

FACTORS AFFECTING INDIA'S BALANCE OF PAYMENT (BOP) AFTER LIBERALIZATION (1991)

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ABSTRACT

Any national macro economic policy has four broad objectives viz., high level of employment, control of inflation, rapid economic growth and maintenance of equilibrium in the international balance of payments. The last one is specially of importance to developing nations because the trade and payment volumes are comparatively large in relation to domestic economic activity. The management of balance of payment is thus of great importance to the economic progress of a developing nation. Balance of payments is one of the major indicators of a country's status in international trade, with net capital outflow

*The aim of the study is to find out the factors affecting India's BOP since liberalization in 1991. India has made rapid strides in international trade after opening of the economy. Once the factors that directly influence BOP can be identified, we can take necessary and adequate measures to have a balance of payment equilibrium. A **balance of payment equilibrium** is defined as a condition where the sum of debits and credits from the current account and the capital and financial accounts equal to zero.*

Several factors that directly influence India's BOP have been identified and data for the factors has been collected from secondary sources (Indiastat.com). Statistical tools (Multiple Regression, ANOVA and Karl Pearson coefficient of correlation) have been used to analyse the data. During the study it has been assumed that BOP has a linear relationship with the factors (discussed in the study) affecting it.

The study will throw light on the factors that directly or indirectly affect India's BOP. Once the factors have been identified and relationship established, managing BOP will become easier. The study will aid the government to undertake necessary control measures through the monetary and fiscal policy. The study will also reveal how much (quantitatively) the factors are responsible for India BOP.

KEY WORDS

BOP, deficit, export, import, trade.

BALANCE OF PAYMENTS

In economics, the balance of payments, (or BOP) measures the payments that flow between any individual country and all other countries. It is used to summarize all international economic transactions for that country during a specific time period, usually a year. The BOP is determined by the country's exports and imports of goods, services, and financial capital, as well as financial transfers. It reflects all payments and liabilities to foreigners (debits) and all payments and obligations received from foreigners (credits). Balance of payments is one of the major indicators of a country's status in international trade, with net capital outflow. The Balance of Payments for a country is the sum of the current account, the capital account and the financial account.

DETERMINANTS OF INDIA'S BOP

INDIA'S TRADE BALANCE



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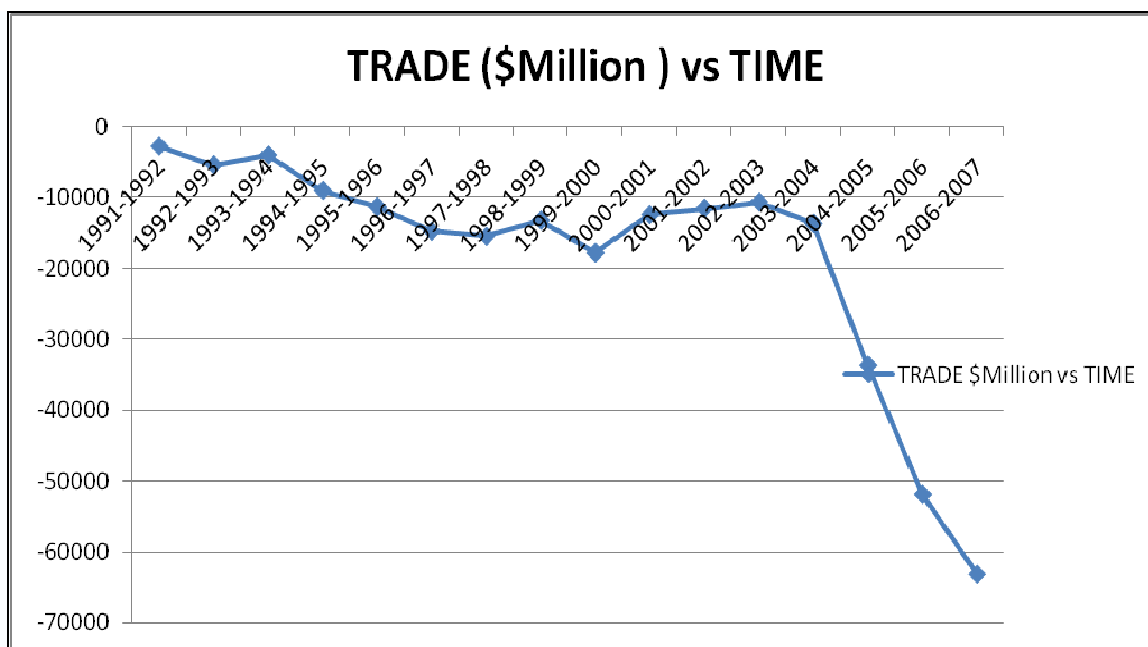
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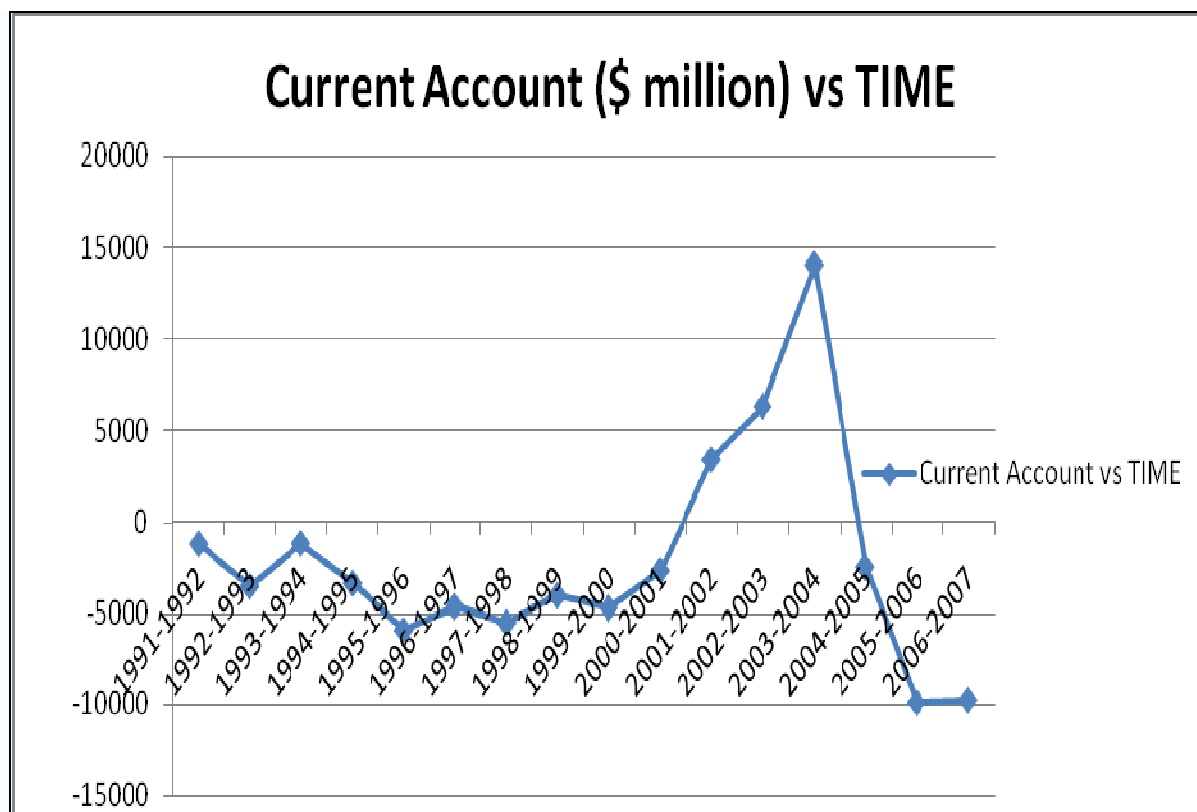


source: Indiastat.com

figure : 1

After liberalization of economy as per suggestions of Rangarajan committee Trade Balance (Export-Import) increased in terms of volume of trade. Both export and import increased exponentially. In 2005 Export reached \$128083 million vs Import of \$191254 Million. Exports increased due to increase in service sector contribution specially software and Import increased because of Oil Imports which has a major contribution of Imports volume. With the onset of structural reforms in 1991-92, accompanied initially by severe import compression measures and determined efforts to encourage repatriation of capital, there was a turnaround in the second half of 1991-92. Over the next two years (1993-95), mainly due to foreign investment flows, robust export growth and better invisible performance, the balance of payments situation turned comfortable and reserves surged by US \$ 14 billion. A combination of prudent and unique policies for stabilisation and structural change ensured that the crisis did not translate into generalised financial instability. In the 1990s, the lessons drawn from managing the crisis led to external sector policies that emphasised the competitiveness of exports of both goods and services, a realistic and market-based exchange rate regime, external debt consolidation and a policy preference for non-debt creating capital flows. These policies ensured that the current account deficit remained around one per cent of gross domestic product (GDP) and was comfortably financed even as the degree of openness of the economy rose significantly relative to the preceding decades and capital flows began to dominate the balance of payments.

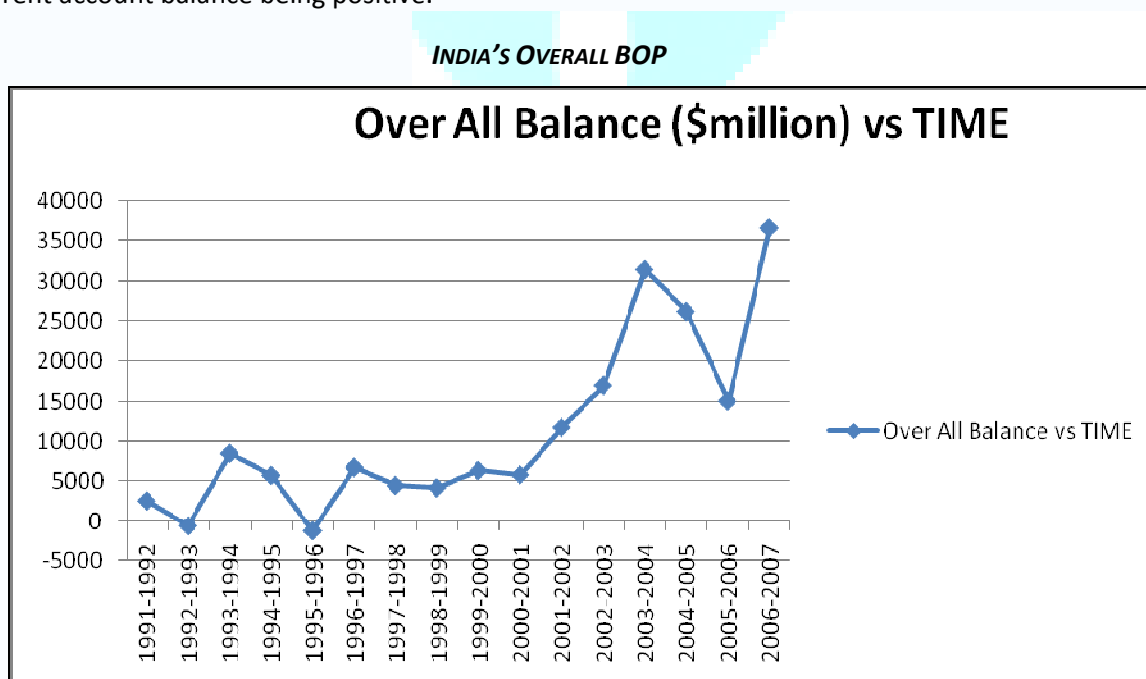
INDIA'S CURRENT ACCOUNT BALANCE



source: Indiatstat.com

figure : 2

Total current account balance (Trade +Invisible) remains constant even though imports were high due to remittance as well as services. But after 2003-2004 the Current account again was negative due to tremendous demand of Oil . In 2004-2005 the Trade Volume was very less which accounts for the Current account balance being positive.



source: Indiatat.com

figure : 3

Overall balance (Total Capital Account, Current Account and Errors & Omissions) increased after LERMS. This increase is partially due to foreign investment as well as increase in remittance.

LERMS (Liberalised Exchange Rate Management System)

After the Gulf crisis in 1991, the broad framework for reforms in the external sector was laid out in the report of the high level committee on Balance of Payments, popularly known as Rangarajan Committee, as it was chaired by Dr. C. Rangarajan, former Governor of the Reserve Bank of India and currently Chairman of the Economic Advisory Council to the Prime Minister. After downward adjustment of the exchange rate in July 1991, following the recommendations of this Committee to move towards the market-determined exchange rate, the Liberalised Exchange Rate Management System (LERMS) was adopted in March 1992 involving dual exchange rate system in the interim period. The LERMS was essentially a transitional mechanism and a downward adjustment in the official exchange rate took place in early December 1992 and ultimate convergence of the dual rates was made effective from March 1, 1993, leading to the introduction of a market-determined exchange rate regime. The unification of the exchange rate of the Indian rupee was an important step towards current account convertibility, which was finally achieved in August 1994 by accepting Article VIII of the Articles of Agreement of the IMF. Capital account liberalisation started as a part of wide-ranging reforms beginning in the early 1990s. The Rangarajan Committee recommended

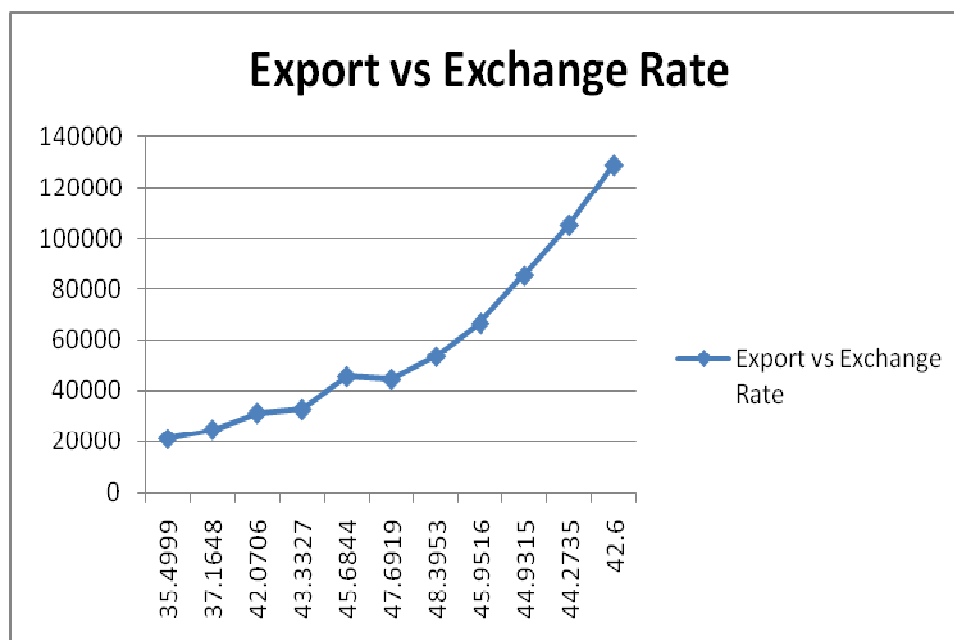
- liberalization of current account transactions leading to current account convertibility need to contain current account deficit within limits
- compositional shift in capital flows away from debt to non-debt creating flows
- strict regulation of external commercial borrowings, especially short-term debt discouraging volatile elements of flows from non-resident Indians
- gradual liberalisation of outflows
- disintermediation of Government in the flow of external assistance.

Finally, it was decided to call it Liberalised Exchange Rate Management System (LERMS). The LERMS was an extremely useful period of learning for the market and authorities alike; it allowed players to respond on a limited scale to price signals. The difference between unofficial market rate and official market rate narrowed considerably. In about a year's time, the country moved from the dual exchange rate regime to a unified market-based exchange rate regime.

DEVALUATION OF RUPEES: "HOOK SKIP AND JUMP"

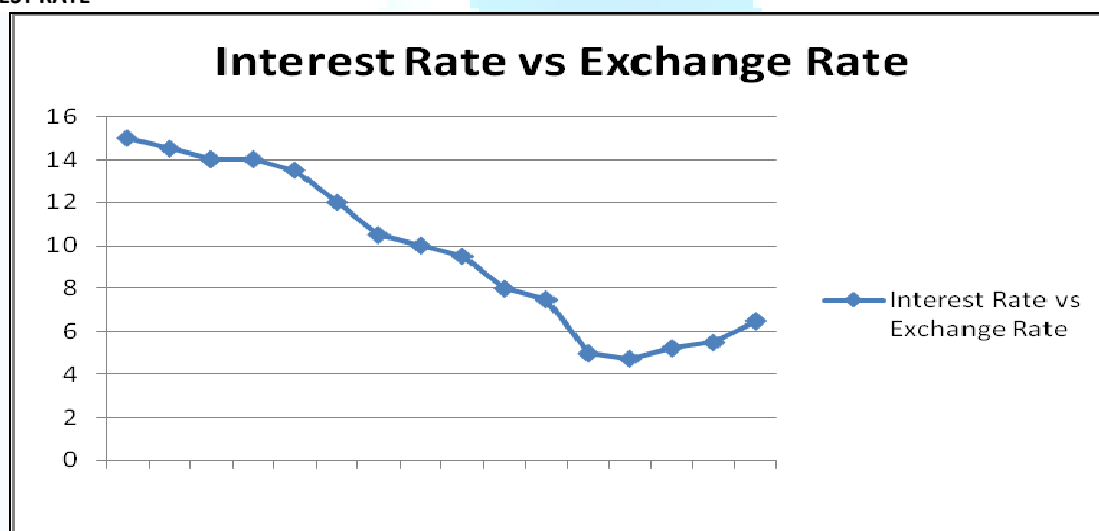
The Reserve Bank of India (RBI) devalues the rupee in a two-stage operation code-named "Hop-Skip-and-Jump", to restore external confidence in India and enable the government to seek balance of payments (BoP) support from the International Monetary Fund and the World Bank. The 'hop' was to "test waters", both political and economic. Dr Manmohan Singh, however, was convinced it was a now or never jump. He thought that it was much better to leave the rupee under-valued than over-valued, and asked the "man on the spot" to go ahead.

RBI deputy governor C Rangarajan, announced the jump. The devaluation of rupees helped to increased the exports and also the overall balance of payments.



source: Indiatat.com

figure : 4

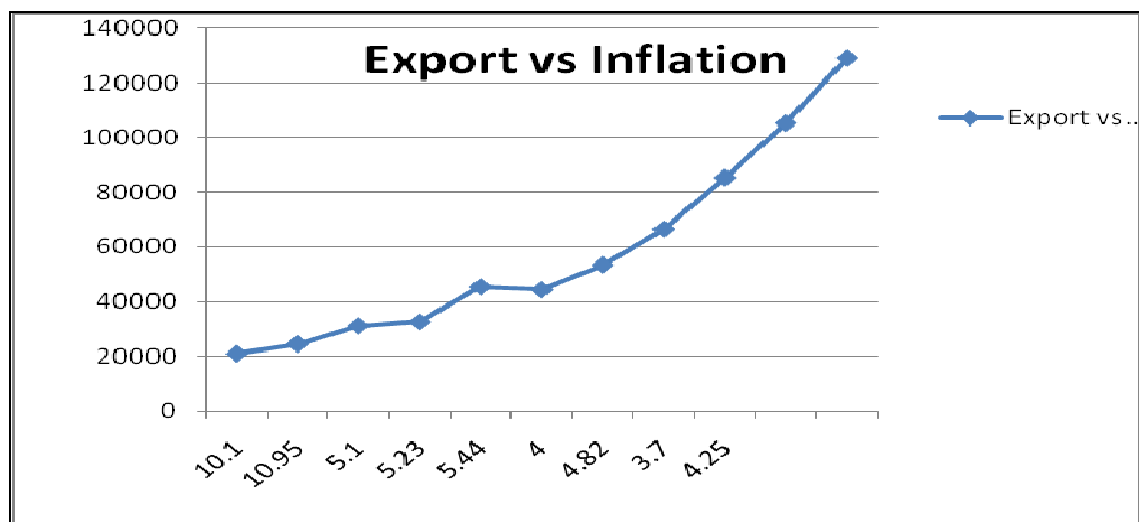
INTEREST RATE

source: Indiatat.com

figure : 5

By Changing the Interest rates i.e. decreasing the interest rates will leave more liquidity with people and also the value of money, which is directly proportional to interest rates, will decrease due to lower demand and more supply of money. It will go on decreasing till the equilibrium is reached. The relation between the Interest rates and Value of money is shown below. The exchange rate is negatively correlated to Interest rate.

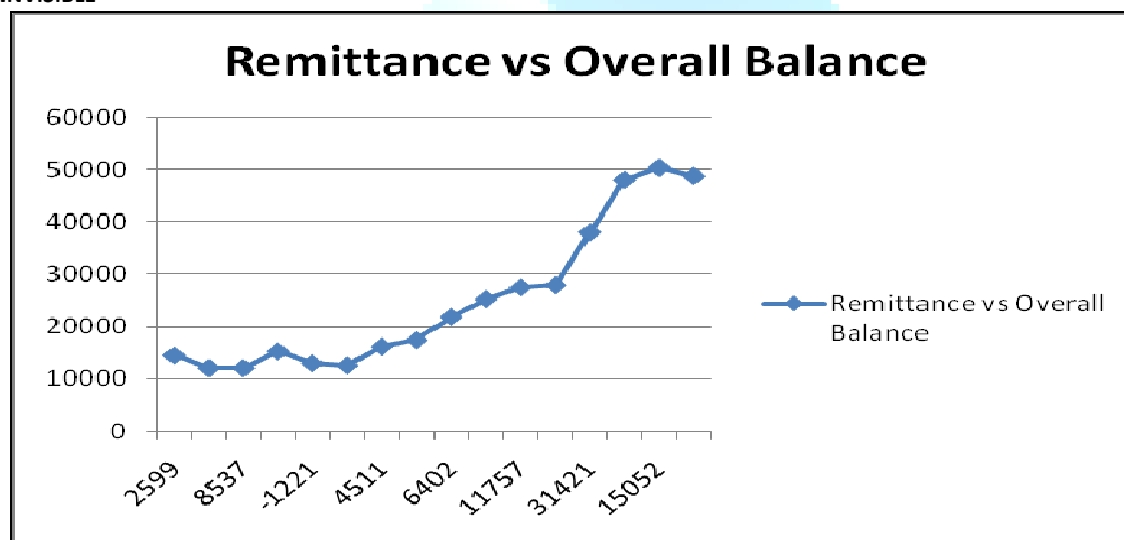
INFLATION



source: Indiatat.com

figure : 6

Inflation is directly contributing to increase in imports. More the inflation, costlier domestic products, less exports. Reduction in inflation is the key factor for increasing the exports. The relation between the inflation and exports is shown below. The Inflation is also negatively co-related to Exports.

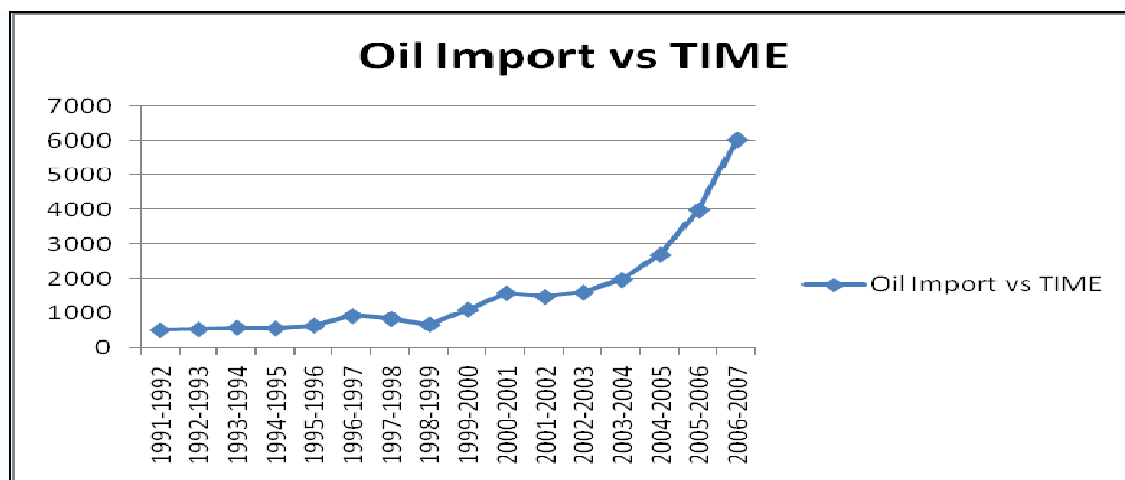
INVISIBLE

source: Indiatat.com

figure : 7

After 1991, invisible (services, Transfer and income) factor has contributed a lot in terms of current account due to which BOP has increased. The relation is shown above.

OIL IMPORTS

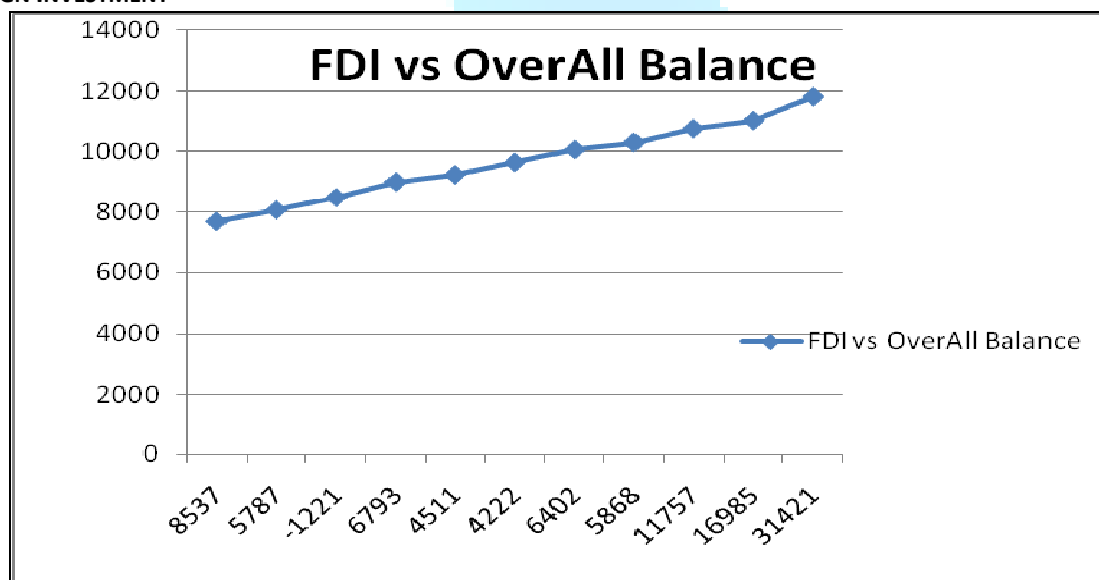


source: Indiatat.com

figure : 8

As Growth increased the Oil imports Bill of India also increased to all time high. The oil contributed about 80% of India's Imports. Following table shows the relation between the oil imports per time.

FOREIGN INVESTMENT

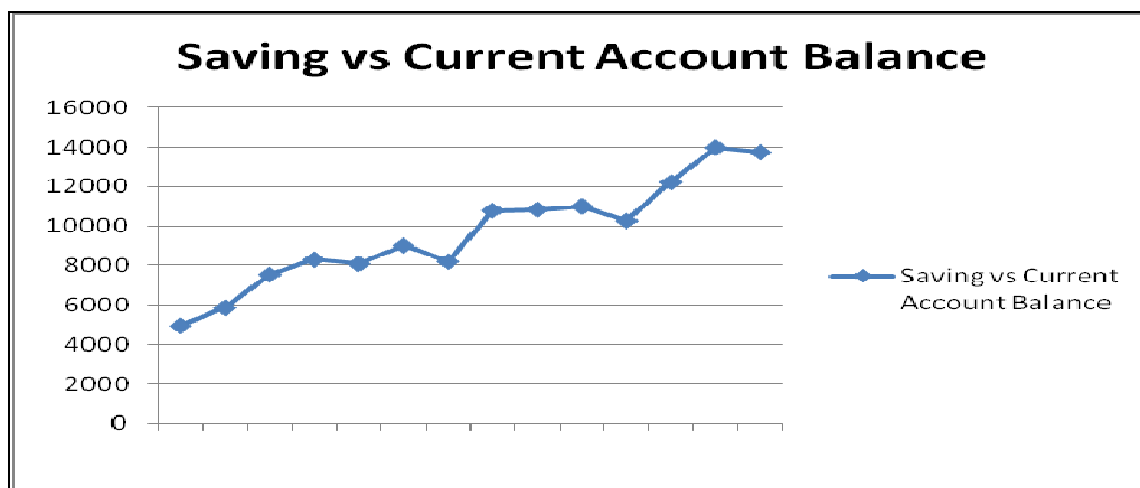


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figure : 9

The liberalization of economy has resulted to make the India more lucrative in terms of investment opportunity due to tax rebates and promoting the foreign investments. The following diagram shows the overall balance increase due to FDI.

RELATION BETWEEN CHANGES IN CA BALANCE AND SAVINGS



source: Indiatat.com

figure : 10

The data for Savings-investment is shown in the graph. The House-hold saving is highest contributor of savings.

RELATIONSHIP OF BALANCE OF PAYMENTS WITH INFLUENCING FACTORS

We have considered following factors while calculating a linear relationship of balance of payments with other factors:

- *Exchange Rate: Exchange rate plays a major role in influencing export and import. Depreciation in currency makes export cheaper for other nations and an appreciation makes import cheaper for our own country population.*
- *Inflation rate: Inflation also plays a role in influencing export and import. If inflation rate is more in other countries as compared to our countries, then exports will increase and vice versa.*
- *Expenditure: Expenditure also plays a role in influencing Balance of payments.*
- *Investments: Investments includes foreign investments, which also increase the flow of other currency in our country. More the investments more will be the return, which can also lead to increase in exports.*
- *Savings: Savings have an inverse effect on our balance of payment. As more savings results in increased spending power and which indirectly results in increase in import.*
- *Remittances: Remittances, which is transfer of money by foreign workers to their home country have a direct role in increasing the cash balance of the country.*
- *Crude oil import figure: Crude oil import figure have an inverse relationship with balance of payments figure. It directly increases our imports figure.*
- *Invisible: Invisibles have a direct role in increasing the current account.*

ANALYSIS

Using a multiple regression model we assume that

BOP = function (exchange rate, inflation rate, expenditure, investments, savings, remittances, crude import)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.965 ^a	.932	.822	4015.421

a. Predictors: (Constant), Expenditures(Cr), Saving, Investments(Cr), Inflation, CRUDE OIL IMPORT, Exchange Rate, Invisible, Remittances

b. Dependent Variable: Over All Balance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3824.748	54758.913		-.070	.947
	Exchange Rate	67.251	1705.574	.054	.039	.970
	Inflation	382.503	1699.373	.125	.225	.831
	CRUDE OIL IMPORT	-4.296	10.252	-.297	-.419	.693
	Invisible	.420	.949	.396	.443	.676
	Remittances	.035	.996	-.040	-.035	.973
	Saving	-1.523	1.458	-.554	-1.044	.344
	Investments(Cr)	.367	.197	.825	1.865	.121
	Expenditures(Cr)	.044	.139	.596	.317	.764

a. Dependent Variable: Over All Balance

From the multiple regression model we can conclude that

$BOP = -3824 + \text{Exchange rate} * 67.25 + \text{inflation rate} * 382.5 - \text{Crude oil import} * 4.296 + \text{invisible} * .420 + \text{Remittances} * .034 - \text{Savings} * 1.523 + \text{investments} * .367 + \text{Expenditures} * .44$

CONCLUSION

If we look at the equation, we can conclude that import of crude oil and Savings have an inverse relationship with final balance of payment. 96% of the change in India's BOP can be attributed to the factors or determinants listed. Rest 4% is dependent on other factors. The factors have a strong correlation between them (table 1). Inflation is negatively correlated with all other factors whereas rest other determinants are positively correlated. The critical value of $F_{(7,111)}$ at 5% level of significance is less than calculated F value (table 2). Therefore we can conclude that differences do exist among the determinants with respect to overall balance of payment.

CORRELATION TABLE (BETWEEN DETERMINANTS)

	Exchange Rate	Inflation	Crude Oil Import	Invisible	Remittance	Savings	Investment	Expenditure
Exchange Rate	1							

Inflation	0.929927	1						
Crude Oil Import	0.488051	0.663868	1					
Invisibles	0.5836264	0.769132	0.9675587	1				
Remittance	0.6671593	0.852482	0.8860509	0.9430827	1			
Savings	0.8766637	0.903709	0.8055264	0.9003786	0.7672926	1		
Investment	0.6749341	0.81634	0.9047903	0.909723	0.9169274	0.8446616	1	
Expenditure	0.8502167	0.958307	0.9203819	0.9479009	0.9635861	0.9131845	0.9076639	1

table: 1

ANOVA (SINGLE FACTOR FOR DETERMINANTS)

Anova: Single Factor						
SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
Column 1	16	628.9326	39.30829	53.51371		
Column 2	16	155.5	9.71875	14.04063		
Column 3	16	25627.72	1601.732	2286763		
Column 4	16	256365	16022.81	2.27E+08		
Column 5	16	401232.4	25077.03	1.93E+08		
Column 6	9	72606.79	8067.421	3371255		
Column 7	15	360369	24024.6	4.69E+08		
Column 8	15	3900685	260045.7	1.72E+10		
ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	8.26E+11	7	1.18E+11	51.63457	4.75E-32	2.093138
Within Groups	2.54E+11	111	2.29E+09			

Total	1.08E+12	118				
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table: 2

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With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Editor