Impact of Debt on the Economic Growth of Nepal

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ABSTRACT

Public debt and Economic growth have always been the major topic of discussion in the Nepalese economy. Nepal, an underdeveloped country, is always trying to take a leap towards development but both external debt and domestic debt have been the major challenging tasks to perform in the economy. This study has empirically explored the relationship between foreign debt, internal debt and economic growth in Nepal. The time series data for the period of 1975-2021 AD has been applied. Unit root test with Augmented Dickey Fuller (ADF) model has been used to test data stationarity. The result of Autoregressive Distributed Lag (ARDL) model shows that internal debt has positive relationship with GDP whereas foreign debt has negative relationship with GDP. Toda-Yamamoto causality test method has been applied because of the non -stationarity of the data at level. The stationarity of data was seen only at first difference and second difference. Toda-Yamamoto Causality Test found the casual relationship between foreign debt, internal debt and economic growth in Nepal. The test is set at 5 percent level of significance. According to the results of the study, foreign debt and internal debt have unilateral relationship with GDP i.e. economic growth. This study shows there is long-run unidirectional causal relationship between foreign debt to GDP and also between internal debt to GDP in Nepal.

Keywords: Log of Gross Domestic Product (LGDP), Log of Foreign Debt (LFD), Log of Internal Debt

(LID), Economic growth

Introduction

Debt is an obligation that requires payment of money or other agreed-upon value to from one party to another party. The part of a nation's debt that is derived from foreign lenders through commercial banks, governments, or international financial institutions is known as its external debt while domestic debt is the component of the total amount of debt in a country that has to be paid to the lenders within the country. Capital is required for production in every economy and development cannot be ensured in its absence but it is relatively scarce. The scarcity of capital is much more prevalent in developing countries. Nepal's internal debt refers to the total amount of money that the government of Nepal owes to domestic creditors, such as banks and other financial institutions. External debt, on the other hand, refers to the total amount of money that the government of Nepal owes to foreign creditors, such as international organizations (World Bank, International Monetary Fund) or other countries.

As of 2021, Nepal's internal debt was estimated to be around NPR 647.8 billion, while its external debt was estimated to be around NPR 1.1 trillion. It is important for a country to manage its debt levels in a sustainable manner, as high levels of debt can place a strain on the economy and make it more vulnerable to economic shocks. Nepal has been working to reduce its debt levels and improve its debt management practices in recent years.

Nepal's budget deficit has been steadily growing over the years, which happens when the government's expenses exceed its receipts. As a percentage of GDP in FY 2020/21, the budget deficit was 7.1%. Since deficit financing accounts for 29.64% of the government budget, it plays a significant part in the annual budget that the Government of Nepal presents. It has been rising by 19.86% annually on average. Being a developing country, Nepal's government relies extensively on public debt as a source of revenue but doing so can be expensive and risky.

The public debt of the government of Nepal has been steadily rising from FY 2011/12 to 2020/21. The public debt of Nepal grew at a compound annual growth rate (CAGR) of 7% between FY 2011/12 and FY 2019/20. The budget of Nepal's government has grown significantly over time, and as a result, government spending has been rising and exceeding government revenue, which is the cause of the country's rising public debt.

In the present time also, the topic of public debt has gained a lot of attention from the economists. They basically fear the increasing amount of public indebtedness. Some argue that in order to make up for the economy's inability to self-regulate, we should use the borrowed resources to boost demand for products and services but almost all are in unison that if the government is unable to repay the debt on time, most of its yearly budget will be utilized to pay loan making it impossible to invest in

productive sector.

A country can achieve higher economic growth only if it is able to invest massively in infrastructure, technological innovation and development, machine learning, artificial intelligence, human capital, and environmental protection. Taxation and borrowing are major sources of funds to finance such investments. In Least Developed Countries (LDC) like Nepal, raising revenue through taxation is quite a difficult task due to the low levels of income of people, low levels of economic transactions, and a possibility of increased burden on domestic economic entities. Due to this reason, government sees public debt as a feasible option to finance government expenditure and development projects for which it lacks funds.

Debt financing is necessary when the tax burden of current finance would be economically or politically unfeasible. Examples include war for national governments and significant capital projects like highways, schools, and so forth for local governments. Public borrowing is frequently used in recessionary times to boost consumption, investment, and employment because it is widely thought to have an inflationary effect on the economy.

In order to fund the expansion of their infrastructure and industries, the governments of the majority of emerging and undeveloped countries started borrowing money in large amounts in the 1970s. At the time, the developing nations believed that industrial development was essential for economic success and that it required protection from international competition in the early stages of development. In order to achieve industrial development, they adopted an industrialization strategy centered on import substitution. Sadly, a lot of these countries didn't spend their borrowed money in initiatives that would generate income, which limited their ability to improve their capacity for debt repayment. In the past, Nepal has borrowed money both domestically and abroad to fund its development needs. In 1951, the government of Nepal raised its first internal loan, and in 1963, it issued its first overseas debt.

The largest source of funding for deficits is an external loan, which is then followed by internal debt and changes in cash reserves. Poor economic performance, which is characterized by low growth and productivity, makes it more difficult for a country to pay its obligations, exacerbates the problem of fiscal sustainability, and raises the possibility of a large fiscal adjustment. With the number of years growing, government borrowing has increased. Government spending has increased more quickly than government revenue due to the restricted revenue resources. The outcome is that both internal and foreign loans are obtained by the government. The increase in borrowing creates a big challenge for the economy and a concern for managing debt. The likelihood that non-monetized and unproductive economic sectors are funding borrowing puts the country at danger.

Despite being a unique country with a high demographic dividend, endowed with natural resources, and fast-growing big economies-China and India- in the neigh-

bour, Nepal has been unable to accelerate its economic growth. Government borrowing has expanded dramatically in recent years as a result of an increase in the budgetary requirements of federalism and post- earthquake reconstruction. Up until 2020/21, the total public debt rose by 148%. The entire amount of government debt at the end of the fourth quarter of 2021–2022 was NPR 2,011.95billion, of which NPR 1025.84 billion was owed outside and NPR 986.10 billion was owed internally. In comparison to the third quarter, external debt climbed by 5.47% and internal debt by 12.16%.

The argument over fiscal sustainability and the effect of the accumulation of government liabilities on financial markets and real economic performance has been reignited in light of the several global financial crises that have occurred throughout time, as well as the large debt buildup in many nations.

The global financial crisis of different times and the massive debt build-up in many countries have reignited the debate about fiscal sustainability and the impact of the accumulation of government liabilities on financial markets and on real economic performance. Poor economic performance of the economies, referring to low growth and low productivity, reduces a country's capacity to pay and aggravates the fiscal sustainability problem, raising the expectation of a severe fiscal adjustment.

In attempts to secure foreign debt to protect the economy and preserve political stability, there have been a number of failure situations. From a short-term viewpoint, foreign debt is determined to be effective and efficient, but it should be considered in a long-term context.

Theoretical Concept

Public debt has always been a topic of discussion since classical times and there have always been different opinions of economists regarding this topic. The question of whether public debt is good or bad for the development of a nation has always interested the economists. The classical economists have strongly stated that a government should not intervene in the economic activities of a nation. They thought that government should not incur public debt because it is not the work of the government. Economists like Adam Smith and David Ricardo said that the state's debt causes its private capital to be diverted from its productive use to non-productive uses. Thomas Malthus, however, foresaw the potential for imbalances and the development of a gap between the supply of products and the demand for them as a result of overproduction.

Adolph Wagner and John Stuart Mill argue that government borrowing to pay for routine public expenditures is completely forbidden because the rising cost of interest would plunge public finances into the abyss, while government borrowing to cover public investment expenditure debt financing is not only accepted but even preferred to tax financing. The Keynesians were influenced by the world economic crisis of 1929–1933 when they proposed that governments should use their financial resources to help economic recovery, combat unemployment, and speed up economic

growth when it is too slow or the economy is stagnant. They emphasized the use of public loans in getting out of the crisis. And that it must cease as soon as the full employment is reached.

The neoliberal representatives advocated whatever the relative position of the country in question, increasing deficits express the promise of future economic difficulties and reduced welfare. The monetarists denied the positive result of public debt. Robert Joseph Barrow advocates on the neutrality of public debt. He thinks that if the government decides to forgo some taxes in order to support a budget deficit, it will eventually have to return the debt and impose further taxes.

The recent thinkers are not exactly clear on whether public debt increases economic growth or not. Some of the economists and policymakers think that issue of debt–growth in the underdeveloped countries is not good; rather it depresses income. The impact of domestic debt and foreign aid on income is trivial. On the other hand, gross fixed capital formation and money supply spur income growth, whereas the impact of openness to trade is dismaying (de Silva et al., (2020).

Conceptual Framework

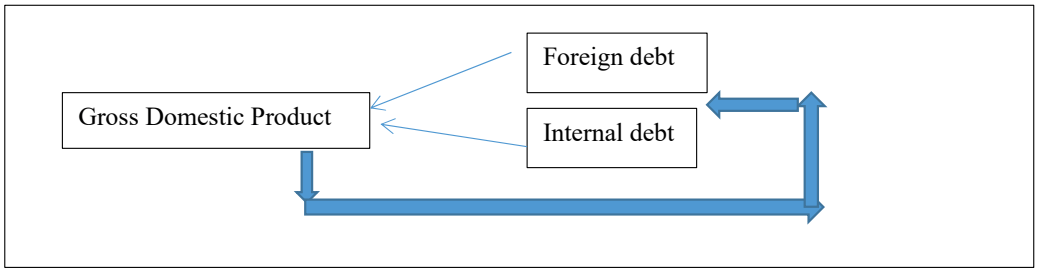
The GDP is impacted by foreign debt in a number of ways. On the one hand, it can support GDP growth by giving money for investments in technology, infrastructure, and other profitable industries. This capital influx has the potential to boost GDP through job creation and increased economic activity. Changes in exchange rates have the potential to make debt payment more burdensome and perhaps cause economic instability. Over-reliance on foreign debt can cause investor confidence to decline, trigger a debt crisis, and cause the GDP to contract as a result of government spending cuts and austerity measures. Thus, it is essential to manage foreign debt to make sure it boosts GDP and doesn't impede a country's ability to grow economically.

Internal debt has a direct impact on GDP and is frequently represented by government bonds or borrowing from domestic sources. Internal government borrowing typically results in an expansion of the money supply in the economy as a whole. Public investment on a range of initiatives, including infrastructure, healthcare, and education, can be funded with this additional funding, which will stimulate the economy. A rise in GDP may result from individuals and companies spending more after receiving government benefits. As a result, maintaining internal debt in a way that promotes stability and economic progress requires careful management.

Both domestic and external debt are directly impacted by the GDP. A growing GDP typically indicates higher economic output, which can be put toward debt repayment. This may lessen the burden of both domestic and foreign debt. However, if a nation's GDP is declining or stagnating, it might find it difficult to pay its debts, which would raise the amount of debt it has. Furthermore, a country with a greater GDP may find it easier to borrow money since lenders will see it as a more reliable and

creditworthy borrower. Essentially, there is a reciprocal relationship between GDP and debt, meaning that managing debt and promoting economic growth are essential to a nation's financial stability.

Figure: 1Causal relationship between GDP, foreign debt and internal debt



Review of Empirical studies

Public debt seems to carry a huge share of responsibility in fulfilling the monetary deficit of a nation whether or not the country approves of it. So, it is obvious that it attracts a lot of attention of the economists and the policy makers. As a result, there are various empirical studies dedicated to show the relationship between public debt and economic growth.

Some researchers have attempted to find if there is causal relationship between public debt and economic growth. Amassoma (2011) conducted a study and reached to the conclusion that there is a bi-directional causality between domestic debt and economic growth and unidirectional causality from economic growth to external debt in Nigeria between the years 1970 to 2009.

There are research works show how domestic debt and foreign debt are related to economic growth. The research conducted in Malasiya (Abd Rahman, 2012), reached to the conclusion that domestic debt has negative impact on the level of economic growth in the long-run and the level of external debt has no significant impact in changing the economic growth within the same time frame. Another research of Nigeria (Ebi et al, 2013) revealed that external debt is superior to domestic debt in terms of economic growth, external debt and not domestic debt crowd-out domestic investment in Nigeria. A research conducted in Jordon (Al-Quadah, 2016) suggested that external debt has positive and significant impact on economic growth of Jordon, while domestic debt is mostly having a negative significant impact on economic growth.

Research conducted in Pakistan (Atique and Malik, 2012) concluded that both domestic debt and external debt had inverse relationship with economic growth. The results also concluded that external debt amount slows down economic growth more as compared to domestic debt amount. The negative effect of external debt is stronger on the economic growth in comparison to domestic debt. Gros (2013) published a research paper in 'Oxford Review of Economic Policy' with the title "Foreign debt versus domestic debt in the euro area" arguing that public debt creates much greater

problems when it is owed to foreigners, i.e. when it constitutes foreign debt.

Several researches done in Kenya (Matiti, 2013), Nigeria (Umaru et al, 2013), Cameroon (Forgha et al, 2014), Zimbabwe (Matandare and Tito, 2018) and Philippines (Akram, 2015), have revealed that external debt possessed a negative impact on economic growth while domestic debt has impacted positively on economic growth (GDP). Shkolnyk and Koilo (2018) studied the economy of Ukraine and found that that there is a critical level of debt burden for emerging economies, where the marginal impact of external debt on economic growth becomes negative. Didia and Ayokunle (2020) studied the impact of public and publicly guaranteed debt on the economic growth of Nigeria revealing that domestic debt has a statistically significant positive relationship 18 with economic growth in the long run while external debt exhibiting a negative relationship with economic growth was not statistically significant.

Akram (2017) in his paper "Role of public debt in economic growth of Sri Lanka: An ARDL Approach" examined the consequences of public debt for economic growth and investment in Sri Lanka, for the period 1975-2014 by using the Autoregressive Distributed lag Model (ARDL) technique. He revealed that the external debt played a crucial role in development of the civil war which had hit the country debt servicing. The result showed the positive and significant relationship of domestic debt with per capita GDP. Kueh and Yong (2017) examined the effect of the debt on economic growth of Malaysia and concluded that Initial domestic debt accumulation contributes positively to the economic growth of Malaysia when the domestic debt level is below the threshold level but becomes detrimental to economic growth when the debt level exceeds the threshold level. On the other hand, external debt has negative impact on the economic growth when the debt is below the external debt threshold but it has positive impact when it exceeds the threshold level.

Bhatta (2003) in his paper "An assessment of the impact of external debt on economic growth of Nepal presents the effectiveness of external debt on economic growth through the estimation of the ordinary least square (OLS) regression equation. The empirical study shows the positive impact, though of very small size, of the debt flow on economic growth. However, the analysis of external debt stock and debt servicing shows that it is equally important that external borrowing be made to supplement but not replace domestic savings in the long run.

Bhattarai (2013) has done a descriptive analysis to show how the share of public debt and external debt have changed over different periods of time. He concluded that in spite of increased budget and increased public debt, the growth rate of economy was relatively low over the period of time. Bista (2014) investigated the various macroeconomic implications of fiscal deficit and public debt in Nepal by analyzing the annual time series data from 1975 to 2011. The empirical results of the study showed positive and significant impact of fiscal deficit and public debt on economic growth and also found crowding-in effect rather than crowding-out effect of domestic borrow-

ing in Nepal. The positive effect of foreign borrowing was found higher than the effect of domestic borrowing on economic growth.

Silwal (2017) conducted a research using regression equation to analyze the relationship between GDP and total debt, external debt, and internal debt. He reached to the conclusion that the degree of indebtedness of the external debt of Nepal increased due to the poor mobilization of internal resources, widening investment-saving gap, export-import gap and revenue- expenditure gap and large amount of fiscal deficit. So, there was excessive flow of foreign loans to fill up those gaps. Consequently, burden of debt and debt servicing obligation were increasing rapidly in each year but the debt servicing capacity of economy was not increasing in the same pace.

Bhatta and Mishra (2020) provided evidence for the existence of a non-linear relationship between economic growth and public debt. Adhikari (2020) found that continuous growth of public borrowing was a challenging problem for any nation in a long run, especially on foreign loan, and it was recommended to be minimized. Upadhyaya (2021) states that there is a positive relationship between public debt and economic development in Nepal. Sharma (2021) used simple linear regression model is used to show the relationship between the public debt and economic development of Nepal. The result showed that there exists a positive relationship between growth rate and public debt which means that the increase in public debt was likely to lead the nation towards 21 economic growth. Upadhyaya and Pun (2022) did not find clear relationship between Nepal's public debt levels and the economic expansion of the country.

Paudel and Kharel (2022) have examined the role of external debt, remittances, exports, and labour force in the economic growth of Nepal in their paper "The Role of External Debt, Export Trade, Remittance, and Labour Force in the Economic Growth of Nepal: Is Nepal Heading Towards Dutch Disease?" The findings indicate a Dutch Disease symptom in the Nepalese economy, particularly induced by the remittance inflows in recent decades, since external debt and remittances have significantly impacted the country's economic progress. The findings imply that debt collected after 2014 has performed better, although the sign is still negative and statistically insignificant.

Research Methodology

This chapter is allocated for the research methodology that are used and followed in the study. The objective of this paper is to understand the impact of foreign debt and internal debt on the economic growth of Nepal by analyzing the data empirically. The study uses quantitative analyses to meet the earlier mentioned objectives. The nature of the study is analytical and the study is based on secondary data. Historical data of the GDP, foreign debt and internal debt of 47 years from FY 1975 to 2021 is taken into account.

Model Specification

For the study purpose, regression model is used to understand the relationship

between GDP, foreign debt and internal debt. So, the study has proposed the following relationship between GDP, foreign debt and internal debt.

GDP = f (FD, ID) …….. (i)

Here,

GDP = Gross Domestic Product

FD= Foreign Debt

ID = Internal Debt

Converting equation (i) to econometric model, the equation converts to,

LGDP = α + B1LFD + B2LID + μ---------- (ii)

Where,

LGDP = Log of Gross Domestic Product

α = B0 is the intercept

LFD = Log of foreign debt

LID= Log of internal debt

μ = error term

We try to find the long run and short run relationship among variable. For that purpose we apply Bound test under ARDL procedure. If the computed F-statistics is greater than the upper bound critical value, and then we reject the null hypothesis of no cointegration and conclude that there exists steady state equilibrium between the variables. If the computed F-statistics is less than the lower bound critical value, then we cannot reject the null of no cointegration. If the computed F-statistics falls within the lower and upper bound critical values, then the result is inconclusive. After the discussion of theoretical model regarding the ARDL technique, we employed the Pesaran et al (2001) procedure to investigate the existence of a long-run relationship in the form of the unrestricted error correction model for each variable as follows regarding our issues:

$$\Delta LnGDP = \alpha_0 + \alpha_1 t + \sum_{i=1}^{m} \alpha_2 + \Delta LnDGP_{t-i} + \sum_{i=0}^{m} \alpha_3 \Delta LnFD_{t-i} + \sum_{i=0}^{m} \alpha_4 \Delta LnID_{t-i} + \alpha_5 LnGDP_{t-i}$$

$$+ \alpha_6 LnFD_{t-1} + \sum_{i=0}^{m} \alpha_7 LnID_{t-i} + \eta_i$$

Where, LnGDP is real gross domestic product, LnFD is foreign debt and LnID is internal debt. 't' is time trend variable, while 'μ' and 'ω' are error terms in the models. The first part of both equations with α2,α3, α4 represents the short-run dynamics of the models whereas the second part with α5,α6α7represent the long-run phenomenon. The null hypothesis in the equation is α5=α6=α7= 0 , which means the non-existence of the long-run relationship and vice versa, which means the non-existence of the long

run relationship and vice versa. Wald test investigate short-run causality through the significance of joint test with an application of sum of lags of explanatory variables in the model. To ascertain the goodness of fit of the ARDL model, the diagnostic test and the stability test are conducted.

Empirical Model Specification and Estimation Techniques

Econometric Diagnostic Test

Unit Root Test

Macroeconomic time series data are generally characterized by stochastic trend which can be removed by differencing. Thus, this thesis has used or adopted Augmented Dickey-Fuller (ADF) Techniques to test and verify the unit root property of the series and stationarity of the model.

Vector Autoregression (VAR)

The structure of VAR model has been used to explain the values of endogenous variables from their past observed values. It includes the variables lagged (past) values, the lagged values of the other variables in the model, and an error term.

Granger Causality based on Toda-Yamamoto Methodology

In order to determine the causality between the GDP, foreign debt and internal debt, Toda-Yamamoto causality test is used. Toda Yamamoto Causality test shows that the long run relationship between the variables have a causal relationship. This technique, also known as Augmented Granger Causality Method, can be used to analyze the econometric time series data which is integrated of different order.

Results and Discussion

Table 1: Unit Root Test taking Log

Intercept only

Variable	t-Statistic	5% Critical Value	p-Value	Comment
LGDP	0.410418	-2.926622	0.9813	Not Stationary
DLGDP	-7.193204	-2.928142	0.0000	Stationary
LFD	-2.103982	-2.929734	0.2442	Not Stationary
DLFD	-1.655370	-2.929734	1.4464	Not Stationary
LID	-1.150984	-2.928142	0.6872	Not Stationary
DLID	-3.918021	-2.602225	0.0040	Stationary

Source: Author's calculation using EViews

Table 2: Trend and Intercept

Variable	t-Statistic	5% Critical Value	p-Value	Comment
LGDP	-2.050360	-3.510740	0.5588	Not Stationary
DLGDP	-7.116401	-3.513075	0.0000	Stationary
LFD	-2.640496	-3.515523	0.2654	Not Stationary
DLFD	-1.597590	-3.515523	0.7779	Not Stationary
LID	-2.198465	-3.513075	0.4788	Not Stationary
DLID	-3.947578	-3.513075	0.0179	Stationary
DLFD,2	-14.75465	-2.929734	0.0000	Stationary

Source: Author's calculation using EViews

Table 4.3 in the appendix show the result of Unit Root Test. ADF has been conducted for testing unit root after taking natural log. The results show that log of GDP (LGDP), log of foreign debt (LFD) and log of internal debt (ID) are still not stationary at level but LGDP and LID are stationary at first difference. LFD is not stationary at both level and first difference. So, unit root test was conducted for LFD at second difference. Table 4.3 shows that foreign debt is stationary at second difference. All data are transformed by taking natural log and the same data are used for further modelling.

The ADF value for LGDP is - 7.116401 and the critical value is - 3.513075 at 5 percent. The ADF value for LFD is - 14.75465and the critical value is - 2.929734 at 5 percent. The ADF value for LID is - 3.947578 and the critical value is - 3.513075 at 5 percent. The null hypotheses of presence of unit root are both rejected at 5 percent level indicated by their probability value 0.0000, 0.0000 and 0 .0179 respectively.

Table 3: ARDL Model Test Result

Variable	Coefficient	Standard Error	t-statistics	Probability
LFD	-0.222265	0.077693	-1.238956	0.0070
LID	0.162614	0.056528	2.876692	0.0030
C	0.19272	0.060088	3.183182	0.0030

For the Autoregressive Distributed Lag (ARDL) model, this thesis has selected the adjusted R-squared as the model selection criteria. After the calculation of values for independent variables, in the respective value of variables in the equation (ii), the regression equation as below is determined: LGDP = 0.19272 -0.222265LFD+0.162614LID From table 4.4 it is found that all the variables LGDP, LFD and LID have p-values less than 0.05. When p-value is less than the 5 percent critical value, the test result is considered as statistically significant. Additionally, the significance can be confirmed through the values of both R^2 and adjusted R^2, both have a higher value of 0.99 and 0.99. Such a high value indicates that the test is of high quality as the

independent variable foreign debt and internal debt are able to explain the dependent variable LGDP significantly. The value of LID is positive, it indicates that there lies a positive relationship between GDP and internal debt. The value of LFD is negative. It means has foreign debt has negative relationship with GDP. The value of change in GDP from the equation when there is a unit change in internal debt, it leads to an increase of 0.162614 percent in GDP. Similarly, 1 percent change in foreign debt leads to decrease of 0.222265 percent in GDP. For the given table 4.3, it can be said that the given model is able to explain the relation by the stated independent variables and constants. In the table 4.3, foreign debt has negative impact on GDP whereas internal debt has positive impact on economic growth, so, the economy should focus more in internal debt rather than foreign debt. Our model is free from the spurious regression as the R^2 value is higher that is of 0.99 or 99 percent, also the D-W test statistics is of 2.08, which is close to 2, showing a higher degree of significance.

Table 4 Toda-Yamamoto Causality Test

Excluded	Lag (k)	Lag (k + dmax)	Chi Sq.	Prob.	Causality Direction
Dependent Var. LGDP LID	2	2+2	10.3670	0.0056	Causality
Dependent Var. LID LGDP	2	2+2	3.1371	0.2083	No Causality
Dependent Var. LGDP LFD	2	2+2	12.700	0.0017	Causality
Dependent Var. LFD LGDP	2	2+2	1.9497	0.3772	No Causality
Dependent Var. LID LFD	2	2+2	1.9084	0.3851	No Causality
Dependent Var. LFD LID	2	2+2	5.4206	0.0665	No Causality

Source: Author's calculation using EView

Toda- Yamamoto Causality Test needs lag length criteria for testing the causality. Table 4.5 presents the results of Toda-Yamamoto Causality test. In the table, the (k+dmax) denotes VAR order. To find out the causal relationship between the variables log of GDP (LGDP), log of internal debt (LID) and log of foreign debt (LFD), first we estimated Vector Auto Regression (VAR) for the variables at level. Lag length selection procedure was conducted for finding the optimum lag length. The optimum lag length for LGDP and LID and LFD was found to be 2. Then, the VAR lag order was found using optimum lag length denoted as (k) and maximum difference denoted as (dmax). Thus, the VAR lag order was derived as (k + dmax). VAR lag order for LGDP and LID and LFD is 2+2. The results of Toda-Yamamoto causality show a long

run relationship between LGDP and LID. The result shows unidirectional causality of internal debt to GDP with p-value 0.0056. It means that internal debt causes GDP but GDP does not cause internal debt. Similarly, a long run relationship is seen between LGDP and LFD. It is found that there is one-way causal relationship between GDP and foreign debt with p-value 0.0017. Here also, foreign debt causes GDP but GDP does not cause foreign debt. Foreign debt and internal debt have no causal relationship.

The variables under study for this research GDP, foreign debt and internal debt have been chosen by several researchers in Nepal and outside Nepal as the topic of their research. Most of them have found causal relationship among the variables. This research was also started with the same objective of finding the relationship between internal debt, foreign debt and GDP. Data used in this paper is from 1975 to 2021 which is a long period of time. The nature of the data made it possible to study the relationship in a unique way. The data being non stationary at level and stationary at first difference and second difference. Unit root test showed that raw data was not stationary at level as well as differences. So, the data was converted by taking natural log. After taking natural log, the data was stationary at first difference and second difference. This situation made OLS estimation not effective as it would show spurious result. The data was not completely stationary at first difference as well.

This paper studied impact of debt on the economic growth of Nepal. The study was done using ARDL model and Toda -Yamamoto causality test. The results of ARDL model shows a significant relationship between GDP and foreign debt. The relationship between these variables is found to be negative which means that foreign debt has negative impact on GDP. The causality test shows one-way causal relationship of foreign debt to GDP. GDP is caused by foreign debt. This result shows that there is impact of foreign debt on GDP. The relationship between GDP and internal debt is also significant. There is significant positive relationship between these variables. Internal debt affects GDP positively which is beneficial for the nation. The causality test also shows one-way causal relationship of internal debt to GDP. Internal debt also causes GDP but GDP does not cause internal debt.

Conclusion

The objective of the study was to determine how domestic and foreign debt affected the GDP of the nation, and it revealed that the macroeconomic environment has been extremely unstable for some time. This has caused the researcher and several policymakers to become more concerned about the relationship between these two factors as well as their potential to affect the economy.

There are academic papers and books on the topic of the internal context, as well as a few works that have been published in international journals, but the literature on the Nepalese context still has a significant and gaping hole in it. So, to a certain extent, this thesis can help to close the gap in the literature on Nepalese literature. The

study of this thesis was impact of debt on the economic growth of Nepal. The study was done using ARDL model and Toda- Yamamoto causality test.

The results of ARDL model shows a significant relationship between GDP and foreign debt. The relationship between these variables is found to be negative which means that foreign debt has negative impact on GDP. The causality test shows one way causal relationship of foreign debt to GDP. GDP is caused by foreign debt. This result shows that there is impact of foreign debt on GDP.

The relationship between GDP and internal debt is also significant. There is significant positive relationship between these variables. Internal debt affects GDP positively which is beneficial for the nation. The causality test also shows one way causal relationship of internal debt to GDP. Internal debt also causes GDP but GDP does not cause internal debt.

Suggestions

GDP defines economy in a strong way. We can know how good an economy of any nation is by looking at the GDP and it highly relies in foreign debt and internal debt in case of Nepal. Based on the results of the test conducted in the thesis, it can be said that there lies a positive relationship between the internal debt and GDP and a negative relationship between the foreign debt and GDP. So, it is recommended that the policy makers should formulate strategies to increase internal debt rather than foreign debt for the betterment of the economy. The government needs to be careful while taking loan from these sources and debt is always a burden. And also, government should make careful decisions on where these debts are being used and if they are productive sector or not. The government should invest more on productive sectors in order to increase the revenue and be able to pay the debt. The results also indicate that the government should rely more on internal debt than foreign debt. Otherwise, the country is sure to fall in debt trap.

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ANNEXES

Annex Table 1. Raw Data of GDP, Foreign Debt and Internal Debt in Nepal from 1975 AD to 2021 AD (in Rs Billions)

Year	GDP	Foreign Debt	Internal debt
1975	16.60	0.35	0.60
1976	17.39	0.48	0.74
1977	17.28	0.63	1.01
1978	19.73	0.97	1.22
1979	26.13	1.32	1.40
1980	23.35	1.81	1.50
1981	27.31	2.45	1.44
1982	30.99	3.18	1.90
1983	33.82	4.72	2.88
1984	39.29	6.32	4.34
1985	46.59	9.20	6.03

Year	GDP	Foreign Debt	Internal debt
1986	55.73	10.33	7.19
1987	63.86	15.17	9.00
1988	76.91	20.83	11.64
1989	89.27	29.22	12.89
1990	103.42	36.80	14.67
1991	120.37	59.51	20.86
1992	149.49	70.92	23.23
1993	171.48	87.42	25.46
1994	199.27	101.97	30.63
1995	219.75	113.00	32.06
1996	248.91	128.04	34.24

Year	GDP	Foreign Debt	Internal debt
1997	280.51	132.09	35.89
1998	300.85	161.21	38.41
1999	342.04	169.47	49.67
2000	379.49	190.69	54.36
2001	441.52	201.55	60.04
2002	459.44	220.13	73.62
2003	492.23	223.43	79.52
2004	536.75	232.78	86.13
2005	589.41	219.64	87.56
2006	654.08	233.97	89.95
2007	727.83	216.63	99.30
2008	815.66	249.97	111.24
2009	988.27	277.04	120.87
2010	1192.77	256.24	142.86
2011	1366.95	259.55	179.33
2012	1527.34	309.29	209.12
2013	1695.01	333.44	207.00
2014	1964.54	346.82	201.82
2015	2130.15	343.26	196.79
2016	2253.16	388.76	234.16
2017	2674.49	413.98	283.71
2018	3044.93	525.35	390.90
2019	3458.79	594.61	452.97
2020	3767.04	805.83	613.21
2021	4816.01	948.98	779.94

Source: Macro Economic Dashboard of Ministry of Finance