Chapter
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Review of Literature
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CHAPTER II

REVIEW OF LITERATURE
AND
METHODOLOGY

This chapter is devoted to review of literature available on the subject of our thesis and it is followed by methodology.

REVIEW OF LITERATURE

Many studies have been carried out in India and abroad which are of greater significance. Among a few significant studies on Fiscal-Monetary Policies Interaction and Public Debt Management, mention may be made of works done by James Tobin, Radcliffe Committee Report, Kahn, Anderson and Jordan, Culbertson, Hussain, Saqib and Yasmin, Upadhayay, Nurun Choudhary, Richard E. Leighten, Henrik Jensen, Gian Kaur, D.S. Pathak, V.B. Ghughe, A. Hasib, B.C. Thaker, J.K. Hajela, D.K. Mishra, B.B. Bhattacharya, Chakravarty Committee Report, Kiran Barman, R.N. Tripathy, Rakshit, R.J. Bhatia, Kulkarni, Mongia, H.V.R. Iyengar, Chandra Dalaya, Jadhav-Singh, and Rangrajan - Arif.

James Tobin in his four assets model, (Money, Public Debt, Private Debt and Physical Capital) has given importance to supply price of capital. He utilises the supply price of capital in
measuring the impact of debt management. Government issues transferable demand debt, marketable debt and non-marketable debt. Total government debt consists of past accumulated debt and current year's addition or substraction in debt. This addition or substraction in debt, depends upon current year's budget deficit or surplus. Deficit increases the debt whereas surplus decreases the debt. Tobin's analysis is mainly concerned with transferable demand debt and securities of different maturities held by the public. Transferable demand debt consists of currency issued by the Treasury and the Reserve Bank, and deposit liabilities of the Reserve Bank. The sum of demand debt and securities including non-marketable securities, becomes the net claim of public against the Government. In Tobin's model, shift from long-term debt to short-term debt, increases the liquidity in the economy. It is associated with lowering the liquidity preference function. Given the stock of monetary wealth, it reduces supply price of capital and hence it is expansionary. The stabilisation policy through debt management is generally based on such relative shift in the maturity pattern of public debt. Such shift affects the liquidity.

Radcliffe Committee Report\(^2\) recognises the importance of debt management, but ignores the relationship between money-supply and general rates of interest or general price level. It says, that changes in the composition of debt may affect short-term rates of interest. This may bring remarkable changes in rates. Radcliffe
Committee recommends a policy which need not be aimed at complete stabilisation of rates of interest, but policy should be aimed at a long-run-view. Short-run fluctuations may be controlled by fiscal operations; monetary authority may operate at long-end. Of course, Radcliffe Committee Report recommends monetary policy in run-away inflation. It recommends to control the liquidity of spenders, and not the money-supply. Though money supply is a major part of liquidity, it intends to control the lending, such as bank advances, consumer credit and lending of non-bank-financial institutions.

Kahn\(^3\), in his thesis, states, that with suitable combination of monetary policy with debt management, interest rates structure can be changed. Relative interest rate structure can be affected by changing the maturity pattern of public debt. This is supported by monetary policy which operates on rates in general. Kahn further states that end objective should be the money supply; but it appears only because it determines interest rates in general. In this regard he further states that in order to bring desired changes in interest rates, what amount of changes in money supply are required, are immaterial. Kahn thus recommends monetary policy of controlling the money supply which in turn sets the general interest rate level; and debt policy to control the composition of debt, which in turn sets the structure of rates of interest.
Anderson and Jordan⁴, in their empirical analysis, have tested, the propositions that the fiscal actions affect more quickly, predictable and strongly over the economic activity, than monetary action. They defined changes in government revenue (R), government expenditure (E), and government deficit or surplus (R - E), as fiscal actions. Monetary actions were defined in terms of changes in monetary resources and monetary base. They took changes in the spending as an indicator of economic activity, for measuring the influence of these two types of actions. They found, the impact of monetary action, stronger, quicker and predictable than impact of fiscal actions.

Culbertson⁵, in his study states that "Fiscal policy provides additional spending in world of sparse spending opportunities. But it does not provide a new source of finance in a world where spending is constrained by sources of finance. The government expenditures are financed in debt markets in competition with private expenditures. The case least favourable to fiscal policy is that in which the additional government borrowing simply crowds out equal (or conceivably greater) volume of borrowing that would have financed private expenditure. It is quite obvious in some cases of strong spending incentives that private borrowers are being crowded out of the debt markets and the expenditures that they would have made are not made, so at least under some condition this is not an absurd line of interpretation. "Culbertson, says as noted above keeping the money supply constant an "additional government borrowing simply crowds out an equal (or conceivably
greater) volume of borrowing that would have financed private expenditure.

Hussain⁶ (1982) adopted the Andersen and Jordan's (1968) model to investigate the relative effectiveness of monetary and fiscal policies in Pakistan for the period between 1949-50 and 1970-71. In performing his investigation, Hussain (1982) used both level and first difference variables as well as the Koyck distributed lagged model. In his estimation with level variables, Hussain found both the money stock and the monetary base to be quite significant in explaining the variation in GNP for Pakistan. However, when the regression equations were estimated with first difference variables, Hussain found that the changes in government expenditures exert a larger, more predictable and faster impact on Pakistan's GNP than do changes in money stock or monetary base (PP. 172-173). Despite the confusing results, Hussain (1982) concluded that fiscal policy is relatively more effective than monetary policy.

Saqib and Yasmin⁷ (1987) argued that the results of Hussain's (1982) study "can hardly be of relevance to the present Pakistan" because Hussain used data which covered united (East and West) Pakistan. In their study, they used the narrow and broad definitions of money as the variables of monetary policy. Also, they used total Government Expenditures, Government Current Consumption Expenditures, Government Investment, and Government
Subsidies as the variables of fiscal policy. With these different measures of monetary and fiscal policy, Saqib and Yasmin (1987) estimated various versions of the St. Louis-type equation and concluded that "monetary impulses have greater leverage and are more dependable." It is important to note that the empirical findings of Saqib and Yasmin (1987) are quite different from those of Hussain (1982).

In a more recent study Upadhyaya (1991) examined the same issue for Pakistan and three other South Asian countries: India, Nepal, and Sri Lanka. In his study, Upadhyaya used annual data on nominal Gross Domestic PRODUCT (GDP), Money Stock (M), Government Expenditures (G), and Exports (X). Based on his econometric methodology, he concluded that (a) the results are not uniform across countries, (b) monetary policy is relatively more important in explaining changes in nominal Gross Domestic product in Nepal and Pakistan, (c) neither the monetary nor fiscal variable is statistically significant in Sri Lanka, (d) the St. Louis-type reduced form equation is not applicable to India.

Nurun N. Choudhary's study has three purposes. First, to review briefly, in the context of a government budget constraint, the theoretical literature on the impact of fiscal and monetary policy. His work focuses attention on the long-run effects of money-financed or bond-financed deficit spending. Second, to review the integration of fiscal and monetary sectors of some of the existing econometric models, particularly, attention is given to IS-LM structures of these...
models to see how they incorporate an explicit or implicit government budget constraint and whether or not, the crowding-out effects are implied by these models under bond-financed deficits. Third, to discuss the results of fiscal and monetary policy simulations as reported by some of these models. This discussion interprets the relative effectiveness of fiscal and monetary policy by analyzing the behaviour of dynamic multipliers.

Richard E. Leighton's work's focus is primarily on direction of fiscal and monetary policy and secondarily, on the magnitude of required actions. A mechanism for allowing prices to vary with output and a foreign trade sector are added to the static system of Ackley. An important criterion for choosing amongst alternative instruments for maintaining equilibrium in the balance of payments is the consistency of the short-run solution with the long-run solution. This study shows that a combination of fiscal and monetary policy would produce an internal and external equilibrium, but it is one which is departing from what a free market would establish. A crawling peg is expected to isolate the short-run cyclical forces while allowing the exchange rate to move in the direction consistent with the long run trend. Such a system will have a short run solution consistent with the long run. However, there may be a trade off between short and long run stability. The study shows that tax-subsidy can theoretically offer short-run stability consistent with long-run stability. Such a system should forestall a retaliatory and competitive devaluation. Like the crawling peg, the rate will be
stable for the short-run, but unlike the crawling peg, the tax subsidy can be adjusted to any trend. The problem with his mechanism is of setting it to be used for a number of small adjustments in the exchange rate, rather than the present system of few large changes.

Henric Jensen's\textsuperscript{11} work provides additional arguments in favor of rules rather than discretion in public policy making. More specific, monetary commitment moderates fiscal time inconsistency problems, and fiscal commitments moderates monetary time inconsistency problems. The gains from rules in either accommodative monetary or fiscal policy-making have therefore been underestimated previously. His approach most clearly identifies the source of time inconsistency problems and their interdependence. He also comments on the degree of independence of monetary and fiscal policy-making. His finding offers a positive explanation for the fact that monetary and fiscal policy indeed are performed by independent authorities in many countries.

D.S.Pathak's\textsuperscript{12} study is an attempt to examine the role played by the Central Monetary Authority - The Reserve Bank of India (RBI) in facilitating the Government Debt Management Operations. It also examines the impact of Government expenditure, revenue and budgetary deficits on Central Bank's debt holding operations. It further endeavours to evaluate the fiscal and monetary role of the Reserve Bank's open market operations policy. The main findings of the study is that monetary and fiscal policies are inextricably intertwined in India.
Gian Kaur’s\textsuperscript{13} study is based on the empirical analysis of monetary and fiscal policy in India. She concludes that in India fiscal policy influences are stronger, faster and more predictable than the monetary policy influences. It may be attributed to the underdeveloped financial markets and existence of the informal credit markets which limit the working of monetary policy in India.

V.B. Ghughe’s\textsuperscript{14} study attempts to calculate the inflationary impact of the internal debt of the Union and State Governments in India and to point out its allocative and distributive effects during the period 1956 to 1966. The analysis distinguishes three effects of internal public debt: (a) primary liquidity effect, (b) monetization liquidity effect and, (c) income effect. The analysis of the Indian data finds the presence of all these effects leading to inflationary price rise. The effects of inflation are increase in the living cost of the working class, increase in the profits of industrialists and traders and big farmers, and the resultant increase in the consumption of luxury goods. Among the allocative effects, mention is made of the lowering of savings by the working class and diversion of savings by the well-to-do classes to investments in the form of gold and real estates from banks, government securities, etc. The study also mentions effects on balance of payments and economic growth.

A. Hasib’s\textsuperscript{15} work discusses the role of the Reserve Bank of India in the management of public debt and explains the open market operations of the banks. The study is divided into the
following four parts: (i) need for government borrowing (ii) Structure of market for public debt, (iii) management of public debt by the Reserve Bank of India, (RBI) and (iv) open market operations of RBI. It is pointed out that any discussion on public debt management must not lose the perspective that it is indispensable in an economy where government has assumed heavy responsibilities for the economic development of the country. In this perspective, public debt is incurred in order to transfer part of the resources of the rest of the economy to the public sector and the objective of public debt management is to ensure that it is done with the maximum possible efficiency in the allocation of resources to various sectors of the economy.

B.C. Thaker\(^\text{16}\) has attempted to test empirically some of the theories. He has specifically attempted to evaluate management of public debt and composition of debt according to maturity pattern and ownership pattern. The present study also evaluates monetary policy in general and in connection with public debt management in particular.

Hajela\'s\(^\text{17}\) work\'s main theme is to locate the potential investable surpluses in the Indian economy and to get them mobilised with the help of monetary and fiscal measures. He has made a critical analysis of the existing monetary and fiscal policies of the Government and has pointed out their deficiencies and limitations. Among various useful recommendations he has
suggested reorientation of tax structure of the country so that unnecessary consumption is reduced and the surplus so created is mobilised and utilised for developmental purposes. He has also laid emphasis on a more meaningful coordination of monetary and fiscal policies so that they pull in the same direction in the development process.

D.K. Mishra's work entitled "Public Debt and Economic Development in India" is a successful attempt to analyse and explain various aspects of public debt with special reference to India in the context of its economic development. Dr. Mishra has comprehensively presented the theoretical background of Public Debt Policy and Management with reference to both internal and external public debt. He has discussed the controversial concept of the "burden of public debt" in detail. A full chapter on the "Burden of External Public Debt" with reference to India is a significant contribution to economics of public debt.

B.B. Bhattacharya has examined effects of these policy changes on the Indian economy. The focus is on fiscal crisis, debt burden and stabilisation programme. Other policy measures are analysed only in the context of their effects on government revenue and expenditure and inflation. The work is aimed for general economists, economic journalists, policy makers and intelligent laymen having interest in the Indian economy. The analyses is
simple and no technical knowledge other than elementary economics is assumed. Econometric results are presented in simple language.

The Chakravarty Committee appointed by the Reserve Bank of India (RBI) pointed out in its Report that there are defects in the existing official measure of budgetary deficit and the need to include the entire net Reserve Bank of India (RBI) credit to the government. This Report has stressed on the need for managing public debt for regulating money supply and reducing budgetary deficit of the Government to provide stability to the Indian Monetary Sector. However empirically content in the Report is not adequate and leaves much to be done.

Kiran Barman takes India as a case study and subject it to a critical examination in the light of recent thinking and research on public debt policy and management. Dr. Burman enunciates a series of rules appropriate to the requirements of debt management under Indian conditions. She points out that Government securities have not been competitive; rising prices have discounted the value of the money rate of interest; investments in real assets are much more attractive in times of spreading inflation. She assesses the relative merits of the various debt policies, singly and in combination, and concludes that the technique of debt management in India should be more effective than it has been in the past and that the main problem in developing economies is that of extracting 'more saving out of low saving'.
R.N. Tripathy observes, "had the plan targets of rates of growth been realised in real terms, deficit financing to the extent undertaken in India would not have produced any marked upward pressure on prices."

Rakshit has studied the role of deficit financing in India and concludes that deficit financing has shown positive correlation with changes in money supply.

R. J. Bhatia explains variations in money supply through the changes in assets of the central bank. Changes in the credit multiplier or changes in the central bank's assets holding, generate changes in money supply.

Kulkarni has made a case for deficit financing for development. He advocates deficit financing for development, but with a note of caution against inflation, which may retard the process of development.

Mongia has studied the impact of deficit financing in India from 1951 to 1966. He has related increases in money supply as a result of deficit financing, over a period of time with various economic indicators. He comes to conclusion that it has led to inflationary situation with some growth in the economy.
H.V.R. Iyengar\textsuperscript{27} observes that, "In fact the maturity pattern of our public debt is changing in a manner so as to make for reduced illiquidity in the gilt-edged portfolio of our financial institutions."

According to Chandra Dalaya\textsuperscript{28} debt management, has not come out as an important instrument of economic policy. In India banking sector is well developed, but lacking in connection with indigenous money markets and prevailing rate of interest in that market. With Planned Development Programme, the influence of the Reserve Bank is increasing, over interest rates and money market.

Jadhav - Singh’s\textsuperscript{29} work states that to the large extent fiscal deficit is financed by net credit to Government. It leads to increase public debt and expansion of money supply.

Rangrajan - Arif’s\textsuperscript{30} study focuses on the interaction between monetary, fiscal and real sector in a dose economic framework. Their study highlights that Government expenditure adjust more rapidly than receipts to a given change in price level. As a result inflation tends to widen the fiscal deficit leading to larger public debt and larger money supply.

All these above mentioned studies are on specific aspects and are not well integrated into some system. There are no theoretical and empirical underpinning provided by most of the studies and very
little empirical effort is made for examination of structural relationships exhaustively and comprehensively.

Though this is not an exhaustive survey of the literature and findings of empirical work that has gone into this area, we feel that it does provide analytical framework for enabling us to undertake the present study.

OBJECTIVES AND HYPOTHESIS OF THE PRESENT STUDY

As we have mentioned earlier in the chapter of introduction, the main aim of our study is to develop a fiscal monetary structure suited to Indian environment by integrating some of the crucial fiscal and monetary variables into the structural equations. Fiscal and Monetary structure and behavioural aspect of its components would, we believe, provide us sufficient material for policy recommendations.

There are many hypothesis which are investigated and verified. Some of these hypothesis are :

(1) We strongly contend that the entire behaviour of the Central Monetary Authority of India - The Reserve Bank of India (RBI), itself is an endogenous.

(2) Debt holding operations of the Reserve Bank of India are strongly and positively influenced by the Government need for Internal Finance.
(3) We also contend that the Reserve Bank of India's claims on Government is negatively influenced by Government Revenue Receipts.

(4) It is our contention that Revenue Receipts of the Government are positively correlated with the National Income. (N.I.)

(5) We also feel that growth of National Income would reduce the Reserve Bank of India's claims on Government, of course, through its impact on Tax Revenue Receipts, given the need for Internal Finance.

(6) In many Developing Countries, National Internal Debt bears strong positive connection with the Gross Domestic Product (G.D.P.) or National Income. We strongly believe that India's Internal Debt is positively and statistically strongly influenced by the level and changes in National Income or Gross National Product (G.N.P.)

(7) In many Developing Economies Public Debt (Internal) has remained sensitive to Fiscal Deficits. In India also we believe, large part of changes in debt have been caused by Fiscal Deficit. Our concept of Fiscal Deficit, unlike Keynesian concept, is the difference between Government need for Internal Finance (Estimated) and Revenue Receipts of Government.
METHODOLOGY

For collecting relevant statistical information we have relied upon many sources. We would like to mention a few important sources such as the Reserve Bank of India's Report on Currency and Finance, The Reserve Bank of India Bulletin, The International Financial Statistics published by International Monetary Fund (I.M.F.) etc. Moreover we have consulted Government Budgets and Memoranda.

We have used well known method for testing hypothesis, namely, Regression and Correlation. The chief attribute of this method is that it not only enables us to know the degree of association among variables but also enables us to predict at what rate dependent variables change per unit change in the value of independent or explanatory variable. It also allows us to test the validity and average and marginal influence of individual parameters on dependent variables. Besides it allows us to know degrees of presence or absence of auto-correlation among residual variables (which is the difference between estimated and actual values of dependent variables) Through this method we would be able to know structural shifts that have taken place and percentage variations in the values of dependent variables jointly caused by set of independent variables. Values of $R^2$ - the coefficient of determination would indicate such variance.
Whenever necessary we would be using some important terminology, defining these terms and interpreting them. Government Need (G) is such term we have used. It is defined as Government Expenditure + Net Lending - Use of Cash Balances - Government Monetary Operations - Foreign Aid etc.

Deficit is another concept which is unlike Keynesian concept of fiscal deficit. It is a difference between Government needs for internal finance (Estimated - G) and Revenue Receipts of the Government.

**DESIGN OF CHAPTERS**

The present study is organised by dividing it into Six Chapters.

Chapter - I is an introduction to fiscal and monetary structures of Indian Economy.

Chapter - II deals with literature review, hypothesis and methodology.

In Chapter - III theoretical foundation to Debt Management is provided.

Chapter - IV deals with the empirical aspect of Debt Management.
and Fiscal Operations. In this chapter an attempt is made to examine the behaviour of fiscal and monetary variables and debt management operations by breaking up the Time Series Data into suitable parts, so as to know in which sub-period significant changes in fiscal and monetary structures have occurred which have bearing on our Macro-Economic Policy and stabilisation programme.

In Chapter - V An attempt is made to examine long run behaviour of Fiscal and Monetary variables and Debt Management Operations to know the effect of time lag. The significance of long run analysis is derived from the fact that some variables operate with substantial time lag.

In Chapter - VI we have tried to summaries main findings by pulling at all structural equations and have made some policy recommendation based on our findings.

The third chapter is devoted to Theoretical Foundation of Public Debt and Public Debt scenario in India.

NOTES AND REFERENCES


3. Ibid, M-3, 144,145and Gurley J.G. and E.S. Shaw, 1960, *op.cit.*, p.690 and Kahn's testimony, Min. E. 10983 - 10987. "In above footnote M -3 refers to third volume of memoranda and its page number; Min. E. refers to Minutes of Evidence and number of question answer".


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