CHAPTER 5
SUMMARY, POLICY IMPLICATION AND CONCLUSION

5.1 Summary.

This study investigates the twin deficit relationship in a developing open economy like India. The study strives to demonstrate that Keynesian proposition of a long run equilibrium relationship exists between the twin deficits, and there occurs bi-direction causality among the variables at 10 percent level of significance which gives us the evidence of Keynesian theory is proved in India economy. This study reveals that the twin deficit have a positive long run association between the budget deficit and current account deficit using the Johansen multivariate co-integration approach. The result confirms the existence of a long run association between the two deficits, thus supporting the Mundell-Fleming theory and refuting the Ricardian Equivalence Hypothesis (REH).

The term “twin deficit” was initially invented to describe the co-movement between the current account deficit and the budget deficit in the United States (Chang and Hsu, 2009). Afterwards, researchers began applying it to other countries. Ever since, it has become an important area for researchers to examine the causal link between the two deficits and the direction of causality. The coincident of budget deficit and the current account deficits for most countries most especially in the United States (US) during the mid-1980s led to the characterization of this phenomenon as the “twin deficits” issue as both economic theory and empirical observation suggested a link between the two deficits.

The main thrust behind current account deficit is caused by governmental budget deficit and this phenomenon is known as twin deficit the most appropriate way to solve out this problem is to maintain balance between internal and external deficit which will minimize the governmental budget deficit. In other words, the direction of causality flows from the budget deficit to current account deficit.

Two major theories used to explain the causal link between budget deficit and current account deficits are the Mundell-Fleming Model and the Ricardian Equivalence Hypothesis (REH). The traditional Keynesians use the Mundell-Fleming model to explain the twin deficit relationship by

arguing that when budget deficit increases, the current account balance will deteriorate as the increases in the budget deficits will lead to increase real exchange rate, domestic interest rates and leads capital inflows and will deteriorate budget deficit.

Some group of researchers used the 0Ricardian Equivalence Hypothesis (REH) to argue that no relationship exists between the two deficits as budget deficits results mainly from tax cuts which tend to reduce public revenue and public savings. They suggest that individuals will recognize these tax cuts as incurring future tax liabilities and thus will increase savings rather than consumption and will not have any effect on the current account balance.

In examining the causal link between the two deficits for India, the study carry out the Augmented Dickey Fuller unit root test (ADF) and all the variables were found to be stationary after first differencing at 1 percent level of significance. Then applying the Johansen co-integration method, the study followed the max statistics and maximum Eigen value which stated that there exists at most one co-integrating equation in the model, which means there is a long run association between the twin deficits as argued by the conventional twin deficit hypothesis. To establish the direction of association between the two deficits multivariate Granger causality test was employed. To estimate the short run causality among the variables Vector Error Correction Model (VECM) was employed between the twin deficits and their interacting variables (such as inflation, interest rate and exchange rate) for the period (1990 to 2013). To predict the movements and behavior of two deficit impulse response function was used to traces the impact of one standard deviation shock to one innovation on its current and future value of endogenous variables.

The Granger causality test was also employed to determine the direction of association between the two deficits as this is the main objective of the study. This was done by using the Wald/exogenueity test for granger causality between the twin deficits and their interacting variables (such as inflation, interest rate and exchange rate) for the period 1990 to 2013. The Granger causality test showed a bi-directional causality flowing from the current account deficits to the budget deficits in Indian between 1990 and 2013. The result of the Wald Test showed that the causality between budget deficit and current account does exist at 10 percent level of significance; looking on the other hand current account deficit also leads budget deficit which is significant at 5 percent level due to the growing dependence of India for oil imports(considering for almost one-third of the country’s total imports) which leads the trade balance of country in

deficit due to oil prices, which provides us the strong proof for reverse causation. This makes us to understand the role of oil prices as an associating factor between the two deficits, given us the clear evidence of co-movement along with reverse causation of two deficits due to the oil prices and is also known as a factor behind upward shift of both internal and external deficits of the country. This helps us to complete the chain of association of the twin deficit hypothesis for India, as the direction of association is unambiguously seen to run from oil prices to the external deficit to the budget deficit. So it could be possible that the widening of gap in the budget deficit due to the oil price shocks appears akin to current account deficit in the case of India, but rather the two deficits are closely related to each other. Hence, while formulating any governmental policy, the government has to take into account how the policy changes will affect budget deficit (BD) and thereby, current account deficit (CAD). The widening of budget deficit may lead expansion in money supply which will lead to a rise in inflation rate and deteriorating the export performance as a result of fall in the competitiveness. Similarly a widening budget deficit will lead to increase in imports which will cause a rise in current account deficit.

5.2 Policy Implication

Overall, the present study confirms that the budget deficit is not a fully controlled policy (exogenous) variable for India, policy makers cannot ignore the budgetary implications of exogenous changes in the current account deficit, which is proved to operate through global oil prices. Because we find it is an external deficit that play a vital role in the worsening of governmental budget deficit. This calls for sustainable measures to restrain the external deficit; particularly leads the expected weakening of global income and demand, so we have to take efficient measures to improve imports as export encouraging policies may not be the only way to forward. The government policy are also protecting the domestic consumers of oil (and closely related products) from the fluctuations in the international prices over an extended period of time which leads a hike in oil prices and bringing the link the two deficits over time and aggravates both the budget deficit and current account deficit as found in our analysis. The results of worsening of budget deficit due to the external deficit bears some importance for the present policy on oil price pass-through. According to the results the adjustment in domestic oil price to the global world, leads a positive impact on fiscal deficit not only directly through reduction in subsidies, but indirectly as well, due to the improvements in the external account if a larger pass-

through leads to a reduction in the oil deficit over time. This would in turn develop the scope for the much-needed infrastructure spending; the important is government investment in the supply of infrastructure is especially important in the present condition with declining growth and stubborn (supply side) inflationary pressures, along with prolonged weak global demand and withholding private sector investments in a rising interest rate scenario. Beside, as oil subsidies have been found to provoke the twin deficit problem for India, stable oil price pass-through would also help in delinking the two deficits association to an extent and reducing problems related to the twin deficit phenomenon.

The relationship between the twin deficits has important policy implications for the economy. There is a serious threat and challenges to the economy of India but at the same time there are many opportunities. India is bestowed with abundant natural resources which can help to attract foreign capital. As in production of many items imported raw material is used so cost of production escalates results in reduction of competitiveness in exports. So deprecation brings high cost of production and ultimately inflation. Inflation leads to higher budget deficit so trade and budget deficit are twin which reinforces each other. It is vicious circles which need to be broken and more logical starting point is to increase exports. In view of the results of the study following policy implication can be suggested.

1) Persistent large deficits is believed to cause indebtedness as government will tend to resort to borrowing internally and externally which may affect the debt profile of such economy.
2) It imposes burden on the future generations as debt incurred by the government to finance the deficits is carried into future generations.

Also, since increases in current account deficit reflect escalating government budget deficits, the current account deficit cannot be remedied by just fiscal consolidation as argued in some empirical literature. Similarly, if the causal role of the twin deficit is incorrect, then reductions in the federal budget deficit may not resolve the current account dilemma causing diversion of scarce economic resources from relevant sectors.

3) If government intends to reduce its “twin deficit” dilemma, it must begin by reducing its current account deficits and this can be achieved by reducing imports, increasing exports or a combination of both measures.

4) Also, some of the findings of this study showed evidence of reverse causation from current account deficits to budget deficits, adjustments in fiscal balance can only be achieved through the implementation of strong external policies.
5) It is important for government to equally diversify the sources of national income since the current account balance depends on oil prices. As the oil revenue becomes less important in domestic income, the economic transformation will result to minimal fluctuations in the fiscal balance of the Indian economy, thus resolving the "twin deficits" dilemma.
6) The study found that of all the interacting variables, in which interest rate and exchange rate Granger causes current account deficits. This implies that changes in the interest rate of the Indian economy will impact significantly in the current account balance. So the Central Bank of India must endeavor to consciously monitor the inflation and interest rate in the economy.
7) In reducing the current account deficit, increase in domestic savings is required which in turn requires the development of a strong financial sector.

5.3 Conclusions.

The study using modern econometric methods for estimation which showed that the twin deficits hypothesis was valid for the Indian economy as the results of co-integration confirms the existence of a long run association between the two deficits, thus supporting the Mudell-Fleming theory and refuting the Ricardian Equivalence Hypothesis (REH). The Granger causality test was also employed to identify the direction of causality between the two deficits. This was done by using the Wald/exogenueity test for granger causality between the twin deficits and their interacting variables (such as inflation, interest rate and exchange rate) for the period 1990 to 2013. The Granger causality test showed a bi-directional causality flowing from the current account deficits to the budget deficits in Indian between 1990 and 2013. Also, the study found that there is a bi-direction causality among the variables which gives us the evidence of Keynesian theory is proved in India economy. The expansion in fiscal policy by the government leads to rise in government expenditure (including transfer payments) will induce the fiscal balance to run in deficit. This rise in government expenditure leads to increase in aggregate demand in the economy inducing the income/output level to increase. With this rise in income

level, the import of foreign goods and services rises such that the trade balance runs into deficit. This trade deficit leads to current account deficit in an open economy. Hence, fiscal deficit leads to current account deficit.

We examine transmission through the budget deficit (BD), current account deficit (CAD) inflation rate (INF) and interest rate (IR) routes. We find evidence that definitely shows that all the four variables considered, namely, FD, CAD, INF and IR, show co-movement and long-run co-integration, the economic implication of this study is that any change in any of the variables lead to a change in the other variable. Moreover, the growth rate of BD is higher than CAD though both the variables rise confirming the hypothesis. Hence, while formulating any governmental policy, the government has to take into account how the policy changes will affect BD and thereby, CAD. The widening of budget deficit may lead expansion in money supply which will lead to a rise in inflation rate and deteriorating the export performance as a result of fall in the competitiveness. Similarly a widening budget deficit will lead to increase in imports which will cause a rise in current account deficit. That is why to avoid such problematic situation prudent steps should be taken to reduce trade deficit by coordination of fiscal and monetary policies with trade policy. Higher interest rate and higher inflation reduce competitiveness of our export and consequently deteriorate our trade balances and creates new problem for economy.

The economic implication of this phenomenon is very important for the Indian economy. The bi-directional causality was found to exist for India but current account deficit also influences the budget deficit, implies that if the Indian government intends to reduce the “twin deficit” phenomenon in India, it must begin by reducing the current account deficits. That is why to avoid such problematic situation prudent steps should be taken to reduce trade deficit by coordination of fiscal and monetary policies with trade policy. In other words, policies should be geared towards controlling the deficit in the current account most especially by diversifying the export base of the economy by promoting of non-oil exports and reducing imports.