The Role of Technology and Regulations in Capital Flow to India

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Abstract

The economic reforms initiated in India in 1990, have opened greater avenues to attract foreign funds into the Indian stock market. The Indian Economy shows more potential for development as compared to other developing economies which is the reason that India is mostly picked up by foreign investors for capital investments. An attempt is being made in this paper to analyse the role of technology in capital flow and also to examine the relationship between regulation and capital flows to India. The monthly data of the variables have been taken for the study and the reference period used in the study is January 2006 to December 2017. The data is processed on EViews 9. The descriptive statistics have been utilized to outline the general pattern and trend of the dataset. For checking the stationarity of the data Augmented Dickey-Fuller test is used. After the ADF test, Johansen Co-integration test is applied to verify the existence of long-run interrelationships and integration among the variables. In the study, regression is also applied to have more predictability about the relationship between different variables. It is found in the study that there has been a positive effect of the regulation policies which are being made in India as well as the technological developments which are happening in India over the period as not only flow of FDI is increasing, but the NSE Index Price is also showing a positive momentum in the study. Therefore it can be said that role of technology in capital flow to India has become increasingly important as it helps the country to invite more and more capital flows to India and thereby have more growth and development in the financial system as well as the whole economy.

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1. Introduction

Economies like India, have more to offer to the foreign investors as compared to other developed economies in the form of better returns, which is the reason that India is picked up more by the capital investors around the world since the economic reforms initiated in 1990. Foreign Investors are very optimistic when it comes to India as the country holds much favorable government's Policies and amendments which allow FDI to enter the country. According to a survey held in 2015 by Bank of America Merrill Lynch (BofA-ML), India earned the spot for the favorite Capital market for the investors around the world at 43 percent, after India China was seen following the position at 26 percent. SEBI acting as a nodal point has smoothened the process of investments too. RBI allowed SEBI registered FIIs/NRIs/PIOs/OCBs to invest in the capital markets of India through Portfolio Investment Scheme. Qualified institutional speculators that can enroll as FIIs are asset management organizations/companies, mutual funds, banks, venture trusts, companies, institutional enrichment establishments, magnanimous trusts and benevolent societies.

Allowing FDI reduced the dependence on external commercial borrowing. Private foreign capital accounted for 70.29% of the total net capital account in 2001-02 against 21% in 1985-86. There has been a consistent upsurge in FDI since 2002-03. The inflow of FDI investments has helped the stock market to rise enormously. FDIs are allowed to invest mostly in secondary markets and dated Government Securities. RBI has placed a ceiling of 10% on NRIs/PIOs share capital of the Indian company, and 20% paid up share capital of government sector banks. RBI recently proposed that the sector-wise ceiling for FII and FDI will be reduced from 24 percent to 10 percent Subject to the approval by the respective board by passing a special resolution for that effect. Presently there are 89 companies in 24% cap category, 19 in 30% cap category, 14 in 40% cap category, 16 in 49% cap category. The most significant source through which FDIs & FIIs invest is the Offshore Derivates also known as an issuance of Participatory Notes (P-Notes). It is generally observed that the inflow of funds in the stock market raises investment sentiments and the stock indices. Portfolio investment being an instant phenomenon it displays the stock market influence instantaneously. An attempt is being made in this paper to identify the association amongst the foreign portfolio investment and factors which determines foreign direct investments in India and further to what extent these investments influence the market indicators. Also, an attempt is made to find out whether this influence gets ironed out over a period and brings sanity in stock index movements in the long run.

2. Theoretical Framework

The framework tries to explain how the technology and regulations affect the capital flow in the capital market of India. Capital market in India is a large part, involves different variables like Lower exchange rate volatility, risk diversification Garg and Dua (2014) Garg and Bodla (2009). Indian equity market return Garg and Bodla (2009) monetary policy, Rao and Sensarma (2007) etc. Technology and regulations are the factors showing great significance in how the capital flow in India operates; Paper has focused on these two factors & identified them as being independent variables. As Capital Flow is influenced by technology and regulations, Capital Flow acts as a dependent variable. The following diagram explains the relationship between the Independent Variable (technology and regulations) and the Dependent Variable (Capital Flow).
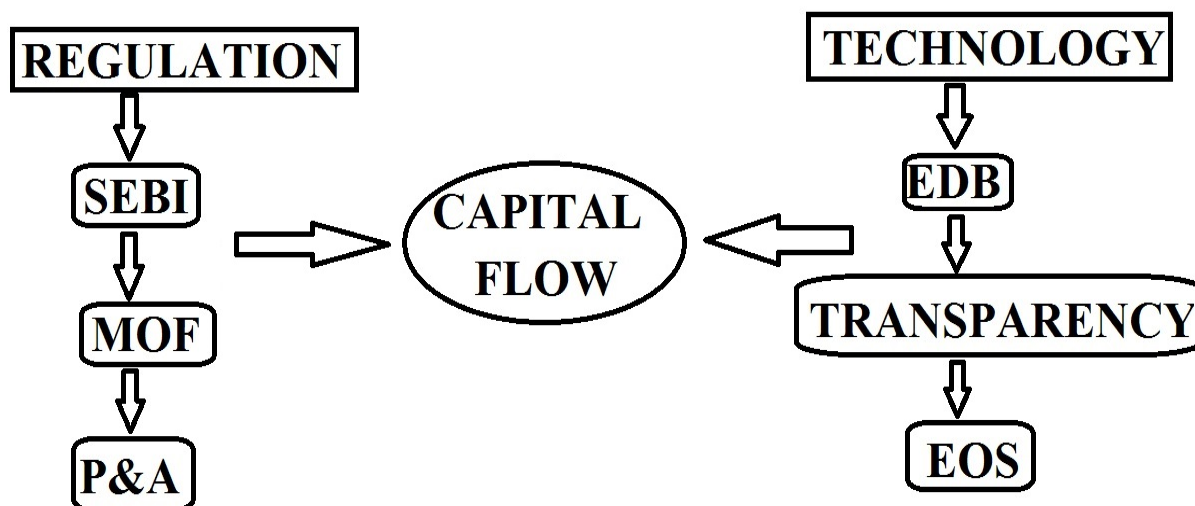
SEBI-

The Securities and Exchange Board of India is an apex government body which regulates the securities market. It was established in 1988 & came into practice in 1992 after SEBI act was passed through Indian Parliament.
Its primary functions are:
- To promote and develop the Indian stock market
- To safeguard the interest of investors.

MOF-

The Ministry of Finance is a ministry which is concerned with the economy of IndiaThe Department of Economic undertakings directly deals with the capital markets fragment under the headings of MoF. This fragment plans the standards for the productive development of money markets which incorporates subordinates, obligation, and value. It additionally figures controls for shielding the interest of the financial specialists.

MoF controls the Indian stock markets through the accompanying laws:

- Securities Contract (Regulation) Act, 1956
- SEBI, 1992
- Depositories Act, 1996

RBI-

The Reserve Bank Of India has a critical influence in the Development Strategy of the Government of India. It initiated its tasks on 1 April 1935 as per the Reserve Bank of India Act, 1934. The elements of RBI in such manner are as per the following:

- Execution of fiscal and credit strategies
- Issuing of money notes
- Government's Banker

- Saving money framework controller
- FEMA, 1999
- Overseeing installment and settlement framework

The framework shown above tells us about how Regulation & Technology are dependent on Capital Inflow. Regulations comprise of the rules and directions set by the higher authority which has to be abided & followed by all. In India, this authority is been given to the SEBI which came into existence in 1992. All the regulations for the securities market in India are under the control of SEBI. Other like Ministry of finance is another important part of the independent variable, where the government makes certain rules for the economy which affects the flow of capital from outside the world into the market. Policies and amendments approved by the Ministry of finance have significantly encouraged the capital inflows in India Sumanjeet (2009). Capital flow contributes in filling the technological gap with new advancements and various innovations Dhiman and Sharma (2013) as a result of new innovation economies of scale can be achieved it likewise adequately contribute in the simplicity of doing business. The general motivation behind capital markets is to add to the most ideal allocation of financial capital Thuesen and Ulriksen (2004). The offering of securities advantage the whole economy, i.e. business undertakings, financial specialists, reserve funds holders, mortgage holders, citizens, buyers, and so forth. The two speculators and borrowers must have the capacity to purchase and offer securities at costs that reflect the connection between supply and purchase of capital stock. This requires well-working markets that are subject to rivalry in the form of competition and effective price formation. Therefore Transparency must be surveyed to guarantee the well-functioning of capital markets & safeguard the interest of the stakeholders in the economy. Thuesen and Ulriksen (2004) The model try to show the impact of the regulations and technology with the support of data from the past 11 years.

3. Review of Literature

Even after the post-Independence period continuing until the mid-1980s, India had a moderately closed capital account. The majority of the outside financing was basically bound to outside help through multilateral and two-sided sources. It was later in the 1980s that the situation began changing as the Current Account of India recorded great deficiency because of increasing demand for imports of oil with hiked prices, along with this sharp devaluation of the rupee in the late 1980s expanded the need for external funds Sen Gupta and Sen Gupta (2012). The presence of FIIs can improve the liquidity in the market to a great extent. India being the second most populated country in the world is rich with Human Resource, and the flow of international capital leads to a Positive effect on the Economy. After 1991 Industrial policy the abolition of the inflow of capital resulted in new trends of capital flow in India Gopinath (2004). Outside capital has a key part to play in the financial advancement of India. Policymakers understood that domestic savings and revenue from taxes are insufficient to fulfill the large investment needs of the country Goel, Kumar and Singh (2012). Indian economy then turned out to be more open and welcoming for foreign capital flows coordinated from rest of the world, which is altogether contributing to the development of the economy Levin and Zahavi (2001). The Indian government has been persistently continuing for financial changes and is guaranteed to secure enactment to permit more outside interest in different parts. The extent of net capital inflows to India has expanded fundamentally in the post-industrialization period Sumanjeet (2009) Nanda and Sekhar (2015). There are various regulations made by the government which can control the number of investments. In the current past, different market analysts, policymakers, and corporate specialists proposed that

India's regulatory policies as, complex paperwork and legal constraints may have played a crucial part in keeping the speculators away from putting investments into India. India has possessed the capacity to draw a sensible amount of Foreign capital and there has been a huge development in the Foreign exchange transactions with respect to Foreign Markets Goel, Kumar and Singh (2012) Nanda and Sekhar (2015). Foreign Direct Investments gives an entrance to the remote capital however in the meantime FDI additionally serves to give the most modernize Technology available, with innovation and other supporting techniques. Presently the Government has an extremely crucial part in drafting and executing different regulations with respect to the inflow of FDI which act as an impetus for outside nations to guarantee their interest in India. Presumably, that measure of the inflow of FDI will record to the development in GDP yet at a similar time the Indian securities exchange will likewise be influenced because of the inflow of FDI Dhiman and Sharma (2013). Sinha (2010) stated that Capital controls in India vary as indicated by the kind of financial specialist, the business sectors worked in, assets purchased or sold. The law has discrete guidelines for every financial specialist According to the reports of the World Bank, & other worldwide institutions in India has been ranked in top three global investment destinations. For the Indian economy which has gigantic potential, FDI has had a positive effect. FDI inflow supplements local capital, and in addition provide innovation and Technology. It likewise helps in setting up new organizations. All together contributing to the monetary development of the Indian Economy Malhotra (2014). Kohli (2001) Analyzed the patterns and the creation of the flow of Foreign Capital into the Indian capital market and inspected the impact of it on the essential macroeconomic factors in the nation. Author additionally analyzed the strategy reactions of Indian Government to these capital flows. The creator found that the capital inflow had a considerable effect on the genuine valuation of the economy and it had likewise expanded the residential cash supply.

4. Research Gap

After 1991 reforms, Industrialization policy of India increased the FDI in India. To measure the impact of these policy changes along with technology on FDI, this study identified few indices, which are (Regulation Index, Competitiveness rank). As regards some studies have expected the impact of FDI on the country growth and its GDP. To the best knowledge of the authors, no comprehensive study is available to measure the impact of Regulation and technology on capital flow in India. Hence to fill this gap the study is conducted to measure the role of technology and regulation. Further study also correlates the performance of capital markets with technology and regulation.

5. The Objective of the Study

The objective of the study is to analyze the role of technology and regulation in capital flow to India. It also correlates the performance of capital market with technology and regulation.

6. Research Design and Methodology

This paper attempts to measure the relationship of FDI (in Indian market) with Regulations and technology. (Annexure-1)

6.1 The Sample for the study: The study was conducted for the 11-year period starting from January 2006 to December 2017. The monthly flow of FDI in India has been taken for the purpose of the study and the time period for which it has been taken is from January 2006 to December 2017, being the reference period. In India, FDI started in 1994. The reason behind taking this reference period for the study is that since Regulation index, competitiveness index the two main independent factor for the study taken from the global Competitiveness report is published by world economic forum since 2004 onwards, therefore the researchers restricted the span of study as no other such strong and effective tool/proxy was found in order to measure the competitiveness and regulation of India across the world before 2004.

6.2 Variables were chosen and justification: For Regulation, the Regulation Index has been taken as the representative and the Competitiveness Rank of India has been taken as the proxy for technology because there is no such kind of framework in India for the purpose of analyzing the regulatory development framework. Moreover, there does not exist any such type of index, which measures the growth, and development of regulation as the base for estimating the impact of regulation on capital flows behavior. In order to capture the impact of FDI on the capital market, the NSE monthly Index Price has been used for the study period.

6.3 Sources of Data collection: The data is mainly collected from the RBI Reports of the different periods, the Global Competitiveness Report issued by the World Economic Forum and tradingeconomics.com. The auxiliary information and other appropriate writing accessible regarding this matter had been assembled from published/unpublished materials, records and web sources through the broad work area.

6.4 Research Tools: The information investigation was finished with EViews 9. The descriptive statistics (mean, middle, mode, standard deviation, skewness, kurtosis) has been utilized to outline the general pattern and trend of the dataset. Information in time arrangement is called as stationary if the mean, difference and auto-covariance are autonomous of time. We have utilized the log estimation of files and additionally affirmed the idea of information arrangement with the use of Augmented Dickey-Fuller (ADF).

$$\Delta y_t = \alpha + \beta_t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \ldots + \delta_{p-1} \Delta y_{t-p+1} + \varepsilon_t$$

Where α is referred to as constant, β time trend coefficient and p being a lag order of the autoregressive process. Imposing constraints $\alpha=0$ and $\beta=0$ corresponds to modeling the random walk and use of constraint $\beta=0$ corresponds modeling the random walk with drift.

After the ADF test, we applied Johansen Co-integration test in order to check the existence of the short and the long-run interrelationships and integration among the variables. We also tried to apply the regression in order to have more predictability about the situation and the relationship the different variables are having with each other in the study. For the regression, we used the log values of the data in order to analyze the data more accurately and thereby drawing some meaningful conclusion.

$$LnFDI = \alpha + \beta_1 RI + \beta_2 CI + \beta_3 Index + \varepsilon$$

7. Data Analysis and Interpretation

First of all the descriptive statistics was estimated in order to have the general trend and pattern of the different variables.

Table 1: Descriptive Statistics of the variables

Descriptive Statistics				
	LNFDI	**LNCI**	**LNRI**	**LNINDEX**
Mean	7.682698	3.936379	4.855053	8.647602
Median	7.709728	3.921925	4.882802	8.636492
Maximum	8.987197	4.26268	4.934474	9.26205
Minimum	4.844187	3.663562	4.60517	7.921209
Std. Dev.	0.618838	0.162778	0.086075	0.333591
Skewness	-0.911646	0.168895	-2.087218	-0.187931
Kurtosis	5.203428	2.468259	6.246855	2.362933
Jarque-Bera	49.07694	2.381106	167.8079	3.282761
Probability	0	0.304053	0	0.193712
Observations	144	144	144	144

Source: Author's own calculation

In the study, it was found that the mean value of FDI over the period is coming out to be 7.682698 which is higher than the mean value of Regulation Index and the competitive index. Whereas on the other hand, the NSE Index price is having the higher mean value in comparison to all other variables of the study. Moreover, the standard deviation of the Regulation Index is very low thereby giving an indication of less volatility and the other variables are having the higher standard deviation in compare of it and thereby gives a little bit higher volatility. The FDI is negatively skewed along with NSE index price and regulation index which means the tail of the distribution is on the left or distribution is having a long left tail and the concentration of mass distribution is on the right whereas the competitive index is positively skewed which means the tail of the distribution is on the right or distribution is having a long right tail and the concentration of mass distribution is on the left. The kurtosis, in normal distribution series, has a value of 3. But FDI and Index Price are having the kurtosis value more than 3 whereas other variables are having less than 3 value.

Table 2 – ADF results for FDI

Null Hypothesis: D(LNFDI) has a unit root				
Exogenous: Constant				
Lag Length: 2 (Automatic-basic on SIC, maxlag=13)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-10.99259	
Test critical values: 1% Level			-3.477487	0
5% Level			-2.882127	
10% Level			-2.577827	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGIND(-1))	-2.072868	0.18857	-10.99259	0
D(LOGIND(-1),2)	0.595774	0.137856	4.32172	0
D(LOGIND(-2),2)	0.223912	0.077967	2.871859	0.0047
C	0.027771	0.037864	0.733461	0.4645
R-squared	0.70362	Mean dependent var		0.007669
Adjusted E-squared	0.697082	S.D. dependent var		0.812078
S.E. of regression	0.446951	Akaike info criterion		1.25542
Sum squared resid	27.16807	Schwarz criterion		1.339467
Log likelihood	-83.87939	Hannan-Quinn criter.		1.289574
F-statistic	107.6234	Durbin-Watson stat		2.051844
Prob(F-statistic)	0			

Source: Author's own calculation

Table 3 – ADF results for Competitive Index

Null Hypothesis: D(LNCI) has a unit root				
Exogenous: Constant				
Lag Length: 0 (Automatic-Based on SIC, maxlag=13)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-11.8354	
Test critical values: 1% Level			-3.476805	0
5% Level			-2.88183	
10% Level			-2.577668	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNCI(-1))	-1.000274	0.084515	-11.8354	0
C	0.000688	0.003514	-0.195707	0.8451
R-squared	0.500137	Mean dependent var		2.91E-18
Adjusted E-squared	0.496566	S.D. dependent var		0.059014
S.E. of regression	0.041872	Akaike info criterion		-3.494393
Sum squared resid	0.245462	Schwarz criterion		-3.452762
Log likelihood	250.1019	Hannan-Quinn criter.		-3.4774762
F-statistic	140.0766	Durbin-Watson stat		
Prob(F-statistic)	0			

Source: Author's own calculation

Table 4 – ADF results for Regulation Index

Null Hypothesis: D(LNRI) has a unit root Exogenous: Constant Lag Length: 0 (Automatic-Based on SIC, maxlag=13)				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-11.85139	
Test critical values: 1% Level			-3.476805	0
5% Level			-2.88183	
10% Level			-2.577668	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNRI(-1))	-1.001624	0.084515	-11.85139	0
C	-0.001047	0.002194	-0.477195	0.634
R-squared	0.500812	Mean dependent var		0
Adjusted E-squared	0.497246	S.D. dependent var		0.036841
S.E. of regression	0.026122	Akaike info criterion		-4.4381
Sum squared resid	0.09553	Schwarz criterion		-4.396468
Log likelihood	317.1051	Hannan-Quinn criter.		-4.421183
F-statistic	140.4554	Durbin-Watson stat		2.000005
Prob(F-statistic)	0			

Source: Author's own calculation

Table 5 – ADF results for NSE Index Price

Null Hypothesis: D(LNINDEX) has a unit root Exogenous: Constant Lag Length: 0 (Automatic-Based on SIC, maxlag=13)				t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic				-11.3183	
Test critical values: 1% Level				-3.476805	0
5% Level				-2.88183	
10% Level				-2.577668	
Variable	Coefficient	Std. Error	t-Statistic		Prob.
D(LNINDEX(-1))	-0.955776	0.084445	-11.3183		0
C	-0.008288	0.00565	1.466946		0.1446
R-squared	0.477814	Mean dependent var			3.58E-05
Adjusted E-squared	0.474085	S.D. dependent var			0.092059
S.E. of regression	0.066761	Akaike info criterion			-2.561411
Sum squared resid	0.623985	Schwarz criterion			-2.519779
Log likelihood	183.8602	Hannan-Quinn criter.			-2.544493
F-statistic	128.104	Durbin-Watson stat			1.985954
Prob(F-statistic)	0				

Source: Author's own calculation

Tables 1 to 4 represent the result of unit root with Augmented Dickey-Fuller. The Study tested the null hypothesis, data series at a level has the unit root, at 5% significance level and found that since the p-value was more than 0.05, therefore making it non-stationary but so it was tested again at first difference and was found stationary as the p-value was lesser than 0.05. Moreover, the t-statistics was also found more than critical values so study must reject the null hypothesis i.e., data has a unit root at first difference, hence it makes data fit for further econometric testing. Table 6 shows the results of co-integration which depicts that there are more than 2 co-integrating factors in the study.

Table 6 –Johansen Co-integration test results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None*	0.307962	100.9873	47.85613	0
At most 1*	0.175315	49.81936	29.79707	0.0001
At most 2*	0.151455	23.02665	15.49471	0.003
At most 3*	0.001426	0.198325	3.841466	0.6561
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None*	0.307962	51.16797	27.58434	0
At most 1*	0.175315	26.79271	21.13162	0.0072
At most 2*	0.151455	22.83832	14.2646	0.0018
At most 3*	0.001426	0.198325	3.841466	0.6561
Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				

Source: Author's own calculation

Table 7– Regression Results

Summary Output

Regression Statistics	
Multiple R	0.959466501
R Square	0.929146686
Adjusted R Square	0.881414115
Standard Error	0.541562826
Observations	144

ANOVA					
	Df	*SS*	*MS*	*F*	*Significance F*
Regression	3	72.72698	24.24233	82.65643	7.85E-31
Residual	140	41.06064	0.29329		
Total	143	113.7876			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	0.004137873	0.045652	0.09064	0.009278	
RI	1.517170321	1.516702	1.00031	0.003187	
CI	1.043266136	1.286017	0.811238	0.004186	
INDEX	1.256676041	0.536378	2.342892	0.020543	

Source: Author's Own Calculation

The regression equation used for the purpose of estimating the relationship among the FDI (being dependent) and the Regulation Index, Competitive Index and the NSE Index (Being the independent) has given us the regression output as mentioned in Table 7.

LnFDI = 0.004137873+$\beta_1$1.517170321 + $\beta_2$1.043266136 + $\beta_3$1.256656041 + ε

It is clear from the output results that the intercept coefficient is coming out to be 0.004137 which means there was a positive growth rate of 0.41% at the beginning of the study and since p-value is less than 0.05 there it is statistically significant also. The Regulation Index is 1.517 having statistically significant. The Competitive Index is having a coefficient of 1.0432 and NSE Index Price coefficient is also having the positive coefficient of 1.2566 which means that both these factors are having the positive growth rate over the period of study and they are statistically significant too. Since all the variables are coming out to be statistically significant therefore we tried to estimate the full regression equation.

8. Limitations of the study

1) The Study is based on secondary data, and the limitations of secondary data are applicable to this study.
2) The period of study taken could be increased in order to cover more broad and important information's.
3) The variables could also be enhanced in the sense that in the present study only capital flows have been taken but there are other variables that define an impact the technology and regulations.

9. Implications of the study

1) The study could be used in order to make broad policy decisions with respect to the attraction of capital flows and technology and regulation
2) The study could be utilized by the government authorities to take policy decisions in order to improve the flow of capital flows by focusing more on the development of technology and making more business-friendly regulations.

10. Scope for Future Research

This study is based on two indices regulation and competitiveness to measure the impact of capital flows. Future academic researchers can try the same for other indices which reflect technology and regulation.

11. Conclusion

The economic reforms initiated in 1990, have opened greater and better avenues to attract the foreign funds in the Indian stock market. Economies like India, which offer relatively higher growth than the developed economies, have gain favor among investors as attractive investment destinations for foreign capital investors. Regulation and technology have always been the two important independent factors affecting the FDI in India since long ago.

This paper was an attempt to measure the relationship of FDI (in Indian market) with Regulations and technology. The researcher has utilized the log estimation of data and additionally affirmed the idea of information arrangement with the use of Augmented Dickey-Fuller (ADF). After the ADF test, researcher applied Johansen Co-integration test in order to check the existence of the long-run interrelationships and integration among the variables. The researcher also applied the regression in order to have more predictability about the situation and the relationship between different variables.

The study found that there has been a positive effect of the regulation policies which are being made in India as well as the technological developments which are happening in India over the period of time as not only flow of FDI is increasing but the NSE Index Price is also showing a positive momentum in the study. Therefore it can be said that role of technology in capital flow to India has become increasingly important as it helps the country to invite more and more capital flows to India and thereby have more growth and development in the financial system as well as the whole economy. The performance of Capital market over the

technology and regulation is also having the positive momentum. Therefore it can also be interpreted that the positive momentum seen in the index prices are also being influenced by the technology and regulations developments which are happening in India.

So, study concludes that the technology and regulations role in inviting FDI in India is not only important but vital also an increase in FDI will result in increase in the flow of development in the financial market, which is evident from the positive movement in the NSE index price, and also in the economy as a whole.

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ANNEXURE-1

The relationship of FDI (in Indian market) with Regulations and technology:

Variable	Type of Variable	Proxy Used	Definition
FDI	Dependent	FDI (No Proxy)	Foreign Direct Investment (FDI) measures the total level of direct investment at a given point in time, usually the end of a quarter or of a year.
Regulation	Independent	Regulation Index	The Regulatory index ranks economies from 1to 190, with first place being the best. A high ranking (a low numerical rank) means that the regulatory environment is conducive to business operation. The index averages the country's percentile rankings on 10 topics covered in the World Banks Doing Business. The ranking on each topic is the simple average of the percentile rankings on its component indicators. (Bank,2017)
Technology	Independent	Competitiveness Rank	It is defined by the World Economic Forum. It is a set of institutions, policies, and factors that determine the level of productivity of a country, conditions of public institutions and technical conditions. (BIRG,2013)
Capital Market	Independent	NSE Index (Nifty 50)	The Index reflects the movements and progression of the 50 Nifty stocks in the Indian stock market and the impact of the flow of capital in the market.