INTRODUCTION

Any macroeconomic policy should ideally be based on a proper understanding of the macro-functioning of the economy which entails the adoption of a correct methodology as well as the incorporation of all the relevant information pertaining to the economy. The Indian economy consists of not only a white part but also a significant black component. Both these need to be incorporated into the analysis for an objective assessment of the economy as well as the formulation of policies. In 1991, New Economic Policies (NEP) were introduced in India. The debate preceding the introduction of these policies and following their introduction has been based largely on the white economy ignoring the existence of the black economy.

Such incomplete analysis does not take into account that economic agents, in order to maximise their incomes, take recourse to a variety of unfair and illegal means. For instance, a part of the output may not be declared by the producers and the corresponding incomes are not reported to the tax authorities. This affects the reported rate of growth of the economy and its fiscal health. In international trade, there are illegal activities like, smuggling and drug trafficking, which again fall into the category of unrecorded output. The illegal economic activities not only undermine the validity of the recorded data, but they affect the behaviour of the economic agents with regard to, say, their consumption and investment decisions with implications for the white economy. This in turn, affects the macro functioning of the economy as well.\(^1\) It is for this reason that in this thesis an

---

\(^1\) Unambiguous characterisation of the white or recorded economy as the legal economy and black economy as the illegal economy is difficult. As, not only there is a close interaction between the two, the recorded economy to an extent captures the vestiges of black economy and a lot of legal activities may not be recorded at all, like e.g., unorganised sector activities.
attempt has been made to incorporate the black economy in the analysis for a proper understanding and appraisal of the economy.

1.1 The background to the New Economic Policies (NEP)

India, even after fifty years of independence and despite vast potential of growth has remained primarily a developing economy. The slow rate of growth, popularly called the ‘Hindu’ rate of growth, has left India among the lowest income group of developing nations. India had adopted a planned industrialisation strategy with the state playing a key role in the process of economic development after independence. Since the mid eighties, India has been gradually veering towards liberalisation. In the late eighties, key macro economic variables such as the fiscal deficit and the current account deficit were indicating that the economy was heading towards a crisis. The economists and policy makers with a leaning to the Right were arguing for liberalisation and greater infusion of market principles in the functioning of the economy. The Left argued against freeing import and wanted more effective state intervention to tackle poverty. The sudden emergence of balance of payment (BoP) crisis in 1990-91 compelled India to seek assistance from International Monetary Fund (IMF) and accept its conditionalities.

Following the crisis in 1991, India adopted a Structural Adjustment Programme (SAP) along with a stabilization package at the behest of IMF and the World Bank. According to IMF’s analysis, the emergence of an unsustainable external account imbalance was precipitated by a growing public sector deficit in the eighties. This view is based on the three-gap model which states that the sum of investment saving gap of the private sector \((I - S)_p\) and the public sector \((I - S)_g\) equals the trade deficit \((IM - X)\). To put it symbolically,

\[
(I - S)_p + (I - S)_g = (IM - X)
\]  

(1.1)

Where, I refers to gross investment, public or private, as the case may be,
S refers to gross saving, public or private, as the case may be,
IM refers to the imports of goods and services, and

_The Macroeconomic Disequilibrium and the Black Economy_
X refers to exports of goods and services.

The subscripts 'p' and 'g' refer to the private sector (constituting household and corporate sector) and the public sector\(^2\) respectively.

**Chart 1.1: The Three-Gaps: The Investment-Saving Gap of the Private Sector and the Public Sector, and Trade Deficit**

![Chart 1.1: The Three-Gaps](image)

Source: National Accounts Statistics, CSO.

The data shows that the investment-saving gap of the public sector had always been positive and was financed by the excess of saving over investment in the private sector and inflow of external resources. It was argued that a high fiscal deficit of the public sector\(^3\) has generated excess demand and inflationary tendencies in the economy. There is also a spill over of excess demand from the economy to the external sector leading to

---

\(^2\) The public sector refers to all the three tiers of government, centre, state and local. The investment-saving gap as in (1.1) corresponds to the public sector investment-saving gap given in the National Account Statistics (NAS).

\(^3\) Fiscal deficit is defined as the total government expenditure minus non-debt receipts (revenue receipts, recovery of loans and dis-investments. The Fund stabilization package targets the fiscal deficit of the centre.
adverse BoP consequences. Persistent inflow of external resources has led to the growth of external debt and associated BoP problems.

This provides the rationale behind the stabilization package, which advocates a reduction in the fiscal deficit, or investment-saving gap of the public sector so as to restore balance in the external account and check the inflationary tendencies in the economy. The structural adjustment programme requires the role of the state to be reduced so that there would be a freer play of the market forces in the economy to ensure efficient and optimum allocation of resources through competition. It is believed that through technological innovation and supply side responses, growth will be stimulated while aggregate demand is restrained by reining in public sector deficit. This was considered to be the panacea for all the economic ills of the country.

Rakshit (1991) was critical of targeting fiscal deficit as the kingpin of the stabilization package. He observed that Indian data did not support any direct and strong relationship between fiscal deficit, on the one hand, and the trade deficit and inflation, on the other. Moreover, from a macro economic perspective, it is the larger investment-saving gap of the public sector, which matters and not merely the targeted fiscal deficit of the centre as in the stabilization package adopted in 1991.

The three gaps in equation (1.1) refer to the economy in its totality and not to any sub part of it. As mentioned earlier, the Indian economy consists not only of a white part but a significant black part as well. By conservative estimate, the size of the black economy has been estimated to be around forty percent of GDP in 1995-96 (Kumar 1999b). Typically, magnitudes in (1.1) refer only to the white economy as this is the major part of the economy, which is recorded. It may be mentioned here that the distinction between the white economy and the recorded economy is blurred. A part of the government expenditure accrues to the private sector as illegal incomes (or, black saving).

---

4 Expressing the size of the black economy as a percentage of the recorded GDP is methodologically flawed, though it is conventionally used for want of any suitable and easily comprehensible alternative.

The Macroeconomic Disequilibrium and the Black Economy
through siphoning out of funds. So the recorded economy captures a part of black income generation. Some activities in the unorganised sector may remain untraceable, and hence, not recorded, though it may be a part of the white economy.

The estimates of the different components of equation (1.1) refer only to one period and the equality holds good in the *ex-post* sense. Macroeconomic analysis needs to be carried out in the *ex-ante* sense. In order to establish causality, the components of equation (1.1) have to be expressed in behavioural or functional forms. Equation (1.1) fails in this respect.

Each of the gaps in equation (1.1) has a component contributed by the black economy. These gaps (black) are not independent of one another, since there are interlinkages amongst them. For instance, due to various cuts and commissions, involved in the public expenditure, a part of the budgeted amount accrues to the private sector as undeclared profit. So, there is a transfer of saving from the public to the private sector. The fake invoicing of exports and imports, smuggling in and out of goods, and remittances sent from abroad which are often short circuited in the *hawala* market create another gap. This gap affects the public sector gap as it affects revenue and leads to another black gap for the private sector with components from the external sector.

Even if the black economy could be ignored, for policy purposes, causation is required to be established for policy purposes. By itself, equation (1.1) does not reveal the direction of causation amongst the gaps. For example, how would the macroeconomic balance be restored because of a reduction in fiscal deficit is not clear? The balance may be obtained either by a corresponding change in the private sector gap, or by the trade gap, or by some combination of these two. Even the causation may run the other way round.

Considering the foregoing discussion, it is apparent that the black economy needs to be integrated into the macro analysis to understand the dynamics of the economic imbalance, which is of vital importance for economic analysis and policy formulation.

---

*The Macroeconomic Disequilibrium and the Black Economy*
1.2 The concept of the black economy

The concept and the definition of black income have remained fuzzy and debatable. In order to integrate the black economy into a macro model, it has to be defined in consonance with the other elements of the model, i.e., it has to be related to income generating economic activities, like the measurement of economic activity, GDP. When tax is evaded, the corresponding output and income are also evaded. This happens irrespective of the method employed to evade tax. In case of artificial cost escalation, value added gets reduced, and, therefore the reported income. The extent of cost escalation is appropriated by the propertied as illegal income on which no tax is paid. The output may also be suppressed and the corresponding income accrues to the propertied as black income. This concept of black income excludes from the definition the transfers like bribes. Though this may have some impact on income distribution, and consequently on demand, we can ignore the impact in the first approximation. Illegal economic activities are also economic activities on which no tax is paid. This should also be taken as a part of definition as tax is not paid because the income itself is illegal. Tax evasion out of legal income is also illegal. In fact, the generation of black income is an illegal activity and this is what characterises the black economy.

With this brief introduction to the facets of black economy, we now dilate on various issues and debates on the Indian macro-economy to see how ignoring the black economy has led to a partial understanding of the economy.

In the following sections, we briefly deal with various issues and debates, which have assumed salience over the years. We also discuss issues relating to the open economy in the end.

1.3 Planning regime and the public Sector

In order to situate the ongoing debate on NEP, with particular reference to the stabilization package, let us trace back the evolution of the debate to its present form.
In the initial phase of planning, the volume of saving and the size of the capital goods sector were recognised to be the major constraints on growth. The public sector was assigned the most important role of spearheading the growth process in the economy. The public sector in order to fulfil its designated role of raising saving and fostering capital formation along with the objective of growth with equity, depended heavily on fiscal policy. The government's effort at raising the saving rate was supplemented by foreign saving in the form of aid. Two gap models were used to find out the quantum of aid requirements. Indeed, fiscal policy along with monetary and credit policies were extensively used to implement development strategy as embodied in the consecutive Five Year Plans. Each successive Plan reiterated the goals while reaffirming the need to orient fiscal policy to sub-serve the objective of planning.

Though, India's public finances have been instrumental in promoting growth of public sector, in terms of resource mobilisation and the efficiency of public sector expenditures, the performance has fallen short of expectations. This has resulted in a large resource gap, which has been covered by borrowing and seigniorage, and failing all else, has led to a cut back in public sector investment. Though the growth of the black economy is a major factor, which has contributed to this development, has been ignored. It has not only adversely affected resource mobilisation, but also weakened the efficacy of public sector investment.

If we look at the relative shares of gross domestic saving of the household sector, private corporate sector and the public sector, the major share of domestic saving has been contributed by the household sector. The public sector saving has steadily declined from 4.54 percent of GDP in 1982 to 0.56 percent of GDP in 1994. Bagchi and Nayak (1994) have argued that the public sector has proved to be a drag on the growth of saving of the economy. They also argue that the public sector has made substantial inroads into the private sector saving. Though, they argue, that using up of 50 percent of domestic saving has been in accordance with the role assigned to the public sector but financing of resource gaps has led to the emergence of problem with long run consequences. In the absence of
an appropriate framework, (or, a model), what they fail to grasp is the relationship or the underlying causality between public sector investment saving gap and other macro variables. In the entire spectrum of discussion on the role and contribution of public sector in the Indian economic development, corruption in public sector activities has not assumed the prominent place it deserves in understanding and assessing the role of public sector in Indian economic development.

In order to probe this issue, we discuss the resource mobilisation aspect and the issue of expenditure control in the following sections.

1.4 The fiscal crisis

The increase in the size of the fiscal deficit in relation to the size of the economy heralds the emergence of crisis on the fiscal front. Fiscal deficit, per se, should not be a matter of concern as long as borrowing finances only investment, which expands the capital base of the economy and earns a competitive rate of return. Crisis surfaces as revenue falls short of revenue expenditure resulting in a part of revenue / current expenditure being defrayed by borrowing and investment failing to yield an adequate rate of return. The government has to borrow more as revenue fails to keep pace with the growth of expenditure. Persistence of this phenomenon may lead to an unsustainable debt to income ratio under unfavourable macro conditions (as real effective rate of interest on outstanding debt exceeds real growth rate of the economy in presence of primary deficit). In the extreme, borrowing may be necessitated to pay only for the interest payment as the state slips into a debt trap. We can discern contending approaches on the broader issue of fiscal crisis, the underlying factors and its remedies.

The first approach in tune with the Classical and Marxist traditions, identifies the emergence of fiscal crisis with the contradiction between the stated objectives of policy and the pressure exerted on the state by the different classes constituting it. The conflict between the propertied and the non-propertied class to stake out a larger share of the cake influences the policy-making. The non-commensurate growth in tax revenue with

The Macroeconomic Disequilibrium and the Black Economy 8
increasing expenditure is viewed as the state’s inability to extract resources out of the propertied. They argue that the solution lies not in cutting expenditures but in mobilising more revenues. The accumulation of surplus as the economy grows poses the problem of effective demand. This arises because private investment may not rise in tandem with the accumulation of surplus. In order to circumvent the possibility of stagnation, the public sector investment should be stepped up to reinvest the growing surplus.

Patnaik (1984b) presents a coherent picture of the fiscal crisis of the state. He argues that the standard under consumptionist explanation is not applicable in the Indian case as state intervention is ubiquitous. Therefore, he argues,

"... there is no reason why, in principle, the growth rate should slow down. Thus, some additional hypothesis is needed regarding the inability of the state to offset the stagnationist tendency arising from underconsumption to make this explanation a complete one." (Patnaik 1984b).

The fiscal crisis originates because of the state’s inability to raise adequate amount of direct taxes from the property owning class. This is attributable to the provision of a wide-ranging tax concessions and exemptions which narrows the income base. Apart from this tax avoidance, there has been widespread tax evasion, leading to the emergence of the black economy. It is the propertied class, which has resorted to evasion of taxes through various ways and means briefly mentioned earlier. Lower growth in revenue compared to expenditure, results in widening of deficit and consequently rise in debt to income ratio. This leads to inflation, which squeezes the real consumption of the poor. In a democratic society, the state is apprehensive of inflation because it hurts the interest of the poor. The state investment gets circumscribed in the process.

Tax policy constitutes a major plank of the government effort towards resource mobilisation. The debate on tax policy has largely been apolitical and has focused on all the major issues such as adequacy of tax base and effort, efficiency of the tax structure, incentive and equity aspects of the tax policy. The Matthai Commission (Government of India 1955) advocated a progressive tax structure and discounted the disincentive effects.
of high marginal tax rates. Kaldor (1956) took the view that the extant system was inefficient and inequitable because income base is not an appropriate base of income as defined for income tax purposes owing to its narrowness in coverage and instead suggested that expenditure should be treated as a base as it is broader and not amenable to manipulation and evasion. However, even though the tax rates were high, the buoyancy of taxes remained low. Bardhan (1962) explained this in terms of high propensity to evade taxes. Kaldor on the other hand, attributed this to the absence of political and administrative will, and, therefore hinted that there was a need for a systemic reform. Das-Gupta, Lahiri and Mookherjee (1995) showed that the compliance index computed for the period 1965 to 1992 exhibit a downward trend with compliance levels close to half at the end of the period than what they were at the beginning. 4

Gandhi (1970) re-emphasised the disincentive effects of high rates of taxes. This was also accepted by the Wanches Committee (Government of India 1971). Gulati (1972) and Bagchi (1972a & b) argued against any inverse relationship between compliance and tax rates and suggested that this argument is based on the use of partial equilibrium analysis, and hence, methodologically weak. This theme has recurred time and again, and constitutes an important pillar of supply side economics. This view is based on a micro understanding of the behaviour of the taxpayers. Much of the debate consisted in pointing out procedural lacunae in tax structure and incidence, which had equity implications. With the rise to the dominance of neo-classical micro-economic methodology, tax issues were increasingly posed as puzzles in consumer inter-temporal utility optimisation.

The framework ignores the circular flow of incomes and the impact on income and expenditure. The problem of tax rate and tax collection needs to be viewed in macro terms since tax collection and tax evasion affect income generation and injection of demand into

4 The compliance index measures in a crude way its complement, the level of tax evasion. The procedure adopted was is to compare actual tax collection with tax-liability computed as the product of non-agricultural GDP (the base for income tax) and an average effective tax rate. Though the estimates are biased, but the degree of bias is unlikely to change much over the years. Thus it is capable of capturing the annual fluctuations. The decline in the index was found to be substantial during 1965 and 1967, 1969 and 1974, and 1977 and 1984.

_The Macroeconomic Disequilibrium and the Black Economy_ 10
the economy. Therefore, there is a need to set up a macro framework, which would contain both the supply and the demand aspects. Moreover, the debate on tax rates, compliance and tax collection needs to be analysed in a framework where economic agents have internalised tax evasion as a part of their behaviour.

The share of income tax in the total tax revenues in India has been low and has largely declined over time. Income tax revenues as a proportion of GDP were a little less than 1 per cent in India in contrast with the figure of 1.36 per cent for the countries with per capita incomes of less than $360 per annum (Das-Gupta and Mookherjee 1997). In relation to non-agricultural GDP, the base of income tax, revenues raised from non-corporate income tax actually fell from 2.17 percent in 1970-71 to 1.89 percent in 1989-90.

It can be shown that the total income tax collection (TA) can be expressed as the following,

\[ TA = r \cdot n \cdot y_i \]  

Where ‘\( y_i \)’ is the per capita income of a taxpayer,

‘\( n \)’ is the number of tax payers and

‘\( r \)’ is the effective income tax rate for each tax payee.

Exemption limit to per capita Net National Product (NNP) ratio has shown a tendency to fall (from 6.5 in 1965-66 to 3.5 in 1992-93). This indicates a rise in ‘\( n \)’ as more and more taxpayers are brought under the tax net. The average effective personal income tax rate has increased from 14.8 percent in 1965-66 to 23.3 percent in 1992-93, which is tantamount to a rise in ‘\( r \)’. The base, non-agricultural GDP has also risen over the years\(^5\). The fall in the exemption limit ought to have enhanced the number of

---

\(^5\) A rise in tax to GDP ratio may not be indicative of a rise in buoyancy. As argued by Kumar (1995), the tax to GDP ratio can be expressed as follows,

\[ \frac{\text{Tax}}{\text{GDP}} = \frac{\text{Tax}}{\text{Business}} \times \frac{\text{Business}}{\text{Non agricultural GDP}} \times \frac{\text{Non agricultural GDP}}{\text{GDP}} \]

So, though the business as a proportion of non-agricultural GDP and the share of non-agricultural
taxpayers. It can be inferred that the poor performance of income tax can neither be explained in terms of narrowing of base nor in terms of changes in the tax rates. This points to the extent of evasion as far as income tax is concerned.

The inadequate direct tax collections have led to serious repercussions for the overall fiscal health of the country. First, the tilting of the structure in favour of indirect taxes, which are argued to be regressive and inflationary in nature. Several studies, however, indicated that the incidence of indirect taxes, too, appeared to had been moderately progressive (Chelliah and Lall 1978; Ahmed and Stern 1983; Jha and Srinivasan 1988). However, several researchers have pointed out that most studies of the incidence of the indirect taxes suffer from several limitations (Bagchi and Nayak 1994).

The slow growth in direct taxes has also seriously impaired the capacity of the government to raise revenue, which has not kept pace with the growth in expenditure in the eighties. This has led to borrowing and an eventual rise in debt to income ratio. The structure of direct taxes with its high degree of progressivity during the sixties, and until the mid-seventies, has also been held responsible for creating inefficiency in terms of its adverse effects on incentives to save, invest, work effort, and the growth of black economy. Liberal provision of exemptions and concessions for a wide range of activities was directly in response of high degree of progressivity. Studies indicate that several of these concessions were not effective (Tulsidhar and Rao 1986; Sarma 1986).

With the onset of economic reforms in 1991, deliberation on Indian tax policy was influenced by the dominant neo-classical public economics, which emphasise on the distortionary effects of tax policy and the consequent disincentive effects of inappropriate

---

6 It was argued that consumer expenditure survey data, which is the basis of the studies, do not reflect the upper expenditure class consumption on account of under reporting of consumer durables. Purchases are often made through business accounts, and therefore, constitutes part of cost which may be passed on to the consumers of the business concerned. The impact of product prices of public sector enterprises is generally not incorporated in the analysis of incidence, whose surpluses share the characteristics of taxes.

The Macroeconomic Disequilibrium and the Black Economy
tax policy. This, in fact, resurrected the proposition of the Wanchoo Committee Report (Government of India 1971). The Chelliah Committee (Government of India 1992) failed to make a dent on the tax system. With its focus on incentive and compliance, the recommendations of the Committee mark a fundamental shift from the debate on the political economy of Indian tax policy.

The liberals (Rao and Tulsidhar 1991; Mundie 1992; Mundie and Rao 1991) locate the fiscal crisis in the emergence of the soft budget constraint. They argued that accelerated growth in expenditure during 1977-91 despite a rise in tax GDP ratio is a result of excessive provisioning of public goods, growth of explicit and implicit subsidies and high spending on administrative machinery. In the above argument, bureaucrats and the politicians are viewed as individual maximisers. But these two actually connive with the propertied to accumulate surplus. The sharp underlying conflict between propertied and the labourers are not explicitly brought out. The inefficiency of public expenditure due to siphoning out of funds is very crucial. What happens to the surplus, which accrues to the propertied - how the income flows in a circular fashion is not stressed. The inefficacy of state expenditure is also because of a change in the composition of the expenditure. The capacity of interest payment to expand the size of the market is highly limited because of low propensity to consume out interest income of the lenders of the funds to the state.

The New Political Economy focuses on the fact that the size of the government is too large and hence needs to be curtailed. Government failure was identified as the principal cause behind poor macro economic performance. Two critiques of interventionist fiscal policy could be identified- first, creation of inefficient public sector enterprises and the second, the 'rent seeking argument', which implied imposition of control in various spheres of economic activity and proliferation of various unproductive expenditures (Bhagwati 1982; Srinivasan 1985; Krueger 1974; Bhagwati and Desai 1970). Notwithstanding, the focus remains mainly on burgeoning, uncontrolled government expenditure. The difference with the liberal pluralist is the unwillingness of the
government to control the growth of government expenditure rather than its inability. The prescription they advance is to curtail the domain of state activity, reduction in distortionary tax rates and expenditures. An example of a technical analysis is found in Buiter and Patel (1992). They argued that Indian Public debt, as a statistical time series, was non stationary and hence explosive. On the basis of this, the authors suggested that the Indian economy was insolvent. They further argued, that fiscal contraction was inevitable as taxation measures would prove to be insufficient. They argued this on the basis of an estimated money demand function.

With the advent of economic reform, these views became part of official discourse on deficit management. Privatization and disinvestment were also advocated (Bhagwati and Srinivasan 1993; Joshi and Little 1994) to boost private sector investment in the space vacated by the receding public sector.

1.4.1 On deficits

The revenue surplus during 1950-78 and the dominance of the Keynesian view maintained that the government deficit plays a vital macro economic role in ensuring demand for the private sector and stabilising the economy in the face of cyclical fluctuations. With the emergence of revenue deficit and a widening fiscal deficit, deficit control became a major issue and reduction in fiscal deficit became an important element in official discourse in the nineties as discussed earlier.

A review of the work on fiscal policy and control of deficit would reveal three different approaches. Within the Classical-Marxist discourse, rise in revenue deficit and the growth of public debt reflected a fundamental problem in surplus accumulation and distribution. For the liberal pluralists, deficits reflected unrestrained growth of expenditure. For NPE, deficits were attributable to the huge size of the government.

The core idea behind reduction in fiscal deficit was from the point of unsustainability of Indian public debt and release of resources for the private sector. This has been widely contested by the Indian scholars. Bagchi (1992) argued that a fall in fiscal deficit may not be accompanied by, either a fall in current account imbalances, or a rise in
private sector investment activity. Rakshit (1991) argued that (as earlier mentioned) the data did not support any rationale behind targeting fiscal deficit, and after all, deficit of the entire public sector is a relevant concept from the point of view of the economy as a whole and to control aggregate demand. Gulati (1991, 1994), reiterating the same argument, pointed out that it was the ultimate object of government expenditure (whether consumption or investment) which mattered for solving the structural problem. Further, reduction of public borrowing without eliminating the root cause, the growth of government consumption expenditure and inadequate taxation of the propertied class, would not have the desired impact. Kumar (1999a) argued that the prescription is based on the white economy data, which led to an inappropriate diagnosis of the problem. Incorporation of the black economy might have resulted in a much lower public sector deficit and even a current account surplus. Moreover, the three-gap model does not postulate any causality and the widely held view that a fiscal deficit cut would lead to lower inflation and restoration of equilibrium in current account. Nayyar (1993) highlighted the Indian reality in the nineties that usually, it is the capital expenditure which is cut as the government does not have any discretionary power over the committed expenditure, comprising mainly wages and salaries, and interest payment. This, associated with persistent revenue deficit, may turn out to be counterproductive as the lower growth rate of the capital base can adversely affect future growth profile.

1.5 The structural demand problem

Bagchi (1970a), Mitra (1977), Chakravarty (1979) and Nayyar (1978) have attributed industrial deceleration in India during the mid sixties to late seventies to the structure of demand. Increasing skewness in the distribution of income was argued to have rendered the structure of demand less conducive for industrial growth.

Mitra (1977) explained industrial stagnation in terms of a shift in terms of trade in favour of agriculture and against industry during the early sixties and the mid seventies. The shift of terms of trade in favour of agriculture can affect industry in two ways. It raises
the input cost for the industry (supply side effect) and depresses the real income of the masses (demand side effect) irrespective of the worsening distribution of income.

Categorising India in terms of two classes, capitalists and workers, does not do justice to the complicated socio-economic structure of the Indian society. India can be viewed as comprising several classes, including those in agriculture, industry, the public sector, or the organised sector employees and the trading community. The distribution of income can therefore be of mixed type. Any change in the distribution of income in favour of one or more classes renders the concept of income distribution ambiguous.

Mitra’s argument has got two distinct disadvantages. It is aggregative in nature and the explanation is provided only in terms of mass consumption goods.

Nayyar (1978) has explained the structural demand problem in terms of worsening distribution of income in general, as the demand for luxury goods by the rich reaches a saturation point earlier. Nayyar argued that the rising income of the rich may not lead to a commensurate rise in consumption of luxury goods but may raise the import intensity of the economy. Bagchi (1970) analysed income distribution in view of the failure of the Mahalanobis type planned industrial strategy.

On the basis of two published studies, which found that the degree of inequality increased over the period 1950-51 to 1965-66, demand for mass consumption goods suffered and resulted in excess capacities in the consumer goods industries. Desai (1981) and Ahluwalia (1985) counter the claim by arguing that the growth of production of consumer goods does not support the structural problem as discussed above. The biasness of the data, and therefore difficulty in accepting the measures of inequality in distribution of income as argued by Desai (1981) and Ahluwalia (1985) should be viewed in the context of the black economy. Black incomes are property incomes, which accrue to the property owners, and therefore share of profit in white and black incomes must have risen with the growth of black incomes. It was observed that demand for mass consumption goods, such as particular types of textiles, has suffered. Black consumption is unlikely to rise commensurately with black income. Black investments in general, are transfers and

*The Macroeconomic Disequilibrium and the Black Economy*
do not expand the productive capacity of the economy. In the first round, demand does not change either. But the growth of the black economy may lead to structural demand problem on account of growing inequality in the distribution of income.

The period 1979-80 marks a structural break in the Indian economy. In the pre 1979-80 period, drought used to be followed by recession. During the post 1980 period, price continued to rise. Rate of growth remained positive in spite of a fall in production followed by drought. This happened because, through all this time, tertiary sector had been growing. Sectoral shift in the distribution of national income is therefore, an important element in understanding the dynamics.

All these arguments suffer from the following, (a) the analysis is aggregative in the sense that categorisation is done only in terms of two classes, (b) sectoral change in the distribution of income is ignored.

Therefore, the structural demand problem cannot be explained without the inclusion of black income into the analysis. The growth of black income is mostly concentrated in the services sector (Kumar 1988a). With the growth of services sector, black income grows, and with it, the share of property incomes in national income.

The question, which naturally arises, is whether government can overcome this stagnation through stepping up of government expenditure. If financed by ‘deficit financing’, it is argued that for a supply-constrained economy like India, increase in government expenditure may lead to inflation. In the Keynes-Kalecki paradigm, government intervention is needed to maintain the growth rate of the economy. With the accumulation of surplus, government has to intervene to plough the growing surplus back into circulation by stepping up its expenditure. But the ability of the government to pay back would depend on the mode of utilisation of funds or in effect the composition of the government expenditure and proper efficient utilisation of funds. In India, by any measure, government intervention has increased, whether it is measured in terms of tax to GDP ratio or expenditure to GDP ratio.

Kumar (1987) argued that a rising rate of inflation may favour the propertied but
instead, the class opposes it. There is something, which needs to be explained. In the eighties, demand in the economy did rise but what happened to the black part is not known. The size of the black economy compared to the white economy being significant, whatever happened to the black economy may be of importance for a better understanding of the economy. Moreover, as Kalecki (1971) has shown that it is the fiscal deficit which represents net injection of demand into the economy, and that is what matters for the determination of profit and income in the short period analysis. So, the issue seems to remain unresolved that why, despite a rise in fiscal deficit, the economy continued to face a lack of aggregate demand.

Though demand in the economy has gone up, the growth may not have been commensurate with it. The size of the fiscal deficit as argued by Kumar (1987) may not adequately capture the net injection of demand as interest payment is a transfer payment, which circulates within the economy contributing little to the expansion of the size of the market.

Nayyar (1978) among others, argue, that the expansion of government expenditure did lead to a recovery of growth in industrial output but the crisis associated with fiscal deficit and balance of payments and an associated rise in import, government expenditure-led-growth could not be sustained. Chakravarty (1979) discussed the possibility of an aggregate demand problem when investment lags behind saving and what is needed is to curtail the demand of the upper income class so that the surplus may be diverted to finance government expenditure. Patnaik (1982) refers to the problem of sensitivity of government expenditure to inflation. By any measure government intervention has not, in fact, contracted. It is the efficacy and efficiency of government expenditure, which seems to have gone down.

Rakshit (1989) argues that the literature on developing economies with its emphasis on supply side factors, as also evident in Indian planning strategies, the problem of effective demand has been neglected. Rakshit argues that the saving-investment puzzle in India can in fact be resolved along Keynesian lines. The steep rise in saving investment

The Macroeconomic Disequilibrium and the Black Economy
ratios has been sought to be explained partly in terms of a rise in unrecorded output to GDP ratio, and partly in terms of a rise in capital output ratio. He invokes the Keynesian relation of income determination in a simple aggregative framework to advance an explanation towards the effective problem,

\[ Y(t) = \frac{I(t)}{s(Y,t)} \]  

(1.3)

To argue that the growth rate of saving ratio exceeds that of investment, the stagnation, or even a fall in the growth rate of output may appear normal rather than paradoxical (Rakshit 1989). He opines, that if we accept the official data as accurate, then the observed changes in saving ratios might have been affected by the changes in the investment ratios and a rise in tax to GDP ratio over the years, the distribution of income has become more inequitable, with an increase in plethora of concessions to the savers. This, along with the Keynesian explanation, is argued to resolve the saving-investment puzzle.

Any analysis of saving and investment would remain incomplete without incorporating black economy into the analysis as the actual magnitudes will be different from what are recorded and the interaction between white and black needs to be studied afresh in the context of the black economy. There are other factors typically found in the under developed countries, Rakshit (1989) mentions, like increase in demand for non-reproducible assets, limited opportunities for investment, various impediments to transactions, may, in fact, have a direct or an indirect link with the black economy.

Rakshit has used the short run income determination model in a long-term framework to explain the saving investment puzzle. In the long run, marginal propensity to save is a function of productivity as this might change the pattern of income distribution. Moreover, he does not explain how saving can continue to be greater than investment during a long period.
1.6 Inflation and monetary policy

Maintenance of price stability and adequate provision of credit to assist growth have been the broad concerns of monetary policy in India. Controlling the growth of money supply is the best way to keep inflation under check, as argued by the monetarists, because the excess money supply growth over and above what the economy can absorb in the process of growth leads to price rise. Exogeneity of output growth and stability of money demand function are the two assumptions which underlie the principle of inflation targeting through exercise of control over the broad measure of money supply. But, the success of monetary targeting through control over reserve money, in turn, hinges on the stability of the money multiplier. The stability of the money demand function and the money multiplier are, therefore, crucial to the effective conduct of monetary policy.

The mainstream discussion (Rangarajan 1996; Mohanty and Mitra 1999) on monetary targeting, stability of money demand function in case of India, broadly speaking, has ignored the implications of the black economy.

Money is not only used for transactions related to the income generating activities of the white economy but to the entire gamut of transactions including transfers for white and the black economy. The income velocity of money circulation, V, which should refer to the totality of all transactions, black and white, is therefore, difficult to estimate. Shukla (1997) has shown that V is significantly higher if the transactions related to the black economy are taken into account.

The demand for money may also vary sector wise. The demand for money for transactions related to the tertiary sector activities is more compared to the other sectors as value added, say for financial transactions, is little compared to the total volume of transactions, e.g., real estate and stock market. Therefore, there is a nexus between the tertiary sector growth, the black economy and the demand for money. With the relatively higher growth of the tertiary sector, the stability of the demand for money is likely to be affected.

The economy can be compartmentalised into formal and informal sector. As shown

*The Macroeconomic Disequilibrium and the Black Economy*
by Das-Gupta and Nayyar (1989) that a good proportion of black liquidity is circulating in the informal sector. The transactions requirements of the black economy can suck out and inject in liquidity from the circulation of money in the white economy. This may have an impact on the behaviour of the money multiplier. Even the control of money supply becomes difficult as the informal sector can give loans to the formal sector to finance expenditure in the situations of credit rationing.

There are two studies (Acharya and Madhur 1983; Sundaram and Pandit 1984), which dealt with the implications of the black economy for the effective conduct of the monetary policy and recognition of such consequences. The study done by NIPFP (National Institute of Public Finance and Policy 1985) and Gupta (1992) also highlighted the importance of the black economy in monetary analysis of India. However, the issue of how the real and the monetary sector of the economy are woven together in the presence of the black economy, remains unattended.

1.7 Open economy themes

India's exports and imports as percentages of GDP have been low by international standards. Perhaps, this explains why the thrust of the debate on Indian macroeconomic issues has mostly been carried out in a closed economy framework. Open economy issues have assumed importance in the present context of the NEP in India.

Since the focus in this thesis is essentially macroeconomic in nature, such as the determination of aggregate output, growth rates, distribution and balance of payments, the literature on the open economy is reviewed in accordance with this focus. We can broadly classify the models as neo-classical, monetarist, two-gap, demand constrained and structuralist (Dutt 1995).

The principal focus of the open economy monetarist models developed at the IMF and the University of Chicago, was to explain balance of payments disequilibrium in terms of money market disequilibrium. Polak (1957) developed a model in tune with the monetarist approach, which later became the theoretical underpinning of the IMF.

*The Macroeconomic Disequilibrium and the Black Economy*
stabilization package.

1.7.1 The monetarist model

In the simplest version of the monetarist model, it is assumed that the country is small, fully employed under a regime of fixed exchange rate with perfect international mobility of goods and financial assets. The model is based on an explicit specification of the money supply process and a money demand function.

In this simple model, a rise in domestic credit extended by the banking authority will be completely offset by a fall in international reserve under the assumption that the price, output, income velocity of circulation, money multiplier and capital flows remain unchanged.

Simple monetarist models have been applied to India by Talele (1984) and Sohrabuddin (1985), which assume monetary equilibrium as in the Polak model. Sundararajan (1986) has tested the applicability of a more complex monetarist macroeconometric model for India. This modified monetarist model performed well for India.

Irrespective of the results, the underlying assumptions of the monetarist model, such as exogeneity of output level, stable money demand function and the stable money multiplier need to be subjected to close scrutiny in a developing economy like India. Exogeneity in the level of output rules out the possibility of aggregate demand playing any role in the determination of output even in the short run. The model does not distinguish between the different classes, say capitalists and the workers and so any analysis of income distribution remains outside the purview of the model. Sectoral complications like variation in the determination of output and price level with respect to the sectors, are ignored. The assumption that the money supply is controllable by the central bank is suspect as money supply is argued to be endogeneously determined (Moore 1988), particularly when public sector deficit used to be financed by the credit from the Reserve Bank of India (R.B.I.). The assumptions of a stable money demand function and money multiplier, as mentioned above, deserve attention in the context of the black economy. The illegal flows of foreign exchange across the border, the functioning of the parallel market,
mis-invoicing of trade transactions along with the restrictive assumptions of the monetarist model as mentioned above are all testimonies to the inapplicability of a monetarist model devoid of black economy in case of India.

1.7.2 The two-gap model

Some of the difficulties faced by the under developed countries (UDCs) in assessing the effects of foreign capital inflows on growth were analysed with the help of the 'two gap' model. On the basis of plausible assumptions about the desired rate of growth and its pattern, a gap between ex ante exports and imports and a parallel gap between ex ante investment and saving are estimated. In case the ex ante trade gap was found to be larger than the ex ante investment-saving gap, higher growth could be attained through higher inflow of foreign exchange, either borrowing or aid. Since investment can be financed by domestic saving and/or foreign inflows, investment would remain constrained by either saving or foreign exchange resources or both. The actual rate of growth \( g \) is given by

\[
g = \min \left[ g_s, g_r \right] \tag{1.4}
\]

Where \( g_s \) refers to the growth rate achievable by the economy if it is saving constrained for any given level of foreign exchange and \( g_r \) if it is constrained by foreign exchange.

The application of the two-gap model was restricted to show how the quantum of saving and foreign exchange could act as constraints on growth. We can identify two analytical issues in this literature. One, to find out the optimum magnitude of aid flows because of its macroeconomic implications and two, its effect on saving.

One of the early applications of two-gap model is that of Bergsman and Manne (1965), which analysed the foreign aid implications of different strategies of growth under the assumptions of domestic expenditure and import substitution. The model can also be used for finding out the growth implications of foreign aid. An analysis by Mammen (1984) under the assumption of foreign exchange constraint estimates the implications of foreign loans from IMF.

*The Macroeconomic Disequilibrium and the Black Economy*
Any amount of aid inflows may not be the optimum for the country because adjustments for several associated complications like inflation, debt service charges, foreign exchange requirements are required when payments have to be made in hard currencies and aid is tied by source, project and commodity (Bagchi 1970b; Bhagwati 1967; Chandra 1973). With respect to the other issue that aid might adversely affect domestic saving rate, the regression results are mixed. While Chandra (1973) and Bowles (1987) find the hypothesis that greater aid inflows depresses saving, Bhagwati and Srinivasan (1975) using total capital flows failed to show any such effects for the fifties and sixties. Weisskopf (1971) argues that the regression results do not take into account whether the level of domestic savings observed in each country reflected an ex-ante behavioural equation or simply an accounting ex-post relationship.

Though the two-gap model has been accepted widely, it has also been subject to criticism. Structural rigidity is a feature of all under developed countries, but excessive rigidities may not truly characterise the developing nations. The model assumes a given pattern of income distribution and spending, which fixes aggregate ratios despite differences in sectoral ratios and the possibility of technological change. Moreover, the inflexibilities may be policy induced - caused by the tariff structures and over valued exchange rate. As mentioned earlier, this model leaves no ground for aggregate demand to play any role in the determination of output. This model leaves space for another constraint to be introduced, the fiscal constraint (Bacha 1990) in which the level of foreign capital inflows limits the size of the government investment which can constrain the growth rate of the economy because of strong complementarity between public and private investment.

1.7.3 The three-gap model

Bacha (1990) argued that a third gap, a fiscal gap (or, fiscal constraint) can explain some of the problems faced by the highly indebted countries. With the inclusion of government, saving constraint level of investment is written as,

*The Macroeconomic Disequilibrium and the Black Economy*
\[ IS = S_p^* + (T - G) + S_f \]  

(1.5)

Where IS is the constrained level of investment, T is the total non-debt receipts of the government and G is the total expenditure. \( S_p^* \) is the potential level of saving, \( S_f \) is the foreign saving available through external transactions.

Fiscal surplus, in addition to private and foreign saving, contributes to the financing of investment. Taylor (1994) in a three-gap framework estimates the global resource requirements for raising output growth in the developing world. Taylor adopts a closure in a computable general equilibrium model. This is the counterpart of equation (1.1). As argued, equation (1.1) is one of the building blocks of the Fund stabilization package and is invoked to provide the rationale behind the ongoing stabilization process. It may be noted that equation (1.1) does not reveal causality and income distributional changes consequent to the stabilization programme. In equation (1.5), investment is argued to remain constrained by the resource requirement. Moreover, it does not take into account the existence of the black economy, which would cast doubt on the veracity of the private sector gap and the true trade balance as mentioned earlier. The three-gap model also, does not distinguish between the short and the long run.

1.7.4 The demand constrained model

In the demand-constrained models, demand plays an important role in the determination of output. Equilibrium level of output is determined in a simple Keynesian framework (without government) when output equals demand for goods without government as follows,

\[ Y = C(Y) + I + X(e) - e \cdot IM(Y,e) \]  

(1.6)

Where \( Y \) is nominal income, \( C(Y) \) is the consumption function, investment \( I \) is assumed to be given, \( X \) is the exports and \( IM \) is the imports. Exports depend on exchange rate \( (e) \) and imports depend on both income and exchange rate.

The equilibrium trade deficit in terms of domestic currency is given by,

\[ TD = e \cdot IM(Y,e) - X(e) \]  

(1.7)
Where $Y$ is determined by (1.6). Any level of trade deficit is permissible under the assumption of inflows of foreign capital and reserve changes.

Though the importance of the structural factors has been stressed in the Indian case, the role of demand has also found wide acceptance (Rakshit 1982). Demand factors are also at the centre of analysis of the Kaleckian approach adopted by Dutt (1984), Patnaik (1988) and Taylor (1983). Based on Kalecki, these models distinguish between the consumption patterns of capitalists and workers and hence, an analysis of the distribution of income with an explicit theory of price determination. Since the open economy Kaleckian models incorporate imports of intermediate goods and capital goods, some elements of the two-gap approach are recognised (Dutt 1995).

The existence of black economy complicates the picture as envisaged by the model. All the above models need to be reviewed in the light of our previous discussion why black economy matters for any meaningful macro analysis.

Fake invoicing of exports and imports render the official data grossly unreliable and so the true trade and current account balances are different from the reported ones. All the gaps or constraints are, in some way, related to the black economy. Capital flight through fake invoicing of exports and imports and smuggling in of goods contribute in a big way to the foreign exchange constraint. Saving cannot be a constraint on growth as investment finances itself through generation of incomes. But saving can be a constraint on growth depending on the form it takes. Black investment out of black saving in the majority of cases may not contribute to capital formation as its nature and impact may differ from the white investment. Because of capital flight, smuggling of goods and short-circuiting of remittances, the true flow of funds across the borders remain untraceable and hence unknown. The volume of money supply corresponding to the actual flow of funds would, therefore, be different. Even the actual money supply is different from what is reported because remittances are channelised through the hawala market but not through

---

5 As shown by Keynes and Kalecki, that in a demand determined system, investment generates equivalent level of saving through the working out of the multiplier.

The Macroeconomic Disequilibrium and the Black Economy
1.8 The Indian database

In the earlier sections, it has been repeatedly argued in the course of our discussion that we must incorporate the black economy into our analysis. Kumar (1993) argued why it is essential to include the black economy in any macroeconomic analysis of the Indian economy. Several studies, as mentioned earlier, indicate that the size of the black economy is substantial compared to the size of the white economy. We could still ignore it if the black economy affects all the major macro variables equally. There is, in fact, no reason why all the macro variables are likely to be affected by the same proportion so that we can capture the total economy by blowing it up by a suitable factor. Otherwise, the growth rates of the black and the white economy need to be the same. But, there is no ground for this justification either.

This is not to say that the data on black economy are firm. The issue is whether we can ignore it on the basis of a quantitative reason. There are many sectors in the white economy where the robustness of the data is questionable. This is due to three factors, one, the influence of the black economy itself, second, the method itself is suspect and third, the existence of a large unorganised sector. So, there is a great deal of uncertainty in the use of even white data.

The sanctity of the Indian database has always been subject to suspicion. Srinivasan (1996) in his critical analysis of the Indian database on major variables has mentioned that the existence of black economy is a worrisome aspect for the reliability of the data. Recently Rao, et al (1999) has scrutinised the macro economic database for the Indian economy. Discrepancy in macro economic variables can be traced because they are inter-related. The real sector behaviour would be reflected in the monetary variables and the investment saving gap of the economy would be similarly manifested in the external balance. They have observed gross discrepancies, large mismatches among various macro economic aggregates for India. They have attributed it to the

*The Macroeconomic Disequilibrium and the Black Economy*
...“independent nature of estimates for different macro economic aggregates based on separate methods and separate sources of data,”... (Rao, et al 1999)

They argue regarding mismatches that,

...“the specific source of which can not be ascertained.”

They make an attempt to develop a comprehensive and consistent set of data by integrating the national accounts statistics of the Central Statistical Organisation (CSO) with the balance of payments and monetary data of the Reserve Bank of India as well as with the fiscal data pertaining to the budget financing operations of the Ministry of Finance and Government of India. What is surprising is that they never allude to the black economy as one major factor to explain the inconsistencies.

The diagram below depicts the mismatch amongst the key macro variables in India with the help of the three-gap model.

It follows from the national income identity, that the gross domestic investment-saving gap of the economy as a whole should be ideally equal to the trade deficit (or, the current account deficit in case of gross national investment-saving gap).
Chart 1.2: The Correspondence between the Investment-Saving Gap and the Trade Deficit

Source: National Accounts Statistics, CSO.

The above diagram does not testify this. Though for the later part of the eighties, the two gaps validate the sign of the gaps. For seventies and nineties, even the signs do not match, let apart the magnitudes. The National Accounts Statistics (NAS) refers to these as the 'errors and omissions', or the difference between NAS estimates of total domestic savings plus net capital inflows from abroad and gross domestic capital formation.

This is despite the fact that the domestic saving is not adequately estimated, but a part of it (physical saving) is residually estimated. This casts doubt on the measurement of the gaps we deal with in our analysis.

1.9 The emerging issues

What is missing, therefore, is an explicit treatment of the black economy in an integrated macro framework. What follows from the preceding debate is, one, the data...
used for empirical analysis are often not the true values and two, failure to incorporate the existence of the black economy in an integrated framework may lead to an incomplete understanding of the economy, and hence, to an improper framing of policies. Formulation and implementation of official policies have, by and large, neglected the existence of the black economy, apart from occasional tangential remarks.

Since black incomes are property incomes, the generation of black incomes changes the distribution of income between the propertied and the non-propertied class. Consumption and investment decisions out of black and white behave differently. The black investments are mostly transfers, a part of which leaks out of the economy as capital flight, for example. Fake invoicing of exports and imports makes the reported exports and imports figures unreliable. Along with this, short-circuiting of remittances and smuggling of goods make parallel flow of funds across the border, which is different from the reported ones. As argued by Kumar (1999a) the sign of the current account balance might have been positive rather than negative, say for 1991. The net result of which might be the opposite compared to the reported one. So, the problem of the black economy is a structural one, deeply embedded into the sphere of economic activities.

This implies that the black economy affects the flow of funds within the economy and across the border and attainment of sectoral balance amongst the private sector, public sector and the external sector different from the one conventionally conceived of. The investment-saving balance of the government is affected as black economy depresses the collection of revenues and responsible for sub-optimal utilisation of government revenues. This, in turn, triggers off a chain of cumulative changes in fiscal policy. As currency is the vehicle for black transactions, the demand for money changes. As a part of black investment is directed towards informal sector saving, the interaction between the formal and the informal sector makes the money multiplier unstable and affects the effective conduct of monetary policy. Even a comprehensive analysis of the 'Hindu' rate of growth, structural demand problem and the BoP crises would require black economy to be integrated into the framework.

*The Macroeconomic Disequilibrium and the Black Economy*
1.10 Introducing the black economy

The studies on the black economy can be categorised into two types, theoretical and empirical, or a combination of these. However, the literature on black economy is overwhelmingly micro-economic. Allingham and Sandmo (1972) was a path breaking theoretical paper on tax evasion in a micro framework. It was followed by Srinivasan (1973), which was extended by Yitzhaki (1974). The problem of tax evasion was posed as an exercise within a conventional utility maximisation framework by a rational taxpayer.

From within the structure of theory, the theory of tax evasion has been criticised (Tanzi and Shome 1993). They argued that the models are dependent on assumptions about the attitude toward risk and on knowledge regarding the probability of detection. The degree of evasion depends on various parameters such as tax rate, the probability of being punished, prosecution efforts by the tax administration, and the penalty. It turns out to be a function of the taxpayer’s true income and the degree of risk aversion. Such an exercise in modelling ignores sociological and moral factors.

The first notable attempt to capture the macro impact of tax evasion in a Keynesian framework was by Peacock and Shaw (1982a). However, Schneider and Enste (2000) refer to the studies of Schneider, et al (1989) and Neck, et al (1989) as attempts to “integrate underground economies into macroeconomic models.” While the first paper is microeconomic in nature to study the behaviour of the households and firms in presence of illegal activities and the second is a Keynesian type macro-econometric model.

Peacock and Shaw (1982a) is a classic paper marked a clear departure from the earlier analysis of tax evasion carried out in a micro framework. They showed how tax evasion can have a positive impact on income, and how even the tax loss can be zero under suitable assumptions of marginal propensities to consume out of white and black income. This was followed by Ricketts (1984), Lai and Chang (1988), Zameck (1989) and Bhattacharyya (1994). Ricketts included monetary sector in his model. He argued in his IS-LM model, that since the same money is used for transactions in the black economy as
well, demand for money rises and with it, the interest rate with given volume of money supply. The rise in interest rate can counterbalance 'the expansionary consequences for expenditure of tax evasion.' Zameck (1989) extended Peacock and Shaw (1982a) by including indirect tax as another source of tax yield to examine the results of the earlier papers in his modified framework. Lai and Chang (1988) dealt with the problem of tax evasion in an aggregate demand – aggregate supply framework. They showed that an increase in tax evasion might improve total tax revenue, rather than lessen it. A more recent attempt is by Bhattacharyya (1994). He extended the Peacock and Shaw model in a dynamic framework with endogenous tax evaded income. He showed that tax evasion lowers the real sector multiplier, which provides justification for an analysis of fiscal policy in a multi-period framework. They argue that the impact of tax evasion on the level of income and the extent of tax loss depends on the difference between the marginal propensities to consume out of black and white income. Kumar (1999a) has suggested a short period model with an integrated black sector specific to the Indian context and capable of analysing various policy decisions.

The paper by Owoye and Bendardaf (1996) establishes linkage between corruption affecting the different sectors of the economy and its impact on growth within a multi-sector Keynesian model. Corruption can render the inputs less efficient and can effectively pull down the production function, consequently affecting the labour and the product markets negatively. The paper also shows that corruption in government spending can reduce the multiplier effects of expansionary fiscal policies. There are other ways corruption can affect the economy adversely. The paper, therefore, discusses various aspects of corruption (or, illegalities which lead to the generation of tax evaded incomes) concludes that corruption affects the supply side more adversely than the demand side.

Caballe and Panades (1997) have analysed the effects of different tax compliance policies (or, tax evasion in particular) on growth in an overlapping generation model. The authors argue that the earlier attempts to incorporate tax evasion in a macro model were deficient because “neither dynamics nor the maximising behaviour of consumers are made

*The Macroeconomic Disequilibrium and the Black Economy* 32
explicit”.

Schneider and Enste (2000) provide a review of the literature on the effects of the shadow economy on the ‘official economy’. Houston (1987) establishes linkage between the shadow economy and tax and monetary policy within a theoretical model of business cycle. Adam and Ginsburgh (1985) find a positive relationship between the growth of the shadow economy and the recorded (white) economy and under certain assumptions, an expansionary fiscal policy may provide an impetus for both formal and the informal economies.

The adverse impact of corruption on growth has also been discussed (Mauro 1995; Tanzi and Davoodi 1998). Mauro (1995) argued that corruption as measured by several subjective indices like the amount of red tape, political stability, etc., for a cross section of countries was found to adversely affect investment, and thereby growth on the basis empirical investigation. Tanzi and Davoodi (1998) argued how corruption in public investment may hurt growth by reducing the quality and productivity of public investment. Loayza (1996) argue on the basis of empirical evidence in the Latin American countries that the size of the shadow economy can affect growth negatively by reducing the production of public services and utilizing the services less efficiently.

1.10.1 The black economy in India

In India, allusion to black economy can, in fact, be traced back to Kaldor (1956), and the Wanchoo Committee Report (Government of India 1971), Cabra (1982) followed by NIPFP (1985) and Gupta (1992). We can identify two broad aspects of the debates on black economy. One was concerned with the empirical estimation of the size and sources of black income and wealth (Chopra 1982; Rangnekar 1982; Sandesara 1982; Cabra 1982, Gupta and Gupta 1982a and b, 1985; Acharya 1983; National Institute of Public Finance and Policy 1985; Gupta 1992; Bhattacharyya 1998). The other aspect deals with the economic effects of the black economy within a political economy framework. However, all authors agreed that the evil effects of the black economy are widespread and one major implication of tax evasion is the low tax elasticities and buoyancies of the Indian tax.

The Macroeconomic Disequilibrium and the Black Economy
system. It was Kumar (1993, 1999a and 1999b) who put black economy in the centre of policy analysis to highlight the poor performance of the policies over the years.

In the next section, we argue that a proper analysis of the economy should treat black economy as an integral part of the economy and so the model has to reflect it accordingly. The method of analysis should also be determined in accordance with the institutional realities of the macro economy and conceptually should be correct to the extent possible.

1.11 Methodological aspects

In the available macro literature on the black economy, several methodological deficiencies can be identified. For example, the underlying economics of the dynamic framework developed by Caballe and Panades (1997) is not defensible at least from two considerations, the investment function of both white and black investments are to be specified in terms of lags which is all the more difficult for black investments because of its heterogenous nature to understand the dynamics. The causality runs from expenditure (or investment) to income as expenditure determines the level of income (or saving) which needs to be analysed within a circular flow of income framework. The other underlying assumption of the model is that the macro behaviour is the sum of maximising behaviour of the individuals is not tenable. Tax evaded incomes are factor incomes, property incomes, which is not recognised. The model also ignores that the disposition of tax evaded incomes would be different from the white incomes because the nature and impact of black investments are different compared to that of white investments.

Apart from the critique of microeconomic framework of the tax evasion from within, there is a critique from the macro perspective as well. In an optimisation exercise, tax evasion changes the income of the economic agent who is a representative individual.

---

6 The famous ‘paradox of thrift’ is one good example. In presence of tax evasion and therefore a rise in incomes of the tax evaders may not lead to a rise income of the economy as a whole.

*The Macroeconomic Disequilibrium and the Black Economy*
For the economy as a whole, this leads to a change in aggregate income, and therefore, to aggregate demand. In micro literature, the assumption of holding income constant is therefore untenable. Tax evasion, with a change in distribution of income and differing expenditure decisions out of black and white income, triggers off further changes in the pattern of income generation in the economy. The macro outcome of tax evasion cannot, therefore, be obtained by summing up of the micro outcome of the representative individuals. What is true for an individual may not be true for the society as a whole when everybody in the society behaves in the same way. The impact of everybody behaving in a particular way is so overwhelming so that, in turn, it affects each and every individual in the society in a way contrary to what is obtained in a micro model studied in isolation. Tax evasion, therefore, is a macro phenomenon, and needs to be studied in a macro framework.

Theorisation in a micro framework denies that income flows in a circular way and expenditure is the causal determinant as it determines the size of the market and therefore, income. Therefore, causality runs from expenditure to income. This is what Keynes and Kalecki argued for. It is investment, which determines the level of saving and through the working out of the multiplier, finances itself as equivalent amount of saving is generated in the process. The double entry format of national income accounting featuring both expenditure and income enables us to deal with the economy in its totality.

Though the issue of tax evasion has been dealt with in a simple Keynesian macro framework in the above-mentioned models in the line of Peacock and Shaw (1982a), there remain serious methodological issues unsettled. Tax evasion affects the income of the government and therefore, its expenditure. But the government as an active agent is not dealt with in the said models.

In developing a model, we should clearly understand and specify the underlying causality among the variables, which are endogenously determined by the rest of the variables, which are given at the start of the short period. The bias in favour of opting for a Keynesian-Kaleckian framework is based on an understanding of the economy which tend to defy the underlying assumptions of a neo-classical model such as the functioning of the
economy at full employment level, the role of capital markets and the role of money (Bougrine 2000). In the simple Keynesian model of income determination, consumption expenditure is treated to be function of current period income. But consumption expenditure along with autonomous investment expenditure determines the current period income itself. So, the Keynesian causality from expenditure to income remains unclear as this leads to circularity of reasoning in absence of a clearly specified time frame. Consumption expenditure, which is a determinant of income is taken to the left hand side and subtracted from income to show saving-investment balance. In the process, the causality gets mixed up. The same argument is applicable to the IS - LM model. In the three-gap model, the causality is not at all evident and any one of the gaps, can be argued to be determined by the other two. The three-gap model can be derived from the national income identity, which holds good in the ex-post sense. Without any specific functional form, causality is imposed from outside. Though investment determines saving, the two are clubbed together to find out the gap of the private sector. This also raises the question whether the macro variables behave in a sequential manner or contemporaneously. The argument in favour of the former is the simplest one, expenditure (investment) determines the level of income (saving).

The other important aspect of modelling is to distinguish between short and the long run. Though Bhattacharyya (1994) distinguished between a static and a dynamic model, the treatment remains far from satisfactory. In a short period we start with certain variables as given, as they are the functions of the past values of other variables. In the long run, many crucial economic factors, which are frozen in the short run, become variables in the long run, like technology and its impact on productivity, income distribution and its effect on consumption. Therefore, the imperatives of the short run and the long rate could be different. Unless we include the properly specified lagged investment function and technology, we do injustice to the long run analysis. For example, in the derivation of a simple Keynesian multiplier, the entire long run process collapses into a moment. This happens when consumption is regarded as the function of current

*The Macroeconomic Disequilibrium and the Black Economy*
period income. Though several time periods are involved and the working out of the multiplier takes an infinite time period, the full value of the multiplier is realised instantaneously and for consumption and investment, no time period is mentioned. In effect, we get a long period multiplier from a short period model as developed by Keynes. In Kalecki, historical time is used in sharp contrast with the use of logical time in the neoclassical analysis. The use of historical analysis means that history matters in the determination of the long-run (Laramie and Mair 2000).

Once we argue our model to be a short run one, we resort to comparative static analysis for understanding the macro behaviour. Hicks (1965) suggested four methods for studying the dynamics. Though there is a progression in the methods from comparative static to steady state, Hicks argues that the steady state analysis is like the static models. In this study, we will confine ourselves to the more tractable short run comparative static analysis. Comparative static method, Hicks (1965) argues, is a substitute for doing dynamics.

Since black incomes are property incomes, incorporation of black income in a model requires an explicit distinction between property and non-property incomes. Since the models in the tradition of Keynes, do not distinguish between two categories of incomes, profit, the property income and wages, the non-property income, we opt for a Kaleckian framework.

Kalecki (1971) has suggested a framework, which overcomes the drawbacks as mentioned above. Kalecki showed that post tax profit \( (P - Tp) \) may be written as follows,

\[
(P_p - T_p) = (G - T_p) + I_p + C_c - S_w + (X - IM)
\]

Where \( (G - T_p) \) is the public sector deficit, \( I_p \) and \( C_c \) are the private sector investment and capitalist's consumption, \( (X - IM) \) is the trade balance and \( S_w \) is the worker's saving respectively. All the right hand side elements together (ignoring the worker's saving, which is small and therefore can be assumed away in the first approximation) determine the post tax profit. Since at the beginning of the short period, all these elements are given, the causality runs from right to the left. This was later modified
by Kumar (1988) to explicitly bring out the economics of various fiscal instruments and to study the impact of black economy in a fiscal policy regime. Equation (1.8) can be written as follows,

\[(P_p + I_n - T_p) = (G + I_n - R + B) + I_p + C_c + (X - IM)\]  

(1.9)

Where In is the interest payment, B is net borrowing by the government, R is the revenue receipts, \((G + I_n - R + B)\) is the fiscal deficit we refer to. This model does not explicitly incorporate the black economy. The black economy affects all the major macro variables. Kumar (1993) is an attempt to include the black economy explicitly in the model.

Since black incomes are property incomes, the gross profit may be split into white as well as black profit. Corresponding to black profit, on the right hand side we would have black investment \((I_b)\) as well as black consumption \((C_b)\). The model as suggested is as follows,

\[(P_w - T_p) + P_l + I_n = I_w + I_b + C_w + C_b + (BudDef + B) + (X - IM)\]  

(1.10)

The fiscal deficit is financed by money financing (akin to the earlier concept of budget deficit \((BudDef)\)). The causality can still be assumed to be from right to left. The model above does not specify the functional forms of consumption and investment required for macro analysis.

1.12 Chapter scheme

The scheme of the thesis is as follows. To begin with, we study the macro economy of India with the available data. Since fiscal deficit is argued to be the kingpin of the stabilization package, we deal with the theoretical basis of targeting fiscal deficit in order to restore balance in the external account and check the inflationary tendencies in the economy in Chapter 2. We survey the literature to ascertain the underlying transmission mechanism between fiscal deficit and trade account imbalance and the basis of correspondence between the two as has been envisaged in the literature. We also consider
the notion of fiscal deficit and its limitations and what should be the actual measure for ascertaining its macro impact. We try to argue why leaving out black economy gives us a wrong and incomplete picture of the economy as the true magnitudes of the private sector investment-savings balance and the trade gap are all different than the reported ones.

The monetary aspects of the economy are considered in the Chapter 3. Black transactions are argued to be transacted mainly in currency, which affects the velocity of circulation. The actual velocity of circulation is very different from what we compute and deal with, in our macro analysis. We make an attempt to highlight the necessity of taking into consideration the black economy so as to understand the economy better. We argue why there is a need to incorporate the black economy to get a true picture of the monetary aspects of the economy.

In Chapter 4, we introduce the concept of black economy and black incomes as used in our macroeconomic analysis. We briefly survey the existing literature on black economy and introduce a model to study the likely consequences of the black economy in a macro framework. This is in sharp contrast with the tendency in the existing literature to be micro based. In Chapter 5, we study the interaction between the real sector and the monetary sector in presence of the black economy in a closed economy framework and deliberate on the likely implications for the functioning of the economy. In order to capture the macro dynamics, equation (1.10) needs to be expanded by formulating the behavioural functions of investment and consumption. In particular, the tax evasion multiplier is derived to find out the effect of the black economy on the white economy. We make an attempt to explain the structural demand problem in the Indian economy, the likely implications for fiscal and monetary policy. In the next chapter, Chapter 6, we make the economy open and study the impact and importance of black economy for the open economy. We also dilate on the macroeconomic effects of the various channels of black investment and black consumption on output and profit and on money supply and money demand. We also try to shed light on how the stabilization programme is likely to function in the presence of the black economy. In Chapter 7, we incorporate the behavioural
functions in the complete model to study the economy in its totality and draw conclusions and juxtapose it with the debates on the Indian economy. The Chapter ends with a reformulation of the saving-investment balance of the economy integrating the various elements of the black economy.