CHAPTER II

REVIEW OF LITERATURE AND METHODOLOGY
The value of any research study depends on a review of the earlier literature related to that study. It will enlighten the researcher on the various research right types of dimensions and problems pertaining to the study. It will help the researcher to frame the right type of objectives for the study with a high level of research motivation. It would be most fitting to review some of the studies that have already been made on the subject.

The balance of payments statements presented for various years had shown both surpluses and deficits over the period of past decade. The surpluses were found in the capital account, which had made a positive net contribution to the changes in the reserves. The post liberalisation scenario had indicated a further phenomenal growth in the capital account balance as a result of the policy measures adopted to strengthen the capital account.

This chapter has been devoted to present a brief review of the related literature concerning the study of “Economic Reform and its Impact on Balance of Payments in India” and to explain the methodology adopted in this study. While Section A of this chapter deals with the review of literature, Section B discusses the methodology adopted.

SECTION A – REVIEW OF LITERATURE
The balance of payments and its theory of adjustment had constituted the central theme of the study that had been made by J.H. Williamson.¹ His approach had included a critical assessment of the existing literature on the desirability of the balance of payments adjustment policies. He had started with an assessment of Professor Meade’s theorem on the value of the exchange rate policy in reconciling domestic and external objectives. After an in-depth analysis, he had validated this theorem. However, he had refuted Professor Mundell’s proposal to vary the fiscal monetary mix to prevent reserve changes without depressing or inflating the demand conditions. His analysis had further emphasised the critical role that certain factual relations could play in determining the content of the desirable policies. The two outstanding concerns were about the presence or absence of the adaptive expectations under a system of flexible exchange rate system and to study whether the capital account could be best explained by the stock flow theory. This study was an attempt to reconcile and arrive at an ideal policy measure to solve the adjustment problems in respect of balance of payments. Highly sophisticated mathematical tools had been employed by him to arrive at the positive role played by the adaptive expectations. It could be seen as a technical exercise, which had revealed a new dimension to the problems of adjustment rather than as a measure of offering concrete solutions or recommendations to the problem. This study dealt with the adjustment problem only and it did not attempt at any modification or refutation of

the existing theories. Instead it adopted a statistical cum mathematical approach to highlight the importance of the capital account in financing the current account deficit and in contributing to the achievement of positive balance of reserves. However, no explicit mention had been made about the problems, the processes or the themes of adjustment.

Rudiger Dornbusch\textsuperscript{2} in his study had explained as to how the governments of the developing countries had been constrained in the effective implementation of their domestic policies due to the interlinking of the national and international markets. The domestic macro economic conditions were influenced by the interactions of national and the international interest rates and the prices through the impact of the real exchange rates on employment. The domestic responses to the changes in these factors were strong and quite rapid. The study had stated that maintaining a dual rate of exchange had depreciated the exchange rate for the capital account transactions and an otherwise over valued rate could have proved effective as a transitory policy to offset the sudden shocks that had occurred in the capital market. This study had revealed the sensitiveness of the capital account manipulations on the exchange rate as well as on international factors such as world interest rates and prices. This again was a mathematical exercise aimed at projecting the importance of the exchange rate policies

in offsetting fluctuations in capital market. This differed from the present study in that it had focussed solely on the policies affected by the international factors like exchange rate movements and world prices, whereas the focus of the present study is only on the content and impact of the policy reforms on the capital account and not on their linkages with world interest rates or prices or more importantly exchange rates.

The study by Anjaria. J. Shailendra³ had focussed on the need for the balance of payments provisions in the GATT. It elaborated the existing debt problems of the developing countries and to strengthen the economy, put forth the argument for a relatively open trade and for viability in trade transactions. The study centred on the debt component of the balance of payments account. It advocated free trade as it had pointed out that any trade restriction for improving the balance of payment presupposed other necessary improvements in the multilateral trading system of today. Thus the central theme of the study was related to the adoption of free trade as a solution to the problem of debt crisis. The present study on the other hand concentrates on how the capital account of balance of payments had behaved over the period (from 1986-87 to 1994-95) inclusive of the years prior to and subsequent to the adoption of liberalisation. The present study differed from Anjaria’s study as it had focused its attention on the contributions of the capital account and capital account reforms to the

overall reserve position in the balance of payments and was not exclusively devoted to the study of debt problem.

**P.C. Varma**\(^4\) in his working paper had analysed the performance of the principal items of exports for the period from 1960-61 to 1984-85. The author had taken into account the product group of fish, tea, coffee, tobacco, spices, cotton textiles, garments, jute goods, leather and leather goods, chemicals and chemical products, iron ore, iron and steel, metals and machines including transport equipment for his study. The findings of his study were that i) exports at an aggregate level had been moderately expanding ii) exports of garments, machinery, transport equipment, chemicals, fish and metal products were rapidly expanding iii) exports of iron ore and coffee were expanding moderately iv) exports of tobacco, spices, cotton textiles, and leather were expanding slowly v) exports of iron and steel, tea and jute goods were falling. Based on his findings, the author had suggested that export promotion policies should be taken up for those commodities, whose world demand was high and efforts should be made to improve the competitiveness of the Indian export products in the world market.

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R.K. Das\textsuperscript{5} in his study had attempted to analyse the diversification and the instability of the Indian exports. He found that due to the commodity diversification and the introduction of the exchange rate system, based on a basket of currencies, the total export instability had declined during the period from 1956-57 to 1984-85. The instability of exports had declined in respect of some currencies and had increased in respect of some other currencies. The author had advocated a higher level of exports of products to some of the developed countries.

India could attract more FDI by adopting a more liberal policy and by bringing about periodical changes in its attitude towards foreign investors. All these changes will accelerate the pace of economic growth in our country. R.N. Malhotra\textsuperscript{6} was of the opinion that the remedial measures taken to reduce the hectic procedural delays by the ‘fast track group’ was a remarkable move to attract the FDI to a greater extent. This had really allured the foreign investors. He had also explained as to how much of the FDI had flown into India and the performance of the various factors, which had, both negatively and positively, affected the inflow of FDI into India. He was not much pleased with the existing policy changes. He had emphasized that we should improve our policy and bring about attractive changes to tap more FDI. The policy changes should take into


account the policy changes of the other nations and make India first in the world in attracting more FDI.

The government had announced a new liberalized external commercial borrowings policy (ECB), which would allow automatic approvals for borrowings with an average maturity of five years and more.

A.K. Neog\(^7\) in his paper had analysed exports, imports, trade balances and GDP for the period from 1950-51 to 1990-91 with a five-year time interval. The author had linked industrial production to exports and imports in order to test the hypothesis that exports and imports were highly correlated to total industrial production. Using the semi-log model, the author had concluded that exports were highly correlated to industrial production and industrial production was highly correlated to imports.

Bimal Jalan\(^8\) had analysed the macro economic variables affecting the balance of payments during the period from 1956-57 to 1990-91. The study period was further sub-divided into three major sub-periods depending upon on the balance of payments situation. The first period covered a span of 20 years from 1956-57 to 1975-76 and was


associated with a large inflow of foreign aid. The second period covered a short span of only four years from 1976-77 to 1979-80 and was associated with an improved balance of payments and foreign exchange reserves position. The third period was covered by the eleven years duration from 1980-81 to 1990-91 and was associated with a period of large commercial loans and external debt. The author had analysed the failure of the inward looking policies, export performance and export policies and came to the conclusion that the period of post independence had witnessed a persistent balance of payments deficit and it was high time that policy objective should be for the elimination of the balance of payments problem on a more permanent basis.

The study by Jonathan Eaton\textsuperscript{9} was due to the growing concern about the outflow of significant amount of private capital from the heavily indebted developing countries. This outflow called “Capital flight” escaped taxation in the borrowing country and had generated a concern about the prospects of future servicing of these debts. The study used a model, which had demonstrated the possible implications of a policy of guaranteeing private debt. This could result in a situation, where savings could be invested domestically and foreign debt could be repaid or it could be that the tax obligations implied by the potential nationalization might lead to the flight of national capital resulting in the non-repayment of foreign debt. The model did not offer any

concrete solution but instead had pointed out that it might lead to two implications, which could form the basis for further studies.

The present study had looked at capital flows from a different perspective namely, its effectiveness in contributing to the reserves and hence the debt problem did not arise, it had confined itself only to the net capital that is, only to the inflows minus outflows and not solely to the capital outflows or the related problem of capital flight.

Though some economists feared that the liberal attitude towards the FDI would not allow the country to explore the new possible and appropriate technologies in India, J.S. Kochar\textsuperscript{10} had expressed a strong optimistic look in favour of the foreign direct investment. The opponents had argued that the scope for research and development would get reduced if the liberal policy towards FDI should allow the import of foreign technology to a greater extent. But he had disproved this negative claim with much empirical evidence. In his article he had brought out the fact about how the companies with more of foreign direct investment were spending more on the research and developmental activities.

K.S.Ramachandran\textsuperscript{11} had explored the liberalisation trend and the entrance of the multinational corporations and their role in India. He was of the opinion that the government had come to a stage, where it had changed its policies towards FDI to a very great extent. Though various packages of liberalisation had been adopted to attract more and more FDI, the government should be cautious that it should take an extraordinary care in regulating the FDI inflow into our country. The government should try to exploit the advantages arise out of permitting the MNCs into India and should overcome the possible disadvantages that might arising out of it. The approach towards the MNCs should be a balanced one. He had strongly recommended a careful supervision on the FDI inflow into our country in order to avoid the misuse of foreign direct investment.

S.K.Ray\textsuperscript{12} had published an article in the Yojana in the year 1986 entitled, “Private Investment in India”. In this article he had elucidated and explained the developments in India’s policy towards FDI and their various dimensions. He had also analysed the need for FDI, and also the need for restricting on FDI inflow and the absorption of the FDI in the various sectors of the Indian economy and so on. He was sure that the domestic industries and their growth would get endangered if appropriate safeguards

\begin{flushright}\textsuperscript{11}K.S. Ramachandran,“Liberalization and Foreign Investment”, \textit{Yojana}, Vol.36, No.10, Jun 15, 1992, pp.8-9. \\
\textsuperscript{12}S.K.Ray, “Private Investment in India”, \textit{Yojana}, Vol.28, No.11, Jun 16-30, 1992, pp.19-24.\end{flushright}
for the major industrial projects within India were not undertaken even if there was more relaxation in the field of the small-scale industries.

Amit Shovan Ray\(^\text{13}\) in his paper had analysed the impact of the liberalisation policies on India’s export competitiveness. The export competitiveness was analysed through a quantitative analysis in terms of export performance. For analyzing the export competitiveness, the author took into account the changing export incentive structure. It was observed that the export subsidy as a percentage of the total value of export was increasing over a period of years. The share of export subsidy in the government total subsidy was also increasing. Hence the author made an attempt to study sectoral incentive structure by taking into account sectoral rates of nominal export incentives to analyse export competitiveness against the background of liberalization. According to the author the 1991-policy package had resulted in improving the cost competitiveness of exports.

Bibek Deb Roy\(^\text{14}\) in his paper, had discussed first, the balance of payments crisis proceeding to liberalisation policies in terms of a few selective crisis indicators. The crisis indicators that the author had analysed for the period from 1980-81 to 1990-91


were trade deficits as a percentage of GDP, the current account deficit as a percentage of GDP, and the reserves calculated in terms of requirements for the months of imports. After analyzing the crisis indicators that had led to the liberalization policies, the author had discussed the medium term structural adjustments that were implemented in the post 1991 reform period. According to the author, structural adjustments were in the form of a neo-classical framework. However the author was of the view that a proper macro theory of balance of payments had not been followed.

**Bishupriya Gupta**\(^{15}\) in his paper, had focused his attention on the changes in the policy towards the liberalization of trade. According to the author, liberalisation would mean the moving away from the policy of import substitution to export orientation. The author had expressed the opinion that the trade polices had reflected the nature of the protection enjoyed by the Indian industries. He took into account the system of import controls for analyzing the level of protection that had been granted. The author had analysed the level of protection through estimation at three different points of time, for the years 1978-79, 1984-85 and 1987-88.

India had unleashed a number of proposals to boost foreign investment in India like the full convertibility of the rupee and in the current account massive cuts in its

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import duties. The cuts in the customs and the import duties on the relevant products of imports would definitely provide a ‘fill up’ to the inflow of FDI into India. There could be no doubt that when the reforms process proceeded further and gained momentum, India could reasonably expect to attract a substantial and larger share of global private investment.  

Policies aimed at trade and investment reforms in countries had been the subject matter of study in the paper presented by Brain Levy. He had pointed out that countries whether developed or developing, varied in their political commitment to the changes and in the capability of their bureaucratic policies due to variations in their organizations and due to their political demands. In virtually all the countries the presumption should be for reforms to dismantle and not to restructure the entry rules and the non-functional discretionary investment incentives. The study had made a brilliant attempt to highlight the impossibility of adopting a single point approach, which could be common to all the countries through which trade and investment policy reform could be proceeded with. This was on account of the heterogeneous nature of the conditions that affect each country and the need to incorporate these institutional variations into the design of the trade and investment policy reforms. Thus the study

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had made use of wide cross country references as compared to the present study, which concentrates exclusively on the Indian scenario and the effectiveness of the policy reforms during the period of liberalisation in enhancing the capital inflows to improve the balance of payments position.

K.S.Mehta\textsuperscript{18} made an attempt to analyse the impact of the trade policy reforms. The author had first discussed briefly the trade policy changes that had taken place since 1978-79 the period of the beginning of trade liberalisation policies, and then had given a brief account of the post 1991 liberalisation policy changes. The author had evaluated the trade policy prior to 1991 through certain selected commodity imports for the periods -1978-79, 1984-85, 1988-89, 1989-90 and 1990-91. He had also evaluated the aggregate exports and imports and trade balances for the three-year period -1988-89, 1989-90, and 1990-91. The recent trade performance in the post 1991 reform scenario was analysed in terms of certain selected commodities for exports and imports for the period from April to December 1991. In his analysis the author had anticipated changes in the export structure, in the import regime and in the flow of invisibles.

The study by Srinivasa Madhur\(^{19}\) had dealt with the evaluation of the trade and external sector policies of new industrial countries like Taiwan, Korea and Singapore. The study had covered policies relating to the quantitative restrictions on trade, the level and structure of tariffs, the export subsidies, the foreign investments, capital flows and the management of the exchange rates. The key objective had been to put together the main elements of evaluation of trade and external sector reforms in the various regions. The study, though a descriptive one, had succeeded in its key objective namely, to trace the main impulses and imperatives that were behind the evaluation of the reforms over the three decades from the beginning of 1960 to the late eighties. However though this study had discussed at length foreign investments and capital flows, it was only one part of the entire study, and it had also focused its attention on the trade sector policies, and reforms, which is not the subject matter of the present study. Further, India is the only country under this study, which does not obviously fall within the ambit of the newly industrialised countries referred to by Srinivasa Mathur.

D. Singh\(^{20}\) in his paper had focussed his attention on the positive link between import liberalisation and export promotion. The author after a survey of the existing literature had measured the import intensity of Indian industries and then had assessed


the impact of the import intensity of the industries on exports. The author had concluded that the import liberalisation policies had a positive impact on the export of chemicals and chemical products, cotton textiles and the products of the engineering industries.

Narinder Kaur\textsuperscript{21} in her work had concentrated on the study of exports. She had analysed data on exports pertaining to a number of commodities for the period from 1970-71 to 1990-91. She had analysed the growth of exports, income and price elasticities and the instability in commodity exports. In her work, she had estimated export projections for the traditional commodities and non-traditional commodities. She also had estimated export projections for different destinations to the major regions and the major countries. The main objective of her study was to examine the trends in the growth of the external variables.

G. Ramakrishnan\textsuperscript{22} in his study had attempted to analyse the growth and fluctuations of India’s exports. The objective of his study was (1) to study the trends in export both at the aggregate and disaggregate levels, (2) to compute and to analyze the instability indices of the various sectors of exports and (3) to establish the association


\textsuperscript{22} Ramakrishna, “Growth and fluctuations in India’s exports”, \textit{The Indian Economic Journal}, Jan-Mar 1996, Vol.No.43, no.3, pp.134 to 139.
between growths in exports and export instability. This article had used the time series data for the various sectors of the exports of India to study the relationship between export growths and export instability during the period from 1960-61 to 1986-87. This paper had studied that the export promotion policies of the seventies had led to a difference in the growth rates of exports and on export instability. If India should succeed in achieving a high rate of growth through promotion of exports, it should try to minimize the fluctuations in its export earnings. Such a policy would reduce uncertainties in the international trade front and would promote economic development.

Sunanda Sen\textsuperscript{23} had made an analysis of India’s recent external crises. Here, the developmental dimension of the crises was separated from the short-term liquidity aspect, which was of paramount importance for the international lenders. This study adopted a systematic approach by beginning with an analysis of the turn of events, which had led to the crises followed by a set of conclusions dwelling on the distinction between the exogenous and the endogenous factors as well as on the developmental financial dimensions of the debt problem. Sen’s study had thus identified the external sector problems with the growing debt crises that had prevailed at that time. With the aid of mathematical tools, she had brought to light certain aspects of the debt issues.

thereby revealing a basic incongruity between the diagnosis and the remedial measures. This had presented a comprehensive picture of the various events, which had led to the other debt crises. A careful separation of the exogenous and endogenous factors had been attempted, which had given a clear idea of the factors causing the problem thereby facilitating suggestions and remedial measures. The present study differs entirely from the above mentioned study in that, while discussing the external sector, the emphasis had been placed on the capital as well as the current accounts of the balance of payments and their respective contributions to the share of the reserves and the factors causing fluctuations in the reserves, and foreign aid as a component, though the debt crises had not formed a significant part of the study.

During his visit to India, the prime Minister of Britain, John Major with a delegation of UK businessmen had encouraged the joint ventures and agreements between the private companies in the UK and in India. These joint ventures and agreements had covered the insurance sector, telecommunication, software, engineering goods, marketing of the real estate development, and the like. The interactions between the businessmen on either side were expected to result in their economic and commercial co-operation to a greater extent between the two countries.
Fifteen products had been identified for undertaking special export promotion efforts so as to increase the export of the Indian goods to the foreign markets including the United Kingdom. Some of the other supporting measures in this direction include participation by businessmen in the international trade fairs, an intensified exchange of business delegations, the supply of necessary information, extension of necessary facilities to the commercial organizations, the setting up warehousing facilities, the promotion of joint ventures and the like.\textsuperscript{24}

\textbf{Chitranjeb Neogi and Buddhadeb Gosh}\textsuperscript{25} in their study had focussed on “Impact of Liberalization on Performance of Indian Industries”. Globalization referred to a phenomenon that involved, basically a fast international spread of financial capital through multinational corporations (MNCs) and through new technologies. It meant the letting open the economy to the global market forces. Thus in July 1991, India had effected some very fundamental policy changes such as the near abolition of licensing procedures, the relaxation of the rigours of the MRTP and FERA, a reduced list of industries for reservation in the public sector, the automatic approval of foreign technology agreements, and the 51 percent foreign equity participation allowing for private investment in infrastructure development, the free import of capital goods, the

\textsuperscript{24} “Balance of trade with UK”, \textit{Facts for You}, Vol.18, May 1997, p.66.

adoption of radically liberal policy measures attracting FDI, new technology and NRI investment and the like, with a view to enhancing productivity and efficiency by creating a competitive environment.

Anita Das and R.C. Sharma\textsuperscript{26} in their analysis of India’s balance of payments related variables had shown that the balance of payments was affected by several factors, which were both endogenous and exogenous. It depended on the domestic economic situation as well as the world economic situations. India’s balance of payments problem essentially depended on its rapid export growth both merchandise as well as invisible exports, more of foreign investments in the core sectors, a prudent fiscal policy, a judicious exchange rate management policy and lastly, a stable and dedicated government at the Centre. The balance of payments of any country was the most important aspect of the country’s financial and economic health. In the case of India, the balance of payment problems had been a chronic one, starting from the early 1950s and it continues to be so till today.

An Analysis by G. Kulkarni\textsuperscript{27} had expressed the changes that had taken place in balance of payments position of the Indian economy. This study is of the greater importance for the modern times due to the increased dimensions of international trade in India. This analysis had focussed its attention on the changes that had taken place in capital account of the India’s Balance of Payments position and by using the survey approach, it had discussed the capital account behaviour in India after Independence.

Due to the small volume of international trade in the Indian economy during the period from 1947 to 1985, there were capital flows, which were very meager, and negligible. Obviously during this period of time, the capital flows were neither necessary nor were they allowed freely. Moreover, the strict capital controls imposed by the governmental authorities, had put some limitations also on capital mobility.

Nonetheless, the major changes in the capital flows had started after the 1990s due to the liberalisation policy efforts. This analysis had been an attempt to summarise the main changes that had taken place in capital inflows and outflows in the Indian economy.

The main aim of this analysis was to review the capital account changes in the Indian balance of payments. It was abundantly clear from the study that the deficit in the trade balance had to be financed either by borrowing from the institutions commercially or from the public. The Indian Government was caught in crisis situation when the supply of the foreign reserves almost got exhausted in the years 1989 and 1990. The devaluation of the Indian rupee, together with the newly instituted economic reform packages helped to salvage the situation in the year 1991. The gains due to economic liberalisation were witnessed in modern times in terms of betterment in the economic output as well as in the increased consumer’s surplus enjoyed by the consumers.

K. Padmanabhan\textsuperscript{28} in his article on “Liberalization and Foreign Investment in India” had explained about liberalization in India. His paper had revealed that the new deal policy of the Government of India had succeeded in reversing the downward drift of the economy. The response evoked by the reforms in the European countries, America and Japan had been overwhelming and had helped to establish a number of agreements between India and these countries, which had ultimately led to a rise in the flow of foreign investments in India. While the openness and transparency of the New Economic Policy had brought down the fear and suspicions of the foreign investors in

India, a few irritants like the political uncertainty, the BJPs (Bharathiya Janata Party), Swedish policy, the domination by bureaucracy and the like, continue to shadow the eagerness of the foreign investors to invest in the Indian market.

_**Anubhuti Shukla**[^29]_ in his study had made on attempt to analyse trade liberalization policies and export performance of the Indian economy. It was expected that the economic reforms would lead to an increase in exports and an improvement in trade balances. Three reasons attributed for this expectation were 1. Indian manufacturers had introduced advanced technologies to face the international competition 2. Inflow of FDI had risen, 3. Import duties had been reduced and regulations on the imports of capital goods had been relaxed. It was concluded that the Indian policy makers should come to grips with the need to sustain the meaningful policies when once they were introduced by rising above the narrow political or career objectives. Further, it should to be ensured that the policies were well integrated covering all the sectors.

_**Debesh Bhowmik**[^30]_ in his article on “Economic Reform, India’s Trade and Rupee Depreciation” had analysed the direction of the performance of India’s external sector in the context of economic reforms, which had been multidimensional in its nature. He

had tried to visualize the impact of the rupee depreciation with 28 various other currencies of the world in the managed and freely floated exchange rate mechanism using the rate of depreciation and its impact on trade by computing Marshall-Lerner variables and by considering the income elasticities of exports and imports. Moreover, he had observed the exchange rate volatility of the rupee in relation to the 28 currencies of the world during 1990-91 - 1999-2000 and studied its effect on the volume of India’s trade from those countries as a result of the depreciation of the rupee. Under the economic reform regime during the period from 1990-91 to 1999-2000, the rupee depreciation could not result in any positive and favourable impact on the 28 foreign currencies on the trade balances, on the price elasticities and the income elasticities when Marshall-Lerner condition was satisfied but their impact on the volume of trade had been rather successful. The rupee baht rate had showed an appreciation of about 5.08 % per annum satisfying the Marshall-Lerner condition, and income and price elasticities had not improved the positive trade balance. Therefore, the trade elasticities had not produced any significant result in the trade balances in our rupee exchange rate variations with the 28 foreign currencies under the managed and freely floating exchange rate mechanism during the reform period 1990-91 - 1999-2000.
Tarlok Singh\textsuperscript{31} in his analysis of the balance of trade position, exchange rate and trade policy regimes in India had expressed, that India’s external sector had continued to be affected by both the trade and the current account deficits since the inception of economic planning in India in 1951. The passive export policy regime of the 1950s (especially the period from 1952 to 62) was followed by the export subsidisation regime (from 1962 to 66) which, after an abortive attempt at liberalisation during the years 1966-68 was succeeded by a more restrictive regime during the period 1968-78. The subsequent regime with a selective relaxation of controls (1978 to 85) was followed by a more systematic approach towards liberalisation (1985 to 91) and then eventually by the paradigm shift and the adoption of a comprehensive structural adjustment programme with a more liberalized trade regime (from July 1991 onwards).

Sugata Marjit\textsuperscript{32} in her paper made an attempt to deliver the title of “Trade, Human capital and Growth – The Indian Perspective” had attempted to establish as to how export growth could eventually increase the overall growth and help the country in the reduction of poverty. The relationship among human capital formation, trade and growth had been discussed by a number of researchers. The expansion of international trade, in the form of skill based exports, would increase the total returns due to skill


formation and hence would attract more and more people towards higher education and skill upgradation. Such an impact would raise the productivity and also economic growth. Even twenty years ago, the world had not experienced such a rapid development in information technology, which when once developed, creates a formidable opportunity for the labour intensive and service-intensive products. In this new environment any country, which had a substantial pool of scientific and skilled personnel, would naturally have a better advantage and India possesses that advantage.

Kavita Bhatnagar in her study had attempted to analyse the structure of the world economy and the share of India in world’s exports. Her study had stated that the share of all the advanced economies was 57.1 percent of the world’s output in the year 2000 and it was 75.7 percent of the global exports of goods and services. The USA and six other major industrial countries had accounted for 45.4 percent of the global output and 47.7 percent of the global trade. The share of output and trade of the developing countries were found to be 37 percent and 20 percent respectively.

As a result of globalisation, India’s exports had accounted for less than one percent of the world’s total exports. It had reached its peak in the year 1966 and after that year, there was no significant improvement in India’s share in the world’s exports

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despite globalisation. It remained stagnant at the level of 0.64 percent during the first eight years of the reform period.

The Government of India on the 26th of June 2003 had cleared a sum of Rs.30 crores of foreign direct investment (FDI) proposals made by a Chinese company HAIER ELECTRICAL APPLIANCES to set up its 100 percent subsidiary unit in India.

The Chinese company had planned to set up a wholly owned subsidiary in Delhi for the manufacture, sale, supply, after sale services of its products and for carrying out wholesale trading activities in electrical products.

This proposal had been cleared due to the recent economic cooperation agreement between China and India during the then Prime Minister Atal Bihari Vajpayee’s visit to China.34

Kumar Venkat35 had discussed the effects of globalisation in his article on “Making Globalization Work”. The globalised economy was based on the idea that it was advantageous to produce only those things that a country could produce at a lesser

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cost than all others in the world for consumers elsewhere and that the adoption of advanced technologies would make all that possible. E.F. Schumacher had pointed out that even three decades back the choice of technology was the most crucial decision that a developing country was called upon to make. In a truly free global economy, countries and commodities might be able to choose technologies that were most appropriate for their local conditions. The discomfort of globalisation arises from the fact that a large number of corporations have already made this choice for us and have imposed a rather uniform standard all the world over for the technologies that everyone should adopt. Globalization that works for the people in all parts of the world should be built on a broad combination of technologies, with countries and communities made free to choose the technologies that were most appropriate for them.

Nidhi Nath Srinivas\textsuperscript{36} in his article on “Green Leaves Wilt on Balance of Payments” had emphasized that India was, at present, the fifth largest importer of raw vegetables after the US, the EU, Japan and Canada. In contrast, India had sold vegetables worth only $246 millions in the year 2002. Though India had a respectable 10\textsuperscript{th} place in the global export stakes, the balance of payments in respect of vegetables was still not a healthy one. India’s horticultural sector was not a net foreign exchange earner, though the country had several surprising albeit small success stories. It had

now become one of the top ranking 15 exporters in the world of rich crops like lettuce, fresh pepper, raisins, tomatoes, squash, grapes, pistachios, oranges, grapefruits, lemons and fresh cherries.

N.S. Siddharthan, K. Lal\(^{37}\) had focussed on the impact of the liberalisation policies on the growth of firms in India. The objective of the study was to analyse the impact of the liberalisation policies introduced by the Government of India since 1991 on the growth of firms. It covered the period from 1994 to 2000. The paper had argued that the policy changes introduced since 1991 had resulted in a change in the environment in which the firms were functioning. The impact of the specific determinants of a firm would vary over a period of time in accordance with the progress of the liberalisation measures. The results of the study had shown that during the initial years, the firm’s size, multinational enterprise affiliation, capital intensity, vertical integration and the import of capital goods had a negative impact on the growth of firms. However, in recent years the impact of these variables had changed into a positive and welcome trend and was significant, indicating the important changes that had been brought about by the policy of globalisation.

Vineet Anand\textsuperscript{38} in his article had described “Sea Changes Buffet Indian Trade” had stated that India’s import basket had also undergone significant changes in terms of the import requirements of petroleum crude and other petroleum products and also of non-petroleum imports in the country’s total volume of imports. The country’s oil import bill had almost trebled the past five-year period. It’s share in India’s total imports had also increased from 15% to 29% over the same five-year period. India’s trade imbalance with the rest of the world had been kept more or less in check in the past few years. As a result India’s trade deficit as a percentage of the total exports had declined. If the invisible exports were also taken into account, the country could register a positive trade balance over a period of time.

K.Revathi\textsuperscript{39} had published an article in the kisan world in the year 2004 entitled “Globalization: It’s Impact on Indian economy”, and discussed as to how globalization could offer significant opportunities to Indian businessmen. Firstly, India had greater opportunities to become the prime production centre of the world. In several sectors and more, particularly in the agro-based industries, India had enormous skills, which had made it the cheapest producer in the world. Secondly, it was of crucial importance for the Indian corporations to penetrate into the world markets and become multinationals abroad with wide markets and later become production centres spread across all over

\textsuperscript{38}Vineet Anand, “Sea Changes buffet Indian trade”, \textit{The Economic Times}, Aug 1, 2003, p.1
the globe. India had a national advantage in a wide range of agricultural, industrial and fashionable products. Thirdly, India held the promise to become a major partner in the global economy. It had the largest trained manpower, including farmers and scientists, engineers and professional entrepreneurs and varied types of skilled workers. The cost of the work force was much lower in India than in any other country in the developed world. This feature had provided a significant competitive advantage to India in relation to the other countries. Finally, opening up of the Indian economy was also an invitation to the foreign investors. Thus the inflow of foreign capital could help to enhance the productive activities and capabilities and thereby increase the national product of India. She had concluded that developing countries like India should be very careful in adopting the policy of globalization. It should see to it that, globalization resulted in prosperity and the driving away of poverty.

The RBI had been asked by the Ministry of Finance to announce the details of the policy and the new guidelines, the Finance Minister, Mr. Jaswant Singh had said that the automatic route would be allowed as long as the amount was utilized for investments in the “critical sectors”, in infrastructure development and in the small and medium scale enterprises, Mr. Singh had added that the new scheme would aim at minimizing the discretionary elements, besides simplifying and rationalizing the procedures. It would also promote transparency to all ECBs. The Finance Minister had said that the new
policy, had been evolved in consultation with the RBI, and would enable the corporates to access resources from the international markets at competitive rates.\footnote{The Hindu, “ECB Norms Eased”, Jan 10, 2004, p.10.}

An in-depth analysis of the various balance of payments related studies had helped the researcher to identify the research lacuna in this field and it had emphatically stressed the need for a study of the balance of payments as a comprehensive record of economic transactions of the residents of a country with the rest of the world. Though there were various studies in India, which had dealt with certain partial elements relating to the balance of payments phenomena, a multi dimensional analysis covering the various facets of the balance of payment had not been made, which was the need of the hour for framing suitable and appropriate policies. This research is a humble attempt to fill up this vacuum in the balance of payment studies in the Indian context. A comparative study of balance of payments position in India in the context of economic reforms would help the policy makers in understanding certain policy implications to help them move into the desired directions and the desired behavioural patterns.
Any serious and scientific research study requires an appropriate methodology, which should be a well-knit method that is adopted to solve systematically the research problem and to prove the authenticity of the work that has been carried out.

Collection of Data

The present study is completely dependent on the secondary data, since it requires a series of aggregate time series data spread over a period of time. Secondary
data are obtained from other published sources and are not collected directly. The information required for the present study was collected from the Reserve Bank of India Bulletin, published by the RBI – various Reports on Currency and Finance, Economic Survey reports and articles published in the various issues of the Journal of Economic and Political Weekly, Southern Economist and The Indian Economic Journal, Facts for You, Yojana, The Economic Challenger, Third Concept, Public Opinion Survey, and articles and news items in the daily newspapers such as The Hindu, the Economic Times, the Indian Express and the Financial Express.

Period of the Study

Data were collected for the period from 1981-82 to 2001-02. The period of study was further divided into two sub periods namely, the pre-reform period covering the years 1981-82 to 1990-91 and the post-reform period comprising the years from 1991-92 to 2001-02. The basic economic variables that have been considered in this study were exports, imports, trade deficits, current account, capital account and foreign exchange reserves.

Tools of Analysis
A few statistical tools have been used to analyse the collected data to enable a meaningful interpretation of the results for analyzing the data.

The researcher has analysed the collected data with the basic objectives of the study in mind.

(i) Index Numbers
(ii) The Time Series Analysis
(iii) The Semi-log Model
(iv) The Chow Test
(v) Openness of Trade and
(vi) The Mag-bean Instability Index

**Index Numbers**

The Index Number is a statistical measure designed to exhibit the changes in one variable or the change in a group of related variables spread over a period of time, or with respect to the geographic locations, or such other types of characteristics.

\[
\frac{\sum P_1}{\sum P_0} \times 100
\]

\(P_1\) – Current Year
P_0- Base Year

Time Series Analysis

One of the most important tasks before the economists and the businessmen these days, is to make estimates for a future period for which time series data could be profitably used. The measurement of a trend line by using the method of the least squares is the most widely used method in actual practice. It is a mathematical model, which helps us to fit a straight line.

\[ Y = \beta_0 + \beta_1 t \]

Where,

- \( Y \) = Exports in crores and
- \( \beta_0 \) = Constant
- \( \beta_1 \) = Slope coefficient
- \( t \) = Time trend variable taking values (1,2,3….22)
- \( U_t \) = Stochastic variable

The Compound Growth Rate
Economists, business people, and also the governments are often interested in finding out the rates of growth for a number of variables, such as population, GNP, money supply, employment, productivity, trade deficit and the like.

To find out the rate of growth of any one particular variable, the following formula had been used.

\[ Y_t = Y_0 (1+r)^t \]

Where ‘r’ is the compound rate of growth of Y.

Taking the natural logarithm

\[ \ln Y_t = \ln Y_0 + t \ln (1+r) \]

Now letting

\[ \beta_0 = \ln Y_0 \]
\[ \beta_1 = \ln (1+r) \]

To write as

\[ \ln Y_t = \beta_1 + \beta_2 t \]

Adding the disturbance term to the previous equation, we get

\[ \ln Y_t = \beta_1 + \beta_2 t \]
This model is like any other linear regression model in that the parameters $\beta_1$ and $\beta_2$ are linear. The only difference is that the regressand is the logarithm of $Y$ and the regressor is the “time”, which will take the values of 1,2,3, etc.

This model has been used to find out the growth rates of imports, exports, invisibles, current account, capital account and the monetary movements in monetary phenomena.

‘t’ test

To examine whether the growth rates had differed between the two assumed sub periods, the following t-test had been used.

$$t = \frac{b_1 - b_2}{\sqrt{(SEb_1)^2 + (SEb_2)^2}}$$

Here $b_1$ represented the slope coefficient obtained in the regression model, which was estimated for the pre-reform period and $b_2$ represented the slope coefficient obtained in the regression model estimated for the post-reform period.

And SE represented the standard error
If the calculated ‘t’ value was found to be greater than table value for \((n_1 + n_2 - 2)\) degrees of freedom the growth rate was statistically significant.

This model had been used to find out the growth rates in exports, imports, invisibles, the current account, the capital account and the monetary movements.

**Chow Test**

The Chow test has been used to find out the structural changes in the variables between the two assumed periods. It has been used to analyze the balance of payments position before the years 1980-81 to 1990-91 and after the years 1991-92 to 2001-02.

\[
F = \frac{S_5 / k}{S_4 / (n_1 + n_2 - 2k)}
\]

Where,

\(N_1 = \text{Number of years before liberalization}\)

\(N_2 = \text{Number of years after liberalization}\)

Degrees of freedom = \((k, N_1 + N_2 - 2K)\)

\(S_5 = S_3 - (S_1 + S_2)\)
\[ S_4 = S_1 + S_2 \]

\[ S_1 = \text{Error sum of Squares obtained in the first equation} \]

\[ S_2 = \text{Error sum of Squares obtained in the second equation} \]

\[ S_3 = \text{Combined Error sum of Squares} \]

Computed F-value was compared with table ‘t’ for \( K, N_1 + N_2 - 2K \) degrees of freedom. If computed F was greater than the table F, it indicated the structural change in the post-liberalization period as compared with that in the pre-liberalization period to balance of payments.

This model has been used to find out the structural changes of exports, imports, invisibles, current account and capital account.

**Openness of Trade**

Percentage share of exports in GDP is taken as export openness while percentage share of import in GDP is the import openness of the country. But the percentage share of export plus import in GDP is considered as the measure of trade openness. Mathematically,
\[(X + M)\]

\[O = \frac{\text{---------} \times 100}{\text{GDP}}\]

Where,

\[X = \text{Export,}\]

\[M = \text{Import,}\]

\[\text{GDP} = \text{Gross Domestic Product}\]

Mag-Bean Instability Index

The problem of instability in the trade flows is an issue of special significance in an analysis of the trade behaviour. Instability in the export earnings in the balance of payments position could aggregate the debt situation of the country. It may also cause fluctuations in exchange rates and worsen the situation of inflation. Hence special measures and institutional reforms might be required to solve the nature of the instability and its intensity and extent by analyzing the factors responsible for it and then by finding out the ways and means of containing it.

\[\log V = \frac{1}{N} \sum [(\log X_{t+1} / X_t) - m]^2\]
Where,

\[ X_t = \text{Export value for period } t \]

\[ M = \text{Mean value of logarithmic differences} \]

\[ M = \frac{1}{N-1} \sum_{t=1}^{N} (\log X_{t+1} - \log x_t) \]

\[ N = \text{Number of observations in the time series data} \]

The instability index is defined as

\[ Z = \text{Antilog} (\sqrt{\log v} - 1) \times 100 \]

The index has been used to find out the nature of the instability in the exports and in the imports.

CHAPTER III

BALANCE OF PAYMENTS ON CURRENT ACCOUNT

Usually an analysis of the data is made prior to its interpretation. The purpose of an analysis is to build up a sort of an intellectual model, where the relationships involved were carefully brought about so that some logical and meaningful inferences could be