

# Twin Economic Policy on Indian Exports Companies

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## ABSTRACT

Policy of a state like monetary, customs duties, taxes, Repo rate, budget, supply of money play very crucial role in the functioning of its economy. For the nation like India the twin economic policy i.e. demonetization and Goods and Service Tax (GST) implementation has an important part to play in its Economy. So, this paper uses the stock market return of companies from the top 10 export companies which belongs to various sectors of the Indian Economy i.e. BHEL, Reliance, ITC, IOC, JSW Steel, TATA Motors, TATA Steel, Bajaj-Auto, Coal India, Hindalco to analyze the impact of demonetization and GST on their abnormal returns. This study aims to study the impact of policies and reform on the Indian Economy, and for the analysis paper is using Abnormal return calculated through CAPM model, Paired correlation and Paired t-Test of pre and post abnormal return with an event window of 10 days. Hence this study is carried out by using basic event study methodologies.

## 1. Introduction

The twin economic policy of the government i.e. Demonetization and Good and Service Tax which were introduced in India by the Central Government on 8<sup>th</sup> of December, 2016 and 1<sup>st</sup> of July, 2017 respectively. On 8<sup>th</sup> of November 2016, the Hon'ble PM Narendra Modi made an announcement that the promissory notes of INR. 500/- and INR. 1000/- will cease to be a legal tender. The (Reserve Bank Of India, 2017)'s Annual report stated that as much as INR 15.41 Lakh Cr. was demonetized. The demonetisation was undertaken for the purpose of curb black money, corruption, fake currency notes and terror funding. Good and Service Tax (GST) has been defined in Article 366(12A) of Constitution Of India as "Goods and Service Tax means any tax on supply of goods, or services or both except taxes on the supply of alcoholic liquor for human consumption. The stock market index or the industry index is a good indicator of the perceptions of the investor during the demonetization and Goods and Service Tax period. The best way to analyse the impact of demonetization and GST is by studying the Financial Statements of the companies but that information is only made available by the end of Quarter, till then the perception of the investors is already reflected in the stock prices. Therefore, the stock price movement acts as a real-time investor's perception indicator which is varied from industry to industry.

## 2. Literature Review

The stock market is impacted by two types of risk: systematic and unsystematic risk. Corporate events such as bonus issue, stock splits, right issue, mergers and acquisition, buyback of the share has an impact on the stock prices and represent unsystematic risk. But In an event of national policy change, Demonetization and implementation of Goods and service Tax represents systematic risk spread across the Indian stock market with all the shares and benchmarks representing its magnitude of affect.

### • Stock Market:

(Singh, Dec 2010), the paper tried to analysis the impact of three macro variable impact on the BSE SENSEX index by

using correlation, unit root stationarity test and Granger causality test. The paper concluded that there is strong correlation between WIP and IIP with BSE SENSEX but there no correlation between exchange rate and BSE SENSEX. further it indicated that the correlation is not supported by causality test. Granger causality test indicated that IIP is the only variable have causal relationship with BSE SENSEX. WPI has strong correlation with BSE SENSEX but its having unilateral causality. Therefore, it finally concluded that, Indian Stock Market is approaching towards informational efficiency with respect of two macro-economic variable i.e. exchange rate and inflation.

### • Demonetisation:

(Ganesan, et al., 2017), the paper tried to studied the implications of demonetization on various sectors and analyze the impact of demonetization on Indian economy. The data is analyzed with paired t-test and regression analysis to understand the immediate effect and to measure its impact on Indian economy. The paper concluded that Gross Value Added (GVA) of India is slightly decreased in comparsion to previous year, as per the t-test analysis the positive effect of demonetization between pre and post period has no significant difference in short term and through regression analysis it is confirmed that there is a positive impact in the long term period.

(Chauhan, et al., June, 2017), the paper tries to analyze the market reaction on the announcement of demonetization. In order to analyze the market reaction the paper focused on S&P BSE 100 index. The paper concluded that there is no significant impact of demonetization on stock market prices and the effcet of the demonetization is a shorter duration but it will recover soon.

### • Goods and Service Tax:

(Prabhu, March 2018), the paper tries to analyze short term effect of the implementation of GST in India through a channel of Indian Stock exchange. The paper concluded that it is too soon to comment on the short term implication of GST

on India through stock market as they are overvalued due to high amount of FPI (Foreign Portfolio Investor) and ease of business but the global institutions like IMF and World Bank had praised India for the implementation of GST and indicated that it has possible long term benefit to India subject to its proper implementation and regulation of its compliance and understandability.

#### • **Both Demonetization and Goods and Service Tax:**

(Kumar, April 2018), studied the impact of fiscal and monetary changes in the Indian banking system through a special reference to NIFTY BANK and S&P BSE BANKEX. The paper concluded that there is a significant impact of demonetization and GST on India Bank index as the ADF test told that data is non-stationary where as JB test shows normality of return series thus recent implementation of policy has affected Indian economy.

### 3. Research Design

#### Research Gap

From the above literature review, we can identify that there is no specific research done to identify the impact of Demonetisation and Goods and Service Tax in the Indian Economy in light of the major listed export companies in National Stock Exchange (NSE). Therefore, this twin economic policy which affected very sector of the economy in different ways motivated me to study the impact of the Demonetization and Goods and Service Tax on the export companies.

#### Objective

- To study the impact of Demonetisation on export companies.
- To study the impact of Goods and Service Tax on exports companies.

#### Hypothesis

- H1 – There is significant correlation of demonetisation on export company returns.
- H2 – There is significant correlation of GST on export company returns.
- H3 – There is significant impact of demonetisation on export company returns.

- H4 – There is significant impact of GST on export company returns.

#### Scope

The paper includes the exports companies from Petroleum, Automobile, Electronics, Natural Resources and Tobacco industries. The stock exchange considered for the study is National Stock Exchange of India (NSE). The paper aims to study the individual impact of Demonetisation and GST in the export companies. The sample companies are Reliance Industries, Tata Motors, Indian Oil, Coal India, ITC, Bharat Heavy Electricals, Hindalco Industries, Tata Steel, JSW Steel chosen by the way of judgmental sampling with reference to their market capitalisation.

#### Period of study

The paper aims to study the individual impact of Demonetisation and GST in the export companies. In order to arrive to the result, Data for 10 days of event window of Pre and Post Demonetisation and for 10 days of event window Pre and Post GST.

#### Research Methodology

In order to arrive at the hypothesis, the beta of the stock in respect to the NIFTY 50 is calculated for 100 days pre and post event which act as an input for CAPM, then Capital Asset Pricing Model (CAPM) was used to find daily return of the stock, and then Paired t-Test is performed by using SPSS statistical software package for assessing the impact of the event on the stocks and the confidence level for the same is taken as 95%.

#### Limitations

The study is dependent upon the secondary data. The study is concentrated on impact of demonetisation and GST on the top 10 export companies from few sectors only and all the other external and macro-variable are assumed to be constant during the period of the study.

### 4. Data Analysis & Findings

#### A) Demonetization

Table :1 Correlation between pre and post demonetisation

#### Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	BajajAutoPre & BajajAutoPost	10	.338	.340
Pair 2	BHELPre & BHELPost	10	-.337	.340
Pair 3	CoalIndiaPre & CoalIndiaPost	10	-.338	.340
Pair 4	HindalcoPre & HindalcoPost	10	-.336	.342
Pair 5	IOCPre & IOCPost	10	-.338	.340
Pair 6	ITCPre & ITCPost	10	.338	.340
Pair 7	JSWSteelPre & JSWSteelPost	10	-.338	.340
Pair 8	ReliancePre & ReliancePost	10	-.338	.340
Pair 9	TATAMotorsPre & TATAMotorsPost	10	.338	.340
Pair 10	TATASteelPre & TATASteelPost	10	-.338	.340

As can be seen from the table 1, Bajaj-Auto, ITC, Tata Motors have a positive correlation of abnormal return between pre and post demonetisation whereas, BHEL, Coal India, Hindalco, IOC, JSW Steel, Reliance, Tata Steel have a negative correlation of abnormal return between pre and post

demonetisation. As the significance level of all the stocks are more than 0.05 or 5%, thus we accept the null hypothesis i.e. There is no significant correlation of demonetisation on export company returns.

**Table :2 Paired t-Test between pre and post demonetisation**

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	BajajAutoPre - BajajAutoPost	-3.5390400	.2609500	.0825196	-3.7257124	-3.3523676	-42.887	9	.0000000000
Pair 2	BHELPre - BHELPost	2.0834900	.2834724	.0896418	1.8807061	2.2862739	23.242	9	.0000000024
Pair 3	CoalIndiaPre - CoalIndiaPost	-.1882900	.6334501	.2003145	-.6414329	.2648529	-.940	9	.3717734312
Pair 4	HindalcoPre - HindalcoPost	-1.3430500	.3088068	.0976533	-1.5639571	-1.1221429	-13.753	9	.0000002391
Pair 5	IOCPre - IOCPost	5.0096000	.6508269	.2058095	4.5440265	5.4751735	24.341	9	.0000000016
Pair 6	ITCPre - ITCPost	-6.0897600	.3821427	.1208441	-6.3631284	-5.8163916	-50.394	9	.0000000000
Pair 7	JSWSteelPre - JSWSteelPost	-3.4023700	.8571679	.2710603	-4.0155510	-2.7891890	-12.552	9	.0000005244
Pair 8	ReliancePre - ReliancePost	-2.3970200	.6568119	.2077022	-2.8668750	-1.9271650	-11.541	9	.0000010729
Pair 9	TATAMotorsPre - TATAMotorsPost	-1.8525400	.2011058	.0635952	-1.9964024	-1.7086776	-29.130	9	.0000000003
Pair 10	TATASteelPre - TATASteelPost	.4663600	.2085345	.0659444	.3171834	.6155366	7.072	9	.0000584310

As can be seen from the table 2, Bajaj-Auto, Coal India, Hindalco, ITC, JSW Steel, Reliance, Tata Motors have a negative mean difference of abnormal return between pre and post demonetisation whereas, BHEL, IOC, Tata Steel have a positive mean difference of abnormal return between pre and

post demonetisation. As the significance level of all the stocks except that of Coal India are less than 0.05 or 5%, thus we reject the null hypothesis i.e. There is no significant impact of demonetisation on export company returns.

## B) Goods and service tax

**Table :3 Correlation between pre and post GST**

		N	Correlation	Sig.
Pair 1	BajajAutoPre & BajajAutoPost	10	.182	.614
Pair 2	BHELPre & BHELPost	10	.183	.614
Pair 3	CoalIndiaPre & CoalIndiaPost	10	.182	.614
Pair 4	HindalcoPre & HindalcoPost	10	.183	.614
Pair 5	IOCPre & IOCPost	10	-.183	.613
Pair 6	ITCPre & ITCPost	10	-.182	.614
Pair 7	JSWSteelPre & JSWSteelPost	10	-.181	.618
Pair 8	ReliancePre & ReliancePost	10	.183	.613
Pair 9	TATAMotorsPre & TATAMotorsPost	10	-.182	.615
Pair 10	TATASteelPre & TATASteelPost	10	-.182	.614

As can be seen from the table 3, Bajaj-Auto, BHEL, Coal India, Hindalco, Reliance have a positive correlation of abnormal return between pre and post GST whereas IOC, ITC,

JSW Steel, Tata Motors, Tata Steel have a negative correlation of abnormal return between pre and post GST. As the significance level of all the stocks are more than 0.05 or 5%,

thus we accept the null hypothesis i.e. There is no significant correlation of GST on export company returns.

**Table :4 Paired t-Test between pre and post GST**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	BajajAutoPre - BajajAutoPost	3.4769700	.1390085	.0439583	3.3775293	3.5764107	79.097	9	.0000000000
Pair 2	BHELPre - BHELPost	-3.9502500	.2495246	.0789066	-4.1287491	-3.7717509	-50.062	9	.0000000000
Pair 3	CoallIndiaPre - CoallIndiaPost	-3.0168400	.1688404	.0533920	-3.1376212	-2.8960588	-56.504	9	.0000000000
Pair 4	HindalcoPre - HindalcoPost	3.8235400	.1882219	.0595210	3.6888942	3.9581858	64.239	9	.0000000000
Pair 5	IOCPre - IOCPPost	2.8258500	.1871162	.0591713	2.6919952	2.9597048	47.757	9	.0000000000
Pair 6	ITCPre - ITCPost	.4333400	.0801336	.0253405	.3760158	.4906642	17.101	9	.0000000360
Pair 7	JSWSteelPre - JSWSteelPost	4.2676900	.3002705	.0949539	4.0528895	4.4824905	44.945	9	.0000000000
Pair 8	ReliancePre - ReliancePost	4.8452300	.3051293	.0964904	4.6269536	5.0635064	50.215	9	.0000000000
Pair 9	TATAMotorsPre - TATAMotorsPost	-1.6505000	.1264019	.0399718	-1.7409225	-1.5600775	-41.292	9	.0000000000
Pair 10	TATASteelPre - TATASteelPost	-.2612400	.1436303	.0454199	-.3639869	-.1584931	-5.752	9	.0002757177

As can be seen from the table 4, BHEL, Coal India, Tata Motors, Tata Steel have a negative mean difference of abnormal return between pre and post GST whereas, Bajaj Auto, Hindalco, IOC, ITC, JSW Steel, Reliance have a positive mean difference of abnormal return between pre and post demonetisation. As the significance level of all the stocks are less than 0.05 or 5%, thus we reject the null hypothesis i.e. There is no significant impact of GST on export company returns.

## 5. Conclusion

The study was conducted to analyse the impact the of twin economic policy i.e. Demonetization and Goods and Service Tax on Indian Economy in light of Export Companies. For analyses the paper considered the Top 10 exports companies from various sectors related to export companies and the companies are Reliance Industries, Tata Motors, Indian Oil, Coal India, ITC, Bharat Heavy Electricals, Hindalco Industries,

Tata Steel, JSW Steel as these companies consists the major export of the total Indian Exports. It was noticed in the literature review that any economic policy has an direct or indirect impact on the stock prices of the companies. Hence the analysis was conducted by using Paired correlation and Paired t-Test to know the relation and impact of demonetisation and GST on the abnormal returns of the export companies. The Paired correlation shows that there is no correlation of demonetization and GST to the the abnormal return of the export companies stock. The Paired t-Test states that there is an impact of both demonetization and GST on the abnormal return of the export companies stock. So the study find that the twin economic policy of government have no correlation with the return of the stockof export companies, but it impacted the return of the stocks of export companies. Hence twin economic policy had an impact on the Indian Economy in the light of the Export companies.

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