This essay has attempted to critically evaluate the position that Conservative economics or sound finance takes on the impact of debt on macro variables including the growth in income. Proponents of sound finance have argued that an increase in debt leads to sale of new bonds and withdrawal of liquidity in the money market which reduces credit availability for private investors. They reduce their proposed investment and this adversely affects the growth prospects and imposes a burden on the economy. The belief is that private investment is efficient and growth enhancing where as public expenditure is not. It would also have other consequences on macroeconomic variables such as rise in interest rates, inflation, which are precursors of a fiscal crisis. A rise in interest rates would make investment unprofitable and this might also adversely impact on growth.

In the initial writings on growth, the role of government was not very clearly enunciated and the neoclassical growth models did not have any role for public intervention to raise the growth rate.\(^1\) It is only in more recent contributions that growth theorists have looked afresh at the public sector. Modigliani (1961) included government expenditures in an aggregate production function model of growth but saw such expenditures as bidding away goods from the private sector.

\(^1\) Harrod (1939) though did mention public projects as a means of maintaining growth when there is a deviation between actual growth and warranted growth and also in the context of the trade cycle.
and thereby adversely affecting their productivity. Arrow and Kurz (1970) on the other hand introduced the government into the production function with positive spill-over effects and since then it has achieved a fair degree of acceptability in the endogenous growth literature. This was the subject matter of our discussion in Chapter Four of this essay where we reviewed the range of endogenous growth models – both with balanced budgets and without. Barro (1990) working under balanced budget regimes used public expenditures on services in the production function to study the impact on growth.

On the other hand, there are numerous models that do not operate under a balanced budget regime -- Pérez (2002), Greiner & Semmler (2000) and Greiner, Semmeler & Gong (1997), while some examined the desirability of fixed or flexible deficits – Brauninger (2002), Ewjik & Klundert (1993). Since public goods are characterised by non-rivalry and non-excludability, they could be subject to congestion and Piras (2004) second best results when there is congestion. While most models assume a fixed labour supply function, Turnovsky (1998a,b) with a flexible labour supply function found that fiscal policy becomes ineffective and this was in line the neo-classical outcome. Some empirical models were also discussed and these provide a mixed outcome Alesina & Perotti (1995), Barro (1991a, b), Fölster & Henrekson (1999), Heylen and Everaert (2000), Fu, Taylor & Yücel (2003), Kormendi & Meguire (1985), Töglhofer & Zagler (2004) among others. This was the subject matter of discussion in Chapter Four of this essay.
The crucial missing determinant for growth that mainstream literature was shy to talk about was distribution. The neo-Ricardian as well as the post-Keynesian literature however took distribution as a starting point and in its general formulation found that growth depended only on the saving behaviour of the asset owning class – the capitalists (Kaldor 1956, Pasinetti 1962). In the initial Cambridge model there was no role for government but eventually when it did find its way into the Cambridge growth model, the Pasinetti process was found to robust to these alterations (Dalziel 1991, Denicolo & Matteuzzi 1990, Steedman 1972, You & Dutt 1996). This was the subject matter of our discussion in Chapter Five.

These growth processes were representative of full employment situations which did not match real world experience of developed as well as less-developed economies where fairly large excess capacities exist both in industrial capacity as well as the labour market (Patnaik 1997). So the question that we posed in Chapter Six was – if government were to increase debt to finance capital expenditure and its past debt obligations (interest payments) will the economy ever stabilise its level of debt and also achieve steady state rate of growth. We incorporated the essence of Arrow & Kurz (1970) and Romer (1990) to the extent that public expenditures contributed to enhancing the productivity of private capital – it has spill over effects and its absence can be growth constraining. Instead of an endogenous growth formulation with increasing returns to scale we have worked under fixed factor proportions schema. The stock of public capital has a dual effect

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2. We have referred to this earlier in this essay as the Cambridge growth model.
direct and indirect – the direct effect is in terms of intermediate inputs and the indirect effect is by way of complimentary services to productive capital.

Even from a political economy perspective, it is easy to see that the capitalists who are part of the dominant coalition controlling the state decide on the kind of public investments that are likely to increase the profitability of their investment. The public projects would themselves not be profitable enough for the capitalists to undertake but if someone else (read state) does it then the profits on own investment increases. Irrigation, roads, electric power, basic education and scientific research, are just some of the examples which are by themselves never profitable for the private sector to be involved in but aids in generation of higher profits. Depending on their strength, they could keep the entire profit in the private domain or be compelled to share with the state for re-distribution with the other classes.

In our exposition of a distribution-based growth model with “under-consumption” and increasing risk, we found that under Domar (1944) sustainability conditions the economy achieves a stable level of debt and steady state level of growth. This is despite the fact that public capital expenditure and past debt obligations are financed entirely by borrowing. In its general solution there are two possible equilibria and we find that debt and growth are inversely related. However, if we invoke the principle of increasing risk, then it is possible to have a unique level of debt and corresponding to which there is a unique steady state growth rate.

3 On both these counts our results are similar to Brauninger (2002) whose model we have discussed in Chapter Four Though results are seemingly similar, the approaches are very different.
These conclusions are distinct from what Solow and the New growth theorists have been arguing where growth faces an upper bound of the natural rate of population growth and technological expansion. But as we have discussed earlier, supply constraint of labour has historically never been a limiting factor to growth in the industrial world [Patnaik 1997:34]. The industrialised economies have drawn on the vast pool of unemployed labour in other sectors of their own economy or from a world market of developing economies to cater to the demand for labour in the growing sectors. So the limits to growth lie not at the rate of population growth but elsewhere. In addition to examining technological barriers what needs to be understood is that in capitalist economies there might be realisation problems arising out of class conflict in society which pose constraints to growth.

It is the autonomous component of demand that helps overcome the realisation problem and therefore the role of the state becomes paramount as the driver of autonomous demand (Patnaik 1984:138). Investment can be conceived as being determined by two kinds of stimuli – endogenous, exogenous. By endogenous here we mean macro variables from within the system that influence investment decisions – for example, expectations of growth or profits in future would be influenced by previous periods growth outcomes. If due to lower growth investors decide to cut investment spending, a downturn in sentiments, it would further

4. As the reader would notice, we have also not engaged with the debate on the limits to growth in the context of an "upper" bound of natural resource availability as it would take us into a different field of enquiry.

5. The realization problem could be measured by the difference between full capacity output and actual output (which is already adjusted to the effective demand).
accentuate the realisation problem, i.e., actual demand would further deviate from full capacity output. This could spiral into an economic crisis and only an exogenous stimuli could revert this trend. The exogenous stimuli could be in the form of an increase in export demand due to internal factors (or more likely) the state increasing its public expenditure. This would drive up the demand of the products from the private sector and revive industry and investment sentiments. If the private agents did not reduce their investment demand irrespective of their demand expectations, then there would never be a downturn in the economy and there would be no need for state intervention. If there is a shift in the share of the output in favour of the capitalists, away from the workers and the state, then under oligopolistic conditions there is likely to be a decline in aggregate demand (Patnaik 1984: 152). The state will have to intervene in demand management but probably have to finance it with borrowings because it would not be able to bid away resources from the dominant classes. This was part of our discussion in Chapters Two.

In Chapter One we began with a description of what differentiates growth and development and examine the notion of Functional Finance (Lerner 1943, 1961), its critiques from Bowen et al (1961), Buchanan & Wagner (1957), Modigliani (1961) and Meade (1958,1959). This leads us into the discussion on Ricardian Equivalence triggered by Barro (1974) on whether debt constitutes wealth in the economy. We had an opportunity to engage with the debate in macroeconomics on debt and income, interest rates, prices etc. This is done from the perspective of different schools – the Keynesian, neo-classical, rational expectations and the post-
Keynesian, structuralist school. The related issue of Sustainability is examined in the following chapter (Three). The Domar (1944) sustainability conditions for steady state growth and debt was established which led the Indian debate on debt sustainability and fiscal management – Rangarajan et al (1994), Mohanty (1997) and Patnaik (1986).

We now turn our attention to an important role of debt that we have not yet touched upon in this essay which relates to debt instruments and its implications for the financial market.

Debt and Financial Markets
Historically, we are aware that debt as an instrument was justified not so much by principles of public finance but contingencies of social demands and emergencies, especially war. The rise in debt of nations across Europe and America was due to various domestic and foreign wars that the state was engaged in. The downside of the large debt was that there were stringent indirect taxes to mobilise social surplus.

We know from the public economics literature that indirect taxation creates serious equity issues as it did in England. In 1815, when income tax was repealed in England, over 75% of tax revenues came from customs and excise duties levied on necessaries [Hansen 1969: 153, quotes the Cowlyn Committee Report on National Debt and Taxation 1927:236]. The rich who held the debt bonds increased the savings of the nation while the taxes were imposed on all. Hansen believes that if
the borrowing is done from small savers, an increase in debt will not lead to inequity in asset ownership. However, if the rich corner the debt bonds, then the poor end up paying the tax to finance the state's interest burden and Hansen suggests that this would be undesirable.

A similar exercise in cornering the social surplus by the state was undertaken in most societies attempting a rapid rate of growth, including the erstwhile Soviet Union, South Korea, and India (to a certain extent) in more recent times, etc., although the institutional arrangements were different from Victorian England. Wages were depressed and consumption curtailed in order to release resources for investment. When the government had to finance capital expenditures which were bulky in nature, taxation was not a feasible way of financing it and governments were forced to rely on debt financing. Compulsions of governments' need to respond to depression and unemployment in later years were other causes of increasing debt.

Votaries of sound finance espoused that parallel to the issuance of debt, a sinking fund needed to be established to ensure that the bonds could be redeemed in due course. Historically, however, only the USA managed it for a while following the War of 1812. For the rest of the world this was not feasible especially across Europe. Hansen (1969) believes that an increase in public investment financed by public debt instead of reducing private capital formation actually provides grounds for higher private investment due to the increase in supply of safe financial instruments – government bonds which stabilised the capital markets. The increase
in supply of safe government bonds provided individuals and financial institutions a diverse portfolio of risk and thereby increased the market access of entrepreneurs. This led to higher private investment funded by stock market sale of equity in the USA (Hansen 1969: 160).  

In fact, the growth of the capital market and the corporate sector based on stock financing as opposed to loan or bond financing was a contribution of public debt. The availability of reliable and secure financial assets allowed financial investors to hedge risks posed by holding of stocks of companies, returns from which were uncertain (Hansen 1969: 155). The expansion of the capital market spurred entrepreneurship and economic growth. The industrial expansion in late 19th century England and the establishment of a secure asset market is attributed to the existence of large public debt.

This argument, though similar in its conclusion, is different in its mechanism of operation to what Indian commentators have argued (Chandrashekhar 1988, Patnaik 1972). In nascent industrialising economies, where the industrial base is low, public investment provides enabling infrastructure for private investment to prosper. In addition, private investors may not have the capability to raise finances from the financial markets for large capital investment which the state could easily overcome by issue of bonds. The public-private investment link here is suggested from the physical aspects of investment and asset creation rather than financial

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6. Harris (1949) points out that public debt in the USA rose by $209 billion but gross income in these years grew by $450 billion which may not have occurred in the absence of debt financed intervention.
choices that bonds provide in the financial asset market to investors to hedge for risk.

Our effort has been to demonstrate that in an economy with involuntarily unemployed resources, the state plays a crucial role in determining the rate of growth. In absence of resource mobilisation efforts through taxes, and in order to avoid a legitimisation crisis, it may be compelled to undertake expenditure much larger than its tax revenues. This could be done through deficit financing or by raising debt. Deficit financing is sometimes frowned upon by monetary authorities or there may be constitutional rules as in India which limits the central bank’s ability to extend credit to the government. So the onus of financing autonomous government expenditure falls on debt financing. In the presence of unutilised capacity this is non-inflationary, and contrary to expectations of the conservative economics, it is possible to have steady state growth and a stable debt even when public investment is fully financed by raising debt. In the presence of risk perceptions by private investors, the economy achieves a unique level of growth and debt.

The policy implications here are very clear. The “panic” perception that multilateral agencies seek to promote vis-à-vis debts and deficits is not necessarily well-grounded either in terms of fiscal management or by way of achieving stable growth when there are persistent slacks in the economy.