



## A STUDY ON TREND ANALYSIS OF BALANCE OF PAYMENTS IN INDIA

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### Abstract

This paper examines the trend pattern of balance of payment during the pre and post devaluation period and the impact of devaluation on balance of payment. This assessment has been carried with paired sample 't' test. The result indicates substantial improvement of balance of payments during the pre- to post-devaluation period.

### Introduction

The balance of payments (BOP) is the method countries use to monitor all international monetary transactions at a specific period of time. Usually, the BOP is calculated every quarter and every calendar year. All trades conducted by both the private and public sectors are accounted for in the BOP in order to determine how much money is going in and out of a country. If a country has received money, this is known as a credit, and, if a country has paid or given money, the transaction is counted as a debit. Theoretically, the BOP should be zero, meaning that assets (credits) and liabilities (debits) should balance. But in practice this is rarely the case and, thus, the BOP can tell the observer if a country has a deficit or a surplus and from which part of the economy the discrepancies are stemming. The BOP is divided into three main categories: the current account, the capital account and the financial account. Within these three categories are sub-divisions, each of which accounts for a different type of international monetary transaction.

### The Current Account

The current account is used to mark the inflow and outflow of goods and services into a country. Earnings on investments, both public and private, are also put into the current account. Within the current account are credits and debits on the trade of merchandise, which includes goods such as raw materials and manufactured goods that are bought, sold or given away (possibly in the form of aid). Services refer to receipts from tourism, transportation (like the levy that must be paid in Egypt when a ship passes through the Suez Canal), engineering, business service fees (from lawyers or management consulting, for example), and royalties from patents and copyrights. When combined, goods and services together make up a country's balance of trade (BOT). The BOT is typically the biggest bulk of a country's balance of payments as it makes up total imports and exports. If a country has a balance of trade deficit, it imports more than it exports, and if it has a balance of trade surplus, it exports more than it imports. Receipts from income-generating assets such as stocks (in the form of dividends) are also recorded in the current account. The last component of the current account is unilateral transfers. These are credits that are mostly worker's remittances, which are salaries sent back into the home country of a national working abroad, as well as foreign aid that is directly received.

### The Capital Account

The capital account is where all international capital transfers are recorded. This refers to the acquisition or disposal of non-financial assets (for example, a physical asset such as land) and non-produced assets, which are needed for production but have not been produced, like a mine used for the extraction of diamonds. The capital account is broken down into the monetary flows branching from debt forgiveness, the transfer of goods, and financial assets by migrants leaving or entering a country, the transfer of ownership on fixed assets (assets such as equipment used in the production process to generate income), the transfer of funds received to the sale or acquisition of fixed assets, gift and inheritance taxes, death levies, and, finally, uninsured damage to fixed assets.

### The Financial Account

In the financial account, international monetary flows related to investment in business, real estate, bonds and stocks are documented. Also included are government-owned assets such as foreign reserves, gold, special drawing rights (SDRs) held with the International Monetary Fund, private assets held abroad, and direct foreign investment. Assets owned by foreigners, private and official, are also recorded in the financial account.

### Objective of the Study

1. To estimate trend and pattern of current account, capital account and balance of payment before devaluation.
2. To estimate trend and pattern of current account, capital account and balance of payment after devaluation.
3. To know effect of devaluation on current account, capital account and balance of payment in India.

### Hypothesis

1.  $H_0$  : There is no significant effect of devaluation on current account.

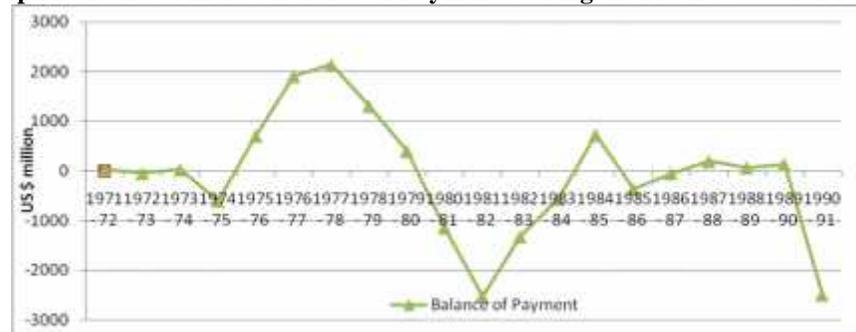
2.  $H_0$  : There is no significant effect of devaluation on capital account.
3.  $H_0$  : There is no significant effect of devaluation on balance of payment.

**Data Source and Methodology**

Basic methodology adopted in this study will be trend analysis. The study applies paired sample ‘t’ test for impact of devaluation on balance of payment. In this study annual data is used from 1970-71 to 2015-16. The all data have been collected from Hand Book of Statistics, RBI.

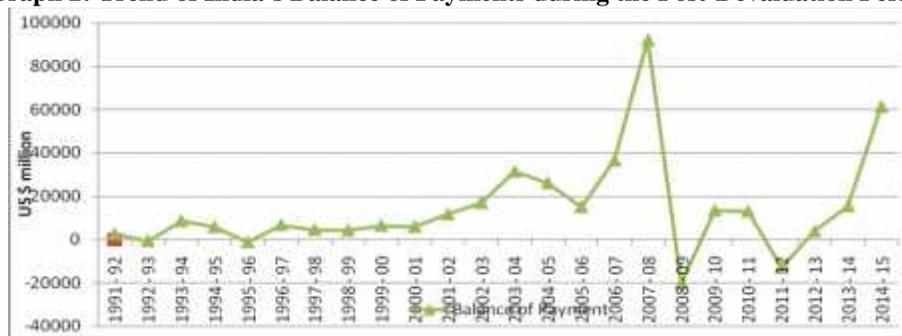
Before the devaluation of money it can be observe from the above graph no. 9 there was very fluctuation in balance of payment, In 1970’s the position of balance of payment is satisfactory, In 1980’s the balance of payment is adversely affected due to trade deficits. It can be observe from the above graph that balance of payment decline sharply in 1990-91 due to domestic political developments affected confidence abroad in Indian economy.

**Graph 1: Trend of India’s Balance of Payments during the Pre-Devaluation Period**



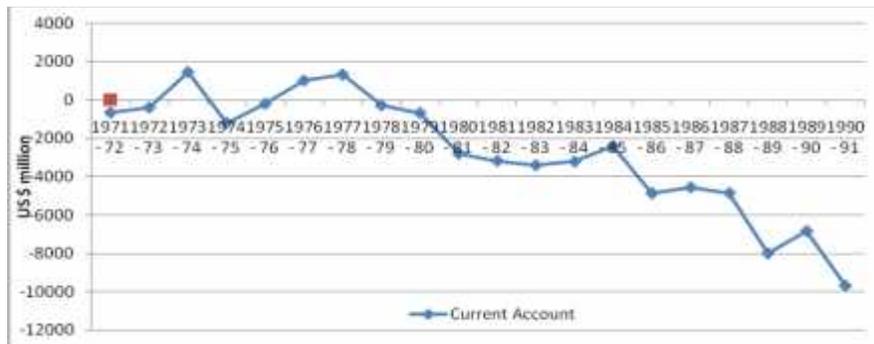
The analysis of balance of payments pattern indicates that on an average there was significant increase during the period. It accounted from US dollar 2599 million in 1991-92 to US \$ 61406 million in 2014-15. There was a deficit in this account in 1992-93, 1995-96, 2008-09 and 2011-2012 (Graph 2).

**Graph 2: Trend of India’s Balance of Payments during the Post-Devaluation Period**



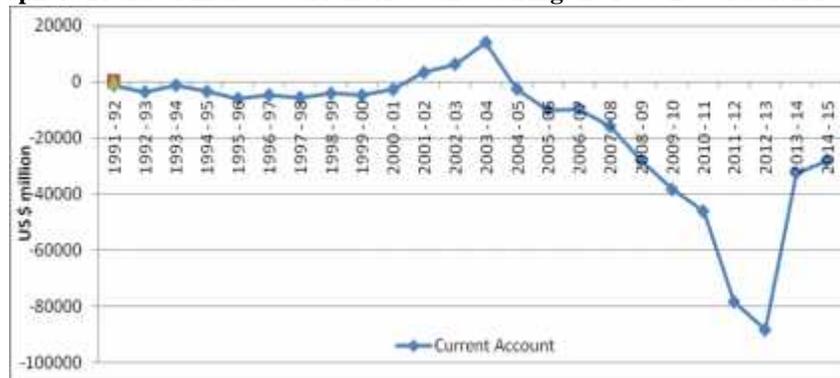
The analysis of pattern of current account position of India’s balance of payments shows that the deficit of this account was increased substantially during the pre-devaluation period. In absolute US dollar value, it has gone up from 290 million during 1978-79 to 9680 million during 1990-91. It is mainly due to continuous decline of surplus in the invisible account in this period (Graph 3).

**Graph 3: Trend of India’s Current Accounts during the Pre-Devaluation Period**



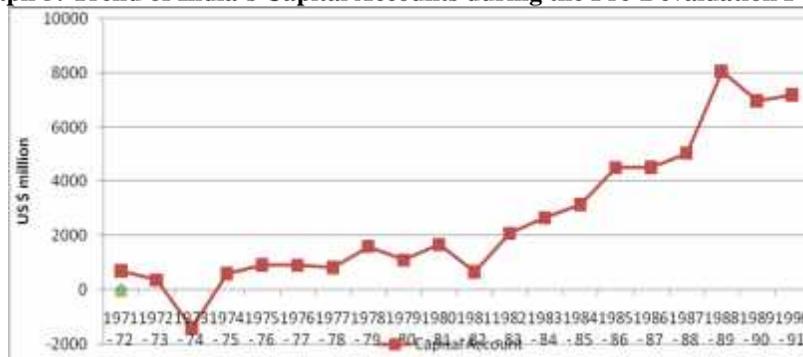
The current account position of India's balance of payments shows an increasing trend during the post-devaluation period. In absolute US \$ value, the deficit of this account has gone up from 1178 million in 1991-92 to 27937 million in 2014-15. From the above graph it can be shown that there was a surplus on current account in 2001-02, 2002-03, 2003-04. It is the first time in post independent period that there was a current account surplus for three consecutive years (Graph 4).

**Graph 4: Trend of India's Current Accounts during the Post-Devaluation Period**



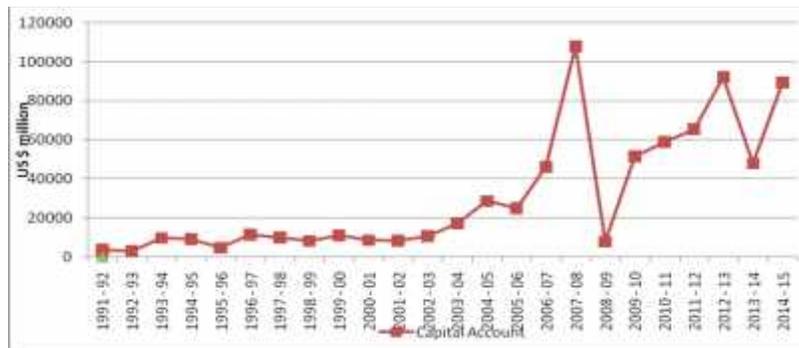
It can be seen from the above figure that there was a substantial increase of capital surplus. The overall trend of the account shows an upward movement during the period. It could be observed that the capital account has increased from US \$ 580 million in 1970-71 to US \$ 7188 million in 1990-1991. There was a high growth rate of current account as compared to the growth rate of capital account of the balance of payments during the pre-evaluation period (Graph 5).

**Graph 5: Trend of India's Capital Accounts during the Pre-Devaluation Period**



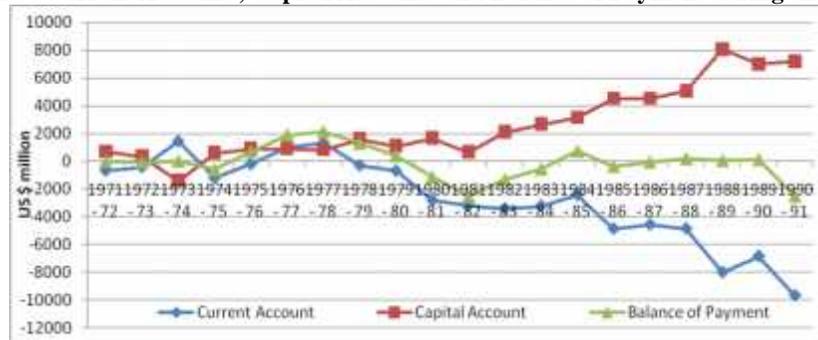
The analysis of capital account pattern indicates that on an average there was significant increase during the period. It could be observed that the capital account has increased from US \$ 377 million in 1990-91 to US \$ 89344 million in 2014-15. It can be observed from the above graph that Current account inflows decline sharply in 2008-2009 due to recession foreign institution withdrawal their resources (Graph 6).

**Graph 6: Trend of India's Capital Accounts during the Post-Devaluation Period**

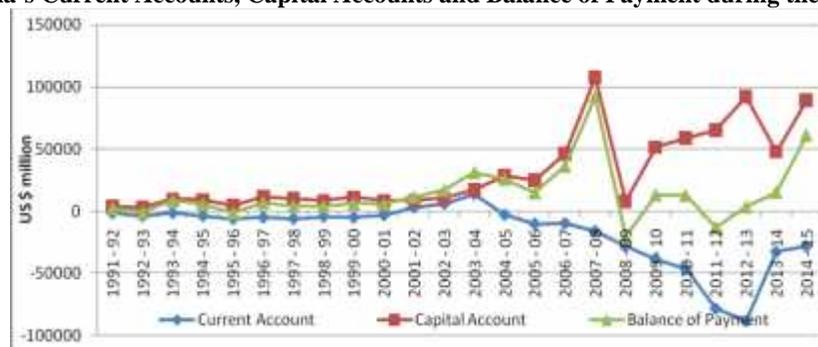


The analysis balance of payment deficits in pre and post devaluation periods shows that there was an increase from US \$ 68.95 million in the pre devaluation period to US \$ 14473.71 million in the post devaluation period. It is interesting to see that such an average increase of balance of payment deficit from pre to post devaluation period is statistically significant at 5 per cent level as the results of 't' value depicts. Further, the analysis of current account indicates that on an average the account indicates in nominal terms has increased from the pre devaluation to post devaluation periods. It accounted to nearly US \$ -16216.8 million in the post devaluation period as against the US \$ -2576.52 million in the pre devaluation period. The results of 't' confirm that the change of current account between pre and post devaluation periods is significant at 5 per cent level of significance. This situation has not been different the case of capital accounts. The results of 't' suggest that there was also significant increase in the capital accounts in an absolute term from pre devaluation to post devaluation period.

**Graph 7: Trend of India's Current Accounts, Capital Accounts and Balance of Payment during the Pre-Devaluation Period**



**Graph 8: Trend of India's Current Accounts, Capital Accounts and Balance of Payment during the Post-Devaluation Period**



**Table 1: Trend of India's Current Account, Capital Account, and BOP Pre - Devaluation Period**

Year	Current Accounts	Capital Accounts	Balance of Payments
1971 - 72	-669	697	28
1972 - 73	-403	360	-43
1973 - 74	1444	-1416	28
1974 - 75	-1198	600	-599
1975 - 76	-206	913	707



1976 - 77	1001	905	1905
1977 - 78	1313	828	2141
1978 - 79	-290	1597	1308
1979 - 80	-685	1090	405
1980 - 81	-2804	1665	-1140
1981 - 82	-3179	657	-2523
1982 - 83	-3407	2087	-1319
1983 - 84	-3216	2655	-561
1984 - 85	-2417	3147	730
1985 - 86	-4867	4506	-361
1986 - 87	-4560	4512	-47
1987 - 88	-4852	5047	195
1988 - 89	-7997	8064	68
1989 - 90	-6841	6977	136
1990 - 91	-9680	7188	-2492
<b>Average 1970 - 71 to 1990 - 91</b>	<b>-2576.52</b>	<b>2507.57</b>	<b>-68.95</b>

Source: Handbook of Statistics on Indian Economy, Reserve Bank of India 2015

#### Trend of India's Current Account, Capital Account, and BOP Post - Devaluation Period

Year	Current Accounts	Capital Accounts	Balance of Payments
1991 - 92	-1178	3777	2599
1992 - 93	-3526	2936	-590
1993 - 94	-1159	9694	8535
1994 - 95	-3369	9156	5787
1995 - 96	-5912	4690	-1222
1996 - 97	-4619	11412	6793
1997 - 98	-5499	10010	4511
1998 - 99	-4038	8260	4222
1999 - 00	-4698	11100	6402
2000 - 01	-2666	8535	5868
2001 - 02	3400	8357	11757
2002 - 03	6345	10640	16985
2003 - 04	14083	17338	31421
2004 - 05	-2470	28629	26159
2005 - 06	-9902	24954	15052
2006 - 07	-9565	46171	36606
2007 - 08	-15737	107901	92164
2008 - 09	-27915	7835	-20079
2009 - 10	-38180	51622	13441
2010 - 11	-45945	58996	13050
2011 - 12	-78155	65324	-12832
2012 - 13	-88163	91989	3826
2013 - 14	-32397	47906	15508
2014 - 15	-27937	89344	61406
<b>Average 1991 - 92 to 2014 - 15</b>	<b>-16216.8</b>	<b>30690.67</b>	<b>14473.71</b>

Source: Handbook of Statistics on Indian Economy, Reserve Bank of India 2015

#### Conclusion

This paper investigates the effect of devaluation on balance of payment for India using data 1970-71 to 2014-15. Further, the study also analyzed the trend pattern of various components of balance of payment such as current account and capital



account. In this context, the present study examines it using paired sample 't' test. The study derives the following inferences from the trend analysis:

The mean test of balance of payments confirmed the improvement of balance of payments from pre-devaluation period to post-devaluation period. It accounts on an average US \$ 14473.71 million during the post-devaluation period 1991-92 to 2014-15 as compared to US \$ 68.95 million during the pre-devaluation period 1970-71 to 1990-91 This improvement of balance of payments of pre-devaluation and post-devaluation periods is significant at 5 per cent significance level.

The mean test of current account confirmed the improvement of current account from pre-devaluation period to post-devaluation period. It accounts on an average US \$ -16216.8 million during the post-devaluation period 1991-92 to 2011-12 as compared to US \$ -2576.52 million during the pre-devaluation period 1970-71 to 1990-91 This improvement of current account of pre-devaluation and post-devaluation periods is significant at 5 per cent significance level.

The mean test of capital account confirmed the improvement of capital account from pre-devaluation period to post-devaluation period. It accounts on an average US \$ 30690.67 million during the post-devaluation period 1991-92 to 2011-12 as compared to US \$ 2507.57 million during the pre-devaluation period 1970-71 to 1990-91 This improvement of capital account of pre-devaluation and post-devaluation periods is significant at 5 per cent significance level

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