

EFFECT OF DOMESTIC GOVERNMENT DEBT
ON PRIVATE CONSUMPTION
AND SAVING IN INDIA

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Section 1: Objective of the Study

India is a developing country facing insufficient saving, inadequate investment and low income. Diverting existing saving to socially desirable investments is a major problem in the country. Viewed from the limitations as well as hesitancy of private sector to undertake socially desirable investments, public sector in India has been assigned an important role. Public sector, through planning process, has been entrusted with the responsibility of channelising saving to socially productive investment activities. While such public sector participation in investment may result in greater externalities, it may also lead to financial crowding out. In that event, the choice between public and private sector investment should depend on relative productivity of the two sectors.

In India, domestic public debt is being increasingly used as an instrument for mobilising private saving. In this context, it is important to examine the effectiveness and desirability of domestic public debt as a means of mobilising saving in the economy. But so far no empirical attempts have been made in this regard. Therefore, the objective of the present study is to highlight empirically the effect of domestic government debt on private consumption and saving in Indian economy. In order to facilitate analysis, subsequent sections are organised as follows: Section 2 outlines major theoretical aspects. Section



3 highlights the major empirical studies. Section 4 presents the structure of domestic government debt in the country and conceptualises it. Section 5 describes the methodology adopted for the present empirical analysis. Section 6 presents and interprets the empirical results. The final section draws the major inferences.

Section 2: Theoretical Aspects.

In its literature there is a continuing debate over the effect of government debt as a method of financing government spending on the consumption - saving decision of the private sector. At the outset, it is useful to make three important observations in this regard. First the debate on the effect of government debt on private consumption is mainly subsumed in the discussion of the real burden of public debt. Second the effect of government debt on private consumption is analysed in the differential incidence framework specifically, as the issue addressed, is in terms of the effect of substituting government debt for taxes to finance a given level of government spending on private consumption. Third, theoretically the effect of government debt on private consumption determines the effectiveness of debt financing as a fiscal policy instrument, as the private sector consumption constitutes an important component of aggregate demand.

The Keynesian theory is based on the assumption that the fiscal policy variables - taxes, transfer payments and government debt - if at all - can affect private consumption only through their effect on private disposable income (Feldstein, 1982). Taxes reduce disposable income and thereby reduce private consumption. Similarly, government transfer payments increase the level of disposable income and consequently increase private consumption. In the Keynesian theory, it is assumed that

government debt is fully absorbed in current saving of the private sector. In this framework, when the level of government spending is held constant, a substitution of government debt for taxes would increase personal disposable income to the extent of the tax cut resulting in the increase of private consumption and the magnitude of the increase will depend on the marginal propensity to consume out of the disposable income.

The expansionary effect of a substitution of government debt for taxes in the Keynesian analysis crucially depends on the assumption that government debt does not reduce private consumption but transfers private saving for public purposes. In theory, whether government debt is absorbed in private saving or is absorbed in disposable income (as in the case of taxation) depends on the private sector perception of government debt, either as an addition to net wealth in private sector portfolio or as an addition to its future tax liability. In the literature, there are three distinct views as to the private sector perception of government debt attributable to Pigou (1928), Buchanan (1958) and Barro (1974).

Pigou (1928) illustrates what is popularly known as the classical theory and his exposition is very often referred to as the Ricardo - Pigou thesis (see Shoup, 1962). Government debt entails periodic payment of interest and a final redemption of the debt which would essentially involve a future tax liability. According to Pigou, individuals are unable to perceive this future tax liability because of two reasons: (i) in a finite life span they are uncertain as to their own future tax shares for the redemption of debt and (ii) ".....large subscribers have good reason to hope that the interest on their holdings will exceed the contribution in taxes which they will have to make to provide for this interest" (Pigou, 1928, P.244). In this framework of

Pigouvian analysis, government debt increases private consumption to the extent the private sector perceives government debt as net wealth.

Buchanan (1958) assumes perfect fiscal illusion under which individuals are completely myopic to future tax shares implicit in government debt. Therefore, they voluntarily exchange their current saving for government debt in order to secure a desired future stream of income. Government debt is fully perceived as net wealth in the private sector portfolio. The implication of Buchanan's formulation could be made clearer through a comparative static analysis where in we either (i) compare two situations, with and without government debt or (ii) examine the differential incidence of debt-tax substitution for a given level of expenditure. Under the former, when additional government spending is financed through government debt, private consumption remains unaffected as the government debt is met solely from private saving. Under the latter method, a substitution of government debt for taxes keeping constant the level of government spending leads to an increase in disposable income by the amount of the tax cut and the private sector consumption increases by the marginal propensity to consume.

Barro (1974) in his ingenious model assumes individuals who would behave as though they have an infinite life span. In his model, where inheritance links generations, the utility of the present generation depends not only on their own consumption but also on future consumption of the heirs. Basic to the Barro model is the assumption that the future tax liability of a current increase in government debt is fully perceived by the present generation and their discounted value of this future tax liability exactly equals the value of current increase in government debt. The individuals therefore forego their consumption by an equivalent amount of the value of current

increase in government debt and pass on the resulting saving as bequest so that the descendents could have the same level of utility as they would have been having in the absence of the current increase in government debt. Interpreted in a differential incidence framework where government debt if substituted for taxes would mean that private consumption remains unchanged; government debt does not have any expansionary effects.

Theoretically, a new dimension to the effect of government debt on private consumption has been given by Bailey (1962). According to him the private sector consumption depends also on the perceived benefits from government spending. To the extent the private sector perceives government spending as providing current utility by the provision of current consumption goods, the private sector would substitute government spending for its own private consumption spending. This substitutive effect of government spending on private consumption spending would be less to the extent to which the private sector perceives the government spending as providing future utility by the provision of investment goods. The major aspect to note here is the theoretical argument that once the benefit from government spending is fully perceived by the private sector, what is important for private consumption is the government spending variable, the mode of financing, whether government debt or taxes, is not relevant.

Section 3: Existing Major Empirical studies

Since the effect of government debt on private consumption is clouded in theoretical controversies, the issue was attempted to be solved empirically by several economists. Before outlining the major studies in this regard, it is worthwhile to make the following observations. First, all the existing empirical

studies on the effect of government debt on private consumption are done in the context of developed economies, particularly in the context of the United States. Second, these empirical studies have mainly taken two directions: (i) the net wealth effect of government debt is tested by directly estimating the coefficient of public debt variable in a private consumption function and on this basis, the effect of government debt on private consumption-savings decision is interpreted, (ii) the testing for the effect of government debt on private consumption-savings decision is carried out by testing for certain coefficient restrictions in a consumption function implied by the net wealth effect of government debt.

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In the US context, Kocnin (1974) estimated a consumption function and interpreted the negative coefficient of the government deficit variable as evidence against the net wealth effect of government bonds. Yawitz and Meyer (1976) reported empirical evidence in favour of the net wealth effect of government securities in the US as in their estimated consumption function the coefficients of the variables; stock of government securities and private wealth are positive and not significantly different. Tanner (1979), contradicted the net wealth effect of government securities in the US context since in the consumption equation he estimated the coefficient of the stock of government security variable was not significantly different from zero. Holcombe, Jackson and Zardkoobi (1981) estimated a saving function for the US and interpreted the positive coefficient of the flow of government debt variable as evidence of partial capitalisation of future tax liability implicit in government securities into private saving. Holcombe, Jackson and Zardkoobi (1982) explicitly included tax variable in the saving function in response to a criticism from Carmichael (1981) and accordingly interpreted the difference between the coefficients of the tax and debt variables in the estimated equation as the differential

effect of substituting debt finance for taxes. Again, their empirical finding supported partial capitalisation of implicit taxes of government debt into private saving. Seater (1982) estimated total consumption function, non-durable consumption function and asset demand function making use of the US data; the net wealth effect is supported only by his non-durable consumption function estimation wherein the coefficient of the government debt variable turned out significantly positive.

Buiter and Tobin (1979) pointed out that private sector perception of government deficit as taxes when translated into empirical terms would imply that in the estimated private consumption function values of the coefficients of deficit and tax variables should be the same and their absolute value would equal the coefficient of income variable. Their empirical test for the US is inconclusive. Carmichael and Hawtrey (1981) in the Australian context provided evidence against the debt-tax equivalence in their effect on private consumption by estimating a partial adjustment model of consumption function. In fact, they tested for the restriction that the sum of the coefficients of disposable income variable and the flow of government security variable are not significantly different from zero. Their empirical evidence supported the irrelevance of financing mix - taxes, debt, and money - on private consumption. Feldstein (1982) pointed out that the debt-tax equivalence can be empirically supported only if in the estimated consumption function, the sum of the coefficients of the government debt and private wealth variables are not significantly different from zero. Feldstein's consumption function estimation in the US context showed no conclusive evidence of this coefficient restriction. Koskela and Viren (1983) by estimating a private consumption function for the OECD countries rejected debt-tax

equivalence by rejecting the coefficient restriction that the coefficients of the tax and debt variables are the same and their absolute value equal the coefficient of the income variable.

Kormendi (1983) in the US context provided evidence in favour of the debt-tax irrelevance for private sector consumption and the substitutive effect of government spending variable on private consumption. Also, Ashauer (1985) through his consumption function estimation for the US, supported the substitutive effect of government spending variable and the irrelevance of deficit and tax variables for private consumption. His major empirical result was that even though deficit and tax variables are irrelevant for private consumption, they are important for their informational contents as to the expected government spending.

Section 4: Structure of Domestic Government Debt and Conceptualisation

In order to analyse the effect of domestic government debt on private consumption and saving in India, it is necessary to outline the structure and components of domestic debt in the country. In this regard, it is useful to note the following three major aspects: (i) debt of the Central and State governments in India consists of not only the stock of market borrowing but also diverse kinds of government liabilities, (ii) government's market borrowing in the country is largely confined to a captive market, the constituents of which are statutorily required to invest in government securities and (iii) a substantial portion of the total marketable debt of the government is monetised.

For the purpose of the present study, following mainly the Report of the Committee to Review the working of the Monetary System (1985), the domestic debt of the Central and State governments is combined and classified into (1) Marketable debt, (2) Small savings (3) Provident funds and (4) Other liabilities. This classification excludes the item 'Loans and advances from Central Government', which is part of the State governments' debt, as it is an inter-governmental debt. In the new scheme of classification, marketable debt includes (i) Market loans and bonds of Central and State governments and (ii) Treasury bills of the Central government. Small saving exclusively belong to the Centre's debt. Provident funds of the Central and State governments are put together. All other domestic debts of the Centre and State governments are put in the residual category, other liabilities. Components of other liabilities are (i) Other unfunded debts, (ii) Reserve funds and deposits, (iii) Special floating loans (iv) Special securities issued to Reserve Bank of India (v) Ways and means advances from Reserve Bank and (vi) Loans from banks and other institutions (items (i) through (iv) form part of Central governments' debt and items (v) and (vi) form part of State governments' debt). Table 1 shows combined domestic government debt of Central and State governments according to the classification adopted in the present study.

The institutional aspect of marketable debt in the country is that the government borrows from a captive market the constituents of which are required to invest in government securities by mandatory provisions. Major constituents of this captive market are Reserve Bank of India, Commercial Banks, Life Insurance Corporation of India, and various Provident Fund Schemes. A brief description of the captive market for government securities is presented in Annexure I.

Various constituents of the captive market mobilise funds from the private sector and the government through its market borrowing programme mobilises a portion of such funds. In this case, it may be noted that private sector does not directly hold government securities, but in a way they hold government securities indirectly as the constituents of the captive market are mainly financial intermediaries. Yet another important aspect to note about the marketable government debt is that a portion of this debt is monetised. Therefore, in analysing the effect of marketable government debt on private consumption it is necessary to decompose the marketable debt into its monetised and non-monetised components.

Briefly, the following may be said about the remaining components of domestic government debt. Small saving mobilised by Central government through the post office net-work in the country closely resembles direct market borrowing from private sector. It may also be noted that traditionally fiscal incentives are given to the investing public in small saving. Provident fund is a mandatory contribution by employees as a social security measure which is to be repaid by government to the employees normally at the time of their retirement. As noted earlier other liabilities in the present scheme of classification of government debts are residual items.

Before the empirical investigation, it is useful to conceptualise the effect of individual components of domestic government debt on private consumption and saving in the country. The idea here is to theorise the effect on private consumption and saving when government debt components are substituted for taxation, keeping the level of government expenditure constant.

Monetised part of marketable government debt increases the stock of money supply and the extent of this increase in money supply depends on the value of money multiplier. When monetised marketable debt is substituted for taxation, it is evident that disposable income of the private sector will increase by an amount of the tax reduction. This increase in disposable income is divided between current consumption and saving, depending on the marginal propensity to consume. But theoretically, the extent of the increase in current consumption depends on the private sector perception of the increase in money supply on account of the monetised marketable debt. If private sector perceives the increased money supply as an addition to private net wealth, the increased money supply would be absorbed in private saving. On the contrary if the increase in money supply is perceived as future tax liabilities, the monetised debt would have a tax-like effect on private consumption and saving. Therefore, a substitution of monetised government debt for taxation does not generate any change in private consumption and saving decision.

Conceptually, non-monetised marketable debt is likely to have the same effect as taxation on private consumption and saving in the Indian context. This is for two reasons. First, by and large private sector in the country does not hold directly non-monetised marketable debt. Therefore, there may not take place, a net wealth effect on private consumption on account of non monetised marketable debt. Second, private sector might rationally perceive the future tax liabilities implicit in the current non-monetised marketable debt for the reason that even though it is the captive market which holds this debt, the future tax liability involved in servicing the debt finally rests with the private sector. These aspects suggest that an increase in non-monetised government debt for financing government expenditure would reduce private consumption and saving just as

taxation does. Alternately, given the level of government expenditure, a substitution of non-monetised marketable government debt for taxes would not cause any change in the private consumption and saving.

Small saving and provident funds are components of government debt held directly by private sector. The effect of a substitution of these components for taxation on current private consumption and saving decision depends on private sector perception of these forms of debt as net wealth or future tax liabilities. As noted before, other liabilities in the present scheme of classification of government debt are of a residual category and again their effects on private consumption and saving depend on the private sector perception of this form of debt as net wealth or future tax liabilities.

Section 5: Methodology Adopted

Following some of the existing empirical studies outlined earlier, the present study is attempted to highlight the effect of government debt on private consumption-saving decision by testing the coefficient equivalence of debt and tax variables in a private consumption function. Free as well as restricted consumption function estimates are attempted and an F-test is performed to test the null hypothesis that the coefficients of the debt-and tax variables are not significantly different in the estimated equation. If the computed F-statistic exceeds the appropriate F-distribution table value, the coefficient equivalence is rejected and if the computed F-statistic is less than the table value, the coefficient equivalence is not rejected (see for instance Rao and Miller (1972)).

Specifically, the study estimates the following consumption function:

$$C = f(Y, G, T, D_i)$$

Where

- C = per capita real private consumption
- Y = per capita real net national product
- G = per capita real government spending on goods and services
- T = per capita real taxes net of transfer payments
- D_i = per capita real government domestic debt (subscript i stands for the components of the debt)

Annexure II shows the details of the variables used.

The concept of income used in the consumption function is the net national product rather than disposable income. This is because of two reasons. First, it is argued that in a consumption function wherein it is assumed that individuals rationally perceive both the benefits from government expenditure as well as the future tax liabilities implicit in governments fiscal policy instruments, it is the total income generated in the economy that is relevant for private consumption rather than disposable income [see Kormendi (1983)]. Second, more importantly the consumption function adopted for the present study should necessarily include tax variable in order to test for the coefficient equivalence of debt and tax variables so as to capture the effect of a substitution of government debt variable for taxation. Tax variable is conceptually a decrease in disposable income and the variable provides the same information as disposable income but for the algebraic sign of its coefficient, in a consumption function. In this way conceptually the effect of disposable income could be subsumed in the tax variable even without explicitly including a disposable

income variable in the estimated consumption function. Government-spending variable is included in the consumption function in order to capture the constancy of government spending, when taxation is substituted by government debt.

Section 6: Results

Table 2 shows estimates of free and restricted consumption function augmented for the components of domestic government debt as well as the total domestic debt. All equations are estimated in first difference in linear form and corrected for first order autocorrelation. Equation (1) shows the estimates of the consumption function without including a debt variable. As suggested by the test statistics, the equation seems to explain fairly well the private consumption. Before interpreting the main results, a brief comment on equations (2a) and (2b) is in order. Equations (2a) and (2b) are free and restricted estimates of consumption function wherein monetised marketable debt is the relevant debt variable. Ideally these equations were to be augmented for the increase in money supply that resulted from the monetisation of debt. In the absence of such precise data, monetised marketable debt is used as a proxy variable.

Equations (2b), (3b), (4b) and (6b) are restricted consumption function estimates augmented for monetised marketable debt, non monetised marketable debt, small saving and other liabilities, respectively. In these equations F-test performed rejects the null hypothesis of the coefficient equivalence of the relevant components of the debt variable and the tax variable. But it is important to note that the rejection of the above hypothesis does not automatically ensure net wealth effect of these components of domestic debt in the estimated equations. This is because in all the estimated equations mentioned above, the restricted estimate of the coefficient is not statistically

significant. The inference that can be drawn in this regard is that behaviourly private sector does not perceive these components of domestic government debt - monetised marketable debt, non monetised marketable debt, small saving and other liabilities - either as an addition to private net wealth future tax liabilities. Therefore, these forms of debt do not have any effect on current private consumption and saving. The interpretation in this context is that at any given level of real income, keeping constant government expenditure a substitution of taxation for these forms of government debt reduces private consumption and saving, depending on the marginal propensity to consume and on the contrary, if any of these components of domestic debt is substituted for taxation, private consumption and saving remain unaffected.

Equation (5b) is the restricted consumption function estimate augmented for provident funds. In this equation F-test does not reject the null hypothesis of the coefficient restriction that the coefficients of taxes and provident funds are not significantly different. In this case the restricted estimate of the coefficient is statistically significant at 5 percent level of significance and has a negative algebraic sign. This empirical evidence is suggestive of private sector perception of provident funds as tax liabilities and therefore provident funds have a tax like effect of reducing current private consumption and saving. In a differential incidence framework the interpretation is that when provident funds are substituted for taxation private consumption and saving is reduced in the same way as taxation does.

Equation (7b) is the restricted consumption function augmented for total domestic government debt. In this case F-test rejects the null hypothesis that the coefficients of taxes and total domestic government debt are not statistically

different; moreover the estimated restricted coefficient is also not statistically significant. This evidence suggests that when total domestic debt is considered as a whole, private sector perceives the debt neither as future tax liabilities nor as private net wealth and therefore current private consumption-saving decision is uninfluenced by the debt.

Section 7: Inferences

Based on the above empirical exercise the following inferences may be made. First, when total domestic government debt as a whole is taken as a means of mobilising real resources from private sector, the present study shows that it neither mobilises real resources from current private consumption nor does it draw resources from current private saving. Second, a component wise analysis of domestic government debt shows that: (a) monetised marketable debt, non-monetised marketable debt, small saving and other liabilities do not mobilise real resources either from current private consumption or from current private saving, and (b) provident funds draw real resources by inducing a reduction in current private consumption and saving as taxation does. Third, following from the above two inferences, domestic government debt (except for its provident fund component) as a fiscal policy instrument does not fulfil the objectives of mobilising real private saving and reducing inequalities through curtailment of private real consumption. Fourth, since the debt (except for provident funds) does not draw real resources by affecting current consumption-saving decision of private sector, its implication is that the debt draws resources either from private investment or through inflation; these aspects need further investigation for any conclusive evidence.

One of the major limitations of the present empirical exercise is that the study is not based on any theoretically derived consumption function most appropriate for the country. Firm consumption function estimation and also more rigorous conceptualisation may throw more light on the issues addressed in this preliminary analysis.

Table 1

Total Domestic Public Debt of Central and State Governments in India

(Rs. Crores)

Year (as on end March)	Market- able Debt	State Savings Funds	Provident Funds	Other Liquor- Licenses	Total Domestic Public Debt (TEPD)	TEPD as percent current of GDP market prices	
1952	1371 (62.4)	373 (12.4)	165 (5.5)	590 (19.7)	2999	30.1	9966
1960	4152 (66.8)	362 (13.9)	365 (5.9)	836 (15.5)	6215	42.0	14793
1970	7507 (52.8)	2024 (14.2)	1207 (8.5)	3476 (24.5)	14214	35.2	40387
1980	26098 (56.6)	6856 (14.9)	4416 (9.6)	8751 (19.0)	46121	40.3	114356
1981	31773 (57.4)	7977 (14.4)	4947 (8.9)	10688 (19.3)	55385	40.8	135812
1982	33389 (51.8)	9375 (14.5)	5851 (9.1)	15892 (24.6)	64507	40.5	159420
1983	44841 (55.9)	11098 (13.3)	7050 (8.3)	17233 (21.5)	80222	45.2	177538
1984	47862 (52.6)	13506 (14.3)	3174 (9.0)	21529 (23.6)	91071	44.1	206681
1985	56382 (51.1)	17157 (15.5)	9519 (8.6)	27282 (24.7)	110340	47.9	230591
1986	68323 (51.4)	21449 (16.0)	10934 (8.2)	30628 (24.4)	133334	51.0	262507
1987	69328 (42.6)	24725 (15.2)	12359 (7.9)	53305 (34.3)	160717	55.5	293408

Source: Computed from (i) Reserve Bank of India, Report on Currency & Finance (various issues), and (ii) Budget Documents of Central & State Governments (relevant issues).

Table 2
Private Consumption Function Estimates (1960-61 to 1986-87)

Dependent Variable : Private Final Consumption Expenditure in the Domestic Market

S.No. of Equations	Number of Iterations Taken for Convergence	Intercept	Net National Product at Factor Cost	Net Govern- ment spend- ing on Goods and Services	Taxes net of Subsidies and Trans- fer Payments	Monetised marketable Debt	Non monetised Marketable Debt	Small Savings	Provident Funds	Other Liabi- lities	Total Domestic Debt	R ²	D.F.	F-Statistic	95% of Reynolds- Computa- tion	P-Value
(1)	3	6.4063 (1.8021)	0.6193 (11.5710)	1.4339 (2.5079)	-0.8530 (-3.2233)							0.8438	1.9091	34.685	14.2233	
(2a)	3	6.4228 (1.7467)	0.6197 (11.3835)	1.4451 (2.4034)	-0.8565 (-3.0766)	-0.0090 (-0.1118)						0.8409	1.9135	35.5791	14.5384	9.66 (Default)
(2b)	3	6.6421 (1.3509)	0.6002 (10.0005)	0.3095 (0.5151)	-0.0333 (-0.3839)	-0.0333 (-0.3839)						0.7721	1.8551	21.33117	17.4632	Significance Rejected
(3a)	2	6.4039 (1.7431)	0.6219 (12.1755)	1.4231 (2.4939)	-0.8933 (-3.3877)		-0.0975 (-1.2369)					0.8516	1.9609	33.7651	14.0437	9.37 (Default)
(3b)	3	6.4987 (1.3995)	0.5927 (10.3913)	0.3206 (0.5776)	-0.1213 (-1.2936)		-0.1213 (-1.2936)					0.7895	1.9133	23.4997	16.7840	Significance Rejected
(4a)	3	5.9293 (1.6935)	0.6029 (10.6138)	1.1456 (1.7349)	-0.8017 (-2.9303)			0.4166 (0.9184)				0.8475	1.9060	27.6781	14.2842	5.96 (Default)
(4b)	2	7.3424 (1.5757)	0.6159 (10.5280)	1.2723 (1.7383)	-0.5539 (-2.0436)			-0.5539 (-2.0436)				0.8097	1.8838	26.5310	15.9569	Significance Rejected
(5a)	3	5.2339 (1.3996)	0.5915 (10.7644)	0.9384 (1.3333)	-0.7913 (-3.0533)				1.5224 (1.3583)			0.8543	1.9556	29.2507	13.9403	4.30 (Default)
(5b)	3	6.9623 (1.8355)	0.6251 (10.7757)	1.5239 (2.3141)	-0.7547 (-2.6698)				-0.7547 (-2.6698)			0.8303	1.8803	30.4603	15.0463	Significance Not Rejected
(6a)	3	5.8742 (1.7249)	0.5883 (11.4069)	0.7333 (1.1565)	-0.6921 (-2.7035)					0.1912 (2.0470)		0.8699	2.0356	33.1027	13.1927	12.99 (Default)
(6b)	2	5.9186 (1.3553)	0.5107 (9.2942)	-0.3553 (-0.5054)	0.1643 (1.4314)					0.1643 (1.4314)		0.7919	1.9483	23.8377	16.6854	Significance Rejected
(7a)	3	7.0118 (1.848)	0.6135 (10.7517)	1.5176 (2.5313)	-0.9103 (-3.1433)						-0.0672 (-0.8435)	0.833	1.9216	25.3925	14.7075	9.61 (Default)
(7b)	3	6.8895 (1.4126)	0.5941 (9.2390)	0.3501 (0.536)	-0.0436 (-0.5343)						-0.0436 (-0.5343)	0.7683	1.8610	20.9475	17.5901	Significance Rejected

- Notes :
1. All variables are in per capita real terms.
 2. All estimates are linear estimates.
 3. All variables are taken in first difference.
 4. Equations are corrected for first-order autocorrelation using Cochrane-Orcutt method.
 5. With in parenthesis are t-values.
 6. Table values of F-statistic are 8.18 and 4.38 respectively at 99 percent and 95 percent level of confidence.

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Captive Market for Government Securities in India

In India, Government borrows from a captive market, the major, constituents of which are the Reserve Bank of India, Commercial Banks, Life Insurance Corporation of India and various provident fund schemes. Apart from these major investors, investment in government securities is also made by the following institutions:

- (i) Industrial Finance and State Financial Corporations;
- (ii) Industrial Development Bank of India;
- (iii) Unit Trust of India;
- (iv) Agricultural Refinance and Development Corporation of India;
- (v) Industrial Credit and Investment Corporation of India;
- (vi) Joint Stock Companies;
- (vii) Local Authorities;
- (viii) Trusts and
- (ix) Post Trusts.

These institutions hold a negligible percentage of total government securities outstanding. A State government who has surplus funds may invest in Central government securities or other State governments' securities. Such investment by State governments are also very negligible. Table A.1 shows the ownership pattern of government securities in the Country.

Reserve Bank of India (RBI), undertakes market borrowing on behalf of government. RBI makes available to the investors a spectrum of government securities of various maturities and absorbs the unabsorbed part of the securities issued to the market. It needs mention that RBI absorbs only Central government securities in its issue department (by virtue of section 33 (3) of the Reserve Bank of India Act of 1934).

Investment of commercial banks in government securities is regulated by the requirement of Statutory Liquidity Ratio (SLR) laid down in section 24 of the Banking Regulation Act of 1949. SLR is a ratio of statutory liquid assets of a bank to its aggregate demand and time liabilities. Statutory liquid assets consist of cash on hand, gold, unencumbered approved securities,

excess cash reserves with RBI over the statutory minimum and balances maintained with the State Bank of India or any other notified bank. Approved securities are those which are issued by the Central government, authorized local bodies and securities guaranteed by Central Government. SLR applicable to scheduled commercial banks was revised over the years in order to support the government borrowing. SLR revisions effected over the years are presented in Table A.2.

Life Insurance Corporation of India was established in 1956 and according to the investment policy adopted by the Corporation it is mandatory to invest 25 percent of controlled funds in Central government securities and another amount of not less than 25 percent of the controlled funds in Central government securities or government guaranteed securities.

Provident fund schemes were to invest the whole accruals in Central government securities until September 1967. Since then substantial relaxation was effected in provident fund investment in Central government securities with a view to diversify its investment portfolio. The investment policy changes in this regard are outlined in Table A.3.

Table A.1

**OWNERSHIP OF CENTRAL AND STATE GOVERNMENT SECURITIES
(1961 TO 1986)**

		Rs Crores										
Category of Holders	1961	1966	1971	1976	1979	1980	1981	1982	1983	1984	1985	1986
I State Governments	264 (9.5)	348 (8.8)	262 (4.9)	232 (2.5)	233 (1.7)	243 (1.5)	244 (1.3)	216 (1.0)	225 (0.9)	253 (0.8)	234 (0.7)	244 (0.6)
II RBI own Account	707 (25.4)	1218 (30.8)	1486 (28.0)	2257 (24.5)	2213 (16.2)	2629 (16.7)	3858 (20.6)	5126 (23.3)	6334 (24.2)	7791 (25.3)	9319 (27.6)	10423 (25.2)
III Commercial Banks	563 (20.2)	804 (20.3)	1338 (25.2)	3192 (34.7)	6033 (44.3)	7320 (46.5)	8523 (45.6)	9688 (44.1)	11021 (42.2)	12645 (41.1)	15366 (43.1)	19919 (48.1)
(a) Scheduled Commercial Banks	552 (19.8)	799 (20.2)	1332 (25.1)	3187 (34.6)	6032 (44.3)	7318 (46.5)	8522 (45.6)	9686 (44.1)	11019 (42.0)	12642 (41.1)	15362 (43.1)	19914 (49.1)
(b) Non-Scheduled Commercial Banks	11 (0.4)	5 (0.1)	6 (0.1)	4 (0.0)	1 (0.0)	2 (0.0)	1 (0.0)	2 (0.0)	2 (0.0)	3 (0.0)	4 (0.0)	4 (0.0)
IV LIC of India	357 (12.8)	525 (13.3)	748 (14.1)	1309 (14.2)	1820 (13.4)	2019 (12.8)	2250 (12.0)	2478 (11.3)	2911 (11.1)	3373 (11.0)	3794 (10.6)	4396 (10.6)
V Employees' Provident Fund	81 (2.9)	218 (5.5)	412 (7.8)	878 (9.5)	774 (5.7)	862 (5.5)	856 (4.6)	860 (3.9)	890 (3.4)	962 (3.1)	977 (2.7)	1036 (2.5)
VI Provident Fund of Exempted Establishments	114 (4.1)	269 (6.8)	508 (9.6)	919 (10.0)	1484 (10.9)	1719 (10.9)	1918 (10.3)	2217 (10.1)	2493 (9.5)	2728 (8.9)	2998 (8.4)	3317 (8.0)
VII Coal Mines Provident Fund	22 (0.8)	44 (1.1)	44 (0.8)	48 (0.5)	131 (1.0)	168 (1.1)	200 (1.1)	236 (1.1)	279 (1.1)	302 (1.0)	294 (0.8)	311 (0.8)
VIII Assam Tea Plantations (Covered under VI) Provident Fund	14	12	14	12	11	11	11	12	12	12	12	13
IX Others	676 (24.3)	527 (13.3)	494 (9.3)	355 (3.9)	928 (6.8)	769 (4.9)	823 (4.4)	1130 (5.1)	2061 (7.9)	2865 (9.3)	2460 (6.9)	2295 (5.5)
TOTAL	2784	3953	5306	9201	13628	15739	18684	21962	26139	30756	35628	41413

- Note: 1. Figures relate to stock of securities as at the end March of each year.
 2. Figures in parentheses are percentages of total.
 3. Figures given are face values of interest bearing rupee securities excluding Treasury bills, expired loans, special securities, Special Bearer Bonds, Prize Bonds and National Rural Development Bonds.
 4. Total for the years 1983 to 1986 excludes the government guaranteed securities held by the Provident Fund of Exempted Establishments.

Source: Reserve Bank of India, Report on Currency and Finance (relevant Issues).

Table A.2

STATUTORY LIQUIDITY RATIO APPLICABLE TO SCHEDULED
COMMERCIAL BANKS

(1949 TO 1988)

With effect from	Statutory Liquidity Ratio (in Percent)*
1949	20.0
1964 September	25.0
1970 February	26.0
1970 April	27.0
1970 August	28.0
1972 August	29.0
1972 November	30.0
1973 December	32.0
1974 June/July	33.0
1978 December	34.0
1981 September	34.0
1981 October	35.0
1984 July	35.5
1984 September	36.0
1985 July	37.0
1987 April	37.5
1988 January	38.0

* As percent of total time and demand liabilities

Source: Reserve Bank of India,
Reserve Bank of India
Bulletins (relevant
issues).

Table A.3

STATUTORY INVESTMENT REQUIREMENTS FOR PROVIDENT FUNDS
(As Percentage of accruals)

With effect from	Central Government Securities	State Government Securities	Others
Before			
1967 September	100		
1967 September	80 ¹		
1968 August	65		
1969 April	50		
1971 April	45		
1972 October	Nil		
1973 March	45		
1973 October	Nil		
1974 March	45		
1975 July	25	25	30 percent in securities or bonds guaranteed by the Central Government or any State Government, 7-Year National Savings Certificates (Second and third issues) or Post Office Time Deposits, 20 percent in the Special Deposit Scheme introduced in June 30, 1975.
1976-77	25	25 ²	30 percent in 7-Year National Savings Certificates (Second and third issues) or Post Office Time Deposits, 20 percent in Special Deposit Scheme.
1979 January	40 ³		-do-
1981 January	30 ³		-do-

Notes: 1. During 1967 September to 1975 July

Source: Reserve Bank of India.

- the remaining collections may be invested in State government securities, Central & State government guaranteed securities, Post Office Time Deposits and Small Savings.
2. Inclusive of investments in securities or bonds guaranteed by the Central and State Governments.
3. Refers to the minimum prescribed in Central and State Government Securities and Government Guaranteed Securities.

Reserve Bank of India
Bulletin (relevant
issues).

Notes on Variables

- (i) Real private consumption data is obtained from private final consumption expenditures in the domestic market (1980-81=100). Consumption expenditures on non-durables could not be separated from the consumption expenditure figures as the data are not available separately in this regard. Data source is National Accounts Statistics (NAS), Central Statistical Organization (CSO), Government of India.
- (ii) Net national product at factor cost (1980-81=100) is obtained from NAS, CSO, Government of India.
- (iii) Government expenditure on goods and services is deflated by net national product (at factor cost) implicit deflators (1980-81=100). Data source is NAS, CSO, Government of India.
- (iv) Taxes net of transfers is derived as follows. Direct and indirect taxes are taken together and the two items (i) subsidies and (ii) transfer payments are deducted. The series is deflated by implicit price deflator (1980-81=100) derived from net national product at factor cost. Data Source is NAS, CSO, Government of India.
- (v) Monetised government debt is Reserve Bank of India's (REI) net credit to Government less the ways and means advances sanctioned to State Governments by RBI. The series is deflated by implicit price deflator (1980-81=100) derived from net national product (at factor cost). Data Source is Report on Currency and Finance, RBI.
- (vi) Non-monetised government debt is derived as the difference between total marketable debt (see Table 1) and monetised government debt. The series is deflated by implicit price deflator (1980-81=100) derived from Gross Domestic Capital Formation (GDCF). Data source is Report on Currency and Finance, RBI.
- (vii) Small savings, Provident funds and other liabilities are computed as in Table 1. The time series on these variables are deflated by implicit price deflators (1980-81=100) derived from GDCF. Source of Data is Report on Currency and Finance, RBI.
- (viii) All debt variables are in flow terms.