

# How balance of payments affects gdp and growth rate



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The main objective of this project is to study balance of payment, understand the various concepts in it, and analyze the various factors affecting it, the importance of it and relevance of it in world economy.

The project has helped me gain great understanding in the field of international finance and trade and which mainly revolves around the concept of balance of payments and various factors affecting. The major factors which have been taken into consideration for the analysis are inflation and exchange rate. Also we would also like to do a small analysis on how balances of payments affect the growth rate of GDP in the economy.

There has also been an analysis on who are the major trading partners of India and the major trading regions of the world and the export, import between the countries and the major commodities between the countries. It also involves a trend analysis of the balance of payments and also the export, import and how the inflation and the exchange rates of the nation over a period of time.

## 2. OBJECTIVES:

### **Objectives of the project:**

To study how exchange rate affects Balance of payments

To study how inflation rate affects Balance of payments

To Balance of payments affects GDP and its growth rate

To see a trend in the export and import between the various trading partners which dominate the bulk of its trade relations.

To also observe the major commodities, which forms a bulk of the trade between the countries.

### 3. METHODOLOGY:

#### **Methodology used in the project:**

Initially the data for balance of payments (RBI), exchange rates (IMF), inflation rates (IMF), import, export and commodity details (department of trade and commerce), GDP values (CIA fact book) are all obtained.

From there the data is analyzed and is converted to a form where anything can be inferred and only the data required is obtained and rest of the data is removed

Then a trend analysis is performed on the import, export and commodity which form the bulk of the trade between the major trading partners of the country using the derived data.

Using this data the relationship between inflation, exchange rate and the balance of payments is found out using regression and similarly the relationship between balance of payments and the growth rate of the GDP.

Thus overall the balance of payment is regressed and analyzed.

### 4. INTRODUCTION:

#### 4. 1 BALANCE OF PAYMENTS:

A balance of payments (BOP) sheet is an accounting record of all monetary transactions between a country and the rest of the world. These transactions

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include payments for the country's exports and imports of goods, services, and financial capital, as well as financial transfers. The BOP summarizes international transactions for a specific period, usually a year, and is prepared in a single currency, typically the domestic currency for the country concerned. Sources of funds for a nation, such as exports or the receipts of loans and investments, are recorded as positive or surplus items. Uses of funds, such as for imports or to invest in foreign countries, are recorded as a negative or deficit item.

When all components of the BOP sheet are included it must balance - that is, it must sum to zero - there can be no overall surplus or deficit. For example, if a country is importing more than it exports, its trade balance will be in deficit, but the shortfall will have to be counter balanced in other ways - such as by funds earned from its foreign investments, by running down reserves or by receiving loans from other countries.

While the overall BOP sheet will always balance when all types of payments are included, imbalances are possible on individual elements of the BOP, such as the current account. This can result in surplus countries accumulating hoards of wealth, while deficit nations become increasingly indebted.

There are 2 principal divisions of Balance of payments - current account and capital account.

The current account shows the net amount a country is earning if it is in surplus, or spending if it is in deficit. Current account is nothing but the difference between a nation's total exports of goods, services and transfers, <https://assignbuster.com/how-balance-of-payments-affects-gdp-and-growth-rate/>

and its total imports of them. Current account balance calculations exclude transactions in financial assets and liabilities

The capital account records the net change in ownership of foreign assets. It includes the reserve account (the international operations of a nation's central bank), along with loans and investments between the country and the rest of world (but not the future regular repayments / dividends that the loans and investments yield, those are earnings and will be recorded in the current account). The net results includes foreign direct investment, plus changes in holdings of stocks, bonds, loans, bank accounts, and currencies.

In the context of BOP and international monetary systems, the reserve asset is the currency or other store of value that is primarily used by nations for their foreign reserves. BOP imbalances tend to manifest as hoards of the reserve asset being amassed by surplus countries, with deficit countries building debts denominated in the reserve asset or at least depleting their supply. Under a gold standard, the reserve asset for all members of the standard is gold. In the Bretton Woods system, either gold or the US Dollar could serve as the reserve asset, though its smooth operation depended on countries apart from the US choosing to keep most of their holdings in dollars.

Following the ending of Bretton Woods, there has been no de jure reserve asset, but the US dollar has remained by far the principal de facto reserve. Global reserves rose sharply in the first decade of the 21st century, partly as a result of the 1997 Asian Financial Crisis, where several nations ran out of

foreign currency needed for essential imports and thus had to accept deals on unfavourable terms.

#### 4. 2 EXCHANGE RATES:

In finance, the exchange rates (also known as the foreign-exchange rate, forex rate or FX rate) between two currencies specify how much one currency is worth in terms of the other. It is the value of a foreign nation's currency in terms of the home nation's currency. For example an exchange rate of 44 Indian rupees (INR, Rs) to the United States dollar (USD, \$) means that Rs 44 is worth the same as USD 1. The foreign exchange market is one of the largest markets in the world. By some estimates, about 3. 2 trillion USD worth of currency changes hands every day.

A market based exchange rate will change whenever the values of either of the two component currencies change. A currency will tend to become more valuable whenever demand for it is greater than the available supply. It will become less valuable whenever demand is less than available supply.

Increased demand for a currency is due to either an increased transaction demand for money, or an increased speculative demand for money. The transaction demand for money is highly correlated to the country's level of business activity, gross domestic product (GDP), and employment levels. The more people there are unemployed, the less the public as a whole will spend on goods and services. Central banks typically have little difficulty adjusting the available money supply to accommodate changes in the demand for money due to business transactions.

The speculative demand for money is much harder for a central bank to accommodate but they try to do this by adjusting interest rates. An investor may choose to buy a currency if the return (that is the interest rate) is high enough. The higher a country's interest rates, the greater the demand for that currency. It has been argued that currency speculation can undermine real economic growth, in particular since large currency speculators may deliberately create downward pressure on a currency by shorting in order to force that central bank to sell their currency to keep it stable (once this happens, the speculator can buy the currency back from the bank at a lower price, close out their position, and thereby take a profit).

#### 4. 3 INFLATION RATES:

In economics, the inflation rate is a measure of inflation, the rate of increase of a price index (for example, a consumer price index). It is the percentage rate of change in price level over time. The rate of decrease in the purchasing power of money is approximately equal.

As inflation increases, prices increase also in other countries from which we buy, because their inflation increases their prices and thus the cost of our imports. At the same time prices are likely to increase also because our government may be printing more money to cover its own deficit, to cover the amount by which its spending exceeds its income.

As prices increase so do percentage markups such as profits and dividends which in this way increase automatically in line with increasing prices.

The higher prices are felt by wage and salary earners who demand increases in line with increasing prices, in line with the increasing cost of living. Prices increase as a result, the increase depending both on the extent to which wage and salary demands are satisfied and on how much of the price consists of labour costs.

Our prices have increased, our exports have become more expensive, we sell less abroad, our payments deficit gets even worse. When this condition persists and gets worse then we can devalue our currency, the extent of the devaluation depending on whether we are devaluing: (1) to stay competitive or (2) to become more competitive.

As a result of the devaluation our exports become cheaper abroad but we have to pay more for imports. The increased cost of imports in turn increases our own prices but only to the extent to which imports figure in the price. However, this has already been allowed for when deciding the extent to which we devalue.

The devaluation reduces our standard of living relative to others abroad as they find our produce cheaper while we find theirs more expensive. We now have to produce and sell a greater volume of exports so as to earn as much foreign currency as we did before and have to sell even more if we are to improve our position, if we are to benefit from the devaluation.

#### 4. 4 GDP:

The gross domestic product (GDP) or gross domestic income (GDI) is the amount of goods and services produced in a year, in a country. It is the

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market value of all final goods and services made within the borders of a country in a year. It is often positively correlated with the standard of living, alternative measures to GDP for that purpose.

$$\mathrm{GDP} = C + \mathrm{Inv} + G + \left( \mathrm{eX} - i \right)$$

C - Consumption,

Inv - investment,

G - Government expenditure

eX - exports

I - imports

From the formula it is evident that balance of payments forms a part and chunk of our GDP and when it increases the GDP and growth rate increases and vice versa is also true.

## 5. ANALYSIS AND PROCEDURE:

The balance of payment data is initially collected from Reserve bank of India. The crucial parameters of current account balance, capital account balance and overall balance of payment is taken from the overall balance sheet. This is the crucial data required for our analysis. This data will then be regressed with inflation, exchange rate (which is obtained from IMF financial statistics) and their effect is observed on the balance of payments. This shall be part of final results. The GDP values are obtained and regressed with the balance of

payments and the effect of balance of payments on the GDP and its growth rate is observed and is tabulated as a part of the result.

Here is the balance of payment data obtained for the period of 14 years from 1997 to 2010:

YEAR

CURRENT ACCOUNT BALANCE

CAPITAL ACCOUNT BALANCE

ERRORS AND OMISSIONS

OVERALL BALANCE OF PAYMENTS

FOREX RESERVES

1997

-20883

36605

931

16, 653

-16653

1998

-16789

35882

-848

18, 245

-18245

1999

-20331

45328

2773

27, 770

-27770

2000

-11431

41599

-2506

27, 662

-27662

2001

3734

50589

2269

56, 592

-56592

2002

19987

58506

3523

82, 016

-82016

2003

1, 904

5, 561

59

7, 524

-7524

2004

-12174

125367

2714

115, 907

-115907

2005

-46856

108521

4231

65, 896

-65896

2006

-20, 765

48, 035

1, 736

29, 006

-29, 006

2007

-6, 301

17, 346

155

11, 200

-11, 200

2008

-9, 019

11, 135

119

2, 235

-2235

2009

4, 747

-5, 288

841

300

-300

2010

-12, 998

16, 091

-952

2, 141

-2, 141

## 5. 1 EXCHANGE RATES

As said before the exchange rates for the 14 years from 1997 to 2010 have been obtained from IMF financial statistics. This data is regressed with the balance of payment data to observe the effect of exchange rates on it. The results are tabulated. This is the data of exchange rates for 14 years:

Year

Annual exchange Rates (Rs/\$)

1997

36. 2812

1998

41. 3294

1999

43. 1212

2000

45. 0009

2001

47. 2255

2002

48. 6220

2003

46. 5947

2004

45. 2766

2005

44. 0086

2006

45. 1778



2007

41. 1977

2008

43. 3887

2009

48. 3744

2010

45. 7300

## 5. 2 INFLATION RATES

As said before the inflation rates for the 14 years from 1997 to 2010 have been obtained from IMF financial statistics. This data is regressed with the balance of payment data to observe the effect of inflation rates on it. The results are tabulated. This is the data of inflation rates for 14 years:

Year

Inflation rates (%)

1997

7. 164

1998

13. 231

1999

4. 67

2000

4. 009

2001

3. 779

2002

4. 297

2003

3. 806

2004

3. 767

2005

4. 246

2006

6. 177

2007

6. 372

2008

8. 349

2009

8. 664

2010

9. 4

5. 3 GDP VALUES:

As said before the GDP values for the 14 years from 1997 to 2010 have been obtained from CIA fact book. This data is regressed with the balance of payment data to observe the effect of GDP values on it. The results are tabulated. This is the data of GDP values for 14 years:

YEAR

GDP (million dollars)

GDP growth rate (%)

1997

1401934

12 %

1998

1616082

15%

1999

1786525

11%

2000

1925017

8%

2001

2097726

9%

2002

2261415

8%

2003

2538171

12%

2004

2877706

13%

2005

3275670

14%

2006

3790063

16%

2007

4138749

9%

2008

4511236

9%

2009

4845068

7%

2010

5276279

9%

#### 5. 4 MAJOR EXPORT AND IMPORT BETWEEN THE TRADING PARTNERS:

As per the objectives the export and import between the major trading partners is obtained from the department of trade and commerce. Also a trend analysis is performed to see who is the leading the trade relations over a period of time. Also we can see the major commodities dominating the trade relations between the trading partners and which commodity is being exported more and which is imported more between the trading partners.

##### 5. 4. 1 EXPORT BETWEEN THE MAJOR COUNTRIES:

The trend analysis of the export of India with its 15 major trading countries in 14 years of data from 1997 to 2010 as displayed by the bar chart is shown as follows:

##### 5. 4. 2 IMPORT BETWEEN THE MAJOR COUNTRIES:

The trend analysis of the import of India with its 15 major trading countries in 14 years of data from 1997 to 2010 as displayed by the bar chart is shown as follows:

#### 5. 4. 3 EXPORT BETWEEN THE MAJOR TRADING REGIONS:

The trend analysis of the export of India with the major trading regions of the world in 14 years of data from 1997 to 2010 as displayed by the bar chart is shown as follows:

#### 5. 4. 4 IMPORT BETWEEN THE MAJOR TRADING REGIONS:

The trend analysis of the import of India with the major trading regions of the world in 14 years of data from 1997 to 2010 as displayed by the bar chart is shown as follows:

#### 5. 4. 5 MAJOR COMMODITIES EXPORTED:

The major commodities exported over the last 2 years i. e. from 2009 to 2010 are shown as follows and the percentage of the commodities exported is observed over this period:

## **Commodity**

**2009**

**2010(P)**

### **A) PLANTATION**

**324. 22**

**375. 04**

### **B) AGRI & ALLIED PRDTS**

**4, 997. 70**

**4, 908. 14**

### **C) MARINE PRODUCTS**

**568. 72**

**618. 74**

### **D) ORES & MINERALS**

**2, 787. 17**

**5, 798. 21**

### **E) LEATHER & MNFRS**

**984. 68**

**1, 179. 22**

### **F) GEMS & JEWELLERY**

**9, 139. 30**

**9, 227. 88**

### **G) SPORTS GOODS**



**47. 09**

**63. 18**

**H) CHEMICALS & RELATED PRODUCTS**

**8, 042. 11**

**10, 203. 19**

**I) ENGINEERING GOODS**

**14, 116. 28**

**13, 916. 60**

**J) ELECTRONIC GOODS**

**2, 332. 88**

**1, 680. 99**

**K) PROJECT GOODS**

**177. 48**

**8. 77**

**L) TEXTILES**

**6, 977. 81**

**8, 206. 78**

**M) HANDICRAFTS**

**67. 15**

**83. 57**

**N) CARPETS**

**237. 1**

**353. 25**

**O) COTTON RAW INCL WASTE**

**273. 67**

**892. 63**

**P) PETROLEUM PRODUCTS**

**7, 592. 28**

**12, 462. 32**

**Q) UNCLASSIFIED EXPORTS**

**3, 790. 08**

**6, 907. 09**

**Total**

**62, 455. 71**

**76, 885. 62**

5. 4. 6 MAJOR COMMODITIES IMPORTED:

The major commodities imported over the last 2 years i. e. from 2009 to 2010 are shown as follows and the percentage of the commodities exported is observed over this period:

**Commodity****Apr-Jul 2009****Apr-Jul 2010(P)****%Growth****%Share****A) BULK IMPORTS****34, 849. 65****49, 192. 37****41. 16****46. 01****B) PEARLS, PRECIOUS & SEMI-PRECIOUS STONES****3, 925. 85****8, 632. 88****119. 9****8. 07****C) MACHINERY****11, 317. 04****10, 744. 05****-5. 06****10. 05****D) PROJECT GOODS****1, 392. 10**

**2, 157. 83**

**55. 01**

**2. 02**

**E) OTHERS**

**32, 670. 77**

**36, 189. 15**

**10. 77**

**33. 85**

**Total**

**84, 155. 55**

**106, 917. 11**

**27. 05**

**100**

#### 6. FINDINGS AND OBSERVATIONS:

Here are the findings and observations that could be deduced at this point of the project:

India has always had current account deficit post liberalization except from 2001 to 2004 and in 2009.

Our balance of payments has always been a healthy amount till 2007 when recession struck and we are recovering from it.

It is also to be noted that we have always had capital account surplus post liberalization except 2009 when most MNC's were still reeling from the <https://assignbuster.com/how-balance-of-payments-affects-gdp-and-growth-rate/>

aftermath of recession and were withdrawing money invested in our markets through FII's. It is also to be noted that we had a current account surplus that year and hence thankfully we did not face balance of payment crisis. This was mainly due to our strong financial regulation thanks to which we withstood recession due to government spending and strong domestic demand and our regulator RBI got applause world wide for the steps taken.

It should also be noted that for most part current account forms a very limited part of balance of payment till 2007 and capital account and overall balance of accounts almost overlap with each other. Only after recession struck have steps taken by the regulator to reduce dependency on overseas inflows and to increase the domestic demand and overall exports.

The rupee has steadily depreciated from 1997 till 2003 after which strict enforcements have ensured that the rupee hovers only around the fixed band with. In 2007 when recession struck the rupee appreciated so much despite the regulation ensured by the RBI. Post recession rupee is just hovering only around the band with set in order to ensure the interests of both importers and exporters are protected.

During 1997 and 1998 India suffered heavy inflation mainly due to the south East Asian crisis and we faced heavy losses during this period. However post crisis we had only an inflation rate of 3 - 4 % till 2006 for a period of 8 years which was amongst the lowest ever recorded world wide during that period. In 2006 we had rampant growth rate due to which we had a steady inflationary trends in the year till 2007. However in 2007 when recession struck there was a natural reduce in inflation because FII's withdrew their

money. It should also however be noted that due to strong domestic demand that inflation has rose to 8 % which is still under permissible limits till 2009. In 2010 we have shown a growth rate of 9 % which has led to high inflation in early 2010 when it reached double figures. Once again thanks to steps taken by RBI the inflation is still under control but experts say more steps needs to be taken to further bring it under control to advance to levels like capital account convertibility.

With respect to GDP we have always had consisting growth rates above 8 % from 1997 except in 2009 when we the recession was just over and we were coming out of it. It should also be noted that 7 % in the period was above par and it should be credited to the sound financial structure of our country, and due to the huge domestic demand that should be satiated.

We can notice that our major trading partner has taken a gradual shift from USA in 1990's and 2000's till recession struck and our major partner shifted to china. It should also be noted that initially we were completely depended on USA for our exports which formed up to 1/5th to 1/6th of our total export. Gradually we have started diversifying our exports and imports and thereby we have reduced our overall risk.

The last point is further supported when we see region wise trading partners than country wise. In early periods we can see that European union and North America accounted for up to half our exports but we could see observe that towards 2010 our trade relations with NE Asia and West Asia and North Africa which has ensured that our trade is well diversified thereby preventing over exposure by depending completely to a single region.

In the commodities exported we note a very significant increase in petroleum products, ores and minerals, chemical and related products which is bound to fetch higher margins and also are non renewable resources which give us a higher level of power in world economy. It should also be noted that recently 2 or 3 reserves of petroleum have been found in Rajasthan by Cairn Energy (which is to be taken over by Vedanta for one of the biggest take over world wide) which is likely to bring more money flowing into our economy. In the import front import of precious stones have tripled, though its partly for polishing and exporting it as some of the business men do in India or its for domestic consumption as jewelry is a part of culture and tradition and plays a huge role in it. It should also be noted that these also make a good investment than expenditure alone because their value rises over a period of time. It is also a good sign that our import of furniture has reduced considerably which is signs that we are depending on our own infrastructure and technology and foreign dependence is reduced

## 7. LIMITATIONS:

Limitations of the project are:

The time under which the analysis has to be done is a short time so the project cannot be completed with perfection

Also the topic of discussion is a very vast one and so the project is done with the little understanding that I could get hold of during the time of analysis

Also a number of assumptions have been made in the analysis that is to be performed which might lead to slight inaccuracies but as far as it comes to my knowledge that these ambiguities have been reduced.