they reduce liquidity and labor productivity. Even the powerful US economy could not escape this macroeconomic logic. As a net importer, each of the seven times the US government tried to run public surpluses (equivalent to private deficits) in its history, they were followed by either an economic depression (six times) or a great recession (in 2008). The latter was not foreseen by most[14] economists - a type II error - because their models focused on public debt to the exclusion of private deficits and debt.

Holding the current account constant, the IMF's aim for Senegal to reach a primary public balance of 2% of GDP implies that the private sector deficit will grow to between 6-7% of GDP. The same logic applies to the aim of raising tax revenues from 20% to 25% of GDP. Tax revenues are a macroeconomic residual, returning (as the word 'revenue' implies) to the government after outlays. Attempting to raise taxes first would only undermine economic growth and end up reducing actual tax receipts back to their current level.

2.2 Dysfunctional Finance

Second, DSAs also ignore the function of debt and deficits, focusing only on their size. Government spending can exceed revenues (creating a deficit) for a variety of reasons. Importing new government cars worsens the external deficit, while hiring new teachers for public schools improves the private sector balance. Excluding the impact of public deficits on the private sector from the analysis creates a serious blind spot, i.e. since the private sector is where most real capital accumulation occurs in a market economy, including innovation, productivity increases, and the building of productive capacity and infrastructure. While DSAs recognise to the need to strengthen the private sector, they provide very little detail. Worse, their recommendations for fiscal consolidation do exactly the opposite – increasing the deficit of the private sector, draining it of money, and preventing real investment, especially by small and medium enterprises which have no foreign financing options.

The lack of real economic variables in DSAs - unemployment, inflation or productive capacity - is problematic beyond its significance for development. The sustainability of public spending and debt cannot be assessed in absolute terms, or even in relation to GDP. It is relative to prevailing macroeconomic conditions. An economy with a high level of unemployed resources can absorb much more public spending without accelerating inflation. Even a fully employed economy can absorb more public spending if it is targeted at expanding productive capacity[15]. It is critical to realize that developing countries face a real resource constraint (low productive capacity) rather than a (financial) balance of payments constraint[16].

Table 1 shows three scenarios for using a domestic public deficit. The first involves cash transfers to the poor. Going beyond the positive social impact (and the progress made towards SDG 1), this public deficit has an equivalent private sector surplus. However, since it stimulates aggregate demand, it could increase inflation if the economy is at full employment and reduce unemployment. The external balance of payments is not affected, assuming that the poor do not spend the extra income on imports. The impact on economic growth is negligible to nil.

[14] Une dizaine d'économistes avaient prédit cette crise ; voir Bezemer, D. J. (2010). Understanding financial crisis through accounting models. Accounting, organizations and society, 35(7), 676-688; et Galbraith, J. K. (2012). Who are these economists, anyway? In Contributions in Stock-flow Modeling: Essays in Honor of Wynne Godley (pp. 63-75). Londres: Palgrave Macmillan UK.

[15] Assa, J., & Morgan, M. (2025). The General Relativity of Fiscal Space: Theory and Applications. Review of Political Economy, 1-35

[16] Sylla, N. S. (2024). Revisiting the foreign debt problem and the" external constraint" in the periphery: An MMT perspective (No. 1067). Working Paper.

Table 1: Differential Macroeconomic Impacts of Public Spending by Function

Function of Public spending	Economic Growth	Inflation	Unemployment	Balance of Payments
Cash transfers	0	+	-	0
Infrastructure	+	+	-	?
Domestic productive capacity (food, fuel, fertilizer)	+	-	-	+

By contrast, spending on domestic infrastructure stimulates domestic economic activity and hence growth. It likewise could put upward pressure on inflation at full employment, or lower unemployment otherwise, and could affect the external balance if it uses imported inputs.

The optimal use of public spending here is the third scenario. It involves building domestic productive capacity in sectors that rely on imports of inelastic goods, such as food, fertilizer, and fuels. Not only does such spending accelerate economic growth, but it also lowers inflationary pressures coming from imports of price-inelastic and necessary goods from global commodity markets. It both stimulates demand and improves the balance of payments. If the resulting growth is faster than the growth in public debt, the debt burden (debt-to-GDP ratio) will decline due to such productive deficits.

This point makes it clear that debt sustainability is a function of macroeconomic sustainability and cannot be evaluated in a vacuum. This is how the US financed its post-WW2 growth, reducing its public debt to GDP ratio from 106% in 1946 to 23% in 1973, demonstrating how productively targeted public deficits and debt are the most reliable (and affordable) route to development.

Finally, and as a result of the above gaps, the economic growth rates projected by DSAs are as arbitrary as the debt thresholds used in them. That is because economic growth is endogenous to private sector balances, changes in productive capacity, and the extent to which it is utilized. Furthermore, even given these real dimensions, it is not possible to say ex ante how a given amount of fiscal spending will affect macroeconomic sustainability. What matters is where the spending occurs, i.e. its function[17].

2.3 Monetary Sovereignty

Third, since DSAs use a microeconomic approach borrowed from banking practices, they also do not sufficiently highlight monetary sovereignty (which only national governments have), and thus the macroeconomic implications of the difference between debt in local and foreign currency. While they show figures for foreign and domestic debt, they add them up together as one aggregate even though they exhibit different dynamics.

Foreign currency debt is similar to household or corporate debt, in that the borrower is a currency user and can default. However, even here there is a difference - foreign sovereign debt leads to currency mismatch and risk of depreciation (not applicable to household or corporate domestic debt).

Domestic debt - in national or regional currency - is different in several respects. First, the government (or the regional bloc it belongs to) issues the currency, so default is less likely. Second, the public domestic deficit by definition equals the private domestic surplus. Thus, reducing the public deficit also impoverishes the private sector. Public domestic debt is also private domestic (or regional) wealth, especially when bondholders are mostly domestic. By contrast, foreign debt enriches external lenders and has a clear colonial history[18].

[17] Lerner, A. P. (1943). Functional finance and the federal debt. Social research, 38-51; Lerner, A. P. (1947). Money as a Creature of the State. The American Economic Review, 37(2), 312-317.

[18] https://www.project-syndicate.org/commentary/conceptual-roots-of-global-south-debt-crisis-by-ndongo-samba-sylla-1-2024-01

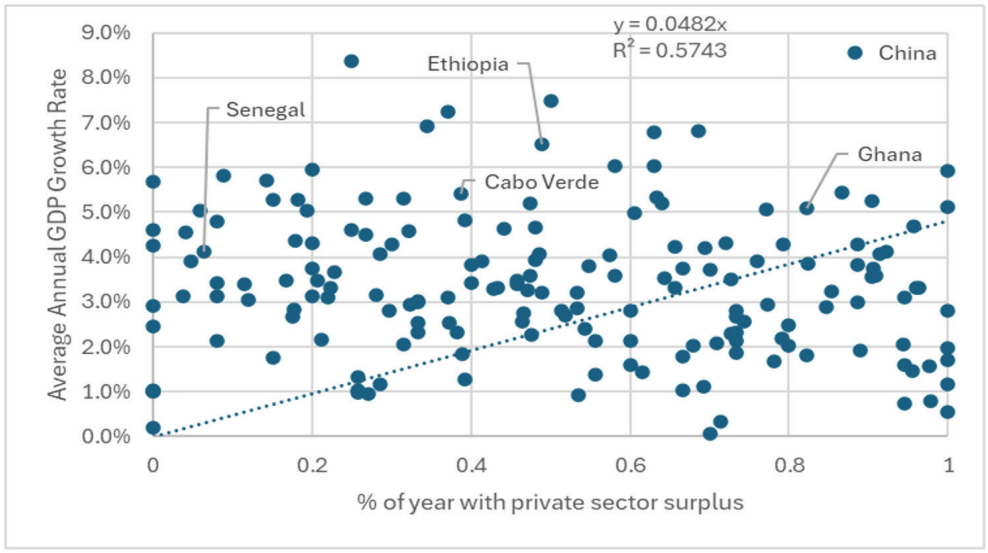
3. The Macroeconomic Sustainability of Senegal

The above analysis makes it clear that debt sustainability can only be assessed as a function of macroeconomic sustainability, not the other way around. For example, whether increasing the deficit by 1% of GDP is sustainable cannot be evaluated in a vacuum but will depend on the size of external and private deficits, the function of the increased spending (consumption, infrastructure, or productive capacity), and which currency is used in the spending.

As shown in Figure 1 above, Senegal's private sector has been in deficit for three decades. Given that it is a net importer, reducing its public deficit to zero would increase the private sector deficit from -3.2% of GDP in 2024 to -5.4% in 2026, and achieving a public surplus of 2% of GDP by 2030 would bring the private deficit to -7% of GDP. Without using any assumptions or projections, theory and history tell us this would retard Senegal's economic growth rate by reducing liquidity, and hence credit, profits, investment and productivity growth.

Figure 3 shows that countries which have a higher incidence of private sector surpluses, ceteris paribus, grow faster than those in frequent private deficits or balanced budgets. Comparing growth to private rather than to public balances avoids the issue of differentiating net importers from net exporters (as the latter can run both public and private surpluses simultaneously as mentioned above).

Figure 2: Average Annual GDP Growth Rate vs. Proportion of Private Sector Surpluses



Source: Authors' elaboration based on WDI data (growth) and sectoral balances data (IMF as of February 2026).

Correlation coefficients of private surpluses to domestic credit to the private sector and labor productivity also show the importance of private liquidity. The two indicators represent the impacts of private sector balances on the demand for and supply of private investment, respectively.

Table 2 : Correlation Coefficients between Private Sector Balance, Domestic Credit and Changes in Labor Productivity

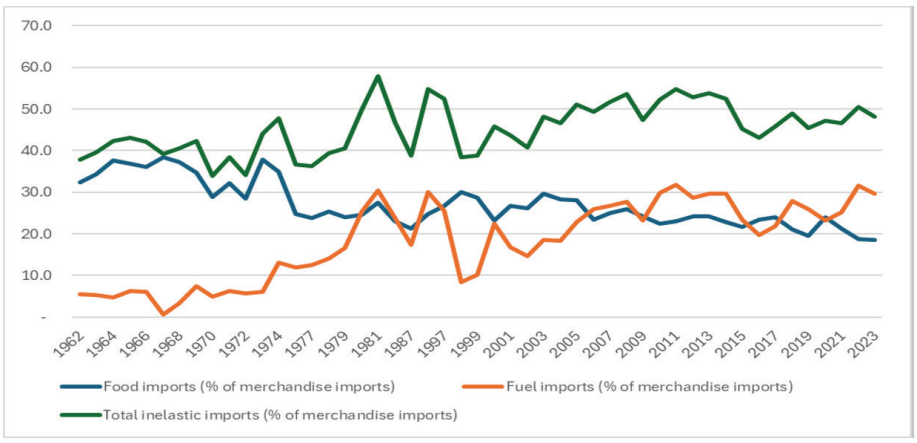
Indicator	Coefficient of Correlation with Average Private Sector Balance
Domestic credit to the private sector	0.3
Change in GDP per person employed (constant 2021 PPP $), 1991-2024	0.73

Source: Authors' elaboration based on WDI data (growth) and sectoral balances data (IMF).

According to Senegal's national statistics office, the unemployment rate in Q4 2025 was 23.3%, clearly unsustainable as nearly a quarter of the economy's productive capacity was not utilized (not even accounting for the informal economy). Combined with a low rate of inflation of around 1%, this clearly shows ample fiscal space for additional spending.

In terms of function, Senegal's economy has a significant dependence on imports of inelastic goods, which leads to shortages of critical inputs as well as pass-through inflation during global periods of instability. Specifically, the combined imports of food and fuel account for more than half of all imports in Senegal. This also drains foreign exchange reserves, which could be otherwise used to pay down foreign debt. Shocks to global commodity markets not only import inflation into the country, but slow down economic growth through higher import volumes (which are a leakage of demand and therefore GDP).

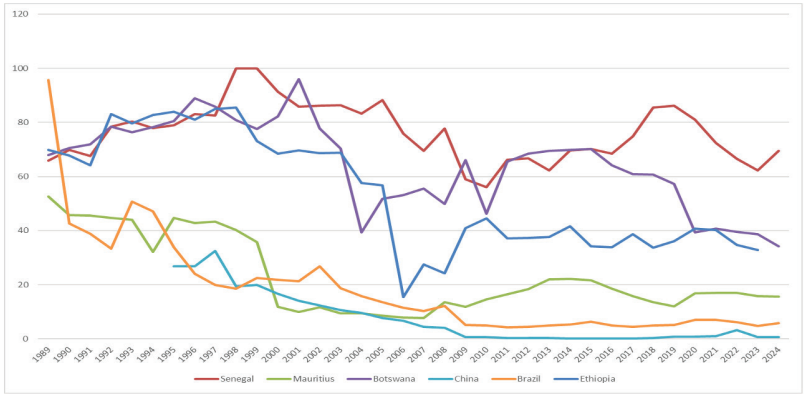
Figure 3: Inelastic Imports as Share of Total Imports, Senegal 1962-2023



Source: World Bank WDI data.

In terms of currency, successful developers reduced their share of foreign to total debt as they grew, strengthening their monetary sovereignty and decreasing their exposure to exchange rate and default risk. Senegal still has more than two-thirds of its debt in foreign currency. While this external debt is largely concessional, with long maturities and low interest rates, it nonetheless drains foreign exchange reserves which could be used to import critical inputs for industrialization, and it also enriches foreign bondholders. While the CFA debt is not strictly domestic either, it is nonetheless a regional currency issued by WAEMU over which Senegal has some influence. And CFA-denominated public debt constitutes the wealth of individual and institutional bondholders in Senegal and the region. However, given that BCEAO's monetary base is tied to net foreign assets, this limits the potential scope of CFA markets.

Figure 4: Foreign Debt as Share of Total Debt, Selected Countries



Source: IMF World Economic Outlook (as of February 2026)

4. Policy Options for Macroeconomic Sustainability

As in medicine, so in economics, different diagnoses give rise to different policy prescriptions. They also come from different points of view with different goals, e.g. paying off debt versus long-term macroeconomic sustainability and development. The above analysis suggests several unorthodox policy paths for strengthening Senegal's macroeconomic sustainability, which in can turn also improve its debt sustainability in the long run.

First, the private sector must be in surplus. That means the size of the public deficit must be greater than the current account deficit. Given the current account deficit of -5% of GDP, the public deficit must be at least -6% of GDP to make private surplus at least 1%. This will boost both liquidity (savings, credit) and productivity of the private sector, and therefore growth.

Second, the function of public spending must be targeted more directly towards increasing productive capacity, especially in food, fuel and fertilizer. This will also enhance growth through both higher output and lower imports, while reducing the current account deficit and pass-through inflation while increasing employment and reducing poverty.

Third, Senegal can follow successful developing countries by 'domesticating' its foreign-currency debt. Domestic public debt will rise as a result of the productive deficits mentioned above, but since the need for imports will decline, more foreign exchange reserves could be used to pay down foreign currency debt. This will gradually reduce the ratio of foreign to total debt, boosting the country's resilience to external shocks, as well as its credit rating[19].

Since Senegal does not have its own central bank, it cannot directly issue the CFA. However, as part of WAEMU, it is a member of the regional central bank that issues the currency. While currency zones do have strengths such as keeping inflation low and stable, they can also constrain policy space, as was the case in the Eurozone after the 2008 crisis.

BCEAO would ideally follow the ECB's example during COVID, committing to doing 'whatever it takes' to support the domestic public debt of its member nations[20]. WEAMU can condition this support on the deficits and debt being used for productive purposes, reducing member states' dependence on foreign currency borrowing, thus supporting Senegal's development as well as increasing its monetary sovereignty. This would be far better than its current sound finance criteria limiting deficits to 3% of GDP and debt to 70% of GDP, which are arbitrary and often self-defeating thresholds as shown above.

The currency system in which Senegal operates constrains some of the above-mentioned policy options. However, monetary sovereignty is not absolute but rather ex-post relative to what public policies are taken[21]. Investing in domestic productive capacity would reduce imports of food, fuel and fertilizers, free up foreign exchange reserves, and allow a decrease in the foreign debt ratio. This would expand fiscal space since the extent of the CFA debt market depends on the net foreign assets position.

Putting macroeconomic sustainability first, both national and regional efforts can accelerate development and make debt more sustainable beyond the short-term. All successful developers, from 18th century Britain to late 20th century China, have followed such policies. Countries that instead pursue austerity as prescribed by DSAs – like Sri Lanka which has endured 17 IMF programs – languish in poverty and do not even reduce their debt burden. The choice is clear.

Audentes Fortuna Iuvat

[19] Both reserves and the share of foreign debt to total debt are part of the sovereign credit ratings methodology.

[20] https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html

[21] hAssa, J., & Morgan, M. (2025). The General Relativity of Fiscal Space: Theory and Applications. Review of Political Economy, 1-35

IDEAS-Africa Network LBG (IDAN)

Accra office: Kwame Nkrumah Complex, Institute of Africa Studies, University of Ghana, Legon, Ghana

reponse@idan.africa

Dakar office: Lot 55-56, Serigne Saliou Building, 8th Floor, Apartment 8A Near the CPI Housing Complex, VDN (Voie de Dégagement Nord)| Dakar, Senegal

+221 33 826 15 40
dakaroffice@idan.africa

IDEAS AFRICA NETWORK LBG IDAN