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Factors Affecting India's Balance of Payment

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Abstract: *Balance of payment is the key indicator for an economy to analyse the economic condition of a country by recording all the monetary & economic transaction made between a country & with rest of the world. Some of the factors which affect Balance of Payment are Gold price, Crude oil price, Inflation rate, USDINR exchange rate which widely affect India's Balance of Payment. The purpose of this study is to analyse the impact of all the four independent variables on Balance of payment by using multi time series regression analysis & Co-relation. The study was conducted for a period of 14 years quarter wise i.e. Q1-2005 to Q3-2018. The study shows that Inflation rate & Gold price are highly impact on India's Balance of Payment.*

Key words: *Balance of Payment (BoP), Exchange Rate, and Inflation Rate.*

I. Introduction

Balance of Payments (BoP) is one of the few mechanisms that helps analyse the economic conditions of a nation by recording of all monetary and economic transactions made between a country and the rest of the world within a defined period. BoP include all the transactions made by individuals, companies and the government. These transaction helps to monitor the economic condition of a country & develop policies for a strong economy. Balance of payment is the economic barometer to analyse an economy because it is base for most of the developed & developing countries like US, China, UK, Europe, and India etc.

Balance of payment indicates whether the country has a surplus or a deficit of funds. It means when export of a country is more than its import, its trade balance is said to be in surplus. Similarly when the imports of a country is high as compared to its exports, then trade balance is said to be in deficit. Trade balance is part of current account which affects India' Balance of payment.

As per BPM 6 Balance of payment have three accounts i.e. Current Account, Capital Account & Financial Account. In a perfect scenario Balance of Payment should be zero i.e.:

Current Account + Capital Account + Financial Account = 0.

But practically it does not happen in most of the countries. India has been BoP deficit country for a long time now. Balance of Payments can be impacted by changes in macroeconomic variables like GDP, Inflation, Interest Rates, Nominal GDP and Exchange Rates etc.

Thus, whether a currency & foreign exchange of a nation are becoming stronger or weaker, whether country is lending or borrowing, how effective its monetary policies that's important which can be studied from the statement of balance of payment for a country. Thus, a country's balance of payment can provide us information of economic dealing in international market.

All the three accounts of Balance of payment i.e. Current, Capital & Financial account have their own macroeconomic factors which drive the overall Balance of payment.

Current Account: The current account consists of Goods Balance, Service Balance, Net Income Receipts, & Net International Transfers. Some of the factors which affect Current account are as follows:

- Inflation: When inflation is high of a country as compared to other countries with which nation trade, the current account deficit will increase due to higher negative trade balance because domestic goods are more expensive to the foreign goods, so import would rise. Likewise exports of a nation also decline because domestic goods will also expensive for a foreign country due to high inflation, & they prefer low price product or substitute of that product.

- National Income: When national income of a country is increased with a higher percentage as compared to other countries, it leads to increase consumption of that country which reflects high demand of foreign goods. Increase in demand of foreign goods means high import which leads to increase in current account deficit.
- Exchange Rate: The value of domestic currency with respect to other currencies is called exchange rate. Exchange rate is volatile in nature because it is driven by market forces, or actions taken by central bank of any respective country. This will directly impact on current account balance because all the international monetary or non-monetary transactions take place on exchange rate. A depreciation in domestic currency exchange rate will leads to our import costlier. Similarly an appreciation of domestic currency will lead to export costlier which will decrease the demand of our product in foreign market.
- Commodities: One of the most essential commodity is Petroleum product. In India, the demand of petroleum product is exponentially increasing day by day. To feed high demand, India import crude oil from OPEC countries which leads to increase current account deficit. Similarly the demand of Gold is also high in India, which leads to high import bill & higher current account deficit. The prices of commodity & volume of import, both plays a major role for India's trade account balance.

Capital Account: Capital Account consists of investment in physical capital that represents purchases of actual goods or services such as capital equipment that increase the economy's future ability to produce. It consider capital transfers and the selling & buying of non-produced and nonfinancial assets. Some of the factors which affect capital account are as follows:

- Government Policies: Favourable policies of Indian Government like Make in India, Special Economic Zones helps to increase foreign capital investment in India which is favourable for a longer term. It will help to produce more in future which leads to less imports & high exports in future. This move would lead India from developing nation to developed nation with a sustainable growth.
- Work force Labour: India have second highest labour workforce population after China, this is biggest advantage for India to attract foreign investor towards India for investing in manufacturing industry.
- Wage Rate: Wage rate of labour in India is very low as compared to other countries which will increase the profitability or Gross margin of a company. It attracts foreign investors to invest in India which leads to increase in capital account balance.

- Political & Legal Environment: Every investor see a country for his investment whose Government is stable because it will give surety to investor that if government is stable, it means there is no major change in compliances & regulations as well as country growth would be stable. Investor also prefer easy & transparent legal process like land acquisition, registration & clearances from various departments.

Financial Account: The financial account deals with money related to foreign reserves and private investments in businesses, real estate, bonds and stocks. The financial account further divided into 2 sub-accounts:

- The domestic ownership of foreign asset.
- The foreign ownership of domestic asset.

When the domestic ownership of foreign asset increases, then the financial account consider as positive entry, likewise when foreign ownership on domestic asset increases, the financial account marked as negative.
Hence the financial account of a nation will be positive or in favour, if the domestic ownership on foreign asset is more than the foreign ownership on domestic asset. Some of the factors which affects financial account are as follows:

- Interest Rate: Generally the interest rate of a country will decide the FPI's flow. If a domestic interest rate is lower than other country then the investor will withdraw their money from domestic country & invest in a foreign country where return is higher.
- Expropriation: Expropriation is an act of government to take private property of their owners against their wishes for the well-being of public interest in terms of Infrastructure projects like Highways, Dams, Airports, Hospitals, Railways, etc. & pay handsome compensation against their property. Likewise Indian government gives fair compensation against their properties so investors have confidence to invest in India.
- Government Stability or Sovereign Risk: The government will decide the market & give a vision to the country by introducing its policies. If the government is not stable or policies is not favourable then market will fluctuate & investor will less likely to invest in India.

1. Objective

- Understand the concept of Balance of Payment & its component.
- Identify the potential factors which affect India's Balance of Payment.
- Analyse the impact of identified independent variables on India's Balance of Payment.

II. Literature Review

(Dr. Sangeetha R, 2019) In their paper titled "Determinants of Balance of Payment- Evidence from India & US" concluded that the balance of payment of India & US are underperforming since long time. The results of multiple regression & correlation shows that Indian BoP is affected by change in Exchange Rate & Inflation Rate while GDP & Interest Rate doesn't have a significant impact on the Balance of Payment of India but in case of US Interest Rate & GDP growth rate have had no impact on the BoP of U.S.A.

(Ms. Amirdha Vasani, 2019) in their paper titled "Relationship between Real Exchange Rate & Economic Growth in India" concluded that the there was no linear relationship between Real Exchange Rate & Economic Growth in India(GDP) while they have Unidirectional relationship during the study period.

(Mittal, 2018) in their paper titled "Balance of Payment: An Indian Perspective" concluded that the BoP has become an economic barometer for an economy because it is base for many countries. And according to the recent data, India faces a severe BoP deficits & some of the factors which affect BoP are Inflation, National Income, Government Restructuring and Exchange Rates.

In their study they also have to explain why GDP & Interest Rate doesn't significant impact on Balance of Payment & they also have to consider other independent variables which may affect India's Balance of Payment like Gold Price & Brent Oil Price.

Hence in our study, we are considering Gold Price & Brent Oil price as our new independent variables which also a significant role of affecting balance of payment because Gold & Brent oil are the major imported commodity of India.

III. Research Methodology

This paper based on Secondary data research, which is collected from RBI & Bloomberg terminal. The data related to Balance of Payment & its components including all the independent variable are retrieved from the stated source. Period of study is 14 years with quarterly basis i.e. Q1-2005 to Q3-2018.

Independent Variable: - Inflation Rate, USDINR Exchange Rate, Crude Oil, Gold Rate.

Dependent Variable: - Balance of Payment.

The descriptive statistical analysis of India's Balance of Payment & other independent variables is used for a period of 14 years. Correlation analysis is also used to see, how India's balance of payment is related to each independent variable. Lastly, the multi-time series regression analysis tool is used to find the impact of independent variable (i.e. Gold price, USDINR exchange rate, Inflation rate & Crude oil price) on dependent variable i.e. Balance of Payment.

IV. Result & Analysis:

Table 1 shows the descriptive statistics of dependent variable i.e. Balance of payment & some independent variable i.e. Exchange Rate, Inflation rate, Crude oil & Gold price. In this table, it can see that Gold price is highly negatively skewed while Inflation rate (RBI, n.d.)& Balance of payment is positively skewed.

Table 1: Descriptive Statistics of India's Balance of Payment

Particulars	Balance of Payment	Gold Price	Crude Oil	Exchange Rate	Inflation Rate
Mean	5157.57	1126.55	75.93	53.70	7.21

Median	3741.00	1208.29	77.88	50.88	6.70
Standard Deviation	9693.24	340.75	21.98	9.71	2.91
Skewness	0.51	-0.36	0.05	0.23	0.56
Kurtosis	1.00	-0.56	-1.02	-1.48	-0.06

Data Source: Bloomberg

In table 2, Correlation analysis is used to show that how balance of payment is related to each independent variable. The period of dataset used in correlation analysis is 14 years quarter-wise. All the independent variables i.e. Gold price, Crude oil, Exchange rate & Inflation rate are negatively correlated with Balance of payment of India. It means increase in the prices of Gold / crude oil or increase in Inflation rate of India will lead to decrease the value of Balance of Payment of India.

Table 2: Correlation Analysis of BOP with Independent variables

Particulars	Gold Price	Crude Oil	Exchange Rate	Inflation rate
BOP	-0.21	-0.14	-0.07	-0.21

Data Source: Bloomberg

In table 3, the regression analysis of dependent variable i.e. Balance of payment with independent variables i.e. Gold price, Crude oil, Exchange rate, Inflation Rate has been analysed. It can see that Exchange rate & Inflation rate are statistically significant because the p-value is equals to 0.00 & Crude oil is statistically significant at 10% while Gold price is not statistically significant. It is also revealed that the R- square value is 91.23% which means that almost 91.23% variation in Balance of payment are because of these independent variables.

Table 3: Multi-dimensional time Series Regression Analysis

R- Square	**91.23%**					
BOP	**Coef.**	**Std. Err.**	**z**	**P>|z|**	**[95% Conf. Interval]**	
Gold Price	-1.42	4.64	-0.31	0.76	-10.52	7.68
Crude Oil	-75.60	44.77	-1.69	0.09	-163.36	12.16
USD INR Exchange Rate	-456.04	153.95	-2.69	0.00	-757.78	-154.30
Inflation Rate	-1602.58	476.58	-3.36	0.00	-2536.66	-668.50
Constant	48273.11	9789.44	4.93	0.00	29086.16	67460.07

Data Source: Bloomberg

* Showed that significant at 10%(0.1), ** Showed that significant at 5% (0.05) *** * Showed that significant at >1% (0.01)

V. Conclusion

From this study, it is concluded that the Balance of Payment is the key economic indicator for a country to analyse the performance of that country. Some macro-economic factors which majorly affect the India's Balance of Payment are Gold price, Crude oil, USDINR exchange rate & Inflation rate. Some other factors also which impact India's balance of payment like Interest rate, Government policies, Legal & Political environment etc.

From regression analysis, it has been seen that Exchange rate, Inflation rate are significantly impact on Balance of Payment including crude oil while Gold Price are not significantly impact on Balance of Payment because in case of gold price, quantity also plays an important role & during price hike of commodity people consumes less & the import of commodity will decrease. While in case of crude oil & other petroleum products, India is exported near about 30% of the total import of petroleum products in 2018. The trade balance of petroleum products may vary with price of international market & quantity demanded. Hence 91.23% R-square value shows the variation in Balance of Payment of India are because of Gold price, Crude oil, USDINR exchange rate & Inflation rate.

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