Domestic or Foreign Debt ? A Choice of no Wrong Selection

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Abstract- This paper reviewed the matter of balance and trade-off between domestic debt and public debt. The study sought to underpin the general consensus on the issue of debt and how economic activities were impacted by the various forms of public debt. The paper gives an overview of different countries experience with regards to debt sourcing. Various authors express various views with regards to this question that do not necessarily bring about points of convergence in ideologies. The general point of agreement of specialists who have looked into this subject matter is established at the use of the debt acquired. If debt is acquired to facilitate development projects then there is no doubt that such debt will resultantly bring about economic growth and economic development. On the other hand there are some governments that do borrow for to finance recurrent expenditure however much that this increases consumption within the economy, the desired growth and development is hardly achieved. Worse still some of the funds acquired as a result of debt in some nations are squandered and pocketed by few individuals and this is very significant in the retrogressive states of many countries with weak systems that provide no serious check mechanisms as well as accountability and ownership of responsibility.

Keywords: domestic debt, foreign debt, economic growth, debt overhang, crowding out.

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Abstract- This paper reviewed the matter of balance and trade-off between domestic debt and public debt. The study sought to underpin the general consensus on the issue of debt and how economic activities were impacted by the various forms of public debt. The paper gives an overview of different countries experience with regards to debt sourcing. Various authors express various views with regards to this question that do not necessarily bring about points of convergence in ideologies. The general point of agreement of specialists who have looked into this subject matter is established at the use of the debt acquired. If debt is acquired to facilitate development projects then there is no doubt that such debt will resultantly bring about economic growth and economic development. On the other hand there are some governments that do borrow for to finance recurrent expenditure however much that this increases consumption within the economy, the desired growth and development is hardly achieved. Worse still some of the funds acquired as a result of debt in some nations are squandered and pocketed by few individuals and this is very significant in the retrogressive states of many countries with weak systems that provide no serious check mechanisms as well as accountability and ownership of responsibility. The review established the concurrence on usage of debt while still the subject matter of domestic and foreign debt still remaining empirically divergent. This study established that CBK Overdraft and Bilateral debt had positive and significant effect on Economic Growth.

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I. Introduction

Striking a balance between domestic debt and foreign debt presents a challenge as discussed in debt overhang theory. Albeit a sound equilibrating policy or guideline is required to ensure economic growth and development are met with utmost efficiency. Public debt refers to the total of the nation's debts which covers debts of local and national governments indicating how much public spending is financed by borrowing instead of taxation (Makau, 2008). According to (Patenio & Tan-Cruz, 2007), a public debt is a debt owed to both external and internal parties by a government of an independent country. This is an indication that nations have liberty to bridge their budgetary deficits within the local markets or international financial markets.

(Mahara & Dhakal, 2020) Found that fiscal deficit, trade openness, and foreign aid are major macroeconomic determinants of external debt in Nepal. From the obtained results, it is seen that an increase in foreign aid helps to significantly reduce external debt but trade openness and the budget deficit significantly leads to an increase in external debt both in the short-run as well as in the long-run. The error correction term is found to be significant and negative, showing proof of a strong association between the selected variable and ensures the correction of short-term disequilibrium to a stable equilibrium at the rate of 37 percent per annum. The study concluded that foreign aid, budget deficit, and trade openness were the main determinants of external debt in Nepal in both the long-run and short-run. Appropriate export-import or foreign trade policy, effective demand management policy, progressive tax system as well as monitoring tax evasion, effectual and productive utilization of available resources helped to reduce debt accumulation and saves the nation from the possible debt trap.

(Benli, 2020) investigated the long run dynamics of external debt burden – economic growth nexus as well as the nonlinearity in the debt-growth relationship in Turkey over the period 1970-2018. Using a multivariate model in which real output growth, external debt burden, domestic investment, exports and population growth are included as variables we employ Autoregressive Distributed Lags (ARDL) bounds testing approach to cointegration. The empirical findings indicated that the external debt burden harms economic growth in Turkey. The preliminary evidence presented here also does not appear to support the hypothesis of the debt Laffer curve in Turkey for the study period.

(N'Zue, 2020) sort to determine the impact of external debt on economic growth in the ECOWAS region. Panel data spanning from 1990 to 2016 was used and analyzed using panel CS-ARDL estimation approach. The results indicated cointegration among the variables. The study found that external debt has a positive impact on economic performance up to a threshold. In the short run, the threshold stood at 45% and in the long run, it stood at 42.52%. Beyond these points, additional external debt accumulation negatively affects the regional economic performance. Knowing that the level of the region's external debt-to-GDP ratio

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stood at 33.11% in 2018 (below the threshold), it appears that external debt has not yet hampered economic performance in the ECOWAS region. The study however, noted a need for caution given the fast rate of increase (25% in six years) of external debt accumulation in the region.

II.   Statement of the Problem

It is largely documented that countries appetite for debt has continually increased pushing up individual countries debt to GDP ratio across board. The structure of these acquired debts range from domestic instruments to foreign instruments. With regards to how these two wide instruments affect economic growth and economic development is a constant point of divergence for researchers. This paper seeks to review insights drawn from African and Asian contexts so as to establish a concrete perspective on matter of debt instruments. generally attract higher interests this means that the financiers in the domestic markets make more while dealing with the government. This can spur growth since they will be making more, the levels of consumption is also expected to increase due to the increased incomes.

III.   Theoretical Review: Debt Overhang

This theory was propounded by (Myers, 1977). The debt overhang theory is based on the premise that if the total amount of debt exceeds the country's repayment ability in the future, then the expected debt service of that country will be an increasing function of its output level. This implies that part of the returns gained from investing in the domestic market is taken by the foreign creditors thus discouraging domestic investments (Claessens et al. 1996). In such a situation the indebted country is left with a small proportion of any increases in output and exports because part of the proceeds is used to service external debt.

The theory postulates that reducing debt obligation lead to a rise in investment and repayment capacity. When this happens, the outstanding debt is more likely to be repaid therefore reducing chances of debt default. Similarly when the effect is strong, the indebted country is said to be on the wrong side of the debt Laffer curve. Here debt Laffer describes the relationship between the level of debt and the country's repayment ability which implies that there is a maximum at which accumulation of debt promotes growth (Elbadawi et al. 1996). Therefore the debt overhang hypothesis predicts that if there is likelihood that in future, debt will be larger than the country's repayment ability, then the cost of servicing the debt will depress further domestic and foreign investment (Krugman, 1988), (Sachs, 1990), (Karafat, 2002).

IV.   Conceptual Framework
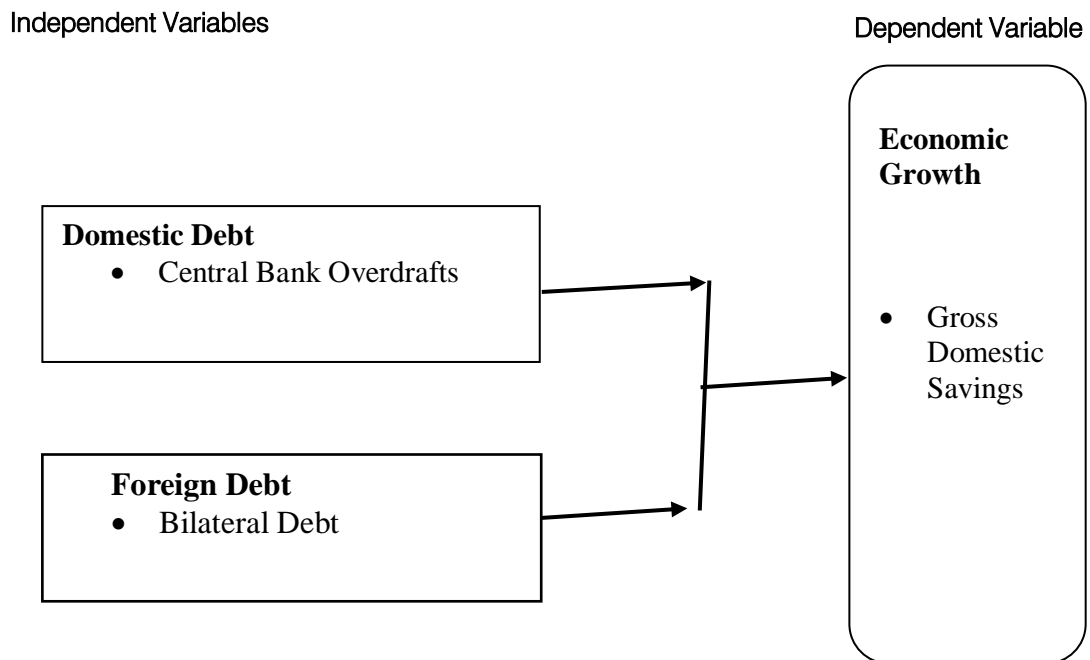
Independent Variables

Dependent Variable

Figure 1

a) Research Design

So as to be able to capture and explain changes that occur overtime, longitudinal design was best suited for the study.

b) Study Area

This study utilized data collected over a period of two decades within reputable and verifiable statistics

bureau in an emerging economy within the east African region.

c) *Data Analysis and Model Specification*

$$Z_{t,\,1} = \beta_{10} + \beta_{11}H_{t-1} + \beta_{12}H2_{\,t-2} + \ldots + \mu$$

$$X1_{\,t,\,1} = \beta_{20} + \beta_{21}Z_{t-1} + \beta_{22}H2_{\,t-2} + \ldots + \mu$$

$$_{for}All\ X\ldots$$

This model will be expanded into the following model:

$$Z = \beta0 + \beta1H1t + \beta2H2t + \text{€} \ldots\ldots\ldots 3.3$$

Where: Z= Economic growth (E.G) (Measured by real value of GDS)

H1= Domestic Debt (D.D) (Measured by total value in Kshs. Of Central Bank Overdraft)

H2= Foreign Debt (F.D) (Measured by total value in Kshs. Bilateral Debt)

V. RESULTS ANALYSIS, DISCUSSION AND INTERPRETATION

a) *Descriptive*

	D.D	F.D	E.G
Mean	22.12	23.58	23.29
Median	22.02	23.32	23.65
Maximum	23.35	24.96	24.62
Minimum	21.79	22.78	21.98
Std. Dev.	0.31	0.63	0.85
Skewness	1.68	0.84	-0.23
Kurtosis	5.60	2.56	1.59
Jarque-Bera	180.42	30.23	21.83
Probability	0.000000	0.000000	0.000018
Sum	5309.69	5658.36	5589.45
Sum Sq. Dev.	22.65	96.15	173.78

For the dependent variable E.G, the measures of central tendencies were as follows, the mean was (23.29, the median was established as (23.65) The dispersion statistics were generated as follows: standard deviation was (0.85). The Kurtosis statistic was determined as (1.59) which is below the value (3) which illustrates presence of symmetry. The skewness coefficient was (-0.23) this bespeaks that the variable is moderately skewed. Minimum was noted as (21.98) while maximum connoted as (24.62).

For F.D, the mode was equivalently obscure while the mean was derived as (23.58) and median stood at (23.33). The standard deviation was fixed at (0.63). Kurtosis statistic was specified as (2.56) denoting presence of symmetry. Skewness coefficient confirmed the same settling at (0.84). The minimum value was (22.78) and the maximum value was (24.97).

CBK_Over drafts the fifth independent variable wonted the mean as (22.12) and median stood at (22.02) the mode was analogously nebulous. The standard deviation was fixed at (0.31). Both Kurtosis statistics that was specified as (5.60) and Skewness coefficient that settled at (1.68) illustrates lack of symmetry. The minimum value was (21.79) and the maximum value was (23.35).

b) *Unit Root*

Series	Prob.	Lag	Max Lag	Obs
F.D	1.00	12	14	227
D.D	1.00	14	14	225
E.G	0.65	13	14	226
Method			Statistic	Prob.**
ADF - Fisher Chi-square			3.10	1.00
ADF - Choi Z-stat			4.29	1.00

The data was not stationary.

c) *Differenced Unit Root*

Series	Prob.	Lag	Max Lag	Obs
D(F.D)	0.02	12	14	226
D(D.D)	0.00	13	14	227
D(E.G)	0.00	12	14	226
Method			Statistic	Prob.**
ADF - Fisher Chi-square			180.14	0.0000
ADF - Choi Z-stat			-11.51	0.0000

The tested variables had no unit root this was later achieved on differencing.

d) *Correlation Analysis*

	D.F.D	D.D.D	D.E.G
D.F.D	1.000000		
D.D.D	-0.27	1.000000	
D.E.G	0.17	0.53	1.000000

The correlation analysis revealed that both foreign debt and domestic debt are positively correlated with economic growth as evidenced by their coefficients 0.17 and 0.53, respectively.

e) *Johansen Cointegration Trace Test*

From Johansen test, the time series variables were not cointegrated. Consequently, the best model to use in the study was Vector Autoregressive Model (VAR).

Vector Autoregressive Model (Var)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.18	0.05	3.77	0.00
C(2)	0.13	0.05	2.78	0.01
C(3)	-0.0002	0.00	-0.05	0.96
C(4)	0.55	0.07	7.98	0.00
C(5)	0.52	0.05	10.19	0.00
Determinant residual covariance		0.00		
Equation: DEG = C(1)*DEG(-1) + C(2)*DEG(-2) + C(3) +				
C(4)*DFD + C(5)*DDD				
R-squared	0.64	Mean dependent var		-0.01
Adjusted R-squared	0.63	S.D. dependent var		0.03
S.E. of regression	0.02	Sum squared resid		0.10
Durbin-Watson stat	1.34	Log Likelihood		587.84

The model is reliable for forecasting since Log Likelihood criteria {587.84>30} is an indication of the goodness of fit. With an R-Square of 64% the model is fit for prediction. This is interpreted that E.G can be explained by the variables in the model up to 64 % while the remaining 36% could be explained by other variables not in the current study.

The model therefore was stated as;

$$E.G = -0.0001 + O.18E.G_{t-1} + 0.13E.G_{t-2} + 0.5200\ D.D + 0.5524\ F.D$$

f) *Domestic Debt (D.D) and Economic Growth (E.G)*

The fourth objective of the study was to establish the effect of CBK overdraft and economic growth. The null hypothesis was therefore stated as follows;

H_0: Domestic Debt has no significant effect on Economic Growth.

The table indicates that the regression weight of D.D and E.G was 0.5200 ($p = 0.0000 < 0.05$) indicating existence of a positive and significant effect of D.D on E.G and hence the null hypothesis was rejected. This means that a unit increase in D.D causes E.G to expand by 0.5200. The amount borrowed should be matched with type of investment to ensure repayment is done on

time thus avoiding delayed repayment `costs. This finding has a bearing on borrowing implementation policy that ought to match borrowed money and targeted investments required to reduce chances of penalties associated with delayed debt servicing. This will in turn enhance credit rating hence reduce cost of borrowing consequently narrowing the interest rate spread. (Muhammad, Muhammad & Tariq, 2010) in their study in Pakistan on impact of domestic debt on economic growth found that there exists a positive relationship between domestic debt and economic growth. (Putunoi & Mutuku, 2013) also found existence of a positive relationship between public debt and economic growth in their study of domestic debt in Kenya.

g) Foreign Debt (F.D) and Economic Growth (E.G)

The sixth objective of the study was to determine effect of bilateral debt on economic growth. The null hypothesis was therefore stated as follows;

H_0: Foreign Debt has no significant effect on Economic Growth.

The analysis on Table 4.6b indicates that the regression weight of F.D on E.G was 0.55 ($p = 0.000 < 0.05$) indicating existence of a positive and significant effect of bilateral debt on economic growth and this therefore led to the rejection of the null hypothesis. This means that a unit increase in F.D enhances E.G by 0.55. This result could be attributed to economic discipline (management efficiency) in the application of debt as contained in the debt agreement between the parties hence improved debt rating. This in turn enables the government to access cheaper credit in future. This finding has a policy implication with respect to continue having a legal limit on size/volume of bilateral debt to avoid situation of excess debt repayment installments (Principal, interest and associated penalties) that consequently reduces savings necessary to catalyze economic development. These findings affirm use of Debt Overhang Theory. These findings contradicts the study by (Pattillo, Poirson, & Ricci, 2004) who looked at the channels through which external debt affects growth. They found out that there exists a strong negative relationship between external debt and economic growth. In their study that looked at the impact of external debt and debt servicing on poverty reduction in Nigeria, (Oloruntoba, Apollos & Emerah, 2013) also contradicts the findings of this current study since they indicated that there exists an inverse relationship between external debt and economic growth.

VI. CONCLUSION

a) Domestic Debt (D.D) and Economic Growth (E.G)

The first objective of the study was to establish the effect of D.D on E.G. The null hypothesis was therefore stated as follows; H_0: Domestic Debt has no significant effect on Economic Growth.

The findings show existence of a positive and significant effect of D.D on E.G and hence the null hypothesis was rejected. D.D is seen to stimulate economic growth as evidence by the positive correlation as well as positive coefficient in the estimated model. This variable defies the expectations from the neoclassical theory since it shows that debt can be a tool to invoke economic growth.

b) Foreign Debt (F.D) and Economic Growth (E.G)

The second objective of the study was to determine effect of Foreign Debt on Economic Growth. The null hypothesis was therefore stated as follows; H_0 : Foreign Debt has no significant effect on Economic Growth.

The analysis indicates existence of a positive and significant effect of bilateral debt on economic growth and this therefore led to the rejection of the null hypothesis. Bilateral debt was not in agreement with the neoclassical postulations since it indicated a positive interaction with economic growth.

VII. RECOMMENDATION

Key establishments have it that as a country secures loans, feasibility has to be factored in to see the position in terms of debt repayment. Still to be considered is the function of the acquired debt and this should largely revolve around development projects to ensure sustainability of growth and development. Further if the development projects could also be income generating the better for the country since this will relieve undue and unnecessary pressures within the economy in search for funds to help off-set the loans. These consideration factors are a clear indication that frugality in cost-benefit analysis needs to occur and this could possible tame the global outage of debt appetite. The market from where the debt is drawn is of importance to the individual governments' consideration since the outcomes have significant effects to both the market players and the countries at large. Domestic debts.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Abbas, M. (2010) 'The Role of Domestic Debt Markets in Economic Growth: An empirical investigation for low-income countries and emerging markets," IMF staff papers No.02/249, Washington: International Monetary Fund.
2. Addison, A. (1995) Economic Progress and Policy in Developing Countries. London.
3. Adofu & Abula, M. (2010). Domestic Debt and the Nigerian Economy. *Current Research Journal of Economic Theory* 2(1): 22-26, 2010
4. Aghion, P., and Durlauf, S. (2007) Handbook of Economic Growth. North-Holland: Elsevier. available on-line in http://www.nek.lu.se/publications/work pap/Papers/WP05_34.pdf

5. Allen and Unwin, Mankiw N. G., and Elmendorf, D. (1999) Government Debt. Handbook of Macro-economics. North Holland. Massachusetts.

6. Ashraf, W. M., Akhtar, J. M., Rehman, H.-u., & Awan, G. A. (2020). Impact of external Debt on Poverty in Pakistan. *Journal of Management, Social Sciences and Humanities*, 251-271.

7. Babatunde, M., and Adefabi, R. (2005) Long run relationship between education and Economic Growth in Nigeria: Evidence from the Johansens Cointegration Approach. 'Regional Conference on Education in West Africa,' Held at Dakar Senegal.

8. Barro, J. (1991) 'Economic growth in a cross section of countries'. Quarterly Journal of Economics, Vol.106 (2), pp 251-276.

9. Bawa, S., and Abdullahi, I. (2010) 'Threshold Effect of Inflation on Economic Growth in Nigeria' C (Addison, 1995) (Adofu & Abula, 2010)BN Journal of Applied Statistics, Vol. 3 (1) pp-64-78.

10. Benli, M. (2020). External Debt Burden-Economic Growth Nexus in Turkey. *Social Sciences Research Journal*, 107-116.

11. Borensztein, E. (1995). Debt overhang, debt reduction and investment: The case of Philippines", IMF Working Paper, No. WP/90/

12. Burnside, C., and Dollar, D. (2000) 'Aid Policies and Growth' American Economic Review, 90(4): pp 847-868.

13. Chandra, R., and Perera, N. (2009) 'Foreign Debt, Trade Openness, Labor Force and Economic Growth: Evidence from Sri Lanka' Sydney Business School - Papers (Archive) (2009).

14. Chauhan, P., Sabale, A., & Yeole, Y. (2020). Impact of External Debt on the Economy of India. *Test Engineering and Management*, 6072-6079.

15. Chowdhury, R. (2001) Foreign debt and growth in developing countries 'Conference on Debt Relief' Held at United Nations University, Helsinki.

16. Claessens, S. (1996) 'The debt laffer curve: Some Empirical estimates'. World development indicators. Worshington, DC; World Bank.

17. Clements, E. et al. (2003) 'External debt, public investment and growth in low-income countries'. IMF Working Paper No. 03/249.

18. Cohen, D. (1993) 'Low investment and large debt in the 1980s' American Economic Review journal, Vol. 83 June, 1993.pp 120-150.

19. Collier, P., and Gunning, W. (1999) 'Explaining African economic performance. Journal of economic literature, Vol.37 (1): 64-111.

20. Cunningham, T. (1993) 'The effects of debt burden on economic growth in heavily indebted nations'. Journal of Economic Development, Vol. 18.pp 137-172.

21. Eaton, J. (1993) 'Sovereign Debt: A Primer'. The World Bank Economic Review, Vol.7 (2) pp 135-180.

22. Elbadawi, A. (1996) Debt overhang and economic growth in Sub-Saharan Africa. 'IMF/World Bank Conference on External Financing for Low Income Countries'. held on December.

23. Ekpe, J. P. (2020). Impact of external debt on economic growth in Nigeria. Social Sciences and Management International Journal, 110-119.

24. Fosu, A. (1999) 'External debt burden and economic growth in the 1980s: Evidence from SubSaharan Africa'. Canadian Journal of Development Studies, vol.12 (3), pp 120-126.

25. Górniewicz, G. (2018). Polish External Debt. Torun International Studies, 103-115.

26. Hadžiahmetović, A., & Hurić-Bjelan, J. (2020). External Debt in Bosnia and Herzegovina- An Empirical Analysis. South East European Journal of Economics and Business, 70-82.

27. Harrod, R. An Essay in dynamic theory. Econ. J. 1939, 49, 14–33, doi: 10.2307/2225181.

28. IBRAHIM, T. M., & FARAH, A. M. (2020). External Debt Stock and Economic Growth in Somalia (1990-2016). Islamic University Multidisciplinary Journal, 234-247.

29. Karagol, E. (2002) 'The causality analysis of external debt service and GNP: The Case of Turkey'. Central Bank of Turkey, Turkey.

30. Karimanzira, T., Maradze, T., Nyoni, T., & Nyoni, S. (2020). The Impact of external Debt on Poverty in Zimbabwe. International Journal of Advance Research and Innovative Ideas in Education, 2395-4396.

31. Khan, M., and Senhadji, A. (2001) 'Threshold Effects in the Relationship Between Khan, M., and Sigh, M. (1997) Public and private investment and the growth process in developing countries. United Kingdom: Oxford University.

32. Klein, T. M. (1994) 'External Debt Management'. Paper No. 245.

33. Krumm, K. (1985) 'The External Debt of Sub-Saharan Africa'. World Bank Staff Working papers No.04/255

34. Lutkepohl, H. (2005). *New Introduction to Multiple Time Series Analysis*. Heidelberg: Springer-Verlang https://kevinkotze.github.io/ts-7-var/ Accessed on 10/12/2020

35. Mahara, S. T., & Dhakal, S. (2020). Macroeconomic Determinants of External Debt in Nepal: The ARDL Approach. Quest Journal of Management and Social Sciences, 275-289.

36. Modigliani, F., and Miller, H. (1958) 'The Cost of Capital, Corporation Finance and the Theory of Investment." American Economic Review, Vol.48 (3), pp 154-160.

37. Ramey, G., and Ramey, V. (1995) 'A cross-country evidence on the link between volatility and growth'. The American Economic Review. 85(5), 1138-1151.

38. Reinhart, M., and. Rogoff, S. (2009) 'The Aftermath of Financial Crises'. .American Economic Review, 99(2), 466-472. Research Paper No. 13. Nairobi: African Economic Research Consortium.

39. Sachs, J., (1989), "The Debt Overhang of Developing Countries," in Debt Stabilization and Development

40. Sachs, J. D. (1990) 'External debt, structural adjustment and economic growth'. International Monetary and Financial Issues for the 1990s, IMF working papers, WP/89/74.

41. Schclarek, A. (2004) Debt and Economic Growth in Developing Industrial Countries, mimeo, Shah, M., and Pervin, H. (2010) 'External Public Debt and Economic Growth: Empirical Evidence from Bangladesh, 1974 to 2010 (September 1, 2012)'. Academic Research International 3(2) Available at SSRN: http://ssrn.com/abstract=2180323.

42. Solow, R. (1956) 'Contribution to the Theory of Economic Growth'. The Quarterly Journal of Economics, Vol. 70(1) pp 45-70.

43. Soren. J., (1995). *Likelihood-Based Inference in Cointegrated Vector Autoregressive Models. Journal of Economic Dynamics and Control*. Vol. 12. Advanced Texts in Econometrics 213. Oxford: Oxford University Press

44. World Bank Krugman, P. (1988) Financing versus forgiving debt overhang. Massachusetts: National Bureau of Economic Research.