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**Assessing the impact of economic performance and political environment on debt intolerance: A case study of highly indebted poor countries**

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**Abstract:** The present study is an attempt to examine the role of economic and political factors in assessing the level of debt intolerance in poor countries. To carry out the investigation, a sample of 29 highly indebted poor countries (HIPC) is taken, covering the time period 2000-2015. Economic performance is measured through GDP, inflation rate and availability of domestic credit to private sector. Political environment is assessed through the voice and accountability index (VA) and political stability and absence of violence (PSAV) index as given by ICRG. Governance (GOV) indicator is used to determine the quality of institutions and is measured through an average of six indicators provided by World Governance Indicators (WGI). Exchange rate, foreign direct investment, and money supply (M2) are included as control variables extracted from World Development Indicators. To examine the relationship, Pooled OLS, fixed effect model along with panel corrected standard error techniques has been employed to account for heteroskedasticity and serial correlation. The results of the study indicate that GDP and domestic credit to private sector has a significant negative impact on debt intolerance. Whereas, inflation rate tends to increase the debt intolerance thereby reducing the debt carrying capacity. Voice and accountability, political stability and absence of violence, and governance play an important role in improving the debt carrying capacity of a country by reducing its debt intolerance level. Therefore, policies should be devised towards enhancing the economic performance of a country through productive use of resources.

**Keywords:** Debt, Inflation, Foreign exchange, Money Supply, Governance

**JEL Classification:** E51, F31, G30, E31, H63.

## 1. Introduction

The issue of heavy indebtedness of poor economies is attaining due concentration from policy makers, since 1990. If a country is unable to meet its debt obligations, then it is likely to enter in a debt trap. The debt becomes unsustainable and the capacity to return back principal

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payment decreases. Therefore, it is necessary to explore the factors which influence the debt carrying of a country or in other words the debt tolerance. For poor and most of the emerging economies external debt is a major source of financing that is used towards the development of domestic economy and other needs of the country (Siddique et al., 2015)? When government fails to generate enough tax revenue, and the level of their spending is more than the revenue collected, they incur fiscal deficits and to fill this up they tend to rely on borrowing from external as well as internal sources. Usually those countries are more prone to incur external debt, where savings are relatively low and foreign aid is needed for economic development.

Excessive debt accumulated poses serious economic implications and uncertainty about economic future thus generating capital flight so lesser resources are available in the economy which discourages growth. More debt accumulated means excessive debt servicing payments which diverts the amount of resources available for the development of human capital, infrastructure information and technology, towards the payment of debt and interest thereon, leaving the other sectors underdeveloped.

Debt tolerance is a concept which shows the capacity of a country to efficiently sustained debt pressures (Reinhart et al., 2003). It is often argued that excessive debt accumulation becomes an obstacle in achieving a sustained economic growth (Zouhaier and Fatma, 2014; Zafar et al., 2015). If external debt is not utilized properly and is not channeled towards the productive activities, then the ability of an economy to pay back its debt is adversely affected. Excessive reliance on external debt distorts the efficient allocation of resources. The political structure as well as economic performance plays an important role in determining the debt carrying capacity of a country.

The issue of debt tolerance arises when the country becomes unable to successfully pay off its debt liabilities. According to Reinhart and Rogoff (2003), history plays an important role in meeting the debt

liabilities of an economy. Usually the countries that have defaulted had so often done so. A long history of serial default on part of a country, poses challenges and threats to its future concerns. The problem of debt default arises when a country having little savings and low economic growth fails to meet its debt concerns, and again to finance the fiscal imbalances rely on additional borrowing. It increases the burden of debt servicing payments which raises the chances falling into in debt trap. Poor economic performance and political environment accounts for amount of debt accumulation. There are many emerging economies suffering from the problem of debt sustainability. Debt tolerance is a phenomenon that must be seen from both economic as well as political viewpoint (Hileman, 2012).

According to World Bank, there are highly indebted countries that consist if a group of 39 developing countries with high levels of debt and poverty. These countries are also eligible for special assistance by the IMF and World Bank which includes debt restructuring, sustainable debt servicing payments etc. For these countries, with the collaboration of IMF and World Bank, highly indebted poor countries (HIPC) initiative program has been started in 1996 to provide these countries with assistance to achieve sustainable economic growth and reduction in poverty. Despite of receiving special compensation, these countries are unable to eliminate debt burden because these programs does not completely terminate their debt liabilities. Instead favor is given in the form of payment of liabilities at some future time or low debt servicing due to which debt is continuously piled up. Consequently, these countries have to face debt intolerance.

Over the past years, highly indebted poor countries (HIPC) have failed to meet its debt obligations mainly due to low economic growth, less foreign exchange earnings, little investment, poor economic policies, political instability, high debt servicing payments, fiscal deficits, little or nearly no finance for the development of human capital, infrastructure and other development projects. So, these countries are characterized by low capital formation and high levels of poverty which has put them in vulnerable debt trap. These countries are striving to get rid of this debt dependency through better economic policies

targeted towards growth but still they are lagging behind in achieving the goals.

The debt burden of highly indebted poor countries has increased drastically over the past few decades and is now beyond the threshold level, which has poses serious implications on its economy. Economic indicators i.e. GDP, inflation, FDI, credit to private sector, money supply plays a significant role in assessing and promoting the debt tolerance of an economy. Moreover, political environment also plays an important role in determining the debt tolerance of these countries. So this study is designed to examine the impact of economic performance and political environment on debt tolerance of selected HIPC. Does economic performance have an impact on debt tolerance? How political environment affects the debt tolerance? Given the economic and political performance will these countries be able to achieve debt tolerance? It will help the government and other relevant institutions in designing the policies which are most suitable according to the needs and circumstances of HIPC to achieve a sustained level of debt tolerance.

## **2. Literature Review**

Alesina and Tabellini (1989) established the link between the political risk, external debt and capital flight for developing countries and came to conclusion that political uncertainty generates huge capital flights. Moreover, this uncertainty urges current governments to accumulate more debt and keeping in view this political risk lenders tend to charge high risk premium.

Fosu (1996) studied the impact of external debt on economic growth in LDCs of Africa for the period 1970 to 1986. The results showed that external debt is deleterious for the economy, whether its debt servicing or outstanding debt, it reduces the productivity of investment. Similarly,

Clements et al., (2003) tried to assess ways through which external debt impacts growth in low income countries using data for 55 countries covering the time period 1970-99. The results indicated that per capita income growth rate will increase with a fall in debt burden. Moreover reduction in debt servicing will also promote growth indirectly.

Guscina (2008) analyzed the impact of macroeconomic, institutional and political factors in assessing the government's debt structure of 19 emerging market economies for a period of 25 years. The results showed that unstable economic environment, poor institutional quality and political instability are obstacles in the way of development of domestic debt market. Mahmood, Rauf and Ahmad (2009) attempted to assess the public and external debt sustainability using theoretical models in case of Pakistan for the period 1970-2007. The results indicate that level of both public and external debt persistently remained high throughout the time period except the first half of 2000s. The main factors that can be held responsible are fiscal and current account deficits. El-Mahdy and Torayeh (2009) studied the impact of rising domestic public debt of Egypt on its economic growth. The results depict that domestic debt of Egypt has a negative impact on growth. Recent path adopted by Egypt for debt is sustainable and for debt to be sustained, fiscal reforms are required.

Adesola (2009) studied the impact of external debt service payments on economic growth in case of Nigeria and found that debt servicing payments to Paris club creditors and promissory note holder were positively related to GDP and gross fixed capital formation (GFCF) while payments to London club creditor and other creditors are negatively related to GDP and GFCF. Reinhart and Rogoff (2010) studied the relation between growth, inflation and debt by using a newly developed historical dataset for 44 countries (20 advanced economies and 24 emerging economies) over a time span of 200 years. For emerging economies inflation level also rises as debt increases but in case of developed countries no remarkable link was found between inflation and debt.

Awan et al., (2011) found a long run relationship between external debt, exchange rate and terms of trade. But no relation was found among these variables during the short run. On the other hand, Akram (2011) concluded that public external debt has a negative impact on growth and investment of Pakistan both in short and long run. In short run, debt servicing has a negative relation to GDP. Domestic debt has negative and significant relation with investment; however it does not seem to have significant relation with GDP.

Qayyum and Haider (2012) investigated the impact of foreign aid, external debt and governance on economic growth for sixty developing countries covering time span from 1984 to 2008. The results indicated that good governance and foreign aid have a significant positive impact on the economic growth whereas external debt affects the growth negatively.

Umaru et al., (2013) concluded that external debt has a negative impact on the economic growth of Nigeria while domestic debt is positively related to economic growth. Benedict, Imoughele and Okhuese (2014) tried to assess the sustainability and determinants of external debt for the period 1986-2010 in case of Nigeria. The results show that main determinants of external debt are GDP, debt service and exchange rate.

Ostadi and Ashja (2014) argued that foreign direct investment is more likely to be in countries where there is a strong structure and infrastructure and attempts to find the relation between external debt and foreign direct investment in D8 countries for the period 1995 to 2011. The results indicated that foreign debt and government size have a negative impact on FDI; GDP has positive effect on FDI. Zouhaier and Fatma (2014) studied the impact of debt on economic growth for the nineteen developing countries and concluded that it affects negatively the economic growth.

Siddique et al. (2015) studied the impact of external debt on economic growth in case of HIPC. The empirical results showed that reduction

in debt stocks of highly indebted economies would significantly lead towards the increase in economic growth of these nations. Ramakrishna (2015) attempted to look into relation of external debt and growth in Ethiopia. The study concluded that growth in services sector as well as in agricultural sector contributes positively towards the economic growth of Ethiopia while external debt does not have any significant relation with economic growth.

Jilenga et al. (2016) studied the impact of external debt and foreign direct investment in Tanzania. The results indicate that in long run the debt tends to boost economic growth and FDI seem to have negative relation to economic growth in Tanzania, whereas in short run no directional causality is found between external debt and economic growth or FDI and economic growth.

### **3. Theoretical Framework**

Debt intolerance is a concept which shows the incapability of the emerging economies to carry such level of debts that would be efficiently sustained by the advanced economies (Reinhart et al., 2003). According to Reinhart and Rogoff (2010), history matters a lot in meeting a country's debt obligations. Usually countries that have defaulted have done it too frequently. Debt intolerant countries tend to have weak economic structure, making these countries prone to default. Because in these countries resources that can enhance economic efficiency are less, so to fill up deficits these economies rely on financing from external sources. External financing does not come free of cost; they bear some losses on the part of indebted country. It usually requires high interest payments.

As the country's economic performance is already weak, there is no investment for the development projects so reliance on external borrowing increases which results in further piling up of debt and debt service payments. Due to which country remains in a vicious circle and chances of debt default increases. Countries with high debt levels tend to over borrow due to which they tend to enter in a debt trap. Usually debt intolerant countries does not seem to be overwhelmed by a

sustained growth, they often need debt restructuring. Debt restructuring is a special assistance provided to debtor countries by the creditors. A creditor allows this favor because of inability of debtor to easily return back the debt easily mainly due to financial constraints. Restructuring involves modification in the terms of loan repayment. So that debtor can easily pay off debt liabilities.

The main patrons to high debt of heavily indebted countries are global happenings of 1970's and 1980's followed by oil price shock, high interest payments, economic downturns in industrial economies and weak commodity prices. Moreover domestic factors i.e. poor governance, lack of accountability on part of government institutions, frequent changes in policies, rent seeking, poor policies regarding the development of domestic credit, misuse of resources, use of foreign aid for unproductive purposes also played crucial role in debt proliferation. Due to all these reasons, economy of these countries becomes even weak so to overcome this they borrowed from external sources. As external borrowing is a major source of financing for these economies for the development of economy. But financing from other sources requires some high interest payments in addition to principal amount.

As economic output was already low to meet this additional burden so these countries again and again relied on borrowing which create excessive debt accumulation. Many countries were already living below their means. In these countries resources that can enhance economic development are scarce so they tend to rely on borrowing from domestic and foreign sources. Weak economic management, little savings, high budget deficits, poor public sector management, civil wars and frightful governance all accounts for debt hike. Many countries were borrowing just to pay off debt servicing payments. Funds for new investment were scarce, economic performance eventually slow down and debt become unmanageable. Such unmanageable high debt levels are deleterious to the economy of a country which pushes them in debt trap. Advanced economies also borrow debt from domestic and external sources. In rich economies,



government borrowing stimulates private sector, create jobs, raises income and enhances standard of living, nevertheless, in case of poor economies the same does not hold to be true. The debt must be utilized for productive purposes otherwise if used unproductively it poses serious threats to a country's economic conditions. Additive debt can be harmful because it shifts the resources from social, infrastructure development towards the interests payments made. Therefore, political environment along with economic policies plays an important role in taking up the debt burden.

Economic condition of a country has a direct impact on its debt liabilities. If there is a sound economic environment, a regulated economy, stable taxation policies then it affects the debt levels in a positive way. When there is a well-organized economy it can easily pay its debt liabilities due to enough earnings from tax revenues and don't relying much on borrowing from external channels. However, poor economic planning, uncertain political environment, weak terms of trade, poor implementation of foreign aid programs, non-development expenditure and high interest rate are the main ingredients that may be held responsible for the indebtedness of a country. Moreover, external debt of developing economies is usually denominated in foreign currency, which means they have to pay back their debts in foreign currency which increases interest payments and budget deficits and reduces public savings, resulting increasing interest rate and crowding out of credit for private sector and suppress economic growth. Higher debt service payments can also have adverse effects on the composition of public spending by squeezing the amount of resources available for infrastructure and human capital with negative effects on growth (Clements et al., 2003).

GDP seems to have positive effect on the levels of debt tolerance, which create more employment opportunities, economy will have more resources, and it will be able to finance fiscal imbalances through taxation without additional borrowing. Level of inflation prevailing in an economy is negatively related to the degree of debt tolerance. As the level of inflation rises, real value of money is lost and this indicates that the country will have to pay more debt which means more

allocation of resources towards payment of debts and little resources left to invest in development projects, as the pace of development in HIPC is already low so this will further hurt the economy and debt tolerance will be reduced.

FDI is very important for the development of emerging economies particularly HIPC, as it carries investment, more jobs, expertise and skills in the host economy. So it is obvious FDI decreases the level of external debts through its positive effects on host country and thus increases its debt tolerance. But, if the free market does not work properly, foreign direct investment is not always bringing the desired outcomes. Similarly, financial markets play a major role in boosting economic growth by channelizing savings into useful investment (Were et al., 2012), which lead to an increase in economic activity; generating enough resources to tolerate the outstanding debt liabilities. Exchange rate fluctuations also pose market risks in paying back the debt liabilities and it could be an important determinant of debt tolerance. As the currency devaluation makes more resources allocation towards debt payments. Even though currency devaluation can have deleterious impact on foreign debt, some study reveals that due to devaluation exports becomes cheaper making it more attractive in international market. The demand for exports increases, increasing the foreign exchange earnings, moreover the export boost also leads to an increase in employment opportunities in the domestic economy. Consequently, economy growth occurs. Thus, indirectly such exchange rate fluctuation can help debt servicing, making the country debt tolerant. Money supply helps out an economy in the payment of debt. With the increase in money supply interest rate goes down which increase investment. Increase in investment give boost to aggregate demand, economy grows, when the economy become stronger, it will attract foreign investment there will be more growth and enough resources to meet debt obligations.

Political environment includes the political culture which incorporate the beliefs and perception related to what the government should do

and participation by the people in electoral process. Stable political environment affects the business activities both in local market and the international level which has a direct impact on the debt carrying capacity. If there is stable political environment and no frequent changes in the policies of government, it attracts the investment, enhances domestic capital formation, generate enough revenue through taxation to finance the deficits. As a result the capacity to pay back debts rises without heavily relying on the additional borrowing.

Institutional quality also plays a vital role in determining the debt tolerance level. Poor policies on part of economic performance, taxation and fiscal concerns causes increasing propensity of debt accumulation. Heavy reliance of government on external debt to finance the fiscal deficits lowers the savings in an economy. Political instability causes frequent changes in policies, more resources allocation has to be done towards debt servicing and reducing investment to other productive programs. A disruption in the economic policies is created and the business environment is adversely affected. The excessive reliance on external debt slows down the economic activity by reducing savings and investment. The high debt accumulation creates fiscal imbalances causing a vicious circle of debt reliance.

#### **4. Data and Methodology**

The panel data consisting of 29 HIPC (highly indebted poor countries) is collected covering the time period from 2000-2015. The countries included are Burkina Faso, Bolivia, Cote d'Ivoire, Cameroon, Ethiopia, Ghana, Guinea, Gambia, The, Guinea Bissau, Guyana, Honduras, Haiti, Liberia, Madagascar, Mali, Mozambique, Malawi, Niger, Nicaragua, Sudan, Senegal, Sierra Leone, Sao Tome Principe, Chad, Togo, Tanzania, Uganda, Congo, Dem Rep and Zambia. There was a limitation of data availability for remaining HIPC including Afghanistan, Benin, Burundi, Central African Republic, Comoros, Congo, Rep., Eritrea, Mauritania, Rwanda and Somalia. So these are not a part of the study. The data on GDP, inflation, official exchange rate, FDI, private sector credit to GDP ratio and Money Supply (M2)

is extracted from World Development Indicators (WDI). Data for voice and accountability index (VA), and political stability and absence of violence (PSAV) index has been taken from International Country Risk Guide (ICRG). Data for governance (GOV) is obtained from World Governance Indicators (WGI).

The present study tries to explore the impact of economic performance and political environment on debt intolerance. Economic performance is measured through GDP, inflation, FDI, M2, private credit to GDP ratio. To measure political environment, voice and accountability, political stability and violence and governance indicators are used. Debt intolerance is measured as log of external debt to GDP ratio (LDEBT). The higher value indicates debt intolerance whereas the smaller value reflects greater debt carrying capacity or debt tolerance. The first equation estimated is given below:

$$LDEBT_{i,t} = \beta_0 + \beta_1 LGDP_{i,t} + \beta_2 INF_{i,t} + \beta_3 GOV_{i,t} + \beta_4 OEX_{i,t} + \beta_5 PVC_{i,t} + \epsilon_{i,t} \dots \dots \dots (1)$$

Where, LDEBT is the log of external debt to GDP ratio.  $\beta_0$  is the intercept term. LGDP is the log of GDP. INF is the inflation. GOV is the average of the six governance indicators taken from World Governance Indicators. OEX is the official exchange rate. PVC is the private sector credit to GDP ratio.  $\epsilon$  is the error term.  $\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  are the slope coefficients. The second equation estimates the impact of voice and accountability and the equation is given as below:

$$LDEBT_{i,t} = \alpha + \alpha_1 VA_{i,t} + \alpha_2 LGDP_{i,t} + \alpha_3 FDI_{i,t} + \alpha_4 LOEX_{i,t} + \epsilon_{i,t} \dots \dots \dots (2)$$

VA is the voice and accountability index. It shows the extent of involvement of military in the political process. As the military become more involved in political concerns, frequent policy changes are depicted, government become more prone to be corrupt. It also exhibits

the democratic accountability in an economy. LGDP is the log of GDP. FDI is the foreign direct investment. LOEX is the log of official exchange rate.  $\varepsilon$  is the error term.  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$  and  $\alpha_4$  are the slope coefficients.

The third equation estimates the impact of political stability on debt intolerance. The equation to be estimated is given below:

$$LDEBT_{i,t} = \varphi_1 PSAV_{i,t} + \varphi_2 LGDP_{i,t} + \varphi_3 FDI_{i,t} + \varphi_4 M2_{i,t} + \varepsilon_{i,t} \dots \dots \dots (3)$$

PSAV is the political stability and absence of violence index. It measures the stability of government, possible conflicts within the domestic government, possible external foreign pressure, possibility of terrorism and the likelihood of ethnic wars and government’s ability to handle all these issues. LGDP is the log of gross domestic product. FDI is the foreign direct investment. M2 is the money supply.  $\varepsilon$  is the error term.  $\varphi_1$ ,  $\varphi_2$ ,  $\varphi_3$  and  $\varphi_4$  are the coefficients of the independent variables. The subscript i indicates the cross sections i.e.  $i=1,2,3,\dots,29$  and t is shows the time period from 2000 to 2015.

The first step is the estimation through pool OLS regression. An important assumption of OLS is that all the error terms  $\varepsilon_i$  should have constant variance i.e. there should not be heteroskedasticity. Similarly, if member of series are highly correlated then problems are generated in regression. If such problems exist in the pool OLS then panel data estimation tools are required. The Breusch Pagan test and VIF test were applied which indicated the presence of heteroskedasticity and multicollinearity. Fixed effect model assumes that country specific effects are correlated with the regressors. Another assumption of FE model is that country specific effects must not be correlated with each other. Afterwards F-test was applied to choose between Pooled OLS and Fixed Effect, based on the result fixed effect model was chosen. To choose between fixed and random effect model, Hausman test was applied and fixed effect model was chosen. Modified Wald Test and Wooldridge Test showed the presence of heteroskedasticity and auto

correlation. To overcome the problem Panel Corrected Standard Error model was applied. Panel Corrected Standard Errors (PCSE) is widely used when working with time series cross sectional (TSCS) data. When serial correlation and observation specific effects are present, it is fairly robust to use this method. PCSE allows accommodating data for panel heteroskedasticity and cross correlation of errors and auto correlation (Beck and Katz, 1995). It accounts for contemporaneous correlation across units and heteroskedasticity's deviation from spherical errors and allow for improved and better results. PCSE covariance shows some similarity with hetero consistent estimator but estimation other than PCSE does not incorporate the known structure of data.

## 5. Results and Interpretation

Table 1 show that the coefficient of GDP is negative and statistically significant at level 1%. It shows 1% increase in GDP will decrease in debt intolerance level by 0.647%. This indicates that debt tolerance increases as GDP increases, because when GDP increases economic activities generate income which generates savings and investment. Inflation has a positive coefficient and is statistically significant at 10% level. It indicates that 1% increase in inflation is going to make a country debt intolerant by 0.014%. It depicts that as the level of inflation raises, economy become debt intolerant as the real value of money falls, and a country will have to pay more debt than it has taken. Coefficient of governance is negative and statistically significant at level of 10%. If governance improves by one point then debt intolerance will decrease by 0.09%, indicating that good governance plays a role in increasing debt tolerance.

**Table 1: Debt Intolerance, Governance and Economic Performance**

Variables	Pooled OLS	Fixed Effect	PCSE (heteroskedastic and panel-

			specific AR(1))
LGDP	-0.4340* (0.000)	-1.0740* (0.000)	-0.6470* (0.000)
INF	0.0280** (0.035)	0.0330** (0.024)	0.0140*** (0.067)
GOV	-0.1680** (0.037)	-0.1990** (0.025)	-0.0900*** (0.064)
LOEX	-0.0800* (0.000)	0.0006 (0.993)	-0.1159* (0.000)
PVC	-0.0040*** (0.07)	0.0080*** (0.051)	-0.0040 (0.161)
Intercept	14.0670* (0.000)	28.0710* (0.000)	19.2120* (0.000)
R-Square	0.387	0.70	0.858
Diagnos- tics	Presence of heteroskedastic ity and Multicollinearity	Presence of heteroskedastic ity and serial correlation	
F-Test	0.000 Fixed Effect Model		
Hausman Test		0.000 Fixed Effect Model	
*, **, *** shows statistically significant at 1%, 5% and 10% level of confidence. The values in the ( ) are the probability values.			

Improved governance means that there will be less rent seeking behavior of government officials, the functioning of government improves by carrying out its declared programs timely and efficiently. According to Lahouij (2016) the lesser the involvement of political pressure on institutions, the lesser the level of corruption, the lesser the rent seeking, the more the economy will foster and suitable policies are formulated for the payment of debts. Official exchange rate has a negative coefficient and is statistically significant at 1% level. If

exchange rate increases debt intolerance will decrease by 0.11%, indicating an increase in debt carrying capacity. Though, literature examines the positive relation between official exchange rate (LOEX) and debt intolerance. As the exchange rate increase, domestic currency devaluates and foreign currency becomes expensive, it further increases the debt payments and makes the country debt intolerant. But the results of present study differ substantially from the literature for the HIPC. The results show negative relation between exchange rate and debt intolerance. The reason could be as the currency devaluates, exports in international market become cheaper, this will lead to an increase in demand of exports (Shahzad & Afzal, 2016), which will boost the aggregate demand. Moreover it will earn foreign currency which will help in paying off the foreign debt.

The coefficient of private capital is negative and statistically insignificant. The negative intercept shows that in the absence of all the explanatory variables, debt intolerance will increase by 19.2%. The negative intercept might be due to the countries under examination. The sample of the countries included in the study is HIPC.

HIPC countries are characterized by high poverty levels and high debt ratios. Since the HIPC do not have enough resource mobilization from within the domestic economy. They need external resources in the form of foreign aid to generate “Big Push” in the economy. Hence they remain highly indebted.  $R^2$  represents that 85% of the variation in debt to GDP ratio (proxy for debt tolerance) is explained by the model.



**Table 2: Debt Intolerance and Voice and Accountability**

Variables	Pooled OLS	Fixed Effect	PCSE (heteroskedastic and panel-specific AR(1))
VA	-0.2870*** (0.096)	-0.7110* (0.005)	-0.4610** (0.048)
LGDP	-0.4380* (0.000)	-1.1180* (0.000)	-0.7000* (0.000)
FDI	-0.0020 (0.948)	-0.0030 (0.211)	-0.0015 (0.583)
LOEX	-0.0690* (0.000)	0.1620 (0.823)	-0.1000* (0.000)
Intercept	14.2630* (0.000)	29.4360* (0.000)	20.6470* (0.000)
R-Square	0.396	0.671	0.900
Diagnostics	Presence of heteroskedasticity but no multicollinearity	Presence of heteroskedasticity and serial correlation	
F-Test	0.000 Fixed Effect Model		
Hausman Test		0.000 Fixed Effect Model	
*, **, *** shows statistically significant at 1%, 5% and 10% level of confidence. The values in the ( ) are the probability values.			

In Table 2, coefficient of voice and accountability is negative and statistically significant at level of 5%. It indicates an increase in the index of voice and accountability (VA) will decrease the debt intolerance by 0.461%. According to the ICRG indicator of voice and accountability, the higher coefficient value implies less involvement of military in political activities and more democratic accountability of

government. Thus the negative relationship indicates reduced debt intolerance level with higher democratic accountability. The less involvement of military indicates stable policies of government regarding economic activities which will positively affect the debt carrying capacity. On the other hand, greater democratic accountability would mean lesser rent seeking behavior of the government officials and more efficient use of government resources. Hence, raising the debt carrying capacity. The coefficient value of GDP, LOEX and the intercept term are robust to the estimated values in equation 1. The coefficient of FDI is negative and statistically insignificant. Intercept has a positive coefficient and is statistically significant at 1% level.  $R^2$  shows that 90% of variation in debt intolerance is explained by the explanatory variables.

In Table 3, the coefficient of political stability and absence of violence index is negative and statistically significant at 10%. It indicates that an increase in political stability and absence of violence will bring 0.612% decrease in debt intolerance. In other words, an increase in political stability increases debt tolerance. As the political stability increases, it minimizes the chances of government collapse, internal conflicts. In addition, the proper functioning of institutions and the accountability is ensured; this helps in promoting economic growth (Alesina et al., 1992) and resource mobilization within the country for paying the external debt thereof.

**Table 3: Debt Intolerance and Political Stability**

Variables	Pooled OLS	Fixed Effect	PCSE (heteroskedastic and panel-specific AR(1))
PSAV	-1.4120* (0.000)	-1.2060* (0.006)	-0.6120*** (0.088)
LGDP	-0.4380* (0.000)	-1.1410* (0.000)	-0.5840* (0.000)
FDI	0.0010 (0.753)	-0.0030 (0.202)	-0.0010 (0.638)
M2	-0.0060* (0.006)	-0.0090* (0.006)	-0.0040*** (0.071)
Intercept	14.9220* (0.000)	30.7780* (0.000)	17.8910* (0.000)
R-Square	0.401	0.699	0.890
Diagonstics	Breusch-Pagan Test (0.000) Presence of Heteroskedasticity VIF (1.04)	Modified Wald Test 0.000 Presence of Heteroskedasticity Wooldridge Test (0.000) Presence of serial correlation	
F-Test	0.000 Fixed Effect Model		
Hausman Test		0.000 Fixed Effect Model	

\*Shows statistically significant at 1% level of confidence. \*\* Shows statistically significant at 5% level of confidence. \*\*\* Shows statistically significant at 10% level of confidence. The values in the ( ) are the probability values.

The coefficient value of GDP and FDI is robust to the value presented for equation 1 and 2. M2 has a negative coefficient and is statistically significant at 10%. It shows increase in money supply will bring 0.004% decrease in debt intolerance. Babatunde and Shuaibu (2011) indicated an increase in money supply is associated with high economic growth. As money supply increase, people hold more money, consumption and investment increases, which in turn boost aggregate demand in an economy, economy grows and there are more chances of paying back the debt obligations.  $R^2$  indicates 89% of the variation in external debt to GDP ratio is explained by the model.

## 6. Conclusion and Policy Recommendations

The results show a positive and significant relation between GDP and debt intolerance. Because as the GDP rises, it ensures that country have enough resources to pay off its debt. When country have enough resources it will not have to depend heavily on debts from external sources. As a result economy become strong and it will attract the foreign investors which will help in more sustainable external debt. Political environment also plays major role in determining the debt tolerance or the debt carrying capacity of a country. Since, it is related to the formulation of policies and allocation of resources. If the policies formulated by government are stable and resources are efficiently allocated, it enhances economic productivity. This in turn makes country debt tolerant.

Inflation is negatively related to debt tolerance. It makes a country more debt intolerant. Governance, official exchange rate and private credit are positively related to debt tolerance. If the institutions of a country work properly, there is less corruption it enhances the productivity of the economy. This in turn makes the country debt

tolerant. The voice and accountability (VA) index is negatively related to debt intolerance level. If the policies formulated by the government are stable, it ensures economy is doing well. Frequent variations in policies affect the economic activities negatively. Moreover, if there is any interruption in the affairs of government by military authorities. It reduces the efficient working of government.

Political stability and absence of violence index is also negatively related to debt intolerance. As political stability increase, there are low chances of government collapse and possible conflicts between the regulatory authorities. Absence of all these events, make the country more prone to achieve sustained growth and thus debt carrying capacity. Thus, it is concluded that stable economic and political environment, proper functioning of institutions, less corruption and accountability on the part of government officials fosters debt tolerance.

The study suggests that the quality of institutions working in these economies should be improved. There must be appropriate means for democratic accountability on the part of institutions, lesser internal conflict and stable government policies. Government must encourage the growth of private sector credit. Authorities must try to create an environment that attracts foreign investment and policies need to be devised in a manner to promote better economic performance. All these measures will help substantially to lower the debt intolerance.

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