Nepal's Public Debt: Should we be worried?

1. Introduction

The origins of public debt can be traced back to pre-modern states when it was exclusively used to finance the costs of warfare. Public borrowing was institutionalized (i) after the existence of institutions necessary to issue public debt: towns, cities, states and nations with well defined borders; contract laws recognizing polities as entities capable of borrowing; and ledgers for payment and repayment, (ii) demand for credit by polity with large number of individuals have sufficient wealth to lend to the polity (Eichengreen et al. 2019). States had to lend funds from merchant bankers, temples to support prolonged campaigns.[1] With the emergence of modern fiscal states, the traditional use of public borrowing shifted from wars to public goods. The most prominent example is Britain's industrial revolution which was fueled by the borrowing. The government's debt rose from 5% of GDP in 1700 to over 200% in 1820. Debt contributed industrial revolution by (i) shifting investment from low return investments such as agriculture sector to new, rising ones such as textiles and iron and, (ii) freeing up the labours employed in agriculture sector which lowered the real wages - a boon to industrialists (Ventura and Voth 2015).

The legitimacy of public debt as a policy instrument was established aftermath the Great economic depression of 1929. Classical economists believed that the markets automatically bring necessary adjustments if left freely. However, it didn't happen during the crisis of 1929. The economy nosedived and never came back up again itself. It was because businesses were not investing enough but holding cash or short term securities to earn interest. Hence, government had to intervene by taxing the uninvested corporate income and invest to increase productivity and output. Keynes argued government had to increase spending because private consumption and investment was not enough to increase the aggregate demand during recession. He further argued that people hoard cash because the propensity to save exceeded propensity to invest in recessionary period. He viewed that public debt as a fiscal tool to absorb excessive savings by the public and boost the aggregate demand especially in recession. The Keynesian prescription challenged the two established orthodoxies among economists (i) Laissez-Faire market system resolves all economic problem, (ii) paradigm shift from surplus or balanced budgets to deficit financing.

During the Second World War, countries invested heavily into the industries that produced different goods required for the war. Even after the war, government continued to implement Keynesianism which resulted into long period of growth, slowdowns in 1950s until Keynesian system collapsed in late 1960s. The failure of Keynesian methods didn't stop countries from deficit fiscal policy. Public borrowing had already become opium for countries. Though public debt enabled countries to fund the investments in health, education, and infrastructures,

[1]Greek city states had contracted loans from Temple of Delos during the period 377-373 B.C. In Late Medieval Europe, Italian bankers provided loans to Edward III during the Hundred Year's War (1337-1443).

the continued accumulation of debt increased the fiscal vulnerabilities and sovereign debt defaults.[2] The growth of debt in both developed and emerging economies has worried economists, investors and policymakers amid the global shocks such as 2008 financial crisis, COVID 19 pandemic, and rising geopolitical tensions.[3] As per IMF Global Debt Monitor Report 2025, the global public debt has reached 92.8 % of GDP while Global Total Debt stands at 235.5% of GDP (including private debt). In most of the advanced economies, the public debt has sharply risen after the financial crisis of 2008 (See Appendix 1).

Nepal has not remained immune to this global trend. The rapid rise of public debt of Nepal has worried the policymakers, bureaucrats, economists and the public like. Public debt to GDP ratio was around 15-20% of GDP pre-earthquake period has reached 44% in 2025. The public debt is continuing to grow due to resource gap. Increased recurrent expenditure after the federalism, stagnant revenue growth, financing infrastructure projects have increased the country's financial needs. Though Joint World Bank - IMF Debt Sustainability Analysis, 2024 of Nepal showed low risk of debt distress with strong debt carrying capacity, the issue of rising public debt periodically resurfaces in public discourse, and is often criticized due to the lack of return on debt. The concerns of debt sustainability have risen following the debt crisis in Sri Lanka and Pakistan fearing Nepal's similar fate. The question is how does a country that culturally dislikes debt has reached this stage where the debt per capita is a national concern. This essay discusses: (i) Theoretical foundations of public debt sustainability, (ii) Situation and drivers of Nepal's public debt, (iii) Nepal's fiscal policy reaction to rising debt.

2. Theoretical Foundations of Public Debt Sustainability

David Hume was one of the earliest contributor to understand public debt. In *Political Discourses*, he argued public debt to be dangerous and unsustainable that weakens the state. He criticized the modern state for mortgaging the public revenue and relying on future generations to pay of their ancestors debt. The taxes levied to service the debt could harm the economy and social welfare through (i) reducing the incentives to invest, innovate, and thus production weakens, (ii) rise in the labour cost as labours demand higher nominal wage to maintain their real income which would ultimately affect production, (iii) burden is disproportionately shouldered by poor households because of regressive nature of tax. He provided stark warning about the sustainability of public debt and that could ultimately destroy the nation. He states "I must confess…….neither this nor any future ministry will be possessed of such rigid and steady frugality,……It must, indeed, be one of these two events; either the nation must destroy public credit, or public credit will destroy the nation" (p.94).

Like Hume, Adam Smith was skeptical about public debt. In *Wealth of Nations, Book V, Chapter III: On the Public Debts*, Smith explained that public debt arises due to failure of

[2]Sovereign Debt defaults of Russia in 1998, Argentina in 2001

[3]On a conversation with Greg Fleming, CEO of Rockefeller Capital Management at the 2025 Forbes Iconoclast Summit, Fleming argued that US treasury market serves as global benchmark. If international investors begin to question America's fiscal trajectory, foreign demand for treasuries can drop sharply that's when the real pressure starts.

frugality of states. He called a "commercial country" that spends a large part of revenue in purchasing luxuries, a shift from earlier states that used to practice parsimony. Absence of frugality in time of peace, the state has to borrow in times of war or emergencies. Smith argued that this same commercial country that creates need for the debt also provides means to borrow it. A commercial country abound with merchants and manufacturers have large sum of fund to lend to the government. The trust towards the government and the liquidity of the government securities encourages them to lend excessively. Smith viewed that this change in hand of financial resources from merchants and manufacturers to the government diverts productive capital into unproductive uses. He viewed that sinking fund government created to pay old debt, facilitated accumulation of new debt. He further argued that government imposes taxes to service the debt,which remains even after the end of the war. He reached similar conclusions to that of Hume, eventually the enormous debts would ruin all great nations.

David Ricardo was the first to discuss government debt neutrality[4] and intergenerational distribution of debt burden (Reinhard and Sturm 2008). Ricardo in *Funding System*, emphasized expenditures (war) financed through borrowing would shift the burden of higher taxes to future generations. He argued that current expenditures should be matched by current taxation, not through debt. He claimed people would try to save the whole cost of war from current income because of war taxes, preserving national capital. But they would only save the amount of interest with government debt, diminishing national capital. About Sinking fund, he called it an instrument of mischief and delusion that would make no progress in the reduction of debt. It would only provide a false sense of relief to the public about government debt. Hume, Smith and Ricardo viewed public debt to be unsustainable in the long run.

After the depression of 1929, Keynes prescribed the use of fiscal policy to maintain a certain level of public investment during the depression. He was supportive of governments borrowing to invest [5]. Domar (1944) introduced the first mathematical analysis of public debt sustainability by introducing debt to GDP ratio. He challenged the fear posited by Ricardo, Smith and Hume that continuous borrowing would require ever higher tax rates to service the debt which eventually destroys the economy. He showed mathematically that sustainability of debt depends on growth rate of national income. Debt burden is stable if the national income grows exponentially (See Appendix 2).

Buiter (1983), Blanchard (1985) and Hamilton and Flavin (1985) introduced government budget constraint. Hamilton and Flavin (1985) used the government borrowing constraint to test if governments could run perpetual deficits on US post war data (See Appendix 3). They rejected the idea that governments could run permanent budget deficits because creditors would expect the government to balance the budget in the long run. Trehan and Walsh (1988) operationalized the IGBC using cointegration test.They argued that government's expenditures (inclusive of interest), tax revenue and seignorage should be cointegrated for government's budget to be balanced in present value terms. Unlike Hamilton and Flavin

[4]Government Debt neutrality was later called the "Ricardian Equivalence theorem", analytically derived by Barro (1974).

[5]https://www.weforum.org/stories/2019/06/keynes-john-maynard-economics-government-spending/

(1985), they argued that stationarity of the net of interest deficit is neither necessary nor sufficient for intertemporal budget balance.

Bohn (1995) claimed that IGBC tests that discount future primary balances at risk free rate would only hold if (i) private agents are risk neutral, (ii) perfect foresight i.e. no uncertainty, (iii) primary fiscal balances are uncorrelated with future marginal utilities of consumption. Instead, he focused on using stochastic discount factor (marginal rate of substitution of consumption). In stochastic, risk averse economy, IGBC has covariance term. Discounting primary balance at risk free rate is only correct if this covariance term is 0 (See Appendix 4). A sufficient condition for IGBC to hold is for a linear fiscal reaction function (FRF) to have positive and significant response of primary balance to outstanding debt (Bohn 1998).

In non-stochastic economies, the governments could issue debt and roll it over forever when the interest rates are lower than the growth rates (Blanchard and Weil 2001). However, actual economies are stochastic so, it is misleading to compare average riskless rate with the growth rate to study the whether governments can rollover debt. Blanchard and Weil (2001) showed ponzi games might be infeasible even when average riskless rate is less than the growth rate, while feasible when riskless rate is greater than the growth rate. The government is able to play Ponzi game if bonds provide insurance and require low rate of return.

Most of these past studies focused on the discount rate, present value of debt, growth rates to study the debt sustainability. Kraay and Nehru (2003) argued that institutions and policies of an economy can determine the probability of debt distress of that economy. They found that low income countries are more likely to experience debt distress because of poor quality of institutions, policies and political instability. IMF introduced Debt Sustainability Framework in 2002 to detect, prevent and resolve potential debt crisis (Barkbu et al. 2008). IMF Debt Sustainability uses Country Policy and Institutional Assessment (CPIA) ratings, macroeconomic variables, debt structure - maturity, interest rates, concessionality to assess the probability of debt crisis of an economy.

3. The Public Debt of Nepal

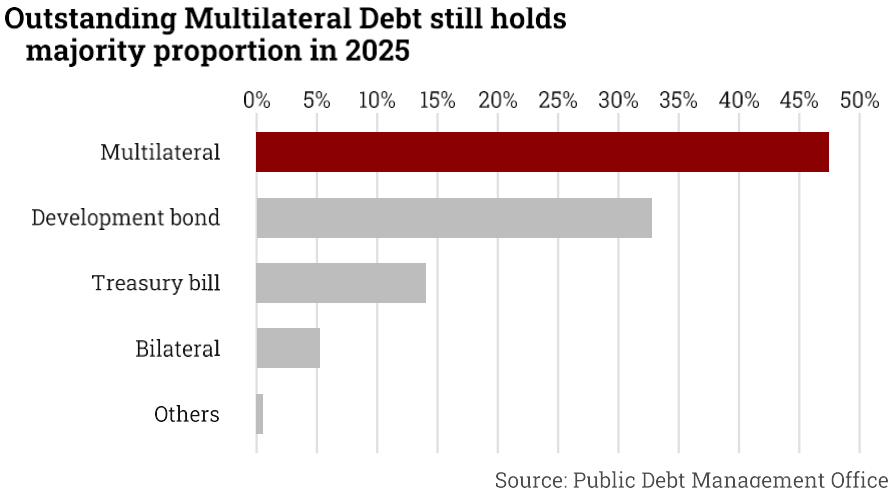
Nepal's formal history with the public debt began only in 1962 unlike the countries in the west. The lack of fiscal discipline coupled with the failure of public enterprises[6] resulted into the large increments in the public debt in following years. Debt to GDP ratio went from 4.9% in 1975 to 60% in 1990. Due to heavy burden on debt, Nepal government with the assistance from World Bank implemented Structural Adjustment Programs (SAP) in mid 1990s. One of the major objective of SAP was to introduce fiscal austerity and privatization of PEs to address the growing debt burden. The rapid accumulation of debt was under some control after the implementation of the SAP but it didn't quite decline. One reason was due to the start of Civil War in 1996. A relief to Nepal during this period was most of the public debt was

[6]The first five year plain in 1956 promoted the establishment of public enterprises. The number grew rapidly from 8 in first plan period (1956-61) to 63 in the Seventh plan period (1985-90). Weak corporate governance, poor performance and inefficiency of PEs created burden on the budget leading to larger budget deficits (K.C., 2008).

external-concessional financed loans. After the Comprehensive Peace Agreement in 2006, the public debt declined reaching 22.4% in 2015 from 50% in 2006. But this declining trend of public debt has reversed its course again. Why is this happening? Is Nepal really in trouble as portrayed by medias? This essay discusses these questions in next section.

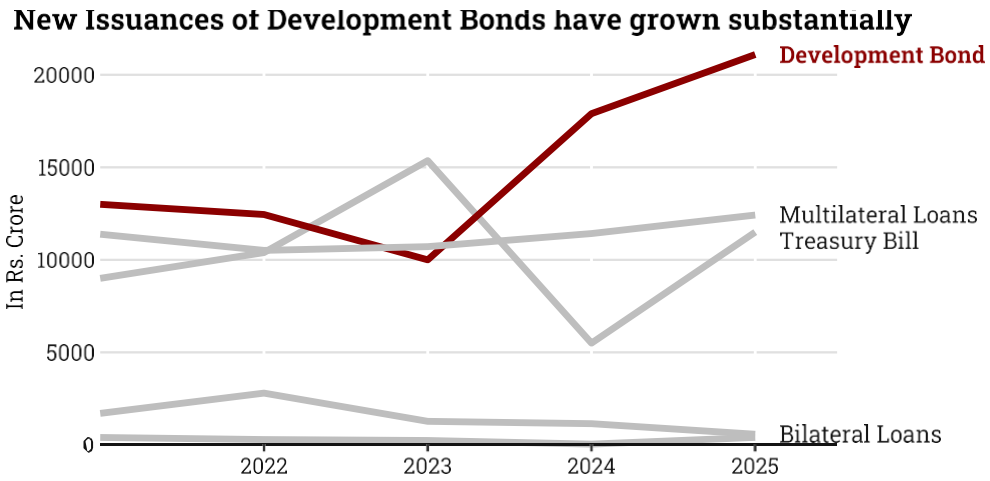
3.1 Public Debt in 2025

Nepal's public debt has remained at 43.79% of GDP i.e. Rs. 243,850.41 crore in 2025 as per Public Debt Management Office (PDMO). It has grown by 9.7% than the previous year. Of the total outstanding debt, 47.5% of the outstanding debt is internal borrowing while rest is external. External debt is composed of multilateral (90.09%) and bilateral (9.91%) financing while internal debt includes development bonds (69.17%), treasury bills (29.73%), citizen saving bond (1.06%) and foreign employment saving bonds (0.04%). The share of internal debt has grown in recent years. Between 2010-2015, the share of outstanding internal debt was between 30-35% which has reached approximately 48% in 2025. Even with the growing internal borrowing, share of outstanding external multilateral debt in total outstanding debt is approximately 45%. International Development Association - World Bank (49.09%) and Asian Development Bank (33.07%) are the largest multilateral creditors while Japan (4.1%) and India (2.67%) are the largest bilateral creditors for Nepal.



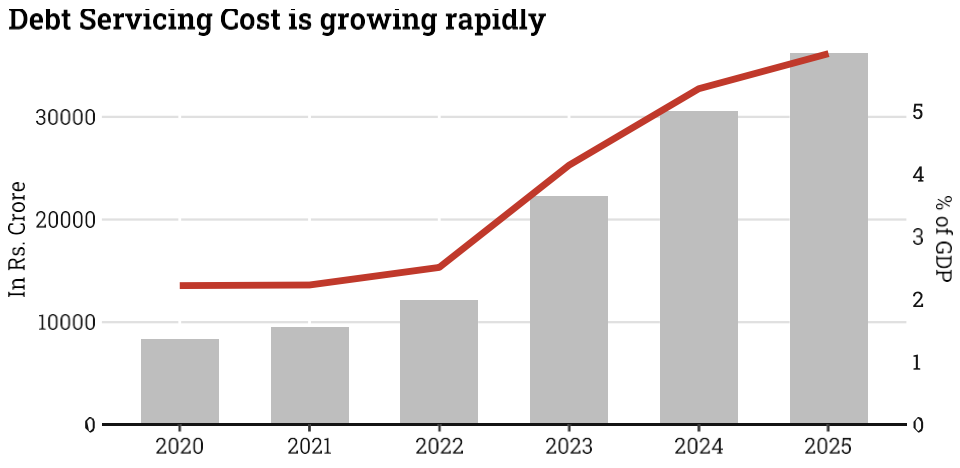
With the reduction in foreign aid, grants and concessional loans[7], development bonds have been a favorite financing tool for the government. The government issued development bonds worth Rs. 21,095 crores which is approximately 45% of new loans taken in 2025. While loans from multilateral partner in 2025 accounts for 27% of total new issuances.

[7]Foreign aid dropped to Rs 113 billion in FY 2024/25 from 174.18 billion in FY 2021/22.



Source: Public Debt Management Office

The debt servicing costs have been increasing in recent years due to growth in the volume of public debt. The debt servicing costs was only 2.51 % of GDP in 2022 has increased to 5.92% of GDP in 2025. In 2025, Nepal made payment of Rs. 36,164.66 crore (principal and interest) to creditors. Of this total payment, approximately 84% went to domestic creditors while rest 16% to external creditors. The average interest rate of domestic borrowing stands at 3.83% in 2025 dropping from 4.88% in 2024.

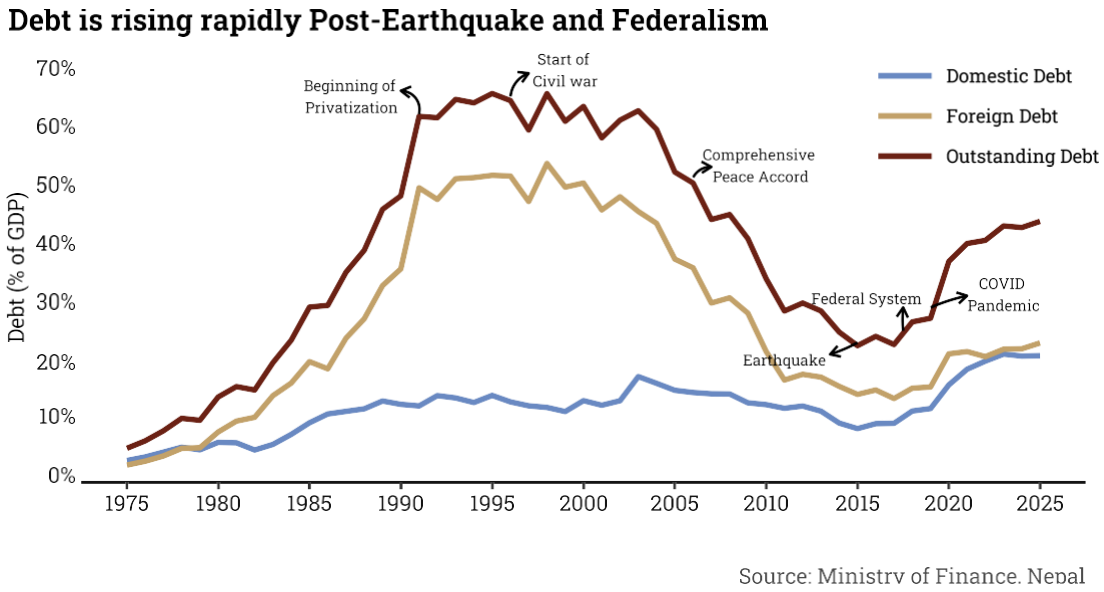


Source: Public Debt Management Office

3.2 The Growing Debt is scaring Nepalese. What are the drivers?

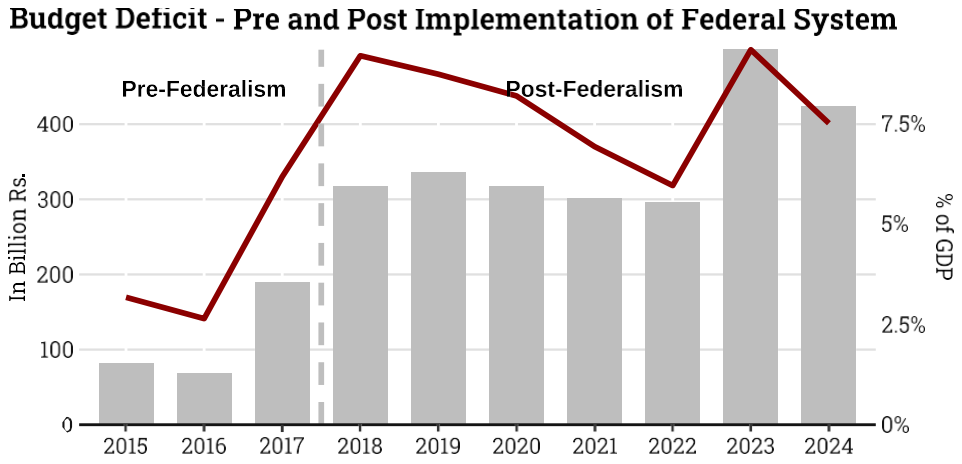
Reconstruction after the earthquake of 2015 is an important driver of growing public debt. Debt hovered around 20-25% during pre-earthquake period. The average growth rate of debt was 5.33% between 2010-2015. After the earthquake in 2015, Nepal required huge funds for reconstruction. National Planning Commission's Post Disaster Needs Assessment estimated losses of US $7.1 billion. NPC had estimated Rs 669 billion funds initially which was later increased to Rs 837 billion by the government in Post Disaster Recovery Framework, 2016. Nepal took 700 million USD from the World Bank for earthquake reconstruction between

2015-2020. The average growth rate of outstanding debt increased to 21.6% between 2016-2020.



Source: Ministry of Finance, Nepal

The implementation of federal system of governance in FY 2017/18 is another driver for growing debt. The formation of new sub-national governments - 7 provincial and 753 local governments have led to sharp rise in the recurrent expenditure. The inter-governmental transfers from federal to sub-national governments and duplication of expenditures by federal and sub-national governments due to the ambiguity on the jurisdiction on concurrent functions have increased government expenditures (World Bank 2021). The budget deficit increased from 6.17% (of GDP) in FY2017 to 9.18% in FY 2018. Likewise, recurrent expenditure increased from Rs 5.2 kharab in 2017 to Rs. 6.9 kharab in 2018.



Source: Economic Survey, MOF

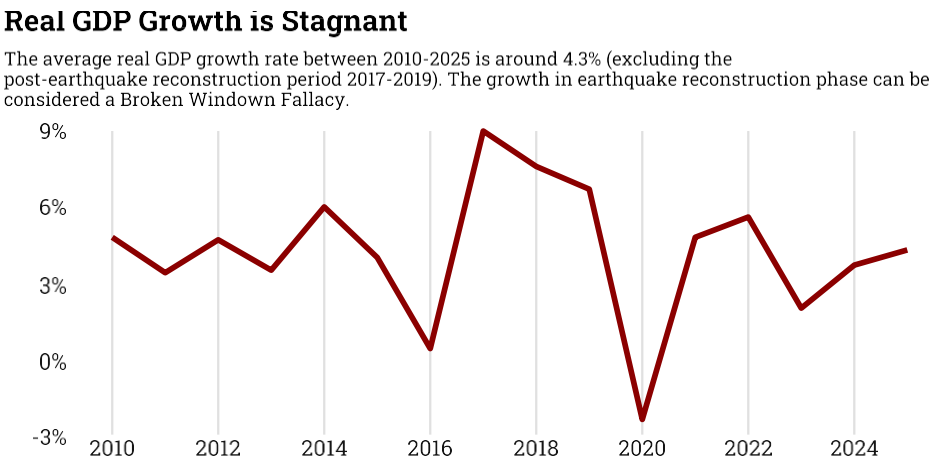
The increase in the social security expenditure has contributed to the sharp rise in government expenditure. Constitution of Nepal 2015 envisions the welfare state. The government expenditures have increased in social security allowances, pensions, health benefits. Old-age

allowances have become a tool for political leaders to sway the voters in their favour (Dahal and Kharel 2024). From 2015-2024, the social security expenditure has increased at an average growth of 19.4%.

Populist fiscal stance of political leaders is another major cause for increasing unnecessary government expenditure. Governments have brought inflated budgets in successive fiscal years with projects especially in the electoral areas of influential political leaders. Two problems with inflated budget. First, revenue collection targets are often inflated which usually falls below targets - only 83% of the revenue target was met in FY 2024/25 according to FCGO. Second, inclusion of populist programs and development projects increases government expenditure that must be financed through borrowings. Finance Minister Rameshore Khanal scraped 1,000 fragmented projects worth approximately Rs. 110 billion from FY 2025/26 budget. Poor project planning and implementation coupled with weak capacity of contractors have led to cost and deadline overruns of majority of infrastructure projects further straining on country's economic resources. For example, Sikta Irrigation project initiated in 2005/06 had to be completed by 2014/15 at estimated cost of Rs 12.8 billion (after first revision) has yet to be completed in FY 2026. The project is estimated to be complete in FY 2032/33 at cost of Rs 52.89 billion.

3.3 Joint World Bank - IMF DSA concludes low level of debt stress risk. But why so much questions around debt?

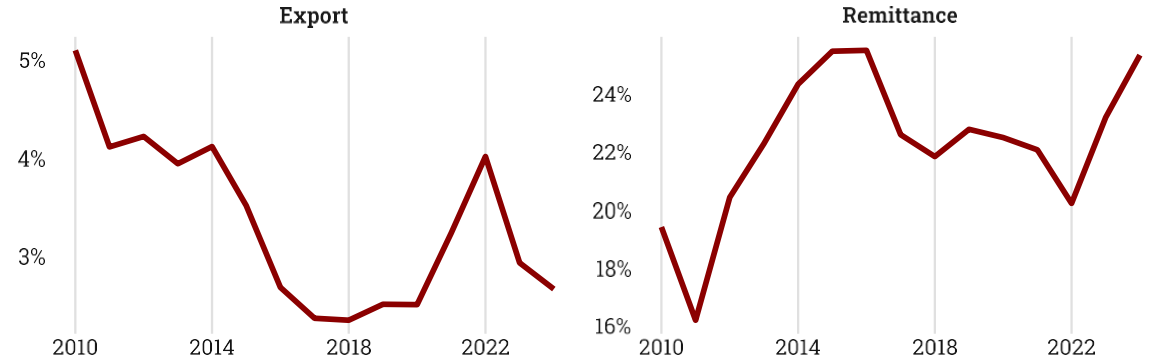
The latest Joint Nepal-World Bank-IMF Debt sustainability analysis conducted in 2025 have concluded low level of debt distress risk for both overall debt and external debt. Still public is worried if Nepal will eventually meet Sri Lanka's fate with current debt trajectory. Often "Nepali ko taukoma …… yeti rin ko bhari.." comes up in Nepali news media. The question is legit because people have not felt real change and the return of debt has been minimal. The economic growth have been stagnant in the last decade though the stock of public debt has risen significantly. The allocation of budget for capital expenditure has fell below the debt servicing expenditure in recent years. In FY 2024/25, government allocated 19.74% of budget for financing provision while 18.94% for capital expenditure.



The questions regarding public debt are further fueled by governance issues particularly in majorities of infrastructure projects. With stagnant revenue collection (has hovered between 20-25% in period 2020-2024) and rising expenditure, poorly planned projects strain on the country's valuable financial resources. Scandals of fund mismanagement and abuse of authority in various projects surfaces from time to time.[8] Such scandals not only undermine the trust of public towards state institutions but also raise questions towards the effective utilization of public funds. Rent seeking behaviour of contractors, inflated project costs along with politically motivated project selection have reduced the marginal returns of public debt. Some examples, (i) a 12-member committee led by Rajendra Lingden concluded irregularities and corruption of around Rs 14 billion in the construction of Pokhara built with the soft loans of $215.96 million from China EXIM Bank International,[9] (ii) CIAA, after a five year long probe on the procurement of two wide-body Airbus A330 jets by Nepal Airlines Corporation alleged corruption in the procurement process leading to loss of Rs. 1.47 billion to the country, (iii) Damak Viewtower initiated by KP Sharma Oli, built at approximately Rs. 1.45 billion have remained unused till February 2026. These cases are only the tip of iceberg that highlight the reality of use of public funds. Beyond these, many projects and programs are infected with procurement irregularities and governance failure that creates substantial fiscal burden.

A critical element of external debt sustainability is the ability of an economy to earn foreign currency. Nepal's external sector has performed poorly in the past. Exports have remained very low over the last decade averaging 2.99 % of GDP in period between 2014-2024. The country has relied heavily on the remittance inflow to earn foreign currency. Scholars are worried that Nepal's reliance on remittance for foreign currency can be a structural vulnerability to the country's debt sustainability framework, if any disruptions happen to the remittance inflows. Risks are further multiplied by the changing geopolitical dynamics and escalating tensions in the middle east where large numbers of Nepali's migrant workers are employed, can pose risks to the stability of remittance flows.

Export and Remittance as Share of GDP



[8]Nepal scored 34 out of 100 on Corruption Perception Index 2025 that is below the global average of 42 indicating high level of corruption.

[9]https://kathmandupost.com/national/2025/04/18/billions-embezzled-in-pokhara-airport-works-probe-finds

Another growing concern is growing cost of debt as Nepal is likely to be graduated from LDC category to developing nation in 2026. With rise in per capita income of the country, Nepal's could potentially face lower grant receipts and concessional loans (Dahal and Kharel 2024). The drying up of concessional financing can be in form of higher borrowing costs and shorter repayment periods (National Planning Commission 2024). World Bank hiked the interest rate from 0.57% to 1.5% while reducing the loan repayment period from 40 years & 38 years to 30 years an early indication of effect of LDC graduation on financing.[10] Even though LDC graduation is not often considered a precondition for development finance by bilateral donors, countries like Japan, the Republic of Korea and Germany use LDC status as factor of ODA support implying LDC graduation can influence bilateral financing (National Planning Commission 2024). The reduction in grants and concessional loans from bilateral and multilateral donors means the government has to either accept external loans at higher cost or issue on internal bonds. In case of internal debt, the government could be tempted to seigniorage financing thereby introducing inflationary risks.

3.4 Is Nepal's fiscal policy reacting to the rising public debt?

The question of probability of debt distress of Nepal has been answered by World Bank-IMF Joint Debt Sustainability Study of Nepal for now. This section focuses on how the fiscal policy is reacting to the growing public debt of Nepal by replicating Henning Bohn's fiscal reaction model.[11] Bohn's fiscal reaction function analyzes whether the government increases primary surplus in response to increase in public debt. The fiscal reaction function is

$$pb_t = \alpha + \rho_1 d_{t-1} + \rho_2 Z_t + \epsilon_t \quad (1)$$

Where, pb_t is primary balance at t, d_{t-1} is debt to GDP ratio at $t-1$, Z_t includes non-debt determinants of primary surplus - temporary government spending (GVAR) and cyclical variations in output (YVAR).

In equation (1), $\rho > 0$ implies the government increases primary surpluses when debt rises. But what happens when the debt is high? To explain how governments respond to primary deficits when the debt is high, Bohn (1998) regressed primary balance with the higher powers of d_{t-1}. Because cubic term and higher order of d_{t-1} are statistically insignificant as showed by Bohn, the study won't employ those terms. Further, I extend the Bohn's model by adding remittance to GDP (Remit) variable to study the fiscal policy reaction for Nepal. Two reasons: (i) remittance fueled consumption increases VAT and import duty (ii) remittance is primary source for earning foreign currency that help the country service external debt obligations despite huge trade deficits.

$$pb_t = \alpha + \rho_1 d_{t-1} + \rho_2 {d_t}^2_{-1} + \rho_3 Z_t + \rho_4 Remit + \epsilon_t \quad (2)$$

[10] https://theannapurnaexpress.com/story/56542/

[11] This study uses data from 1976 to 2025. Temporary Government Spending and Output gap has been calculated using hp filter. The analysis can be obtained from https://github.com/Roshann-Rai/Henning-Bohn-model---Nepal

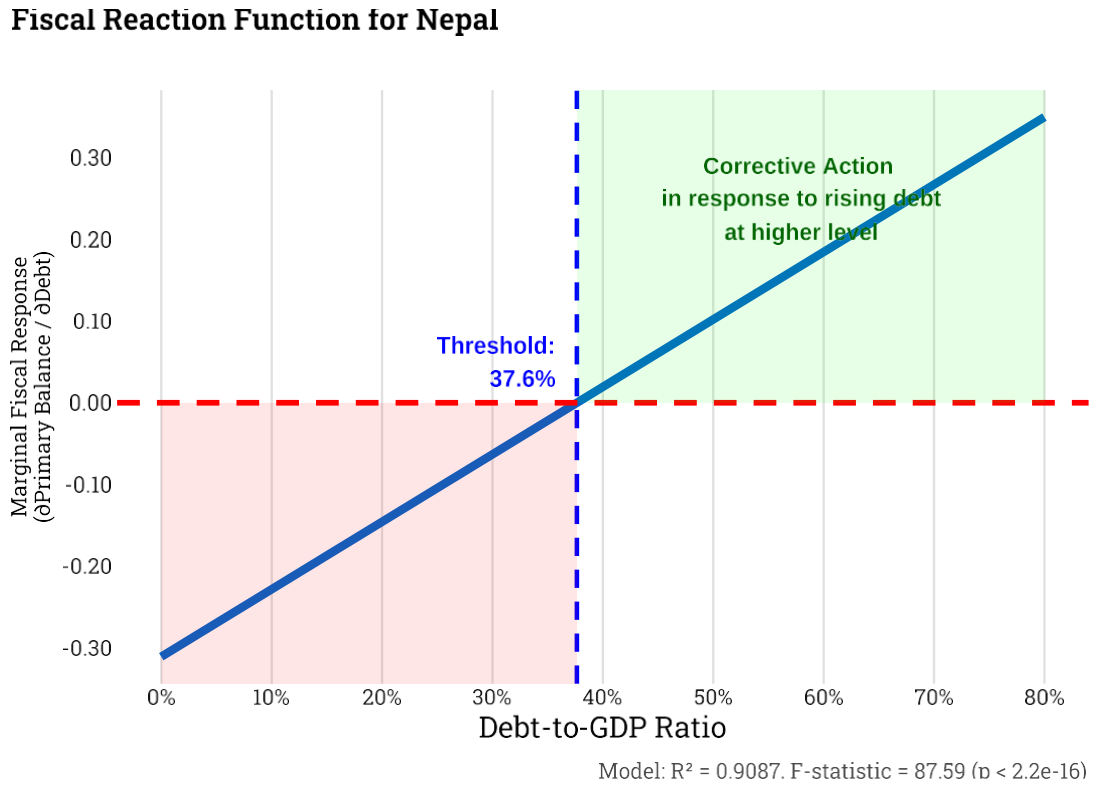
Table 1: Nepal's Fiscal Reaction Function

Variable	Coefficient	Standard Error	OLS t-stat	NW t-stat	p-value
(Intercept)	-0.0460758	0.0060379	-7.631	-9.738865	1.37e-09
d_{t-1}	-0.3109446	0.0436253	-7.128	-10.260595	7.43e-09
d_{t-1}^2	0.4129780	0.0573176	7.205	10.430427	5.73e-09
GVAR	-0.7202260	0.0831340	-8.663	-9.762221	4.59e-11
YVAR	0.0011598	0.0008136	1.425	1.695464	0.161
Remit	0.3214525	0.0184177	17.453	20.458544	< 2e-16

[a] Note: Dependent variable is primary balance to GDP. NW t-stat = Newey-West robust t-statistics. Observations: 50. R-squared: 0.909. F-statistic: 87.59 on 5 and 44 DF, p-value: < 2.2e-16. Durbin-Watson: 1.423 (p = 0.004).

The coefficient of d_{t-1} is $\rho_1 = -0.311$ indicating negative relationship between the lagged debt GDP ratio and primary balance. However, coefficient of $d_t{}^2{}_{-1}$ is $\rho_2 = 0.412$ implying the government increases primary balances as debt rises to higher level. It suggests that Nepal doesn't tighten the fiscal policy immediately when debt rises but only when the debt level crosses a certain threshold. The threshold can be calculated from the marginal fiscal response,

$$\frac{\partial pb_t}{\partial d_{t-1}} = -0.311 + 2 * 0.413 d_{t-1} \quad (3)$$



Below 37.65% debt GDP ratio, the primary surplus declines by 0.31% of GDP when lagged debt GDP ratio increases by 1%. Above this threshold, government takes corrective action.

Similarly, result shows that remittance is a key factor for improving fiscal position of Nepal. 1% rise in remittance inflow increase primary balance by 0.32%.

4. What Now?

The current situation of public debt of Nepal doesn't signal an imminent crisis (with the assumption that remittance inflow is stable). At 44% of GDP, the joint World Bank-IMF Debt Sustainability analysis categorizes Nepal at low risk of debt distress. Public anxiety arises due to the lack of tangible returns from the debt. For decades, capital expenditure has been entangled with implementation problems, cost overruns, and governance issues. Meanwhile, recurrent expenditure particularly after federalization has grown significantly. Poor capacity of government institutions to forecasts government revenue and expenditures, inflated budget, politically favored and poorly planned projects have undermined fiscal discipline.

The empirical analysis reveals that Nepal's fiscal policy reacts to rising debt only after it crosses a certain threshold. Below 37.65% of GDP, the primary balance deteriorates as debt accumulates. This delayed fiscal response, coupled with heavy reliance on remittance inflows exposes country's fiscal risks, particularly as Nepal approaches LDC graduation. In an increasingly uncertain geopolitical world, foreign labor market shocks and rising borrowing costs due to LDC graduation can prove costly for Nepal.

In short, the risks of debt distress for Nepal arises due to (i) heavy reliance on remittance to earn foreign currency, (ii) stagnant revenue growth, (iii) fiscal imprudence and (iv) higher interest rates and shorter maturities following LDC graduation. With rising debt, the appropriate policy response should not be indiscriminate fiscal austerity. Nepal still requires public borrowing to finance infrastructure projects. Policy priorities should focus on: (i) clarifying expenditure responsibilities among three tier governments, (ii) strengthening capacities of government agencies to forecast revenue and expenditures, (iii) enhancing project selection, planning and implementation capacity, (iv) expanding revenue base and (v) developing post-LDC financing strategy. Debt sustainability will depend fiscal discipline and governance quality than debt stock. If governance weaknesses persist, even moderate debt levels can gradually erode fiscal space. The central policy question, therefore, is not whether Nepal should be worried about debt today, but whether it is willing to undertake the institutional reforms necessary to ensure that tomorrow's debt remains sustainable while achieving growth targets.

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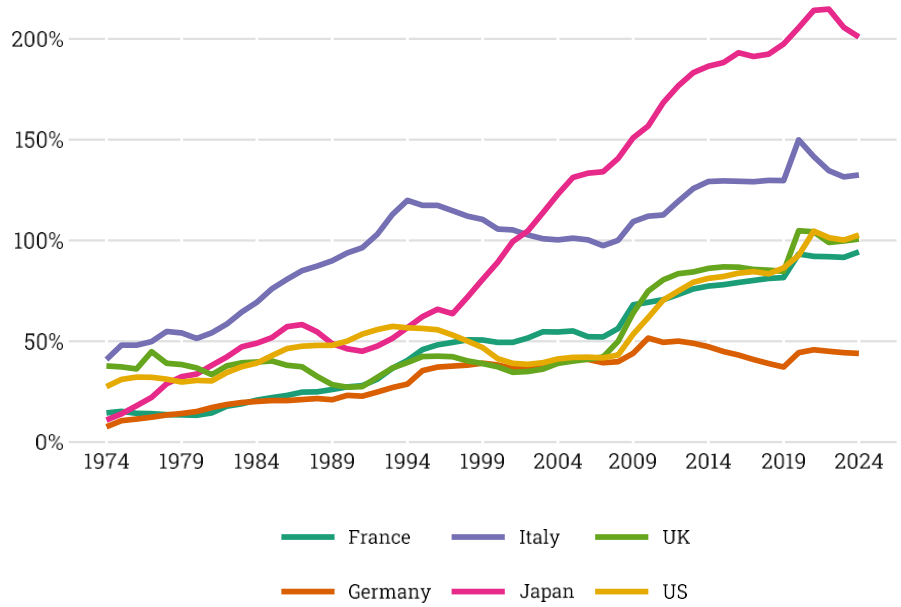
Appendix

Appendix 1: Government Debt, % of GDP



Source: IMF

Appendix 2 : Domar's Model (When National Income grows exponentially)

Consider national income grows exponentially,

$$Y = ae^{\tau t}$$

where,

a = initial national income at t = 0;

r = constant growth rate of national income;

t = time in years

Suppose, α is the fraction of national income borrowed annually. Then,

$$D = D_0 + \int \alpha a\, e^{rt} dt$$

$$D = D_0 + \frac{\alpha a}{r}(e^{rt} - 1)$$

Debt to income ratio is

$$\frac{D}{Y} = \frac{D_0}{ae^{rt}} + \frac{\alpha}{r}(1 - e^{-rt})$$

As $t \to \infty$,

$$lim_{t\to\infty} \frac{D}{Y} = \frac{\alpha}{r}$$

Debt to income ratio converges $-\frac{\alpha}{\tau}$ if national income grows exponentially.

Appendix 3 : Hamilton and Flavin (1985) 's present value budget constraint

$$\frac{B_t}{P_t} = \sum_{i=1}^{\infty} \frac{(S_{t+i} - V_{t+i})}{(1+\bar{r})^i}$$

Where, B_t is nominal market value of debt held by public, P_t is aggregate price index for goods in the economy, S_{t+i} is the real value of government surplus in year t+i, $\bar{\tau}$ is the average real interest rate.

Appendix 3 : Bohn (1995)'s IGBC and stochastic discount rate

$$b_{t-1} = pb_t + \sum_{j=1}^{\infty} [\frac{E_t[pb_{t+j}]}{R_{t+j}} + Cov_t(MRS(c_{t+j}, c_t), pb_{t+j})]$$

Where, b_{t-1} is debt level at t-1 period, pb_{t+j} is primary balance at $t + j$ period, $\boldsymbol{v}_{t+j} = MRS(c_{t+j}, c_t)$ is marginal rate of substitution of consumption at $t + j$ and t period is the stochastic discount factor, $R_{t+j} = \frac{1}{E[u_{t+j}]}$

Discounting at risk free rate is only correct if,

$$\sum_{j=1}^{\infty} Cov_t(MRS(c_{t+j}, c_t), pb_{t+j}) = 0$$