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Public debt and economic growth in India: A reassessment

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ABSTRACT

This paper examines the effect of public debt on economic growth in India between 1980 and 2011. Using the autoregressive distributed lag ARDL model, the paper traces a long-run equilibrium relationship between public debt and economic growth. The error correction model (ECM) results show that central government debt, total factor productivity (TFP) growth, and debt-services are affecting the economic growth in the short-run, and that the results are consistent with our *a priori* expectation. It is recommended that the government should follow the objective of inter-generational equity in fiscal management over the long term in order to stabilize debt-GDP ratio, particularly, after the global financial crisis.

1. Introduction

The continuous rise in government spending widens the gap of fiscal deficit, and thereby forces the government to depend on public debt from both internal and external sources. Though the Indian government tries hard to reduce the fiscal deficit by promoting an inflow of foreign investment and disinvestment, sustaining a lower fiscal deficit becomes challenging, mainly due to high subsidies on food and fertilizer. The economic consequences of high fiscal deficits result in heavy public debt, which is likely to affect the economic growth of the nation.

Public debt in India can be classified into external and internal debt. The internal public debt of India has increased in terms of gross domestic product (GDP) from 36.8% in 1960 to 41.2% in 1970, and from 41.6% in 1980 to 55.3% in 1990. Although it registered a declining trend from 1995 to 1998–1999, it rose further to 53.4% in 1999, and even more in 2010 at 66%. However, if other liabilities are taken into consideration along with the internal debt, the figures are much higher, both in pre-reform and post-reform periods. The trends in India's external debt also increased from USD 261 billion at the end of March 2010 to USD 305.9 billion at the end of March 2011. The increase can be directly linked to the higher external commercial borrowing and short-term flows. The share of commercial borrowing in total external debt increased from 19.7 % by the end of March 2005 to 28.9% by the end of March 2011. The long-term external debt accounted for 78.8% of the total external debt and the remaining 21.2% was short-term debt.

It can be seen from these trends that the total debt (sum of debt and other liabilities) of the central government has increased significantly. The central government debt amounted to 45.3% of GDP during 1980–1981, and increased to 69.7% during the fiscal year of 1991–1992. Similarly, the combined debt of central and state governments was 52.4% of GDP in 1980–1981, but it increased to 80.1% in 1991–1992. The average central government debt was 58.2% of GDP during the pre-reform period from 1980 to 1991 (Handbook of Statistics on Indian Economy, 2012).

The public debt scenario of the Indian government in the post-reform period was worse than in the pre-reform period. Post-reform, the central government debt was 68.3% of GDP in 1992–1993, increasing to 72.3% in 2002–2003, and then

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slightly declining in consecutive years till 2010–2011 (Handbook of Statistics on Indian Economy, 2012). However, it remains an alarming fact that the average public debt of the central government during the post-reform period was 65%, which is higher than the debt of the pre-reform period.

Further, the combined central and state governments' average debt (public debt plus other liabilities) during the post-reform period was 79% (Handbook of Statistics on Indian Economy, 2012). Although there has been marked improvement in repaying external debt (principal and interest payment) by the central government, particularly after 2000, the internal debt and other liabilities, such as the National Small Saving Fund (NSSF), the Provident fund, and the Deposit and Reserve funds are on the rise, particularly after the global financial meltdown in 2007–2008.

The present study examines the impact of public debt on economic growth in India by addressing key macroeconomics variables.

In the process, it differs from existing literature in three novel ways. Firstly, unlike other studies (Kannan and Singh, 2007; Ghosh, 2006; Rangarajan and Srivastava, 2005; Singh, 1999), this study takes additional key macroeconomics indicators, such as internal and external debt, debt service payment, total factor productivity and export into the growth equation, and examines the relationship between debt and economic growth in an extended growth accounting framework for India. Secondly, this study uses more sophisticated statistical methodology to explore both short-run and long-run effects of public debt on economic growth using the autoregressive distributed lag (ARDL) model (Pesaran et al., 2001). Thirdly, most of the previous studies are almost a decade old. Therefore, it has become imperative to revisit the public debt–economic growth linkage when the Indian economy is facing serious problems for maintaining GDP even 6% of growth. Most of the credit-rating agencies have downgraded India's sovereign rating, which has created considerable fiscal pressure on the current government.

The remainder of this paper is organized as follows: Section 2 reviews the literature; Section 3 details the methodology in terms of the analytical framework and data sources; Section 4 presents the results; and Section 5 discusses the conclusions and implications for policy.

2. Review of literature

Classical economists, such as Smith (1776, p. 878), Ricardo (1951, p. 247), and Mill (1845, p. 230) viewed the economic effect of public debt on a nation as destructive. The Ricardian Equivalence theory noted that the financing of public expenditure via taxation and borrowing is equal. Its argument is that the repayment of debt will take place through future taxation, which means individuals will increase their savings by buying the bonds that have been issued by the government. So, according to Ricardo there is neutral effect of public debt on economic growth. Whereas, in the Investment Saving–Liquidity Preference Money Supply (IS–LM) model, Keynesian economists pointed out that an increase in government debt induced by deficit-financed fiscal policy will increase the level of income, the transaction demand for money and prices. This will cause the rate of interest on bonds to rise with a fixed money supply. According to Keynesian theory, if the private sector perceives government securities as net wealth, the deficit will further amplify private consumption expenditures, transaction demand, interest rates, and prices. The effects of expansionary fiscal policy on capital formation may be strengthened through the accelerator effects and thereby raise economic growth. On the other hand, the monetarists have argued that the macroeconomic effect of debt financed is crowding out the private investment through increasing levels of interest rates. Hence, public debt will affect economic growth in a negative manner. Further, the debt overhang theory suggested that if future debt gets larger than the country's repayment ability, the expected debt-service costs will discourage further domestic and foreign investment, and thus harm economic growth.

Several studies have found an inverse linear relationship between total debt and economic growth both across countries and at a single country-level analysis. The empirical work by Mitchell (1988), Baro (1989, p. 238), and Camen and Rogoff (2011) used UK data to show that public debt has a significant impact on economic growth. According to a study by Forslund et al. (2011), results indicate a negative correlation between domestic debt and inflation in developing countries. Ismihan and Ozkan (2012) found that public debt can harm countries when the financial movement is underdeveloped. Westphal-Checherita and Rother (2012) argued from their analysis of twelve European countries that there exists a non-linear impact of public debt on economic growth, which was mainly due to private savings, public investment and total factor productivity. As viewed by Schclarek (2004), 59 developing countries from 1970 to 2002 were examined and found that a significant inverse relationship existed between external debt and economic growth.

Similarly, Kumar and Woo (2010) came to the conclusion from their empirical study of 38 advanced and emerging economies between 1970 and 2007 that there was an inverse relationship on initial debt and economic growth across. Qureshi and Ali (2010) found that the high level of public debt had negatively affected the economy of Pakistan between 1981 and 2008. Some of the important studies, which particularly address the issues in Indian context, are as follows: Singh (1999) has examined the long run relationship between domestic debt and economic growth using the Johansen cointegration technique. His study supported the hypothesis of Ricardian equivalence in India. Kannan and Singh (2007) showed that public debt and a high level of fiscal deficit had an adverse effect on interest rates, output, inflation and the trade balance in the long run in India. Similarly, Rangarajan and Srivastava (2005) argued that a large fiscal deficit and interest payments to GDP adversely affected economic growth. They also pointed out that public debt negatively affected the growth of the Indian economy.