CHAPTER X

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

This chapter summarises the present study and brings out the conclusions. Present study was undertaken to examine the balance of payments position of India by comparing the pre-liberalization period (1980-81 to 1989-90) to post-liberalization period (1992-93 to 2005-06). The study also examined the various factors affecting the BOP position and the impact of BOP position on growth of the economy.

OBJECTIVES OF THE STUDY

The specific objectives of the study were:

1. To study the balance of payment problem in terms of various accounts viz. current account and capital account as a whole.

2. To examine growth of receipts and payments of various components of current and capital accounts and their contribution to study importance of various items in financing balance of payments.

3. To bring out structural changes in components of balance of payments, if any.

4. To identify various factors influencing movements in major components of balance of payments.

5. To estimate the impact of various components of balance of payments on economic growth of India.

6. To suggest policy measures for curing balance of payments deficit.

HYPOTHESES

In the light of above-mentioned objectives, the study attempted to test the following hypotheses in the context of Indian economy:

1. Liberalization measures have significantly improved the balance of payments position.
2. There are sizeable structural changes in components of balance of payments during the whole period (1980-81 to 2005-06).

3. Balance of payments position is significantly affected by various external and internal factors.


PLAN OF THE STUDY

The study was divided into ten chapters including the chapter on introduction. Second chapter reviewed the literature about various issues of balance of payments. Third chapter gave the database and methodology used in the analysis. Fourth chapter examined the balance of payments position of India since independence period. Fifth chapter studied the trends in current account and the structural changes therein by comparing pre-liberalization and post-liberalization periods. Sixth chapter examined trends and structural changes in capital account and its components. Seventh chapter was devoted to various determinants of BOP viz. its accounts at disaggregated level. Eighth chapter brought out the impact of current account, trade balance, invisibles account and capital account on the economic growth of India. Ninth chapter critically examined the external sector reforms in India and last chapter summarized the study and brought out policy implications.

DATA BASE AND METHODOLOGY

The nature of the study was such that it required secondary data. The data were collected from various issues of Economic Survey, Government of India; Handbook of Statistics on Indian Economy, Reserve Bank of India; EPW Research Foundation, Foreign Trade and Balance of Payments, National Income Statistics and Capital Market Issues, Center of Monitoring Indian Economy (CMIE) Report, Economic Intelligence Service; International Financial Statistics Yearbook, World Bank Tables, Global Development Finances and World Development Indicators, World Bank.

The study covered the period from 1980-81 to 2005-06. However, to make the comparative study of balance of payments position and to know the impact of liberalization and globalization on balance of payments since 1991, the whole period was bifurcated into two sub-periods i.e. pre-liberalization period (1980-81 to 1989-90)
and post-liberalization period (1992-93 to 2005-06). The two years i.e. 1990-91 and 1991-92 were excluded from the analysis due to economic crisis of 1991 and abrupt changes in 1991-92. However, to know the cointegrating long run relationship between the various components of balance of payments (i.e. current account, trade balance, invisibles account and capital account) and economic growth (GDP), the data were taken for period 1973-74 to 2005-06 as need of the technique was such that it required minimum data of 30 years.

In order to know the effect of various external factors and internal factors, a disaggregated structural model of India’s BOP was set up. Various external and internal factors which were considered as: Reserve Money Supply (ResMs), Fiscal Deficit (FD), GNP at constant prices (GNP), Net Barter Terms of Trade (TOT), Nominal Exchange Rate in terms of $ (ER), Foreign Exchange Reserves (FER), World GDP Index (WGDP\text{indx}), External Debt (ED), Foreign Currency Assets (FCA), Export Promotion Expenditure (XP\text{e}), Export Credit (ExCr), Infrastructure Index (IIndx), Relative Consumer price Index (RCPI), India’s Government Expenditure Index (IGE\text{indx}), Oil Prices ($ per barrel) (OP), Industrial Sector GDP index of India (IGDP\text{indx}), Growth rate of India’s GDP in financial sector (GDP\text{fs}), India’s Industrial Production Index (IPI), Growth Rate of Net Foreign Currency Assets (FCA\text{gr}), India’s Inflation rate in Percent (IInf), Wholesale Price Index (WPI), Long Term U.S. Interest rate in Percent (ROI\text{Abroad}), Gross Domestic Product at factor Cost at constant Prices (GDP\text{FC}), Inflation rate prevailing abroad (U.S. economy) in percent (Inf\text{abroad}), Domestic Rate of Interest (ROI), Average Effective Interest rate on external debt in percent (Debt Int), Export Unit Value Index (EUI), Gross Fiscal Deficit Ratio (GFD\text{ratio}), Openness Ratio (OPEN), Returns in Domestic market (RBSE), Returns in Foreign Market (RSP), Interest rate differential (Int Diff), Saving-Investment gap (S-I gap), Relative Price Ratio (RPR), Reserve Money supply as percent of GDP (ResMs/GDP), Fiscal Deficit as percent of GDP (FD/GDP), Growth rate of GNP (GGNP), Foreign exchange reserves as percent of GDP (FER/GDP), External debt as percent of GDP (ED/GDP), Lagged current account balance as percent of GDP (LCAB/GDP), Current account balance as a percent of GDP (CAB/GDP)

In addition to all the independent variables, dynamics was also included in equations to account for lagged effects such as previous receipts earned by country of
destination etc. To know the effect of these independent variables on balance of payments and its components, step down multiple regression was used.

**FINDINGS OF THE STUDY**

Before liberalization policy was launched, India’s balance of payments account showed a mixed trend of improvement and deterioration. Balance of payments account almost remained in deficit during first, second and third plans. However, the period comprising fourth and fifth plan was the golden period as far as balance of payments position was concerned as this period faced huge surpluses in account. This period witnessed new confidence in the external sector. Balance of payments situation started deteriorating during early 1990s with underlying expansion in economic activities, exports and imports grew in tandem, keeping the trade deficit at a high level. As a result of various measures taken during economic reforms, the performance of external sector became gradually strong. The stabilization measures of 1991-92 sharply reduced the imports, reduced the trade deficit and consequently led to decrease in current account deficit immediately. Afterwards, though import growth recovered and surged in mid-nineties, but current account deficit remained well below 2 percent of GDP because of concomitant buoyancy of exports and strong recovery of invisible earnings. On the other side, portfolio earnings also responded smartly to new initiatives and climbed quickly to peak levels. Balance of payments position showed a quite comfortable picture during post-liberalization period.

**BALANCE OF PAYMENTS**

The analysis revealed that balance of payments account was facing a deficit during pre-liberalization period which turned into a good surplus during post-liberalization period. On an average, ratio of balance of payments to GDP improved from (-) 0.32 percent during pre-liberalization period to 1.54 percent during post-liberalization period indicating improvement in balance of payments position during post-liberalization period. Regarding importance of components in financing the balance of payments, the analysis showed that 82.14 percent of current account deficit (CAD) was financed by capital account during pre-liberalization period, while CAD financing by capital account improved to 233.47 percent during post-liberalization period thereby indicating improvement in financing of CAD. Trend analysis of self
financing ratio also revealed that capital account financed the CAD positively during post-liberalization period.

**BALANCE OF PAYMENTS - CURRENT ACCOUNT**

- Component-wise analysis of balance of payments showed that though current account was facing deficit in both the sub-periods but this deficit, on an average, decreased from Rs.14406.4crore in pre-liberalization period to Rs.7136.02crore in post-liberalization period due to higher growth rate of receipts than payments. In the same way, share of receipts in financing payments improved from 81.23 percent in pre- liberalization period to 96.52 percent in post-liberalization period. Current account as a percent of GDP improved from a deficit of 1.83 percent in pre-liberalization period to 0.28 percent in post-liberalization period. Trend analysis of current account balance also revealed the same pattern as current account balance showed increasing(though non-significant) trend during post-liberalization period. Receipts also financed the payments at significant rate in post-liberalization period. This showed that though current account was facing deficit during both the periods but this account showed an improvement in post-liberalization period. Regarding the components of current account, 42.5 percent of deficit in trade balance was financed by invisibles during pre-liberalization period which improved to 87.68 percent in post-liberalization period thus indicating increased importance of invisibles in reducing the current account deficit during post-liberalization period.

- Regarding the trade balance account, the study revealed that deficit of trade balance account increased at significant rate during post-liberalization period. The ratio of trade balance deficit/GDP, ratio of exports to GDP and ratio of imports to GDP were found to be -3.25 percent, 4.73 percent and 7.22 percent in pre-liberalization period which turned to -3.14 percent, 9.54 percent and 12.78 percent respectively in post-liberalization period indicating decrease in trade deficit ratio marginally and increase in openness ratio. Higher import ratio as compared to export ratio led to a decline in self-financing ratio at the rate of 0.18 percent during post-liberalization period thus indicating the less
role of exports in financing imports in post-liberalization period due to a surge in import bill.

- Regarding the invisibles account, the study showed that on an average, balance of invisibles account increased from Rs. 10270.29 crore during pre-liberalization period to Rs. 55278.7 crore during post-liberalization period. Invisibles to GDP ratio also increased from 1.43 percent during pre-liberalization period to 2.72 percent during post-liberalization period. Trend analysis revealed the fact that net invisible earnings, receipts/payments ratio and net invisibles/GDP ratio decreased at a significant rate in pre-liberalization period but increased at a significant rate in post-liberalization period as well as the whole period due to rapid increase in invisible earnings indicating that invisible earnings were of paramount importance in reducing current account deficit in post-liberalization period.

- Within invisibles account, on an average, balance of travels account decreased at a significant rate during post-liberalization period. Average expenditures increased at a higher rate than average receipts which led to significant decline in self financing ratio from 489.34 percent in pre-liberalization period to 218.04 percent in post-liberalization period thus reflecting shortfall of earnings to compensate expenditures. Thus, on the whole, no improvement has been witnessed in travels account in post-liberalization period.

- Balance of transportation account faced a deficit in almost all the years of the study. Average deficit of this account increased from Rs.435.33 crore in pre-liberalization period to Rs. 2437.75 crore in post-liberalization period, indicating no improvement in transportation account in post-liberalization period.

- Balance of insurance account as well as self financing ratio improved during post-liberalization period thus indicating improvement in performance of insurance account in post-liberalization period.

- Balance of investment income account, on an average, showed an increase from Rs.2764.79 crore in pre-liberalization period to Rs.15986.6 crore in post-liberalization period.
• Balance of GNIE account, on an average, increased from deficit of Rs.5.24 crore in pre-liberalization period to a surplus of Rs.180.98 crore in post-liberalization period. Both net balance and receipts/payments ratio showed an increase but at non-significant rate in post-liberalization period, indicating improvement in GNIE account during post-liberalization period as compared to pre-liberalization period.

• Balance of miscellaneous account as well as self-financing ratio witnessed a significant increasing trend in post-liberalization period.

• Regarding the structural changes in components of invisibles account, the study revealed that as compared to pre-liberalization period, share of private transfers balance, miscellaneous balance and government income balance increased in post-liberalization period while the share of travels account, transportation account, insurance account, investment income account and official transfers account declined. This reflected that over time, there was rapid growth of non-software miscellaneous services due to the on-going technological transformation and modernization of the economy/industry.

BALANCE OF PAYMENTS - CAPITAL ACCOUNT

• The study showed that balance on capital account experienced a significant increase during both pre and post-liberalization periods. However, net inflows on capital account increased at the rate of 25.02 percent during pre-liberalization period while increased at quite lower rate of 9.14 percent during post-liberalization period. On an average, receipts financed 186.35 percent of payments during pre-liberalization period which declined to 132.12 percent during post-liberalization period. Earning/expenditures ratio increased at the rate of 2.44 percent during pre-liberalization period while decreased at the rate of 5.37 percent during post-liberalization period. Similarly, capital account as a percent of GDP also showed a tremendous increase during pre-liberalization period (at the rate of 18.57 percent) but increased at comparatively lower rate of 3.27 percent during post-liberalization period.

• Regarding the structural changes in capital account, the study brought out that on an average, surplus in capital account existed due to a surplus in private
transfer balance (31.42 percent share), loans balance (112.63 percent share) and banking balance excluding RBI (ie.0.53 percent share) which compensated the deficit given mainly by amortization balance (-39.21 percent share) and government miscellaneous balance (-2.1 percent share) during pre-liberalization period.

- The analysis of various components of capital account during pre-liberalization period showed that though private transfer balance account experienced a surplus during this period but self-financing ratio declined at non-significant rate of 4.23 percent due to higher rate of increase in payments than receipts.

- Both government miscellaneous balance and loans balance showed a surplus during pre-liberalization period. Both receipts as well as self-financing ratios of these two accounts increased at a significant rate during this period which indicated that these accounts experienced an improvement during later years of pre-liberalization period.

- Regarding the amortization balance, receipts on this account were almost negligible which led to huge deficit on this account. Trend analysis of this account revealed that receipts increased at non-significant rate while payments increased at significant rate. Thus, the analysis showed that balance on this account shows deterioration during the later years of pre-liberalization period.

- Net receipts of banking excluding RBI increased at non-significant rate during pre-liberalization period while self financing ratio of this account declined at non-significant rate of 1.76 percent because of lower growth rate of receipts than payments.

- During post-liberalization period, components of capital account showed a divergent pattern as the share of foreign investment which was quite low during earlier years of this period, increased at significant rate while the share of loans and banking capital decreased during later years of post-liberalization period thus indicating the increased importance of FDI inflows for economic development during recent years.

- The analysis of loans balance account showed that net receipts declined at non-significant rate during post-liberalization period while self financing ratio
of loans balance declined at the rate of 3.18 percent due to higher growth rate of payments (21.59 percent) than receipts (6.67 percent).

The study of the composition of loans account showed that, on an average, external assistance balance was the major component constituting surplus in loans account, followed by commercial borrowings balance and short term loans to India.

The analysis of the performance of all the three components of loans balance brought out that payments of all the three accounts (i.e. external assistance balance, external commercial borrowings and short term loans to India) increased at higher rate than receipts during post-liberalization period, which led to decline in self-financing ratio.

- Foreign investment inflows account of capital account experienced a significant and remarkable improvement during post-liberalization period. Net inflows on this account increased significantly during this period. Average receipts on this account were Rs.60092.48crore and average payments were Rs.37205.38crore. The average value of net foreign investment inflows during post-liberalization period was Rs.22887.22crore. On an average, receipts financed 502.28 percent of payments during this period.

    The analysis of two components of foreign investment i.e. foreign direct investment and portfolio investment was also carried out. The study revealed that in year 1990-91, FDI composition was having higher share of 94.17 percent in total foreign investment while the share of portfolio investment was quite low (5.83 percent). But after 1993-94, there has been a major shift on composition of foreign investment as FII increased drastically after 1993-94 but still, FDI was having higher share in total foreign investment, however in 2005-06, the situation almost reversed as the share of FII rose to 72.54 percent and share of FDI declined to 27.46 percent. This showed a significant structural shift in composition of foreign investment after the reform process in India. This surely reflects the rising strength of Indian economy as far as overseas institutional investment is concerned.

    Regarding the trends of foreign direct investment, the study revealed that average receipts were Rs.12234.91crore while average payments were comparatively quite low at Rs.113.059crore which resulted in huge surplus of
Rs.12121.85 crore in FDI in India during post-liberalization period. The self-financing ratio increased at a very high rate of 47.58 percent due to comparatively higher accelerated growth rate of 31.55 percent of receipts and negative growth rate of payments (10.91 percent) thus indicating the improvement in FDI account during post-liberalization period.

Portfolio investments, by their very nature, reflect much shorter-term commitments compared to FDI, and hence are prone to greater volatility. During post-liberalization period, average receipts (Rs.47437.08 crore) of this account are higher than average payments (Rs.33842.59 crore) which resulted in significant surplus in portfolio investment inflows account (Rs.13595.42 crore). However, during post-liberalization period, payments increased at a much higher rate (137.6 percent) than receipts (63.19 percent) which lead to significant decline in self-financing ratio at the rate of 31.31 percent.

- The study of banking capital account showed that in post-liberalization period, banking capital account remained in surplus during all the years (except three years i.e. 1994-95, 1997-98 and 2000-01). Receipts increased at a higher rate (4.09 percent) than payments (2.88 percent) which led to increase in self-financing ratio at the rate of 1.17 percent.

  The analysis of the two components of banking capital i.e. commercial banks and others was also carried out. The study revealed that during post-liberalization period, average receipts on commercial banks capital account were Rs.44894.79 crore while average payments were Rs.34807.08 crore which reflected a surplus of Rs.10090.29 crore in this account. Payments increased at a higher rate (6.98 percent) than receipts (5.18 percent). Consequently, self-financing ratio decreased at non-significant rate of 1.68 percent.

  While average receipts on others banking capital account were Rs.3349.59 crore and average payments were Rs.2288.51 crore which led to surplus of Rs.1060.87 crore in this account. On an average, receipts financed 208.53 percent of payments. Both receipts and payments showed a declining trend while receipts declined at marginally higher rate (8.55 percent) than payments (8.46 percent), leading to decline in self-financing ratio at the rate of 0.09 percent.
Regarding others capital account, the study revealed that this account showed a surplus in all the years (except three years i.e. 1992-93, 1995-96 and 1996-97). During this period, average receipts were Rs.13066.6 crore while average payments were Rs.9607.88 crore which led to a significant surplus of Rs.3458.71 crore in this account. On an average, receipts financed 195.61 percent of payments.

On the whole, the analysis revealed that capital account balance remained in surplus during the whole period. Though the receipts of capital account increased during post-liberalization period but at the same time, payments on this account also witnessed increasing trend, thus leading to decline in self-financing ratio during post-liberalization period. During post-liberalization period, the components of capital account showed a divergent pattern. During the earlier years of post-liberalization period, banking capital was the single largest component contributing surplus in capital account, followed by foreign investment and loans which compensated the deficit resulting from rupee-debt service and other capital. However, during later years of post-liberalization period, the surplus experienced by capital account was due to foreign investment, followed by loans and banking capital. Thus, it suggested that the share of foreign investment increased significantly while the share of loans decreased during later years of post-liberalization period thus indicating the increased importance of FDI inflows for economic development during recent years.

**DETERMINANTS OF BALANCE OF PAYMENTS**

Attempt was made to examine the various factors affecting the balance of payments position of India as well as its components covering the period 1980-81 to 2005-06.

**Balance of Payments**

- Regarding the determinants of balance of payments, out of 11 variables considered, five variables (mostly external) namely FD/GDP, FER/GDP, ED/GDP, D and oil prices significantly affected the balance of payments position of India. Variables fiscal deficit, ED/GDP and OP had theoretically correct negative signs thus indicating that rise in fiscal deficit, external debt and increase in oil prices deteriorated the balance of payments position. While
the variable FER/GDP positively and significantly affected the balance of payments position thus reflecting that increase in foreign exchange reserves of the economy led to better BOP position of India.

**Current Account**

- Results of step-down regression analysis revealed that out of all eleven variables considered in the study as the determinants of current account, six variables (external as well as internal), i.e. ER, GGNP, FCA/GDP, D, ResM/s/GDP and ED/GDP turned out to be the significant variables influencing the current account. Variables FCA/GDP, ER and ResM/s/GDP had theoretically correct positive and significant impact on current account balance. This revealed that as the foreign currency assets increased, it had positive impact on current account balance. While GGNP and ED/GDP negatively influenced the current account balance thus implying that as economy developed, the current account balance deteriorated (or current account deficit increased). This relationship confirms the hypothesis that as economy grows, the demand for foreign based products (imports) in the domestic economy increases which will eventually lead to deficit in the current account.

**Trade Balance**

- The analysis of the determinants of trade balance revealed that out of all the nine variables considered, seven variables (mostly external) namely WGDP$_{idx}$, ER, D, FER/GDP, ED/GDP, OP and GGNP turned out to be the significant variables influencing the balance of trade. However, variable GGNP, ED/GDP and OP exerted negative and significant influence and were having theoretically correct signs while FER/GDP and ER had expected positive and significant effect on the trade balance. Variable dummy also turned out to be the significant variables influencing the trade balance but were having unexpected signs (negative). The negative sign of dummy variable can be justified on the grounds that after the liberalization process initialized in 1991, trade balance of India deteriorated and India faced continuous increasing trade deficit.

- The analysis of the determinants of components of trade balance i.e. exports showed that out of all the 12 variables considered, seven variables (both
external and internal) namely lagged exports, EUI, XPe, dummy, TOT, ExCr and IIndx turned out to be significant variables explaining variations in the exports. Variable lagged exports, EUI, dummy, ExCr, IIndx and TOT had significant and positive impact on exports. While one significant variables i.e. export promotion expenditures did not oblige the theoretical expectations and showed a negative effect. Export promotion expenditures showed a declining trend during the later years of this period due to which this variable exerted negative influence on volume of exports.

- Regarding the determinants of imports, out of all the 11 independent variables considered, six variables namely GNP, TOTn, ER, lagged imp, dummy and lagged ER had significant and theoretically expected influence on the volume of imports. Three variables namely TOTn, ER and lagged ER negatively affected the imports while three variables namely GNP, lagged imports and dummy variable had the significant and positive influence on volume of merchandise imports. Variable TOTn had a negative and significant impact on imports which signified that improvement in net barter terms of trade would reduce the value of imports and in turn would have a positive impact on trade balance.

Invisibles Receipts

- The analysis of the determinants of overall invisible receipts showed that out of all the eight variables considered, three variables namely lagged Inv Rec and dummy (positive effect) and Relative Consumer Price Index (RCPI) (negative effect) turned out to be significant variables influencing variations in service receipts. Variable RCPI had expected negative sign which implied that with an increase in CPI of India, as compared to world, the value of variable RCPI increased. This would lead to lower inflow of tourists to India and hence lower exports of services.

- On the receipts side of invisibles account, out of 10 variables considered, three variables namely lagged GNP, ER and dummy positively and significantly affected maximum variations in travel receipts.

- In case of determinants of transportation receipts, out of 10 variables considered, four variables namely merchandise exports, lagged transportation
receipts, \( \text{WGDP}_{\text{incl}} \) and lagged GNP were the most significant determinants of transportation receipts with theoretically expected signs.

- The study of the determinants of insurance receipts showed that three variables namely exports, lagged ER and \( D_1 \) were the significant determinants of insurance receipts. Variable exports and lagged ER had expected correct positive signs and were statistically highly significant implying that exports positively and significantly affected insurance receipts.

- Regarding the determinants of investment income receipts, only two variables namely lagged investment income receipts and lagged GNP turned out to be the most significant variables.

- For private transfer receipts, three variables namely oil price, lagged ER and lagged private transfer receipts were the significant variables.

**Invisible Payments**

- The analysis of the determinants of overall invisible payments brought out that out of all the eight variables considered, five variables (both internal and external) namely ED (positively), merchandise imports (positively), lagged GNP(positively) and lagged ER(negatively) turned out to be the significant variables affecting the invisible payments. The positive signs of ED and imports variables were justified on the grounds that higher imports gradually lead to higher amounts of shipping, transport and other insurance charges and higher amount of external debt will in turn lead to higher amount of interest payments. Thus, it implied that increase in merchandise imports and external debt would lead to increase in import of services.

- Regarding the determinants of travel payments, out of nine variables considered, three variables viz. lagged GNP(positively), lagged Trav pay(positively), lagged ER(negatively) and \( D_1 \) (positively) turned out to be the significant ones with theoretically correct signs. This indicated that India has been receiving far more travels with the growth of income and globalization.

- The study of the determinants of transportation payments showed that out of 9 variables considered, five variables (both external and internal) viz. merchandise imports(positively), exchange rate(negatively), lagged Trans Pay(positively), lagged ER(negatively) and lagged GNP(positively) were the significant variables affecting the transportation payments. This implied that
depreciation in country’s currency lowered the inflow of imports which in turn lowered the transportation payments.

- Regarding the determinants of insurance payments, out of all the 10 independent variables considered, four variables namely merchandise imports, lagged Ins Pay, FER and lagged WGDP\textsubscript{indx} had significant and theoretically expected positive effect on insurance payments (except GNP).

- Regarding the determinants of investment income payments, out of 11 variables included in the analysis, three variables namely lagged GNP, GNP and D were the significant variables (with theoretically correct signs) affecting the investment income payments. This suggested that as economy grows and opens up, it avails more of the services from abroad thus increasing the payments abroad.

- For private transfer payments, lagged private transfer payments and lagged GNP were the two significant determinants.

**Capital Account**

- The analysis of the determinants of capital account showed that out of all the ten variables considered, four variables namely ER, FCA\textsubscript{gr}, D and CAD/GDP turned out to be the significant variables affecting net capital account inflows with expected correct signs. Variable FCA\textsubscript{gr} affected the net capital inflows positively. Variable GGNP and D affected the capital account inflows positively and significantly.

- Regarding the determinants of foreign direct investment inflows, out of all the 12 variables, the coefficients of only two variables (Exp and ED) were statistically significant at 5 percent level. An increase in merchandise exports led to increase in FDI inflows. This suggests that export-oriented economies can attract more FDI. The negative relationship of ED with FDI inflows was also on expected lines. As the external debt goes up, it lowers international confidence, thereby decelerating FDI significantly.

- Regarding the determinants of foreign institutional inflows (Portfolio inflows), it has been revealed that out of all the eight variables considered, five variables (all are external factors) namely WGDP\textsubscript{indx}, inf\textsubscript{ab}, RSP, ER and lagged portfolio inflows turned out to be the significant variables affecting the FII inflows. Variable inflation rate abroad (US) was significantly and positively
affecting the FII inflows. This implies that when inflation rate in foreign country increases, purchasing power of funds invested in foreign country declines, portfolio investors would withdraw from foreign market and make investments in domestic (Indian) market.

- Inflation rate prevailing in India was the sole determinant of external assistance inflows out of all the variables considered thus indicating that as the prices in the economy increased, it hampered the internal price stability which led to increase in external assistance inflows.

- For External Commercial Borrowings (ECB) out of four variables, only one variable i.e. imports remained the significant determinant of ECB inflows thus indicating that ECB inflows were very much affected by merchandise imports of the economy.

- Regarding the determinants of FDI outflows, out of all the variables, only one variable i.e. openness ratio turned out to be significant variable with expected correct sign. This indicates that as the domestic economy integrates with the global world by opening up its market, FDI outflows will also increase.

- Regarding the determinants of FII outflows, out of all the variables considered, variables namely lagged FII outflows, GFD ratio and lagged returns in domestic market (RBSE\textsuperscript{lagged}) were the three significant determinants of FII outflows with expected correct sign. Variable GFD ratio and RBSE\textsuperscript{lagged} had negative and significant impact on FII outflows. It suggests that as the level of country’s fiscal deficit goes up, it is matched by decrease in portfolio outflows as the country’s priority would be to meet its deficit rather than to make investments abroad. The negative sign of RBSE\textsuperscript{lagged} is justified on the grounds that investors are always believed to follow higher return, hence when return in domestic market decreases, institutional investors would flow from the (Indian) market to foreign market (US).

- For external assistance inflows, out of 4 variables, only one variable i.e. GNP was a significant and positive determinant. This suggests that as the economy grows, it provides more external assistance to other economies.

- For external commercial borrowings outflows (ECBO), out of three variables, two variables i.e. lagged external commercial borrowings outflows and exchange rate turn out to be the significant determinants. Variable exchange...
rate had positive and significant impact on ECBO with correct sign. This indicates that the expectation of depreciation in rupee could speed up repayments.

Thus, on the whole, it has been revealed from the analysis that exchange rate, gross national product of the economy, WGDP index, foreign exchange reserves, lagged exchange rate and lagged GNP turned out to be the most significant variables affecting the different accounts of balance of payments. Variable dummy also turned out to be significant in fourteen accounts out of 29 accounts of balance of payments. This showed that policy changes in the economy made in 1991 significantly affected the balance of payments position of the economy. However, external factors and growth of the economy also affected the balance of payments position and its various accounts.

**BALANCE OF PAYMENTS AND ECONOMIC GROWTH**

- The results of Vector Error Correction Mechanism (VECM) and co integration analysis revealed that invisibles account balance and net capital account balance affected the GDP positively and significantly in the long run. The signs of these two variables were in consonance to a priori expectations. Thus, it becomes important to put forward the role of invisibles and capital inflows for the growth of our economy.

- While investigating the relationship of components of balance of payments and economic growth in the short run, no evidence of causality has been found between capital account and other variables. It has also been found from the results of VECM that in the short run, GDP neither affected nor is affected by any of the variables considered under study which implied that components of balance of payments affected the GDP in the long run only. However, a bi-directional relationship existed between current account balance and trade balance. A two way relationship has also been found between current account balance and invisible balance.

- It is concluded that there was no causal relationship of components of balance of payments with GDP in the short run, while the results indicated the importance of balance of payments constrained economic growth in India in the long run.
On the basis of the analysis carried out in the study, following hypotheses are accepted:-

1) There are sizeable structural changes in components of balance of payments during post-liberalisation period as the share of invisible earnings and foreign investment has increased tremendously during this period.

2) Balance of payments position is effected by both external and internal factors.

The hypotheses i.e. liberalisation measures have significantly improved during post-liberalisation period cannot be conclusively accepted or rejected. If we look at the components of balance of payments position, there is improvement in invisibles earnings and capital account of balance of payments but trade balance faced a continuous deficit during the period.

The hypotheses i.e. balance of payments position affects the economic growth (via GDP) cannot be conclusively accepted in the short run. The study concludes that components of balance of payment affected the GDP in the long run only.

**POLICY IMPLICATIONS**

Following policy implications have been derived from the findings and conclusions of the study:

- As balance of payments faced deficit due to deficit in trade balance and the only cause of increasing trade balance deficit is the rapid growth of imports in relation to exports. Thus, the study suggests that exports have to be increased steeply in order to nullify the negative impact of growing import expenditure. For this, untapped foreign markets have to be exploited and more product groups have to be explored for exports with indigenous technology where we have competitive strength.

  For stepping up exports effectively in an increasingly competitive world liberalised trade system, the export policies have a lot to do particularly from angle of price, quantity, timely delivery (well-developed infrastructure) and appropriate marketing strategy.

  Greater attention also need to be paid not only to the expansion of production on competitive lines but also to all round improvements in productivity and consequent reduction in import consumption norms.
• As the invisibles balance showed a tremendous improvement during post-liberalization period, therefore, in order to neutralise the impact of trade deficit on current account balance, invisibles earnings should be further increased. The gross invisible earnings comprising services, current transfers and income are gaining importance in India’s external transactions in recent years. To increase invisible earnings, development of tourism, transportation industry and miscellaneous services is of immense importance.

Development of India’s tourism industry depends upon the integrated infrastructure of national and international highways, railways, ports, civil aviation, telecommunication, hotel accommodation and allied services. Inadequacies of such infrastructural facilities have adversely affected our tourism industry. Therefore, India should market itself as a more attractive destination stressing its variety and cost effectiveness.

As the transportation account of invisibles showed a sizable negative figure, this offers substantial scope for improvement in shipping and related services. This, in turn, depends on the government creating a positive environment for shipping and port services.

India’s miscellaneous services account shows a significant improvement during post-liberalization period. Thus, it requires a careful nurturing with favourable government intervention to eliminate any potential impediments.

• India’s capital account has shown a remarkable improvement during post-liberalization period but its self-financing ratio decreased during this period. The current account deficit, is balanced by these capital receipts i.e. loans, FDI and portfolio inflows. Thus, the receipts on these accounts should be increased so as to compensate the deficit on current account.

To increase the FDI inflows in the economy, there is a need to focus on infrastructure of airports, telecommunications, ports and roads in selected areas in order to make country more attractive to foreign investors. Among the institutional changes, there is a need to strengthen Foreign Investment Promotion Board (FIPB) and Foreign Investment Implementation Authority (FIIA) so as to increase their effectiveness and removing procedural bottlenecks and reducing bureaucracy and red tape.
In order to gain higher share of portfolio inflows, India has to make conscious efforts in liberalising the manner in which qualifying entities can invest in India and by further deregulating the investment limits.

Government should encourage stock exchanges and capital markets to become efficient so that investors feel comfortable and allow foreign institutional investors to trade in the shares and debentures of country’s companies.

Government should encourage foreign investment mostly in the form of equity of companies and in terms of fresh debt inflows from abroad.

- The study suggests that various external and internal factors such as fiscal deficit, GNP, foreign exchange reserves, external debt, inflation rate, exchange rate and WGDP index are significant determinants of BOP which need to be incorporated in policy making. Thus policies should be formulated to increase the reserves of the economy so that international competitiveness of the economy can be improved. If government wishes to reduce imbalances, it has to exercise fiscal discipline to reduce high fiscal deficit to manageable limits.
- The study also concluded BOP constrained economic growth in India in the long run. Therefore, to achieve stable macroeconomic environment and growth sustainability, the invisibles led growth and capital receipts led growth can be featured to a greater extent into a range of government policies towards promotion of services sector and inflows of more foreign direct investment in the economy. Policies regarding capital account and invisibles account and promotion measures, as well as outward oriented development strategies need to be further strengthened.

On the whole, the liberalization of India’s external sector was largely successful in meeting the BOP crisis of 1990 and putting the BOP on sustainable path. These reforms improved the openness of Indian economy viz-a-viz other emerging economies. The main lessons of nineties are that liberalization of current and capital account increases the flexibility and resilience of BOP. As country is continuously facing increasing trade deficit, development of the economy’s export sector, systematic reduction of tariff protection and liberalization of capital flows will enhance the efficiency of Indian economy, which along with the reforms of domestic policies will stimulate investment and growth. Thus, to reduce trade deficit, exports have to be increased more vigoursly by tapping new markets and new products.