

Critical Test for Indian Economic Stability

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Abstract:-Since from previous studies it is found that uncertainty plays a major role in defining crisis specifically, country with good Debt-GDP ratio could reach economic insolvency within year or so (as happened with Greece, Italy, Portugal). This paper will discuss this issue and with help of statistical tools analyses whether India can create some fiscal space so that it not only survive unexpected global crises but also take advantage of global crises for growing faster. Immediate remedies have to be taken to create fiscal space so that solvency can be maintained. India can manage to create more fiscal space by implanting multilevel strategy for external debts.

JEL : H1 , H2

Key Words : Fiscal Space, Crisis, Debt, GDP, Economic

I. INTRODUCTION

Fiscal Space is the jargon commonly used by policy makers, ministers and economists, yet the concept of 'fiscal space' remains fuzzy. The term is now frequently used in current policy debates without clarity as to its meaning. For better understanding of fiscal space we have to first understand meaning of fiscal sustainability and economic stability.

Now one more question arises in our mind whether fiscal space is created or it occurs. In search if solution to all these questions let us understand economic stability. Economic stability is the solution when all the economic parameters related to monetary values remain stable and under control of the governing bodies of the country. Fiscal sustainability is the situation or the extent to which the government can increase its expenses above its income so that the country can maintain its economic stability.

"In broader sense, fiscal space can be defined as the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a governments' financial position".

Fiscal Space has different meaning to countries at different stages of development ie:

Low income countries

The concept of fiscal space was devised in response to discredited policies of international organizations that required poor countries to adopt austerity programs when

they faced economic stress.

Prime objective is to assess the opportunity for additional spending to promote development, thereby stimulating future economic growth and increases in government revenue.

Fiscal space justifies policies that may worsen current financial imbalances but would promote growth and thereby enlarge the future scope of public expenditure.

Prime problem is to create fiscal space for countries that have inadequate tax bases, chronic financial imbalances, and compelling need to invest in human and physical resources.

Developed countries

Prime problem is how to rationally allocate the space that is available through economic growth, revenue policy and saving.

To access the resources available for allocation through annual or medium term budget decisions.

To measure the money available for policy innovation consistent with medium to long term fiscal sustainability.

The drawback is that the opportunity to enlarge future space through growth stimulating budget policy is limited.

Middle income countries

The prime objective is to promote rapid development without undue risk to the governments' future fiscal position.

The second objective of fiscal space is the opportunity to create fiscal space depends on variables such as the tax revenue/GDP ratio, spending on infrastructure and other investment, and budget rigidity through balance between tax, revenues, and different types of loans, inflation and import export balance.

Overall speaking we can conclude that fiscal space can be used as a tool for sustainability, development and efficient budgeting. But these bookish meanings / definitions and theories go in vague when we study fiscal space of individual country to country. For maintaining fiscal space government has to maintain "no-ponzi game condition". If government is insolvent and still able to continue functioning without the breakdown then it is playing a ponzi game ie discharging its liabilities by borrowing continuously or creating currency, as in case of Japan.

II. HYPOTHESIS FOR THIS PAPER

Ho : Assuming revenue generation as a balance factor, when debt is in a moderate range, its dynamics are

sustainable in the sense that increases in debt elicit sufficient increases in primary fiscal balances to stabilize the debt to GDP ratio.

H_{a1} : At low level of debt the country play a safe game but in the fast moving economic race the country may lag behind as happened to India during 16th to 18th century.

H_{a2} : At high debt levels, the conditions may turn unstable. The risk may totally depend on country historical track record of adjustment.

III. FRAMEWORK AND OPERATIONS OF GOVERNMENT DEBT MANAGEMENT

(In accordance with Stockholm Principles)

1. The scope of debt management should be defined in a way that also accounts for any relevant interactions between the nature of financial assets, explicit and implicit contingent liabilities, and the structure of the debt portfolio

The crisis-related interventions have involved a wide range of debt management operations. In some instances, changes have taken place in the structure and the composition of the debt portfolio. It is important that the debt management strategy takes into account the relevant variables and the policy and financial risk implications.

2. Strategic and operational debt management decisions should be supported by relevant information sharing at the domestic, regional, and global levels.

The crisis has raised the risk of financial stability spillovers, including systemic cross-border contagion. Therefore, the need for information sharing on materially important aspects, at both the regional and global levels, takes on greater significance. This aspect becomes especially important when the investor base comprises both domestic and foreign participants. Information sharing should take place among relevant public authorities, and where appropriate, also with the private sector.

3. Flexibility in market operations should be maintained to minimize execution risk, improve price discovery, relieve market dislocations, and support secondary market liquidity.

In light of the challenges of issuing and managing increased amounts of debt, debt managers should retain sufficient flexibility to adapt the debt issuance format and/or adopt different issuance techniques. They should also be prepared to make timely use of liability management operations to alleviate secondary market impairments. In such cases, the following Principle 5 should also be taken into consideration.

Communication

4. Proactive and timely market communication strategies should be maintained to support a transparent and predictable operational framework for debt management.

Effective communication helps minimize uncertainty and contain costs by providing investors with the necessary

information required to form expectations and manage investment decisions. This also facilitates the smooth undertaking of debt management operations, including primary market issuance.

5. Modifications to the operational toolkits of debt managers should be properly explained.

As changes are made, debt managers should communicate them to the public clearly and in a timely fashion. Where appropriate, prior consultation with investors and other stakeholders should be undertaken to garner feedback and support for the planned changes, such as the introduction of a new debt instrument or an adjustment to an existing debt issuance mechanism.

6. Communication among debt managers and monetary, fiscal, and financial regulatory authorities should be promoted, given greater inter-linkages across objectives, yet with each agency maintaining independence and accountability for its respective role.

The higher levels of debt and increased uncertainties regarding fiscal, monetary, and regulatory policies imply the need for close communication among different agencies on all relevant aspects. However, it is important that these agencies retain their functional and operational independence in areas for which they are accountable.

7. A close and continuing dialogue with the investor base should be promoted to keep abreast of its characteristics and preferences.

Understanding the nature of the investor base and shifts in the investment philosophy enables debt managers to identify potential vulnerabilities and new opportunities, and to offer instruments that better match investors' needs. This can have important positive effects in limiting funding disruptions, mitigating adverse funding conditions, and reassuring that investors are being treated equitably.

Risk management

8. Debt portfolio risks should be kept at prudent levels, while funding costs are minimized over the medium to long term.

Given the increased exposure to macroeconomic and financial risks, a stronger emphasis should be placed on risk mitigation than that implied by traditional policy objectives of public debt management. The debt manager should have a framework that helps identify, assess, and monitor the risks associated with debt management operations.

9. When determining medium-term debt management strategies, the range of risk factors considered should be consistent with the broadest definition of the debt portfolio and the associated range of potential scenarios.

The main sources of the risks to which the sovereign balance sheet is exposed should be identified and a clear

framework on how these risks are managed should be established. A careful analysis of the debt portfolio should be carried out on the basis of relevant economic and financial stress scenarios, including the costs and risks of alternative strategies.

10. Prudent risk management strategies covering the full range of risks facing sovereign debt managers should be adopted and communicated to investors.

In many cases, the high level of debt is constraining governments' ability to absorb additional risk on their balance sheets. It is important to maintain debt portfolios that reduce the sovereign exposure to a variety of financial risks, including refinancing risk and exposure to contingent liabilities. Debt managers should clearly set out the strategies being adopted to limit these risks and communicate them to the public.

Current Indian position

	GDP Projections			
	2009	2010	2011	2012
World output	-0.6	5	4.4	4.5
Advanced Economies	-3.4	3	2.5	2.5
US	-2.6	2.8	3	2.7
Japan	-6.3	4.3	1.6	1.8
UK	-4.9	1.7	2	2.3
Canada	-2.5	2.9	2.3	2.7
Euro Area	-4.1	1.8	1.5	1.7
Germany	-4.7	3.6	2.2	2
France	-2.5	1.6	1.6	1.8
Italy	-5	1	1	1.3
Spain	-3.7	-0.2	0.6	1.5
Other Advanced Economies	-1.2	5.6	3.8	3.7
Developing Asia	7	9.3	8.4	8.4
China	9.2	10.3	9.6	9.5
India	5.7	9.7	8.4	8
ASEAN-5	1.7	6.7	5.5	5.7

Table 1. Latest IMF projections.

Global output is projected to expand by about 4½ percent in 2011, while IMF had predicted Indian GDP growth is 8.4% in 2011. Finance Ministry (25th feb. 2011) had estimated the growth between 8.75% to 9.25% for the year 2011, which is much better estimate than IMF projections.

Overall, advanced economies are projected to grow by 2.5 percent in 2011, with emerging and developing economies seeing growth of 6.5 percent, against 7.1 percent last year. Growth in sub-Saharan Africa will climb to 5.5 percent, from 5.0 percent in 2010.

According to the IMF October 2010 World report (table:1) India had minimum impact of global recession as seen from YoY GDP growth compared to other developed and developing countries.

METHODS FOR CALCULATING FISCAL SPACE

1) Debt – GDP Ratio

Conceptual fiscal space can be estimated by calculating debt-GDP ratio. A debt-GDP ratio of 50% above is considered unstable but it could be argued that it makes little sense to use such conventional ratios, taking an example of Japan, it is presently having Debt-GDP of approximately 200% for long time but it has stable economy but countries like Argentina and Iceland were trapped in economic breakdown even through they were maintaining much lower debt-GDP.

After closer analysis we can say that fiscal space can be maintained until following conditions are satisfied:-

Imports are less than exports.

Exchange rates are maintained stable.

GDP growth rate is increasing.

Strictly controlling Inflation.

Maintaining stable and low interest rate.

Thus for country like India having 63% debt-GDP ratio is not a big problem as GDP growth is high around 8-9 % while only risk is inflation which has to be maintained low with low bank interest rate.

If there is prolonged period of high interest rate, the debt can grow faster than that of the economy and an unbounded ratio of debt to output is possible (M C Callum 1984), however Barro (1979) and Kremers (1989) note that such possibility does not seem sensible and therefore argue for a constraint in the size of primary fiscal surpluses because the government cannot raise more revenue than the economy generated as income.

2) Calculating Interest Rate Risk

The duration of equity (DoE) or the net-worth duration approach in stress tests could help in calculating the erosion in capital due to unit increase in interest rates. The analysis takes into account the interest rate sensitive items in balance sheet of the banks' portfolio and also the banks' exposure to interest rate sensitive off balance sheet items. Subject to certain limitations, DoE captures the interest rate risk and helps in moving towards the assessment of risk based capital. The higher the duration of equity, more is the interest rate risk and accordingly greater the requirement of capital.

• **Duration Gap** = (Duration of assets * total assets – Duration of liabilities * total liabilities) / total asset

• **Duration of Equity** = Duration Gap * Leverage Ratio

= (Duration of assets * total assets – Duration of liabilities * total liabilities) / total asset * Leverage Ratio

total liabilities) / Capital & Reserves

• **Interest rate shock required to wipe out the capital funds = % Change in Price / DoE = 100/ DoE**

Under this approach, the duration of equity of a bank's portfolio (RBI) is computed under two scenarios: the savings deposits are assumed to be withdrawn in the first time band viz. 1 to 28 days (scenario I); the savings deposits are assumed to be withdrawn in 3 to 6 months time band (scenario II).

This implies that if the interest rate is greater than the growth rate, the debt ratio needs to be bounded. Though this theory had been proved wrong by some countries who are having high Debt-GDP ratio but weak growth rate, this has been possible by creating a strong position to generate fund both in terms of short term and long term through mobilizing internal sources.

3) Balance between Internal and External Debt

From the historic study we can observe that this is possible as internal debt does not follow the rule of calculating insolvency using Debt-GDP. If interest rate is maintained low while interest on government bonds maintained at premium then this stability can be achieved while maintaining solvency. Considering this analysis India has got much more potential to maintain solvency at higher Debt-GDP ratio considering mobilization of large proportion of internal debt compared to external debt.

4) Saving pattern and Individual debt pattern of citizens

One more factor which cannot be ignored is saving habits of citizens of the country. One of the major reasons for Japan maintaining economic stability in spite of very high Debt-GDP is high saving habit of Japanese citizens. Indians also follow the same pattern as of Japanese, hence we can conclude that India still have scope to expand its debts (Internal) which may subsequently increase GDP.

5) Deficit as a stationary variable

A standard approach in the empirical literature studying solvency is to test whether the budget deficit is a stationary variable (Trehan & Walsh (1988, 1991), Ahmed & Rogers,1995) when this null hypothesis cannot be rejected the current behavior of government debt is said to be sustainable in the long run.

David Wilcox (1989) also analyzed that let all factors be ignored and only factors which are being affected are considered ie real economic growth and real rate of interest. If government is in position to maintain higher real economic growth than interest rate of its debts then it is sustainable by resorting to borrow money and pay the interest by borrowing more.

Trehan & Walsh state that "A standard approach in the empirical literature studying solvency is to test whether the budget deficit is a stationary variable" when this null hypothesis cannot be rejected the current behavior of

government debt is said to be sustainable in the long run, however Quintos (1995) proved in his paper that the non-ponzi game condition is satisfied when the budget deficit is integrated of order one and therefore distinguishes between strong (the budget is stationary) and weak (the budget is non stationary) form of solvency.

A government's deficit can be measured with or without including the interest it pays on its debt. The primary deficit is defined as the difference between current government spending and total current revenue from all types of taxes. The total deficit (which is often just called the 'deficit') is spending, plus interest payments on the debt, minus tax revenues.

Therefore, if t is a timeframe, G_t is government spending and T_t is tax revenue for the respective timeframe, then the primary deficit is $(G_t - T_t)$

If D_{t-1} is last year's debt, and r is the interest rate, then the total deficit is $G_t + rD_{t-1} - T_t$

Finally, this year's debt can be calculated from last year's debt and this year's total deficit is: $D_t = (1+r) D_{t-1} + G_t - T_t$

Using above quoted formula Geeta Jalan & Sudhir Sharma in there paper (2010) developed a formula for state of insolvency.

Working on that formula we can further develop

$$B_t = \sum_{s=1}^{\infty} \frac{(R_{t+s} - G_{t+s})}{\prod_{j=1}^s (1 + r_{t+j})} + \lim_{s \rightarrow \infty} \prod_{j=1}^s \frac{(B_{t+s})}{(1 + r_{t+j})} \quad (1)$$

where; B is stock of Debt of Government. We make two assumptions (Flavin and Hamilton, 1986) and (Haug, 1995), the first is that the real interest rate is stationary with an unconditional mean. The second is that real supply of bonds does not grow, on average, at a rate in excess of average rate of interest. It is now possible to present analytically two complementary definitions of solvency, which set the background for most empirical testing :

1) First part of right hand side of the equation stating the value of public current debt must be equal to the sum of future primary surpluses.

When second part of right hand side of the equation is zero, the present value of the debt will be identified to present value of future primary surpluses.

$$B_t = \sum_{s=1}^{\infty} \frac{(R_{t+s} - G_{t+s})}{\prod_{j=1}^s (1 + r_{t+j})} \quad (2) \quad \text{ition}$$

$$\lim_{s \rightarrow \infty} \prod_{j=1}^s \frac{(B_{t+s})}{(1 + r_{t+j})} = 0 \quad (3)$$

6) Debt Service Payment and Debt Service Ratio

One more tool very commonly used is Debt service

payments and debt service ratio, they occupy a central place in debt analysis. Debt service ratio, as measured by the proportion of total debt service payments (i.e. principal repayment plus interest payment) to current receipts of Balance of Payments (BoP), is an indicator of debt sustainability. It indicates the claim that servicing of external debt makes on current receipts and is, therefore, a measure of strain on BoP due to servicing of contractual obligations.

The debt service payments comprise principal repayments and interest payments on the outstanding debt. When debt service payments are large relative to the current receipts, the BoP would be under strain and the economy less resilient to external shocks. A higher debt service ratio may also have adverse impact on the country's sovereign credit rating. Recording and monitoring of debt service payments are, therefore important elements of effective external debt management.

Recent trends in India's external debt service ratio are presented in figure below.

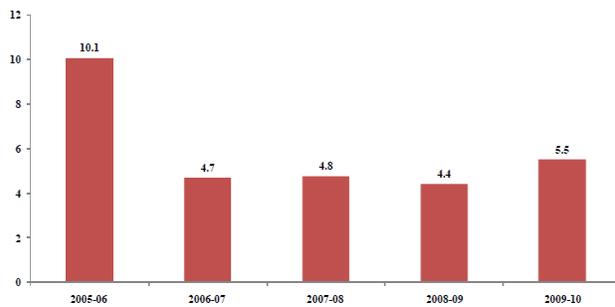


Fig : 1 India's Debt Service Ratio (Percent)

Interpretation the data from the figure we can conclude that India is in improved position in factor of external debt service ratio compared to year 2005-06. Due to exchange rate there is some negative deviation in year 2009-10, still upto 10 debt service ratio can be maintained.

7) Analyzing Critical test for Fiscal Space

Year	External Liabilities	Implicit Interest Rate on External Debt	Interest on External Debt Calculated	Total Receipt	Revenue Expenditure	Critical Test for Stability
1	2	3	$4 = \frac{2 \times 3}{100}$	5	6	$7 = \frac{4}{(5-6)}$
2000-01	65945	4.8	3165.36	326789	277839	0.06
2001-02	71546	4.8	3434.208	363806	301468	0.06

2002-03	59612	4.6	2742.152	411365	338713	0.04
2003-04	46124	3.8	1752.712	475146	362074	0.02
2004-05	60877	4.1	2495.957	506382	384329	0.02
2005-06	94243	3.9	3675.477	526626	439376	0.04
2006-07	102716	4	4108.64	583387	514609	0.06
2007-08	112031	3.9	4369.209	712671	594433	0.04
2008-09	123046	2.9	3568.334	883956	793798	0.04
2009-10	139581	2.5	3489.525	1021547	906355	0.03
2010-11	162045	2.4	3889.08	1108749	958724	0.03
2011-12	205245	2.4	4925.88	1303960	990345	0.02

Critical Test for Stability = (Interest payment on External Debt) / (Total Receipt - Revenue Expenditure)

DIRECTIONS IN WHICH INDIA CAN WORK ON TO EXPAND FISCAL SPACE

Like many other countries, India is also at the risk of insolvency. Immediate remedies has to be taken to create fiscal space so that solvency can be maintained and for that India has to maintain its distance from new debt (External) but to follow the rule of creating money than borrowing money.

India can manage to create more fiscal space by implanting multilevel strategy for external debts. It can create an opportunity to repay external debt with high interest rate when ever exchange rates are in favour. Further India could develop strategies in the direction of following approaches to create fiscal space:

- Reprioritize expenditures?
- Say no to incremental budgeting and develop Zero based budgeting.
- Establish social health insurance schemes?
- Increase borrowings (internal), for the economic developments and not social developments.
- Share of profit with private sector.
- Increase receipt of grants.
- Study macroeconomic challenges of absorbing additional resources transfers.
- Cutting down subsidies wherever required in phased manner (eg Agriculture, petroleum products).
- Maintain minimum unplanned expenses.
- Maintain minimum recurring expenses.
- Balancing debt thus reducing burden of interest payments.
- Go for privatization and focus more on infrastructure

development.

- Increase non tax revenues.
- Develop public private partnerships.
- Increase Tax Revenue by
- Tax policy change
- Tax administration reform

CONCLUSION

WTO, IMF and other global institutions state this period as recovery from global recession. India should take advantage of this period as India was not having a major impact of recession, even though post recession period was resulting into heavy inflation. India can consider this period of 2010-2011 as base period for re-estimating fiscal space and position itself to be at low or medium risk level. Since from previous studies it is found that uncertainty plays a major role in defining crisis specifically, countries whose debt appears sustainable may find an economic shock could change the whole situation ie country with good Debt-GDP ratio could reach economic insolvency within year or so (as happened with Greece, Italy, Portugal). The critical test show that Indian economy had not grown, but it can be said that it had not fallen to the extent as during 2000-2002. India should take action not to decrease fiscal space but to increase the economy itself by reducing recurring expenses and unplanned expenses while focus more on infrastructural developments through zero budgeting and public private partnerships. India should also increase tax revenue by efficient tax administration reforms. Finally control the fall of rupee against dollar.

REFERENCES

- [1] Blanchard, O. ; Chaurauqui, J. ; Hagemann, R. and Sartor, N. (1990) : "The Sustainability of Fiscal Policy : New Answers to an Old Question", OECD Economic Studies 15, Autumn, p. 7-36.CIA, (2010) : "CIA World Factbook".
- [2] Agenor, P. R. and Montiel, P.J. (1996) : "Development Economics", Princeton University Press.
- [3] Ahmed, S. and Rogers, J.H. (1995) : "Government Budget Deficits and Trade Deficits: Are the Present Value Constraints satisfied in Long Term Data?", Journal of Monetary Economics, Vol. 36, No.2, p. 351-374.
- [4] Artis, M. and Marcelino, M. (1998) : "Fiscal Solvency and Fiscal Forecasting in Europe", CEPR Discussion Paper No. 1836.
- [5] Baldacci, Emanuele and Kevin Fletcher, (2003) : "A Framework for Fiscal Debt Sustainability Analysis in Low-Income Countries," in Helping Countries Develop: The Role of Fiscal Policy, ed. by Sanjeev Gupta, Benedict Clements, and Gabriela Inchauste (Washington: International Monetary Fund), pp. 130–161.
- [6] Bohn, H. (1998) : "The Behaviour of U.S. Public Debt and Deficits", Quarterly Journal of Economics, 133.3, p. 949-963.
- [7] Boyes, Roger (2009). Meltdown Iceland: Lessons from the World Financial Crisis from a Small Bankrupt Island. Bloomsbury USA. ISBN 978-1608190188.
- [8] Buiter, W.H. (1990) : "Principles of Budgetary and Financial Policy", Cambridge Mass, MIT Press.
- [9] Calderón, César and Luis Servén, (2004) : "The Effects of Infrastructure Development on Growth and Income Distribution," World Bank Policy Research Paper No. 3400 (September).
- [10] Chalk, N. and Hemming, R. (2000) : "Assessing Fiscal Sustainability in Theory and Practice", IMF working paper, no. 81 : April, 1, 2000.
- [11] Chalk, Nigel, and Richard Hemming, (2000) : "Assessing Fiscal Sustainability in Theory and Practice," IMF Working Paper 00/81 (Washington: International Monetary Fund).
- [12] Chartier, D (2010). The End of Iceland's Innocence. The Image of Iceland in the Foreign Media during the Crisis. Citizen Press Iceland. ISBN 978-0955136337.
- [13] Enzo Croce and Hugo Juan-Ramon, V. (2003) : "Assessing Fiscal Sustainability: A Cross Country Comparison" IMF Working paper No. 143.
- [14] FMI. (2010): "India's External Debt : A Status Report 2009-2010", Department of Economic Affaires, August, p. 47-49.
- [15] Hakkio, G. and Rush, M. (1991) : "Is the Budget Deficit Too Large?", Economic Enquiry XXIX (3), p. 561-580.
- [16] Haug, A. (1995) : " Has Federal Budget Deficit Policy Changed in Recent Years?", Economic Enquiry XXXIII(3), p. 371-395.
- [17] Heller, Peter S., (2003) : "Who Will Pay? Coping with Aging Societies, Climate Change, and other Long-Term Fiscal Challenges" (Washington: International Monetary Fund).
- [18] Heller, S. P. (2005) : "Understanding Fiscal Space", IMF policy Discussion Paper, March, PDP/05/4
- [19] Hinh, T. Dinh (1999) : " Fiscal Solvency and Sustainability in Economic Management", Macro Economics I, Southern Africa Region The World Bank.
- [20] IMF (2004) : "Operational Implications for Debt Sustainability in Low-Income Countries—Implications for Fund Program Design" (September), IMF.
- [21] IMF, (2004) : "Debt Sustainability in Low-Income Countries—Proposal for an Operational", Framework and Policy Implications (February).
- [22] Jalan, G. and Sharma, S. (2009) : "Fiscal Solvency and State Government's Debt: An Empirical Analysis", Indian Journal of Economics, October XI, p. 817-830.
- [23] Jonsson, Asgeir (2008). Why Iceland: How One of the World's Smallest Countries Became the Meltdown's Biggest Casualty. McGraw-Hill Professional. ISBN 978-0071632843.
- [24] Khan, Mohsin S., and Abdelhak S. Senhadji, (2000) : "Threshold Effects in the Relationship Between Inflation and Growth," IMF Staff Papers, Vol. 48, No. 1, pp. 1–21.
- [25] Lehmann E.L. (1992) "Introduction to Neyman and Pearson (1933) On the Problem of the Most Efficient Tests of Statistical Hypotheses". In: Breakthroughs in Statistics, Volume 1, (Eds Kotz, S., Johnson, N.L.), Springer-Verlag. ISBN 0-387-94037-5.
- [26] Nilss Olekalns and Paul Cashin (1990) : "An Examination of the sustainability of Indian Fiscal Policy", Research Department, IMF.
- [27] Payne, J. (1997) : "International Evidence on the Sustainability of Budget Deficits", Applied Economic Letters 12(4), p. 775-779.
- [28] Pedgaonkar, A.M.; Chatterjee, G. and Misra, B.M. (2010) : "Handbook of Statistics on the Indian Economy", Reserve Bank of India.
- [29] Quintos, C. (1995) : "Sustainability of the Deficit Process with Structural Shifts", Journal of Business and Economic Statistics, 13(4), p.409-417.
- [30] Rangarajan, C. and Srivastava, D.K. (2003) : "Dynamics of Debt Accumulation in India : Impact of Primary Deficit, Growth and Interest Ratio", E.P.W., November, Vol. 38(46).
- [31] Tanner, E. and Liu, P. (1994) : "Is the Budget Deficit Too Large? : Some Further Evidence", Economic Inquiry XXXII, p. 511-518.
- [32] Trehan, B. and Walsh, C. (1991) : "Testing Intertemporal Budget Constraints : Theory and Application to U.S. Federal Budget and Current Account Deficits", Journal of Money, Credit and Banking 23(2), p. 206-223.

- [33] Uetum, M. and Wickens, M. (1991) : “Debt and Deficit Ceilings and Sustainability of Fiscal Policies: An Intertemporal analysis”, CEPR Discussion Paper No. 1612.

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