CHAPTER - II

Macroeconomic Instability: Review of Literature

2.1 INTRODUCTION & THE LITERATURE REVIEW APPROACH

The theme of 'economic instability / stability' (rarely) has long been at the centre stage of interest in macroeconomic research. There are several reasons as is why this subject is of current interest. First, it is essential to assess the impacts of macroeconomic adjustment in India as the issue of adjustment has become a global phenomenon throughout the developing world since the outbreak of the debt crisis in 1982. Second, Post-independence India witnesses the dynamics of macroeconomic policy efforts in gradualistic approach. Third, to inform policy stabilisation and reliance, it is important to examine the role of economic policies in mediating the real and financial factors in determining growth process. Fourth, Indian macroeconomic time-series database is considered relatively good by developing country standards, and data being available on a comparable basis for a period of time and is adequate for systemic econometric investigation.

Reckoning country specific economic instability analysis in the process of economic growth has long been an important area of active research to macroeconomic theoreticians, empirics, forecasters, researchers, policy makers, market participants, and business analysts across countries and times, and growing concerns continue to do till date. The concept of macroeconomic instability, which implicitly or explicitly constitutes the core of economic analysis, has undergone considerable changes in the economic discourse over the past decades. Generally speaking, there are three broad periods identified in terms of the changes in perception in economic thinking during the post world war II: the first phase, during the 1950s and 1960s - the era of Keynesian supremacy; the second phase, from about the early 1970s of neoclassical resurgence; and the third phase, since about the mid-1980s - the emergence of the new growth economics and the outpouring of empirical macro-econometrics literatures.

Importance added of being attractive area of research particularly following the economic turmoil in once high performing South East Asian economies and others resulted from financial liberalisation and deregulation. This chapter is prepared in a manner to obtain

preliminary a relevant comprehensive account of the theoretical, analytical and methodological framework to explore the underlying stylized facts of economic instability and their routes of transmission mechanisms in the policy context particularly to outline how the evolution of changing perceptions with substantial methodological contents kept centring on the theme of instability in the intellectual climate of economics profession in theoretical and empirical works across countries and times before sets out its own empirical probe.

It intends to be a comprehensive Indian case study of the subject, rather than a study of India *per se*. It has drawn the interpretation of instability particularly in the context of the Indian economy but interpreted in the wider context of literatures drawn from other developing countries. It combines quantitative approaches with qualitative analysis as included the related economic, social, political, and institutional aspects while examining the role of macroeconomic policies in mediating macroeconomic growth process.

2.2 THEMATIC GROUPING

This chapter seeks to revitalise the literatures on macroeconomics in general and macroeconomic instability in particular. This chapter is organised as follows. Section 2.2.1 gives a brief description of theoretical overview. Section 2.2.2 reviews current empiricisms built up from the major pillar works over the past decades to provide an array of instability issues drawn upon from real country experiences as attempts to grouping them thematically into subsequent four sub-sections, namely, 2.2.2.A- literatures on structural adjustment; 2.2.2.B - literatures on fiscal adjustment; 2.2.2.C-literatures on external sector adjustment, and 2.2.2.D-literatures on the political economy of adjustment. The thematic grouping of literatures is intended to capture the shifts in thinking, the debates and the consensus. Section 2.3 has made an effort to consolidate all sub-sections. Section 2.4 identifies some areas to place the present research in correct perspective.

2.2.1 THEORETICAL OVERVIEW

The concept of macroeconomic instability in development thinking evolved around general overproduction of commodities and scarcity of capital of the early classical; circulating capital in the wage-fund theory [Bernhard, 1943]; laws of capitalist motion in the Marxian sense [Eagly, 1972]; effective demand management problem in savings-investment disjunction,

under-consumption (thriftiness) and volatility of private capital sector investment in Keynesian view of effective demand problem [Keynes, 1936, 1937]; the role of savings and investment rates and thereby policies in the formal growth literatures[Harrod, 1939, 1948; Domar, 1947; Fry, 1994]; economic fluctuations due to unexpected monetary shocks and the monetary equilibrium business cycles and swing of the pendulum from capital accumulation (capital fundamentalism) to policy reforms aiming at achieving efficiency in resource allocation through market oriented policy reforms with the neoclassical resurgence; government stabilisation policy could amplify business cycle [Lucas, 1981]; real variables (like productivity, technology, output, employment) are the main sources of fluctuations of real business cycles (RBC) theory [Kydland and Prescott, 1982]; wage price stickiness causing slowing down equilibrium dynamics and result into instability of the new Keynesian menu cost literatures, wage contract theory, and disequilibrium literatures based on microeconomics foundation to macroeconomic analysis[Patinkin, 1956; Solow and Stiglitz, 1968; Barro and Grossman, 1971]; financial repression and financial deepening-economic growth hypothesis and macroeconomic instability issues [Goldsmith, 1969; Mckinnon, 1973 and Shaw, 1973]; export led growth hypothesis and instability issues [Sharma and Dhakal, 1994]; investment led growth hypothesis and instability issues [Krugman, 1994]; multi-country cross-sectional endogenous new growth empirics [Romer, 1986; Lucas, 1988; Barro and Sala-I-Martin,1991,1992, 1995; and Jones, 1998]; political business / budget cycle[Cf. Nordhaus,1975]. Thus, to account for the reasons underlying macroeconomic instability, one must look into historical, political and psychological characteristics of an economy.

Generally speaking, the path determinacy methodological thinking about modelling economic phenomena to understand the path to be followed by an economy when its steady state is subject to some kind of disturbances and to explain how an economy moves towards its long-run equilibrium after passing through the disequilibrium adjustments evolves around equilibrium framework to partial adjustment to general equilibrium to disequilibrium framework to dynamic stochastic general equilibrium model to inter-temporal general equilibrium analysis resembling with the role of traverse and hysteresis were introduced to measure economic fluctuations and business cycles and close interpretation with recent 1990s concept of error correction methods to measure the degree of disequilibrium eliminating in each period [Singh 2000].

2.2.2 EMPIRICAL OVERVIEW

2.2.2.A STRUCTURALIST LITERATURES

Structuralist thinking though was most prominent in the 1950s and 1960s has still been influential in India. The essential feature of structuralism involves 'rigidities'. Structuralist approaches to macroeconomic imbalances take the explanation of short-run movements in prices and incomes as the basic problem in which long-term growth plays a crucial role. These approaches serve well not only to deduce the most desirable thrusts of economic policy through macroeconomic modelling but also to explore the development strategy, studying economic relationships and their key orders of magnitudes by analysing what went wrong with an economy, enlightening the then prevailing macroeconomic situation with economic history, exploring constraints (or rigidities) on growth. The structuralist literatures extending familiar optimisation problems incorporating the two extensions - specifying standard objective function within the context of economic stabilisation problems and endogenous to the time horizon of the optimisation process describe solutions algorithm to present practical convenience for applied policy work.

The discourse of structuralism recognising a variety of issues as sources of instability that constrained the Indian macroeconomic growth process at different times can be clubbed into two sub-classes, namely closed macroeconomic themes and open macroeconomic issues. The former focuses on demand-side policy constraints for India like fiscal and monetary policy along with supply side exogenous shocks in the domestic saving-investment process and its relation to income distribution and government activity, planning or the dynamics of the agricultural sector and its interaction with the rest of the economy or inter-sectoral linkages or sectoral imbalances in the growth process, problems of effective demand and the dynamics of inflation. On the other hand, the latter to imply India's development problems involves a variety of important issues relating to India's industrialisation and the reliance on foreign aid; the trade policy debates of import substitution and export pessimisms – the protectionist phase up to the mid-sixties supplemented by an elaborate system of industrial controls caused various types of inter-sectoral inefficiencies and the trade and foreign investment problems with the increasing liberalisation in recent years; foreign exchange constraints and BoP disequilibria; the role of stabilisation policies such as exchange rate, fiscal and monetary policies in BoP

adjustments and their general macroeconomic implications; and trade deficits and the effects of foreign capital inflows [Bagchi, A K 1999; Dutt, A K, 1999].

The first and most important structuralist view that was prevalent in India in the 1950s was that India was operating under a trade or foreign exchange constraint and not a savings constraint as a large element of foreign aid for a decade was felt indispensable as India was to adopt public sector led highly import intensive capital goods industrialisation Mahalanobisian development strategy [Little 1960; Bhagwati and Desai, 1970]. The stagnation of the Indian economy after the mid-1960s has stimulated the constraints like imbalances between agriculture-industry linkage and the problem of effective demand [Chakravarty 1974, 1979; Raj 1976; Mitra 1977; Bagchi 1970; Nayyar 1978, 1988]; fiscal constraint caused by claims by various lobbies of different pressure groups on government resources [Bardhan 1984]; infrastructural bottleneck[Patnaik 1987]; deceleration of industrial growth [Srinivasan & Narayana 1977; Shetty 1978; Patnaik & Rao 1977]; the import of food was prevented in the wake of refusal to renew food aid (US PL 480) [Ahluwalia, 1985]. Indian economy had to adjust not only to international shocks like international price hike in 1972-73 and in 1979 but even to major domestic shocks stemming from harvest failures and industrial recession [Prasad, 1990; Mukherjee, 1988]. The macroeconomic constraints to growth in India in the late 1980s incorporate inappropriate domestic policies, fiscal constraint, external debt trap, and problems of savings, inflation and current account deficit [Ahluwalia, 1986; Taylor, 1988]. Several rigidities are implicit in the empirical findings of the impacts of devaluation of the Indian rupee on imports, exports, inflation, fiscal deficit, external debt, foreign exchange problems [Raipuria, 1999; Trivedi, 1992; Pradhan, 1996; Tarapore, 1995; Mustafa and Rahman, 1997].

High inflation rate, misallocation of investment across sectors with higher variance in relative prices, and the efficiency of investment may cause instability via detrimental effect on economic growth [Fischer 1993; Bleaney 1996; Elbadawi, Schmidt and Hebbel 1998]. A joint study has reported that dealing with production, capital formation, price behaviour, public finance, money and banking, trade and BOP, private consumption and private savings are related with combined effects of fiscal, monetary and exchange rate policies; and, policy co-ordination is more effective in raising growth with moderate inflation [Pandit and Krishnamurty, 2004]. To explain why observed a decline in savings and investment rates particularly following the structural adjustment reforms initiated in 1991, while structuralist

critique subscribed that as an inevitable outcome of market-oriented reforms [Patnaik & Chandrashekhar 1995], then the other contrasting argument emphasised instead on the underlying data generation process in the nature of the estimation procedure[Athukorala & Sen, 1995]. Moreover, the thesis whether LDC growth is export-induced or investment- led may involve the problem of identification as both is mutually interdependent and can in no way be substitutable.

Macroeconomic imbalances arising from both exogenous shocks and inappropriate domestic policies repeatedly confront India like developing economy with the need to restore domestic and external balance [Branson,1991; Mallick 1999; Rao 1999]. Influential studies in the Indian context are Rao et al. (1997, 1999, 2000); Dua and Banerji (2001); Chitre (1982); Joshi, and Little (1998). They have either been to detect important patterns or regularities of the Indian macroeconomic databases or dating growth cycles listing business cycle indicators or explaining sub-periodic experiences. However, these studies remain far from being significant in terms of time-period and sectoral coverage and using sophisticated macroeconomic tools.

2.2.2.B LITERATURES ON FISCAL ADJUSTMENT

It is widely believed that fiscal stability is a key determinant of macroeconomic stability and growth, and its sustainability aspects are linked in terms of debt burden, inflation, interest rate and balance of payments. Thus on the fiscal front, it is essential to evaluate various fiscal policy options as above a certain fiscal deficit to GDP ratio is necessarily bad for the health of an economy and bringing down this ratio is expected to lower inflation and interest rates and strengthen the sustainability of fiscal balance in the long-run. Fiscal adjustment is needed not only to overcome an imminent crisis but also to avoid the long-run sustained growth in jeopardy.

There are three following means through which a deficit can be financed such as domestic borrowing, external borrowing, and printing money. Over reliance on any one of them can cause macroeconomic imbalances. A high dependence on domestic borrowing may result high real interest rates and consequently falling private investment. Similarly, over reliance on foreign borrowing can create appreciation of the real exchange rates, widening current account deficits and thereby unsustainable external indebtedness and dwindling foreign exchange

reserves. Over dependence on money creation likewise can prompt higher inflation in an economy. Thus, the manner by which a given public debt is financed determines the extent to which the deficit can be reconciled with broader macroeconomic objectives.

Broadly speaking, the efforts to regain control on macroeconomic situation through fiscal adjustment has been a global phenomenon since the beginning of 1980s and this period unfolded for many developing countries with the events of mounting external and internal debt led to loss of international credibility, high rates of inflation, a large growth in balance of payments deficits, and major deceleration in growth performance, and, in the light of that, the following literatures found focussing on the linkages between fiscal deficits and macroeconomic variables in empirical works with strong theoretical underpinnings .

The empirical investigation to establish the relationship between fiscal deficit and the interest rate has generally been confined to the developed economies. Tanzi (1985) made use of alternative definitions of budget deficits in the context of US economy observed that sensitivity of interest rate to government spending has got diluted over the years because of other factor affected interest rates beyond deficits is high international capital mobility. Similarly, the studies by Dalamagas (1987), Kulkarni and Eric Lee (1996) found no evidence of positive causation between interest rates and fiscal deficits. However, other set of studies including Cebula (1990), Correia Nunes et al. (1995) found a positive linkage between interest rate and fiscal deficit.

In the Indian context, the protracted contention between Prabhat Patnaik (2001) and Deena Khatkhate (2001) caters around various theoretical contours of the issue. While the former undermined the theoretical proposition that high level of fiscal deficit causes higher real interest rate, the latter vehemently encountered the view and asserted that the rise in fiscal deficit does push up the interest rate. Theoretically, the issue has remained inconclusive, empirical evidence is also quite limited. The empirical research in the Indian context has largely been confined on the issue of fiscal spending and its impact on the private initiative or the crowding out phenomenon, thereby intuitively addressing the issue of impact of fiscal deficit on the interest rate.

According to the classical theory and its modern versions, deficit financing crowds out private investment because both public and private sectors have to compete in terms of loanable

funds that consequently increases the rate of interest and displaces private investment and the transmission mechanism channel for displacement of private investment or rather expenditure works through rate of interest. It may also work through movements in the price level that depend on how much investment is financed and the extent of capacity utilisation in the economy. On the contrary, the net effect of increase in public investment on private investment would be positive in the Keynesian framework, via the multiplier as the economy is operating below capacity. The critically important points considered in this respect include the extent to which public and private investments are competitive or complementary in nature, the state of capacity utilization in both consumer goods as well as capital goods industries, foreign exchange reserve position, and the manner in which public investment is financed. However, insofar as public investment is targeted in nominal terms and financed by money creation, price effects may erode real public investment and subsequently have a dampening effect on private investment. The empirical evidence on crowding-out is highly susceptible depending on the following factors including the mode of financing budgetary deficits, components of public expenditure, private capital formation and household's response to deficit financing.

It was found that partial crowding out occurred using US data leading slower economic growth through reduced capital formation and inflation in the long-run while regressed the ratio of 'private investment to income' on the ratio of 'public deficit to income' [Cebula, 1985].

It was claimed that the presence of crowding out on Australian data as the private sector had to compete with the public sector in private savings, because of asymmetry of risks involved in holding between private and public sector bonds and more risks in the former and higher interest rates offered in the latter induced to reduce private investment [Feltenstein,1986]. Some dynamic analyses involving policy simulations exist to capture the crowding-out effect emphasized the modes of financing public deficits chosen, and the elements of public expenditure as components underlie differentials in empirical results [Arestis, 1979; Haque and Monitel, 1993]. It was detected in a study that public capital formation induces higher private capital formation as higher private return generated by public investment [Aschauer,1989].

In India and other developing countries, evidence on private savings replenishing government deficit is rare (Mohanty,1995) while there is a plethora of empirical works

substantiating public investment crowds out private investment in some sectors, but strongly complements in certain others, particularly infrastructure sector [Sunderarajan and Thakur, 1980; Krishnamurthy and Saibaba, 1982;Tu Wai and Wong,1982; Blejer and Khan, 1984; Bardhan, 1984; Pradhan, Ratha and Sarma,1990; Bhattacharya et. al, 1994; Rao, 1995; and Pillai et. al, 1997, Mohanty,1995; Desai, 1997]. Though these studies showing varied findings, their deduced combined close observations are: (i) generally crowding out phenomenon happens in the short-run as both public and private sectors have to compete while purchasing resources, and interest payments reduce private consumption, national savings and capital formation; but crowding in phenomenon happens in the long-run when public investment on infrastructure plays a complementary role to help private capital formation and higher private returns generated; further, the private investment function behaves well empirically particularly when the openness of the economy along with the availability of foreign funds does matter; (ii) weakening of crowding-in phenomenon since the mid-1960s seemingly because of the reduced infrastructure generating role of such investment; (iii) crowding in taking place through financial market openness route since 1990s; (iv) the studies on developing countries are limited in scope because of several reasons such as existence of market segmentation, valuation problems, and difficulties in measuring capital stock and many other related factors.

However, the works developed in the Indian context have examined the phenomenon of crowding out, but did not attempt to establish a direct linkage between interest rate and fiscal deficit. Absence of market determined interest rate till recently is seemingly the reason for lacking of such empirical work. However, Chakraborty (2002) has made an attempt to place this issue under scrutiny in VAR framework suggesting one way causality from real rate of interest to deficit and deficit does not induce rise in rate of interest. This study seemed to have been unsatisfactory owing to the choice and measurement of proxies for key variables.

The present research investigates the fiscal impact on interest rate by running causality tests between fiscal deficit and interest rate in the Indian economy as well as by going into the aspects of private investment and crowding in and crowding out phenomenon.

2.2.2.C LITERATURES ON EXTERNAL SECTOR ADJUSTMENT

An important rational of fiscal reform relates to containing the domestic absorption to a level so that it is consistent with the sustainable external balance. This view underpins the fact that

fiscal adjustment is an important determinant of external sector adjustment being implied not only in the national income identity but also in the dynamic adjustment process in the economy because open economy context involves a continuous alignments-realignment of macro variables with rest of the world [Rangarajan et al. 1989; Rangarajan 1994]. It is generally believed that budgetary deficits spill into external trade deficits, which is popularly known as the problem of 'twin-deficit' [Rakshit, 1983, 1991; Balakrishnan, 1995; Rao, 1995].

This 'twin-deficit' perspective of fiscal adjustment has become a quite contentious issue in India despite having received much less serious attention in the reform process than what should have been [Rao et al. 1999; Rao 1999; Rao 1999]. The central problem of this issue is that if the government fiscal deficit is corrected, would that improve the current account balance? It is certainly tricky to pursue an argument in favour of 'twin deficit' just merely by looking at the ex- post national income identities which are only axiomatic in the way that the national income is defined. This axiomatic ex-post identity indicates that improvements in the current account deficit can take place subject to sectoral savings rise relative to sectoral investment. In another way of saying that an improvement in current account deficits (i.e., an increase in external savings) counterbalances public sector dis-savings thereby pre-empting the crowding out of private sector investment. However, at the least, what can be best is to recognise that fiscal deficit can affect external balance in various ways and not necessarily through the current account deficit.

In the context of whether fiscal deficit causes current account deficit, Dornbusch and Helmers (1988) concluded that forcefully any policies do not have any effect on savings cannot be expected to improve the external balance. On the same count, Feldstein and Horioka (1982) found that just as forcefully cutting the fiscal deficit and thereby increasing the national savings rate would only increase investment with very little impact on the current account deficit. They pointed out that an increase in government dissavings might bring down the investment level in the economy rather than result in increased flow of foreign savings through current account deficit. They suggested that domestic investment is primarily influenced by domestic savings and not so much by international capital inflow. One of its close interpretation is that a decline in government saving or higher fiscal deficit would translate lower level of national investment rather than an increase in flow of foreign savings. This result looms large for countries which are dependent on portfolio capital inflow to sustain their investment activity and not so much

for countries where investment is constrained by the trade gap [Mohanty, M.S., 1997]. Thus, as to whether changes in the savings rate are reflected primarily in the external balance (Dornbusch and Helmers) or in investment levels (Feldstein and Horioka) has been a policy issue of very great contemporary relevance.

Given the greater integration between domestic and world financial markets, fiscal deficits assume a great deal of significance to play as a policy instrument of maintaining the viability of external (foreign) sector. If it is assumed that fiscal deficit does not matter for the external current account balance, it can easily be seen that how an unstable fiscal situation can difficult the finance ability of a given balance of payments deficit through its adverse impact on exchange rate and country credit risks. Rodriguez (1989, 1991) has hypothesised that for a given level of trade deficit, an increase in fiscal deficit might lead to appreciation of real exchange rate, implying higher private spending via a shift of demand to non-tradeables and an increase in their prices. To the extent that fiscal deficit is bond financed, the domestic interest rate effects could dominate to attract capital inflows resulting appreciation of nominal exchange rate. The expectation of a looming depreciation of the over-valued currency could bring down investors' confidence in the economy that might cause a sudden outflow of capital i.e., 'capital flight' could simply take the form of exporters keeping their money abroad in anticipation of future devaluations. This happened vividly in the context of a number of Latin American countries, several countries of eastern Europe, Sub Saharan Africa, and South East Asian economies though once were high performing plunged into currency crises mostly in the mid-1990s despite implemented intensive economic reforms particularly due to heavy dependency on short-term floating foreign institutional investment (FII) with consequence of huge debt service burden and capital repatriate (withdrawing or capital outflow) from the economy, what was described also as the implications of the volatility of the exchange rates at the international monetary system and the problems of co-ordination of monetary, fiscal and exchange rate policies on the management of exchange reserves, which Krugman illustrated as a part of the broader financial crisis[Khatkhate, 1998; Ramanathan and Samuel, 2000]. The consensus conclusion commonly drawn upon the 'currency crisis' or 'contagion' and the validity of the financial-deepening economic growth hypothesis led macroeconomic instability through crisis of the external sector [Ahluwalia, M.S., 2004]. There has been a vast body of literatures with overwhelming recognition that currency crises owing to pro-cyclical financial markets and

pro-cyclical liberalised financial policies have not encouraged growth and instead increased growth volatility, in which various issues like the problems of excessive reliance on short-term external financing, sequence and pace of reforms, exchange rate movement and international capital movement, interest rate parity have become the part of the standard recipe of instability analysis.

To study the directional links between the twin deficits, Darrat (1988) by using Granger Final Prediction Error Criterion (to determine the lag length in conventional Granger causality test) empirically confirmed bi-directional causality and this contention was also reconfirmed by Abell(1990) by applying a vector auto regressive (VAR) model to US data confirming the hypothesis that not only do budget deficits affect trade deficits but also evidence of reverse causality true and the transmission linkage worked via high interest rates, high capital inflows and exchange rate appreciation. By applying the same VAR methodology to panel data consisting of eight OECD countries, Keamey and Monadjemi (1991) found that a temporary and bi-directional relationship exists between the twin deficits. To identify the implications of government borrowings on the current account through variations in the exchange rate, Spiro (1990) found that high government deficits which induce high interest rates causes high inflows of capital and ultimately an adverse current account as there exists a positive relationship between foreign public sector borrowing and the exchange rate. Based on simultaneous model involving bonds, foreign exchange and goods markets, Zeitz and Pemberton (1990) found the evidence that fiscal deficits do affect the current account adversely and occurred through domestic absorption rather than through interest rates and exchange rates. To study this relationship, a similar finding was confirmed by Bachman (1992) using VAR methodology to US data.

India has adopted measures of expenditure compression through a sharp fiscal correction and expenditure switching through devaluation, the present research needs to find the impact of the fiscal deficit on the current account deficit to confirm whether exchange rate is a powerful instrument of adjustment in the current account deficit in India.

2.2.2.D LITERATURES ON POLITICAL ECONOMY OF ADJUSTMENT

The concept of political business cycle (PBC) was originally proposed by Kalecki in 1943 to refer macroeconomic imbalances consequent to myopic government's manipulating behaviour

of using macro policy instruments with a hope to strengthen the chances for their incumbency in re-election by providing artificial favourable economic conditions unusually prior to an election for electoral gain with the economy turns for the worse immediately after election yielded by budgetary cyclical tendencies. However, the theoretical plane of PBC came to be criticised by the rational expectations school and attempts were made at reconciling them since the mid-1980s and inculcated into political budget cycles, in which focus has shifted from real-sector variables like employment, etc, to policy instruments like taxes and transfers or monetary policy, and more attention being directed towards the principle of central bank independence in the context of debt monetisation and financing of fiscal deficits with the objective of minimising inflation [Alesina & Sachs 1980; Rogoff & Sibert 1988; Cukierman & Meltzer 1989; Rogoff 1990; Mourmouras 1997].

Public choice literatures suggest that political parties within a representative democratic system may use alternate preferences with regard to public spending. Manipulations observed in the components of public expenditure as capital expenditure (financed by market borrowing) having longer gestation and barely yield immediate physical returns (or financial dividends) are rarely prioritised by pre-election years while current public revenue expenditure (financed by tax revenue) like subsidies are observed to be increased sharply during election years and fall subsequently. Debt-financing or government borrowing from the RBI is seen to increase through debt-GDP ratio around or at the commencement of the electoral term while the inflationary impact occurs after a lag. Similar manipulations are also observed to have occurred in certain other non-budgetary variables such as escalations in food-grain procurements and prices during pre-election years. Cyclical tendencies within the macro economy and the political preferences concerning public expenditure working together can create strong budgetary imbalances [Alesina & Tabellini 1990]. It was shown in a model of the budget-maximising government that the economy would eventually be destabilised by government's successive political budgetary cycles as aimed at serving partisan and opportunistic ends [Nordhaus 1975]. It was also observed that unemployment rates fall during the election regime, but remain high immediately after an election year in order to compensate for inflation.

The presence of budget cycles was also observed in the context of the Indian economy as dispersed mean growth rates of key macro policy variables differently across pre-election, election and post-election years, and the incumbent government facing an election would seek

to neutralize the demand-pull effects of increased budget deficits by an appropriate policy of commodity-price stabilization either through increasing food-grains imports or by running down buffer stocks so as to insulate the electorate from an increased in food prices; evidenced empirically that receipts on the revenue account comprising both tax and non-tax revenues tend to fall during election years to let certain sections among the electorate go off with tax evasion particularly in the case of central excise duties and corporate taxes, alongside revenue expenditures committed to developmental activities increased in pre-election and election in years followed by a decline in post-election years thereby revenue deficits as a proportion of GDP tend to be higher in pre-election and falling during post-election years [Karnik 1990; Sen & Vaidya 1996; Lalvani 1999].

2.3 CONSOLIDATION OF RESEARCH IDEAS

Despite its vastness, there are still major areas of disagreement, mixed findings and several caveats that do not make literatures reviewed comprehensive. It has been at least to improve wisdom, consolidate current empirical findings and to provide preliminary direction of this present research. If there is any single thread that connects relevant literatures is probably the stylised facts of underlying instability channels. This is done in an attempt not only to show the extent by which various paradigms developed but also to understand how they interplay in the real country context in finding the diversity of empirical interpretations with theoretical postulates and empirical justifications. It seems to have abridged conditions attached traditional and fundamental metaphoric literatures with less empiric structuralist and PBC literatures developed in constraint-optimisation framework with the recent much empiric literatures developed in positive using framework. It has gone well to keep pace with the changing perceptions of sources of instability, filtering relevant methodological contents, formulation of spectrum of policies on meaningful and effective macroeconomic management, and diversity of channels of influences and instability transmission mechanisms.

2.4 RESEARCH GAPS & FUTURE RESEARCH NOTES FOR PRESENT RESEARCH

The structuralist literatures can hardly explain how the Indian economy jumps from one constraint to another by deducing the exact timing as the effective constraint on economic growth process is doctrinal rigidity, and not any real rigidity, emphasising usually on a single constraint, owing to unrealistic assumption of rigidity (time-invariant) and thereby no

substitution or zero shadow price (relative price) and thus can barely analyse the lag impacts of economic policies. Similarly, PBC studies were found tend to provide circumstantial economic evidence of political phenomena rather than being based on sound theoretical ground and explained scarcely macroeconomic policy variables to refer cyclicity of real and budgetary variables in the planning process.

Empirical cross-country studies on this subject have also been dubious because of implicit restrictive assumptions of homogeneity across countries despite there are vast differences and considerable variations in terms of their various structural features, natural and policy induced differences, institutional aspects, with respect to the nature and quality of data as well as statistical procedure for measuring data. Thus quite apart from general methodological flaws pertaining with model specification and econometric procedure, data should not be pooled without considerable cautious.

The existing studies though are partial in period, policy and sector coverage but had come to use gaining the understanding of short-run disequilibrium dynamics for different phases to inform the historical policy environment in the long-run growth process. The literatures available taken together collectively mapped Indian macroeconomic experiences hemmed in with an initial phase of acquiring an industrial base, followed by endogenous deceleration and structural retrogression started in the 1960s, stretched its recessionary impact engulfed by external shocks in the 1970s, followed by industrial recovery through the 1980s and the re-emergence of structural adjustment in the wake of marked recessionary tendencies since the early 1990s.

However, country-specific systematic macroeconomic studies of this nature have been few and far between. More importantly, a great deal of earlier studies carried out prior to 1990s tends to be spurious as are based on traditional regression methodology even dealing non-stationary variables and could mislead in what they advocated their findings. This research aims to fill this gap. It explains why there is a comparative perspective of recessionary episodes in the 1960s and 1990s in the Indian economy ambling all the probable routes of instability channels and their transmission mechanisms. In this way, the advantage of this chapter has been mutual.

REFERENCES

1. Abell, J. (1990): 'Twin Deficits during the 1980s: An Empirical Investigation', *Journal of Macroeconomics*, Vol. 12, pp 81-96

2. Ahluwalia, I.J., (1985): Industrial Growth in India: Stagnation since the Mid-Sixties, Oxford University Press, Delhi

3. Ahluwalia, M.S. (1986): Balance of Payments Adjustment in India, 1970-71 to 1983-84, World Development, 14 (8)

4. Ahluwalia, M.S.(ed.) (2004): India's Vulnerability to External Crises: An Assessment, p.183, in Macroeconomics and Monetary Policy, Oxford India Paperbacks

5. Alesina, A. and Sachs, J., (1988): ' Political Parties and the Business Cycle in the United States 1948-84', *Journal of Money, credit and Banking*, Vol.50, pp 63-82.

6. Alesina, A. and Tabellini, G., (1990): ' A Positive Theory of Fiscal Deficits and Government Debt', *Review of Economic Studies*, Vol. 57.

7. Arestis, P., (1979): The Crowding-Out of Private Expenditure by Fiscal Actions: An Empirical Investigation', *Public Finance/ Finances Publiques*, Vol. 34, pp 36-50.

8. Aschauer, D.A., (1989): ' Does Public Capital crowd out Private Capital?', *Journal of Monetary Economics*, Vol. 24, pp 171-88.

9. Athukorala, P & K. Sen (1995): Economic Reforms and the Rate of Saving in India: Some Observations, Economic and Political Weekly, Vol. 30, No.

10. Bachman, D.D., (1992): Why is the US Current Account Deficit so large? Evidence from Vector Autoregression, Southern Economic Journal, Vol.58, pp.232-40

11. Bagchi, A.K. (1970): Aid Models and Inflows of Foreign Aid, Economic and Political Weekly, Annual Number, January

12. –(1970): Long-term Constraints on Indian Industrial Growth, 1951-68, in E.A.G. Robinson and M. Kidron (eds.), Economic Development in South Asia, Macmillan, London

13. Bagchi, A. K. (1999): Closed-economy Structuralists Models for a Less Developed Economy, in P. Patnaik (eds), Macroeconomics,Oxford University Press, Delhi, pp. 85-113

14. Balakrishnan, P. (1995): What are Fundamentals? Economic and Political Weekly, 1067-71

15. Bardhan, P.K. (1984): *The Political Economy of Development in India*, Oxford University Press, Oxford.

16. Bardhan Pranab (1984): The Political Economy of Development in India, Oxford University Press

17. Barro, R.J. and H.Grossman (1971): A General Disequilibrium Model of Income and Employment, *The American Economic Review*, March, Vol. 61, pp. 82-93.

18. Barro, R.J. and X. Sala-i-Martin (1991): Convergence across States and Regions: Brooking Papers on Economic Activity, No. 1, pp. 107-158

19. --(1992): Convergence, *The Journal of Political Economy*, April, Vol. 100, pp. 223-251.

20. ─ (1995), Growth Economics: McGraw-Hill, New York

21. ` Bernhard, R.C. (1943): Myths and illogic popular notions about business cycles, *The Journal of Political Economy,* Vol. 51, No. 1, pp. 54

22. Bhagwati, J. N., and P. Desai (1970): India: Planning for Industrialisation, Industrialisation and Trade Policies since 1951, Oxford University Press, Oxford

23. Bhattacharya B.B., Barman, R.B., Nag, A.K. (1994): Stabilisation Policy Options, Development Research Group, Reserve Bank of India Study 8

24. Bleaney, M. (1996): 'Macroeconomic Instability, Investment and Growth in Developing Countries', *Journal of Development Economics*, Vol. 48, No.2, pp. 461-77

25. Blejer, M J and Khan M S (1984): ' Government Policy and Private Investment in Developing Countries', IMF Staff Papers, Vol.31, pp 379-403

26. Branson, W.H.(eds.) (1991): Macroeconomic Theory and Policy, New Delhi

27. Cebula, R.J. (1985): Federal Government Budget Deficits and Interest Rates. A Brief Note, Southern Economic Journal, Vol.54, pp 206-10

28. Cebula, J Richard (1990): ' Structural Budget Deficits and the Ex-ante Real Long-Term Interest Rate: An Analysis of the Direction of Causality', , *Public Finance*, Vol.52(1), pp. 36-49

29. Chakraborty, Lekha S (2002): Fiscal Deficit and Rate of Interest – An Econometric Analysis of the Deregulated Financial Regime', *Economic and Political Weekly,* May 11

30. Chakravarty,S., (1974): Reflections on the Growth Process in the Indian Economy, in Hyderabad Administrative Staff College of India

31. -(1979): On the Question of Home Market and Prospects for Indian Growth, Economic and Political Weekly, Special Number, August

32. Chitre, V.S.(1982): Growth Cycles in the Indian Economy, Artha Vijnana, Vol. 24, No.4, December, pp. 293-450

33. Correia, Nunes, Jose and Loukas Stemistsiotis (1995): 'Budget Deficit and Interest Rates: Is there a Link? International Evidence ', *Oxford Bulletin of Economics and Statistics,*57(4), November

34. Cukierman, A., and Meltzer, A.(1989): A Political Theory of Government Debt and Deficits in a Neo-Ricardian Framework, American Economic Review, Vol. 79, pp 713-33

35. Darrat, A., (1988): Have Large Budget Deficits Caused Rising Trade Deficits?, Southern Economic Journal, Vol.54, pp. 879-87

36. Dalamagas, Basil A (1987): ' Government Deficits, Crowding Out, and Inflation: Some International evidence', *Public Finance*, 42(1)

37. Deena Khatkhate and Dan Villanueva (2001a): ' On Fiscal Deficit and Real Interest Rate', *Economic and Political Weekly*, May 12

38. Desai, M (1997): Macro-econometric Models for Planning, Note, (mimeo) September

39. -----(1997 b): Macro-econometric Models for Planning, Note, (mimeo) September

40. ----(2001b): ' A Reply to Reply', *Economic and Political Weekly*, July 28

41. Domar, Evsey (1947): Expansion and Employment, *American economic Review,* Vol. 37, March, pp. 34-55

42. Dornbusch, R. and F L C H Helmers (eds.) (1988): The Open Economy: Tools for Policy Makers in Developing Countries, Oxford University Press, New York

43. Dua, P. and A. Banerji (2001): An Indicator Approach to Business and Growth Rate Cycles: The Case of India, Indian Economic Review, Vol. 36, pp. 55-78

44. Dutt, A. K. (1999): Open-economy Macroeconomic Themes for India, in P. Patnaik (eds), Macroeconomics,Oxford University Press, Delhi, pp. 28-84

45. Eagly, R.V. (1972): A Macro Model of the Endogenous Business Cycle in Marxist Analysis , *The Journal of Political Economy,* Vol. 80, No. 3, pp. 523-539

46. Elbadawi, I. et K. Schmidt-Hebbel (1998): Macroeconomic Policies, Instability and Growth in the World, *Journal of African Economies*, 7, 116-168

47. Feldstein, M. and C. Horioka (1982): Domestic Savings and International Capital Flows, Economic Journal, 92.

48. Feltenstein, A. (1986): Financial Crowding-Out Theory with an Application to Australia, IMF Staff Paper, Vol. 33, pp 60-89

49. Fischer, S (1993): The Role of Macroeconomic Factors in Growth, Journal of Monetary Economics, 32, 485-512

50. Fry (1994), see in Marwah K and Klein L R (1998, January): Economic Growth and Productivity Gains From Capital Inflow: Some Evidence For India, *Journal of Quantitative Economics,* Vol.14, No.1

51. Goldsmith, R W (1969): Financial structure and Development, Yale University Press, New Haven

52. Grilli, V. Masciandaro, D. and Tabellini, G., (1991): Political and Monetary Institutions and Public Financial Policies in the Industrail Countries, Economic Policy, Vol.5, pp.341-92

53. Harrod, R.F. (1939): An Essay in Dynamic Theory, *The Economic Journal,* Vol. 49, March, pp.14-33

54. ── (1948): Towards a Dynamic Economics: Some recent Development of Economic Theory and Their applications to Policy: Macmillan, New York.

55. Haque, N V and Monitel, J P (1993): 'Fiscal Adjustment in Pakistan', IMF Staff Papers, Vol. 40, pp-471-81

56. I M D Little (1960):' The Third Five Year Plan And The Strategy of Indian Development', *Economic and Political Weekly*, Vol. 12, No. 23-24-25, June-04

57. Jones, C. I. (1998): Introduction of Economic Growth: W.W. Norton, New York

58. Joshi, V and I.M.D.Little (ed),(1998): India: Macroeconomics and Political Economy 1964-91: Oxford University Press, Delhi

59. Kalecki, M (1943): 'Political Aspects of Full Employment', *Political Quarterly*, vol 14, pp-31; reprinted in M Kalecki, *Selected Essays on the Dynamics of the Capitalist Economy 1933-1970*, Cambridge University Press, UK.

60. Karnik, A V (1990): 'Elections and GovernmentThe Indian Experience', *Journal of Quantitative Economics*, vol 6, pp-12.

61. Keamey, C. and Monadjemi, M., (1990): ' Fiscal Policy and Current Account Performance: International Evidence on the Twin Deficits', Journal of macroeconomics, Vol 12, pp 197-218.

62. Keynes, John Maynard, (1936): The General Theory of Employment, Interest and Money: Cambridge University Press, Cambridge

63. ─ (1937): The General Theory of Unemployment, *Quarterly Journal of Economics*, February, Vol. 14, February, Collected Writings of John Maynard Keynes

64. ─ (1937): The Ex-ante Theory, *Economic Journal*, Vol. 47, No. 188, pp. 663-9.

65. Khatkhate, D (1998):'Impact of Volatility of Exchange Rates of Major Currencies on Foreign Exchange Management', *Economic and Political Weekly*, Vol. 33, No. 9., February 28, pp. 465-67.

66. Krishnamurthy and Saibaba (1982): Savings Behaviour in India, Hindustan Publishing Corporation

67. Krugman, p (1994): 'The Myth of Asia's Miracle', *Foreign Affairs*, 73, pp. 62-78

68. Kulkarni, G Kishore and Lee Eric Erickson (1996): ' I Crowding Out Hypothesis Evident in LDCs?: A case of India', *Indian Economic Journal*, Vol.43, No.1

69. Kydland. Finn E. and Prescott, Edward C. (1982): Time to Build and Aggregate Fluctuations, *Econometrica*, November, Vol.50 pp. 1345-1370

70. Lalvani, M (1997): 'Some Anomalies in Indian Data Sets: Tackling Inconsistencies', *Economic and Political Weekly*, June 7-13.

71. Lucas, R.E.(Ed) (1981): Understanding Business Cycles: MIT Press, Cambridge Mass.

72. Lucas, (1988): India's Export performance, 1970-85: Underlying Factors and Constraints, in Lucas and Papanek (eds), Indian Economy

73. Mallick, S.K. (1999): Policy modeling for India, *The Journal of Quantitative Economics,* Vol. 15, No. 2, pp. 161-76

74. Mckinnon, R I (1973): Money and Capital in Economic Development, Brooking Institution, Washington D.C.

75. Mitra, A (1977): *Terms of Trade and Class Relations: An Essay in Political Economy*, Frank Cass, UK.

76. Mohanty, M. S.(1995): 'Budget Deficit and Private Saving in India: Evidence on Ricardian Equivalence', *Reserve Bank of India Occational Papers*, Vol. 16, No. 1.

77. Mohanty, M. S. (1997): Macro-Economic Stability, Growth and Fiscal Reform: The Indian Perspective, Economic and Political Weekly, February 8, 1997, p.294

78. Mourmouras, I.A. (1997): Central Bank Independence: A review of Theories, Working Paper, Queen Mary and West field College, University of London

79. Mukherjee, N., (1988): India's International Payments, Imbalances, Mayur Offset, Calcutta

80. Mustafa, M. and M. Rahman, (1997): Dynamic Linkage Between Exchange Rate and Foreign Debt: The Case of India and Nepal, The Indian Economic Journal, Vol.44 Jan – Mar. 1997

81. Nayar, D., (1978): India's Exports and Export Policies, Cambridge University Press, Cambridge

82. –(1988): India's Export performance, 1970-85: Underlying Factors and Constraints, in Lucas and Papanek (eds), Indian Economy

83. Nordhaus, W D (1975): The Political Business Cycle, *Review of Economic Studies*, vol 42, pp 169-90

84. Pandit, V. and Krishnamurty, K.. (eds.) (2004): Economic Policy Modelling for India,, Oxford University Press, New Delhi

85. Patinkin. D. (1956): Money, Interest and Prices: Row, Peterson, New York

86. Patnaik, P., (1987): Recent Growth Experience of the Indian Economy: Some Comments, Economic and Political Weekly, Annual Number, 22, May

87. Patnaik, Prabhat (2001a): 'On Fiscal Deficit and Real Interest Rate', *Economic and Political Weekly*, April 14

88. ----- (2001b): ' Fiscal Deficits and Real Interest Rates: A Reply', *Economic and Political Weekly*, July 28

89. Patnaik, P. and C.P. Chandrasekhar (1995): 'Indian Economy Under Structural Adjustment', *Economic and Political Weekly*, November 25.

90. Patnaik, P. and S.K. Rao (1977): '1975-76: The Beginning of the End of Stagnation?', *Social Scientist*, Jan-Feb

91. Pillai et. al. (1997): Fiscal Policy: Issues and Perspectives, RBI Occasional Papers, Vol. 18, No. 2 & 3.

92. Pradhan, B K, Ratha, D K and Sarma, A (1990): ' Complementarity between Public and Private Investment in India', *Journal of Development Economics,* Vol. 33, pp 101-16

93. Pradhan, H.K.,(1996): New Economic Policies in Developing Countries, Vol. 2 in N. Kaur & G.S. Batra, Anmol (eds.)

94. Prasad, H.A.C., (1990): ' Impact of Oil Price Hike on India's Terms of Trade and Balance of Payments', *Journal of Indian School of Political Economy*, Jan-Apr.

95. Raipuria, K.,(1999): India's Foreign Trade and the Asian Crisis, The Asian Economic Review, Vol.41, No.1, pp. 1-12.

96. Raj, K.N., (1976): Growth and Stagnation in Indian Industrial Development, Economic and Political Weekly, 26 November

97. Rakshit, M., (1983): On an Assessment and Interpretation of Saving-Investment Estimates in India, Economic and Political Weekly, Annual Number, May

98. ---- (1991): The Macroeconomic Adjustment Programme, Economic and Political Weekly, August 24, 1977-78

99. Ramanathan, A. and A. Samuel (2000): 'Financial Liberalisation and Economic Development: The Theory and Experience', *The Indian Economic Journal*, Vol.46, No.1.

100. Rangarajan, C et al (1989): 'Dynamics of Interaction between Government Deficit and Domestic Debt in India', *RBI Occasional Papers*, vol 10 (3), September, pp 164-220.

101. Rangarajan, C (1994): 'India's Balance of Payments: the Emerging Dimensions', 16th G B Pant Memorial Lecture at New Delhi, Reserve Bank of India

102. Rao, B B (ed) (1997): Co-integration for the Applied Economists, Allied Publishers

103. Rao, M.J.M., (1995): Analytical Foundations of Financial Programming and Growth Oriented Adjustment, Development Research Group, Study No. 10, Reserve Bank of India

104. Rao, M. J. (1999): 'Financial programming and stabilization policy options for macro-economic adjustment', *Economic and Political Weekly*, Vol-34 No.3 & 4, January 16-23, pp 99-108.

105. Rao et al. (1999): 'Indian Macro- Economic Data Base in a Consistency Accounting Framework(1950-51 to 1997-98)- I: Identifying Sectoral and Economywide Budget Constraints' , *Economic and Political Weekly*, Vol. 34, No. 33., August 7, pp. 2243-2260

106. Rao et al. (1999): 'Indian Macro- Economic Data Base in a Consistency Accounting Framework(1950-51 to 1997-98)- II: Empirical Patterns and Regularities' , *Economic and Political Weekly*, Vol. 34, No. 34., August 14, pp. 2345-2357

107. Rao, M J M, (2000), ' Fiscal Deficits, Interest Rates and Inflation: Assessment of Monetisation Strategy', *Economic and Political Weekly*, Vol.35, No.30, July 22.

108. Rodriguez, C.A., (1989): 'The External Effects of Public Sector Deficits', Working Papers, WPS 299, The World Bank

109. Rodriguez, C.A., (1991): Macroeconomics of the Public Sector Deficit – The case of Argentina, World bank Pre-Working paper Series No. 63

110. Rogoff, K (1990): 'Equilibrium Political Business Cycles', *American Economic Review*, vol 80, pp 21-36.

111. Rogoff, K and Sibert (1988): Elections and Macro-Economic Policy Cycles, *Review of Economic Studies*, vol 55, pp 1-16.

112. Romer, P.M. (1986):Increasing Returns and Long-run Growth, *Journal of Political Economy*, Vol. 94, No. 5, pp. 1002-1037.

113. Sen, K. & Vaidya, R.R. (1996): Political Budget Cycles in India

114. Sharma, S C and Dhakal, D (1994): ' Causal analysis between exports and economic growth in developing countries', *Applied Economics*, 26, pp. 1145-57

115. Shaw, E S (1973): Financial Deepening in Economic Development, Oxford University Press, New York

116. Shetty, S.L. (1978): Structural Retrogression of the Indian Economy since the mid-Sixties, Economic and Political Weekly, Annual Number

117. Singh T (2000):The Critique of Equilibrium Theory of Joan Robinson: An evaluation, *The Indian Journal of economics*, Vol. LXXX, Part II Issue No. 317

118. Solow, R.M. and J.E.Stiglitz (1968): Output, Employment and Wages in the Short Run, *Quarterly Journal of Economics*, November, Vol. 82, pp. 537-560.

119. Spiro, P.S., (1990): Foreign Borrowing and the Real Exchange Rate, Journal of Macroeconomics, Vol. 12, pp. 611-24

120. Srinivasan, T.N. and N.S.S. Narayana (1977): Economic Performance since the Third Plan and its Implications for Policy, Economic and Political Weekly, Annual Number

121. Sunderarajan, V. and Thakur Subhas (1980): Public Investment, Crowding Out and Growth: A Dynamic Model Applied to India and Korea, IMF Staff Paper, Vol. 27

122. Tanzi, V., (1985): Fiscal Deficits and Interest Rates and Interest Rates in the US – An Empirical Analysis, 1960-84, IMF Staff Papers, Vol.32, pp. 551-76

123. Tarapore, S.S., (1995): Adjusting to Changes in Exchange Rate Poliies and Development in Forex Market, R.B.I. Bulletin, December

124. Taylor, Lance (1988): Macro Constraints on Indian Growth, MIT, Cambridge, Mass

125. Trivedi, P., (1992): The Impact of Recent Policy Measures on India's Balance of Payments: An Analytical Exercise, The Indian Economic Journal, Vol.39, Jan-Mar

126. Zietz, J. and Permberton, D.K., (1990): The US Budget and Trade Deficits: A Simultaneous Equation Model, Southern Economic Journal, Vol.56, pp. 23-34