

A STUDY ON FDI & FII INVESTMENTS IMPACT ON SELECT SECTORAL GROWTH IN INDIA

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ABSTRACT:

The present study has been emphasized on the foreign funds flows through FDI and FII into India from the period of 2002 to 2018 year. The study has considered the secondary data of five sectors which are attracting the higher investments in both formats from the year of 2002 onwards from the equity market and ministry of commerce and industries of India. The relationship has been measured with the help of bi-variant correlation between the investments of FDI and FII with the selected five sectoral investment indicators and the result reveals that the stronger relation observed with the service and infrastructure sectors. The least square regression result indicated that the impact of FDI and FII is observed on selected five sectors. The vector auto regression has been applied to know the future movement of the selected sector based on the FDI & FII and the result stated that the all the sectors are expected to grow in near future. This paper is useful not only to the equity investors of FII but also the domestic and foreign industries who want to do the business by investing directly in India.

Keywords: CHEMICALS, FDI, FII, INFRASTRUCTURE, IT, METALLURGIC, SERVICES, TELECOM.

INTRODUCTION:

FDI or Foreign Direct Investment is any sort of wander that additions energy for endeavors which work outside of the family unit locale of the theorist. FDIs require a business association between a parent association and its outside reinforcement. Outside direct business affiliations offer ascending to multinational associations. For a hypothesis to be seen as a FDI, the parent firm needs no fewer than 10% of the ordinary offers of its outside individuals. The contributing firm may in like manner fit the bill for a FDI in case it claims voting power in a business wander working in a remote country.

India now with solid improvement execution and unlimited high-skilled direct work gives massive opportunity to wander both private and outside. Remote direct hypothesis (FDI) causes a surge of money into the economies which quickens fiscal development, constructs work and actuates the long run add up to supply and gets best practices.

Economies like India, which offer moderately higher development than the created economies, have picked up support among financial specialists as appealing wander objectives for outside institutional speculators i.e. FIIs. Financial specialists are hopeful on India and estimations are good after government's declaration of a progression of change measures as of late. According to Ernst and Young's (EYs) Global Capital Confidence Barometer (CCB) - Technology report, India positions third among the most captivating hypothesis destinations for development trades on the planet. India is the third biggest start-up base on the planet with in excess of 4,750 innovation new businesses, and around 1,400 new companies being established in 2016, as indicated by a report by NASSCOM.

REVIEW OF LITERATURE

Santanu Kumar Das (2017)¹: The present paper endeavours to think about the criticalness of FDI and FII for the financial development of India amid 2001-2015. In request to accomplish the destinations of paper, information have been gathered from different optional sources and for the count connection and relapse apparatuses have been applied. They ponder that FDI influences the monetary development fundamentally though the part of FII is factually immaterial.

Pooja Nagpal, Chandrika R, Ravindra H V (2016)²: The present paper thinks about the degree of connection between outside capital streams and securities exchange unpredictability. In this specific situation, an endeavour is hard to think about the effect of FDI and FII on Indian securities exchanges. This investigation covers the time skyline of 10 years from 2005-06 to 2014-15. The examination expresses that the stream of FDI and FII has huge effect on developments of Sensex and Nifty.

Sandeep Kapoor, Rocky Sachan (2015)³: The present paper makes an endeavor to think about the relationship and effect of FDI and FII on Indian securities exchange utilizing factual measures connection and relapse investigation. Sensex and CNX Nifty were considered as the delegate of securities exchange as they are the most famous Indian stock exchange files. In view of 10 years information beginning from 2002 to 2011, it was discovered that the stream of FDI has no noteworthy effect on securities exchange however FII in India decides the pattern of Indian securities exchange.

Naveen sood (2015)⁴: The present paper endeavors to ponder the importance of FDI and FII for the monetary development of India amid 2001-2015. With a specific end goal, to accomplish the target of the paper, information has been gathered from different optional sources and the apparatuses of connection and backslide have been associated. The examination reasons that FDI influences the monetary development of India essentially while the part of FII for the financial development of India is factually inconsequential.

Arindam Banerjee (2013)⁵: The present examination was directed with expect to comprehend the effect of FDI and FII on Indian Stock Market (BSE and Nifty) amid the retreat time frame. It was found from the examination that FDI affected the Indian Stock market amid subsidence while FII contrarily impacted the Indian Stock Market.

Mamtajain, Priyanka Laxmi Meena, Mathur T N (2013)⁶: The present paper endeavour to test the relationship between's remote institutional ventures or outside direct speculation and the genuine monetary development in India over a period 2000-01 to 2009-10. The examination infers that both FII and FDI are impacting the financial improvement. FDI is favoured over FII speculations since it is thought to be most advantageous type of outside venture for the economy.

Shikha Menani (2013)⁷: The present paper endeavors to complete a similar investigation of FDI and FII and their commitment towards financial development. For the information and procedure, the time arrangement examination is connected on the day and age from 2000 to 2012. The investigation presumes that aside from GDP and FII at a slack of 2 years, there is no causal connection between the two factors i.e., FDI and FII.

RESEARCH GAP:

The various studies discussed about the FDI flows and out flows across the world by the academicians. In India few researchers focused on impact of FDI on economy and its comparison with various countries. Even, FII investments and its impact on Indian stock markets. But no study has been considered both FDI and FII investments impact by considering the sectors. The present study has made an attempt to fill the gap with the titled “FDI and FII investments impact on select sectoral growth in India”.

OBJECTIVES OF THE STUDY:

1. To study the relationship of FII & FDI investments with select sectoral investments.
2. To study the impact of FDI & FII investments on select sectoral investments.
3. To study the future movement growth of select sectoral investments based on FII & FDI investments.

HYPOTHESIS OF THE STUDY:

H₀: There is no relationship between the FII & FDI with select sectoral investments.

H₀: There is no impact of FII & FDI on select sectoral investments.

SCOPE OF THE STUDY:

The present study will consider secondary data from the year 2002 – 2018 March. The following are the sectoral investments will be considered, they are SERVICES, IT, TELECOM, METALLURGIC, CHEMICALS & INFRASTRUCTURE.

RESEARCH METHODOLOGY:

The present study will consider secondary data from the year 2002 – 2018 March. The data is collected from DIPP, BSE & NSE sites.

The following statistical tools will be applied in this present study,

- ADF test, Bi-variant correlation, Johansen co-integration test, Granger causality test, OLS, VAR.

Tabulation of Data Analysis

The study has considered the historical time series data from the period of 2002 to 2018 of various sectors. The Augmented Dicky Fuller test has been applied for the stationary to remove the seasonality of the data. The statistical methods were applied on the stationary data.

1st Objective: To study the relationship of FDI investments with select sectoral investments.

Table – 1: The Correlation of FDI with the Selected Sectoral Investments

	DFDI	DSERVICES	DIT	DTELECOM	DMETALLURGIC	DCHEMICALS
DFDI	1	-	-	-	-	-
DSERVICES	0.900274	1	-	-	-	-
DIT	0.449312	0.287797	1	-	-	-
DTELECOM	0.144050	-0.136849	0.305446	1	-	-
DMETALLURGIC	0.212684	0.012351	0.187925	0.276690	1	-
DCHEMICALS	0.071286	-0.084178	0.156982	0.048015	0.581743	1

Source: Compiled from E-views version 10 on secondary data

Table illustrates the relationship of FDI with select sectors. The result indicates that FDI with SERVICES sector is strong i.e., 0.9 (which is greater than standard value > 0.6), the relationship of FDI with IT sector is moderate i.e., 0.44 (which lies between 0.3 - 0.6), and the relationship of FDI to TELECOM, METTALURGIC and CHEMICALS is weak i.e, 0.14, 0.212, 0.07 (which is less than the standard value < 0.3). Therefore, Null Hypothesis is rejected and Alternative Hypothesis is accepted.

Table – 2: The Correlation of FII with the Selected Sectoral Investments

	DFII	DSERVICES	DIT	DTELECOM	DMETAL	DINFRA
DFII	1.000000	-	-	-	-	-
DSERVICES	-0.132237	1.000000	-	-	-	-
DIT	-0.160477	0.754889	1.000000	-	-	-

DTELECOM	-0.084592	0.675133	0.497973	1.000000	-	-
DMETAL	-0.162543	0.866538	0.683310	0.571277	1.000000	-
DINFRA	-0.161901	0.914276	0.529166	0.732534	0.854675	1.000000

Source: Compiled from E-views version 10 on secondary data

Table illustrates the relationship of FII with select sectors. The result indicates that FII with SERVICES sector seems to be negatively correlated i.e., (-0.132). Similarly the IT, TELECOM, METALLURGIC and INFRA sectors are also observed to be negatively correlated with their corresponding values as -0.160, -0.084, -0.162, -0.161. Therefore, Null Hypothesis is rejected and Alternative Hypothesis is accepted (i.e., correlation should be <0 or >0 but it should not be $=0$).

2nd Objective: To study the impact of FDI investments with select sectoral investments.

Table – 3: Impact of Selected Sectoral Investments on FDI Flows

Dependent Variable: DFDI				
Method: Least Squares				
Sample: 1 21				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DSERVICES	0.205024	0.017571	11.66797	0.0000
DIT	0.060616	0.051397	1.179376	0.0257
DTELECOM	0.063168	0.022135	2.853794	0.0115
DMETALLURGIC	0.016738	0.020757	0.806344	0.0419
DCHEMICALS	0.015170	0.015401	0.985030	0.0393
R-squared	0.911444	Mean dependent var		18.50914
Adjusted R-squared	0.889306	S.D. dependent var		38.35809
S.E. of regression	12.76203	Akaike info criterion		8.135083
Sum squared resid	2605.912	Schwarz criterion		8.383779
Log likelihood	-80.41837	Hannan-Quinn criter.		8.189057
Durbin-Watson stat	2.131003			

Source: Compiled from E-views version 10 on secondary data

The table Least Square Regression shows the impact of FDI on select sectors. The Adjusted R-Squared (0.91 $>$ 0.60) is observed to be strongly fit. And Durbin-Watson stat is 2.13 (i.e., slap level is 1.5 to 2.5) so it observed to be strongly fit.

Regression results indicate that all the sectors have impact of FDI. i.e., SERVICES (0.00 $<$ 0.05), TELECOM (0.01 $<$ 0.05), IT (0.025 $<$ 0.05), METALLURGIC (0.041 $<$ 0.05), CHEMICALS (0.039 $<$ 0.05), is observed to

be significant which indicates that these sectors have influence of FDI. Hence, concluded that SERVICES & TELECOM sectors have higher impact of FDI.

2nd Objective: To study the impact of FII investments with select sectoral investments.

Table – 4: Impact of Selected Sectoral investments on FII

Dependent Variable: DFII				
Method: Least Squares				
Sample: 1 39				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DSERVICES	5.665294	68.80388	0.082340	0.0000
DIT	-24.85553	33.11025	-0.750690	0.0040
DTELECOM	17.85590	28.57092	0.624968	0.0002
DMETAL	5.127516	21.98928	0.233182	0.0000
DINFRA	-25.87182	61.72430	-0.419151	0.0007
R-squared	-0.039151	Mean dependent var		-366.0685
Adjusted R-squared	-0.161404	S.D. dependent var		1094.544
S.E. of regression	1179.573	Akaike info criterion		17.10290
Sum squared resid	47307309	Schwarz criterion		17.31618
Log likelihood	-328.5066	Hannan-Quinn criter.		17.17942
Durbin-Watson stat	1.967093			

Source: Compiled from E-views version 10 on secondary data

The table Least Square Regression shows the impact of FII on select sectors. The Adjusted R-Squared (-0.03<0.60) is observed negative. But the Durbin-Watson stat is 1.96 which lays between the slap values of 1.5 to 2.5. Hence, the model is stated to be fit for the least the square method.

Regression results indicate that these sectors have influence of FII. i.e., SERVICES (0.00>0.05), TELECOM (0.0002>0.05), IT (0.004>0.05), METALLURGIC (0.00>0.05), INFRA (0.0007>0.05), seem to be significant. The sectors like SERVICES, TELECOM, METAL has positive influence on FII, whereas IT and INFRASTRUCTURE sectors have negative influence on FII.

3rd Objective: To study the future movement growth of select sectoral investments based on FDI investments.

Table No – 5: VAR Lag Order Selection Criteria for FDI

Endogenous variables: DFDI DSERVICES DIT DTELECOM DMETALLURGIC DCHEMICALS
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Exogenous variables: C						
Sample: 1 21						
Included observations: 20						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-705.6066	NA	3.24e+23	71.16066	71.45938	71.21898
1	-633.6912	93.49010*	1.07e+22*	67.56912*	69.66015*	67.97731*
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

Source: Compiled from E-views version 10 on secondary data

Above Table depicts the Lag order selection criterion for Vector Auto Regression. LR test statistic is observed to be fit at Lag 1. Similarly Final Prediction Error and Akaike Information Criterion are observed to be fit at lag 1, Schwarz Information Criterion select Lag 1 as a lag order selection and Hannan-Quinn information criterion are fit at lag 1. Overall criterion states that Lag 1 is a best for VAR model.

Table No – 6: VAR (Vector Auto Regression) Estimates of FDI

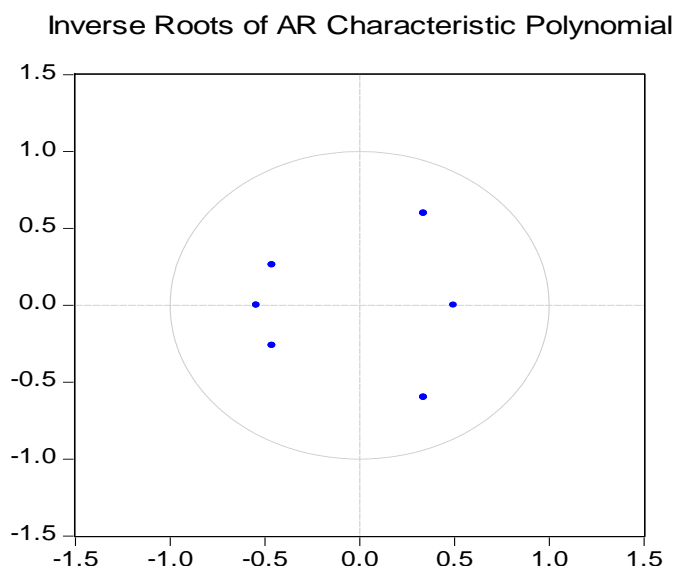
Vector Autoregression Estimates						
Sample (adjusted): 2 21						
Included observations: 20 after adjustments						
Standard errors in () & t-statistics in []						
	DFDI	DSERVICE S	DIT	DTELECO M	DMETALL URGIC	DCHEMIC ALS
DFDI(-1)	-0.444414 (0.44869) [-0.99048]	-0.192460 (1.51665) [-0.12690]	-2.582728 (1.20258) [-2.14765]	-1.104391 (2.88425) [-0.38290]	-3.206725 (3.32820) [-0.96350]	-4.139521 (4.82926) [-0.85717]
DSERVICES(-1)	0.105531 (0.09605) [1.09873]	-0.083185 (0.32466) [-0.25622]	0.433191 (0.25743) [1.68274]	0.287712 (0.61742) [0.46599]	0.587197 (0.71246) [0.82419]	0.684223 (1.03378) [0.66186]
DIT(-1)	0.090172 (0.09382) [0.96114]	0.627626 (0.31712) [1.97912]	0.265720 (0.25145) [1.05674]	0.608328 (0.60308) [1.00870]	-0.237883 (0.69591) [-0.34183]	-0.674719 (1.00977) [-0.66819]
DTELECOM(-1)	0.077723 (0.04882) [1.59211]	0.268157 (0.16501) [1.62507]	0.247250 (0.13084) [1.88969]	-0.245412 (0.31381) [-0.78204]	-0.156137 (0.36211) [-0.43118]	-0.080093 (0.52543) [-0.15243]
DMETALLURGIC(-1)	0.194325 (0.03718)	0.930471 (0.12569)	0.115756 (0.09966)	0.061196 (0.23902)	0.320682 (0.27581)	0.051240 (0.40021)

	[5.22617]	[7.40311]	[1.16152]	[0.25603]	[1.16268]	[0.12803]
DCHEMICALS(-1)	-0.047897	-0.424779	0.011566	0.203602	0.350349	-0.104842
	(0.02868)	(0.09695)	(0.07687)	(0.18437)	(0.21275)	(0.30871)
	[-1.66994]	[-4.38140]	[0.15046]	[1.10429]	[1.64674]	[-0.33962]
C	9.372610	8.525030	25.72497	50.51158	59.76516	172.6740
	(6.27381)	(21.2067)	(16.8152)	(40.3294)	(46.5370)	(67.5257)
	[1.49393]	[0.40200]	[1.52986]	[1.25248]	[1.28425]	[2.55716]
R-squared	0.767325	0.873622	0.400178	0.277207	0.434049	0.243809
Adj. R-squared	0.659936	0.815293	0.123337	-0.056389	0.172841	-0.105203
Sum sq. resids	6479.989	74038.77	46549.87	267765.6	356540.7	750672.8
S.E. equation	22.32623	75.46715	59.83944	143.5178	165.6086	240.2999
F-statistic	7.145313	14.97763	1.445516	0.830966	1.661699	0.698570
Log likelihood	-86.18619	-110.5449	-105.9042	-123.4001	-126.2635	-133.7087
Akaike AIC	9.318619	11.75449	11.29042	13.04001	13.32635	14.07087
Schwarz SC	9.667125	12.10300	11.63893	13.38852	13.67485	14.41938
Mean dependent	20.36266	50.64981	27.27382	65.96168	60.87848	95.71025
S.D. dependent	38.28559	175.5968	63.91035	139.6348	182.0910	228.5771
Determinant resid covariance (dof adj.)		1.77E+21				
Determinant resid covariance		1.34E+20				
Log likelihood		-633.6912				
Akaike information criterion		67.56912				
Schwarz criterion		69.66015				

Source: Compiled from E-views version 10 on secondary data

The table depicts that, there are one exogenous i.e. DFDI and five endogenous variables, DSERVICES, DIT, DTELECOM, DMETALLURGIC, DCHEMICALS which includes 1 lag. Each column in the table corresponds to an equation in the VAR, and each row corresponds to a regressor in the equation. 1 unit increases in service sector, the corresponding value of an FDI has increased. similarly, IT, Telecom, Metallurgic sectors are increased by 10.5%, 9%, 7%, 19% Whereas, Chemicals sector were decreased by 4% and their T-values are 1.09873, 0.96114, 1.59211, 5.22617, -1.66994.

Figure No - 1



Source: Compiled from E-views version 10 on secondary data

The following graph reports the inverse roots of the characteristic AR polynomial. From the above Figure estimated VAR is stable. All the roots are inside the circle which says the sectors are moving parallel and these sectors are influenced by the FDI. In future these sectors will grow high with the help of FDI.

3rd Objective: To study the future movement growth of select sectoral investments based on FII investments.

Table No – 7: VAR Lag Order Selection Criteria for FII

Endogenous variables: DFII DSERVICES DIT DTELECOM DMETAL DINFRA						
Exogenous variables: C						
Sample: 1 39						
Included observations: 36						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-905.9619	NA	4.06e+14	50.66455	50.92847*	50.75667*
1	-872.1768	54.43154	4.73e+14	50.78760	52.63504	51.43241
2	-824.9641	60.32738*	3.02e+14*	50.16467	53.59563	51.36217
3	-784.7578	37.97263	3.97e+14	49.93099*	54.94547	51.68118
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

Source: Compiled from E-views version 10 on secondary data

Above Table depicts the Lag order selection criterion for Vector Auto Regression. LR test statistic is observed to be fit at Lag 2. Final Prediction Error is observed to be fit at Lag 2. Akaike Information Criterion is observed to be fit at lag 3. Similarly Schwarz Information Criterion and Hannan-Quinn information criterion are fit at lag 0.

Table No – 8 VAR (Vector Auto Regression) Estimates of FII

Vector Autoregression Estimates						
Sample (adjusted): 3 39						
Included observations: 37 after adjustments						
Standard errors in () & t-statistics in []						
	DFII	DSERVICES	DIT	DTELECOM	DMETAL	DINFRA
DFII(-1)	-0.239525 (0.18609) [-1.28714]	0.001218 (0.00163) [0.74941]	0.002555 (0.00219) [1.16870]	0.002539 (0.00212) [1.20030]	0.005213 (0.00333) [1.56764]	0.001319 (0.00202) [0.65302]
DFII(-2)	-0.072638 (0.14282) [-0.50858]	-0.000845 (0.00125) [-0.67679]	0.001346 (0.00168) [0.80199]	-0.001071 (0.00162) [-0.65997]	-0.002317 (0.00255) [-0.90797]	-0.003220 (0.00155) [-2.07753]
DSERVICES(-1)	272.6262 (69.4126) [3.92762]	-0.590026 (0.60644) [-0.97293]	-1.197076 (0.81559) [-1.46774]	-0.146965 (0.78904) [-0.18626]	-1.681588 (1.24029) [-1.35580]	-0.813159 (0.75336) [-1.07938]
DSERVICES(-2)	-28.37951 (78.6103) [-0.36102]	-0.128143 (0.68680) [-0.18658]	0.372977 (0.92367) [0.40380]	0.574592 (0.89359) [0.64301]	0.255967 (1.40464) [0.18223]	0.286763 (0.85319) [0.33611]
DIT(-1)	-142.0196 (31.7000) [-4.48011]	0.473311 (0.27696) [1.70897]	0.696906 (0.37247) [1.87102]	0.058362 (0.36035) [0.16196]	1.035725 (0.56643) [1.82852]	0.469225 (0.34405) [1.36382]
DIT(-2)	17.54224 (35.0674) [0.50024]	-0.339327 (0.30638) [-1.10755]	-0.326792 (0.41204) [-0.79311]	-0.263858 (0.39862) [-0.66192]	-0.900293 (0.62660) [-1.43680]	-0.478892 (0.38060) [-1.25826]
DTELECOM(-1)	17.08815 (28.1757) [0.60649]	-0.352456 (0.24617) [-1.43178]	-0.395525 (0.33106) [-1.19472]	-0.187417 (0.32028) [-0.58516]	-1.235083 (0.50345) [-2.45322]	-0.377130 (0.30580) [-1.23325]
DTELECOM(-2)	-2.631853 (24.3586)	-0.102719 (0.21282)	0.374271 (0.28621)	-0.060828 (0.27689)	0.542247 (0.43525)	-0.076396 (0.26437)

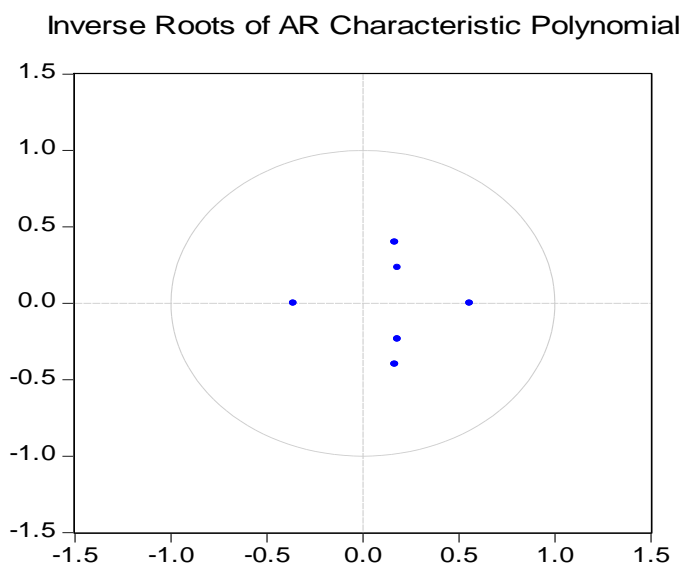
	[-0.10805]	[-0.48267]	[1.30767]	[-0.21968]	[1.24583]	[-0.28897]
DMETAL(-1)	11.09133	0.003032	0.169198	-0.024299	0.483185	0.090557
	(17.9254)	(0.15661)	(0.21062)	(0.20376)	(0.32030)	(0.19455)
	[0.61875]	[0.01936]	[0.80332]	[-0.11925]	[1.50855]	[0.46547]
DMETAL(-2)	39.11106	0.047183	-0.189732	-0.209704	-0.069162	0.053704
	(17.9183)	(0.15655)	(0.21054)	(0.20368)	(0.32017)	(0.19447)
	[2.18274]	[0.30139]	[-0.90117]	[-1.02955]	[-0.21602]	[0.27615]
DINFRA(-1)	-142.6832	0.690270	1.069975	0.470064	1.392307	0.704088
	(60.1807)	(0.52579)	(0.70712)	(0.68410)	(1.07533)	(0.65316)
	[-2.37091]	[1.31283]	[1.51315]	[0.68713]	[1.29477]	[1.07797]
DINFRA(-2)	-20.57531	-0.006115	-0.318537	-0.334213	-0.742921	-0.442472
	(56.6151)	(0.49463)	(0.66522)	(0.64357)	(1.01162)	(0.61446)
	[-0.36342]	[-0.01236]	[-0.47884]	[-0.51932]	[-0.73439]	[-0.72010]
C	-849.3845	5.246888	7.155805	0.956391	7.657866	1.703712
	(266.127)	(2.32510)	(3.12697)	(3.02516)	(4.75525)	(2.88837)
	[-3.19166]	[2.25663]	[2.28842]	[0.31615]	[1.61040]	[0.58985]
R-squared	0.609682	0.462837	0.444805	0.374061	0.546151	0.484117
Adj. R-squared	0.414523	0.194255	0.167207	0.061091	0.319227	0.226175
Sum sq. resid	17651243	1347.351	2436.946	2280.848	5635.669	2079.237
S.E. equation	857.5946	7.492639	10.07668	9.748607	15.32382	9.307787
F-statistic	3.124024	1.723264	1.602337	1.195197	2.406757	1.876846
Log likelihood	-294.3956	-119.0078	-129.9710	-128.7463	-145.4809	-127.0342
Akaike AIC	16.61598	7.135558	7.728163	7.661964	8.566533	7.569418
Schwarz SC	17.18198	7.701556	8.294161	8.227963	9.132531	8.135417
Mean dependent	-386.4698	3.966206	4.837833	0.725669	4.132384	1.448800
S.D. dependent	1120.797	8.347109	11.04203	10.06076	18.57231	10.58096
Determinant resid covariance (dof adj.)		5.66E+13				
Determinant resid covariance		4.22E+12				
Log likelihood		-852.8107				
Akaike information criterion		50.31409				
Schwarz criterion		53.71008				

Source: Compiled from E-views version 10 on secondary data

The table depicts that, there are one exogenous i.e. DFII and five endogenous variables, DSERVICES, DIT, DTELECOM, DMETAL, DINFRA which includes 2 lags. In this vector auto regression model the FII is independent variable and the sectors as dependent variables. Result indicates that FII is having positive influence on SERVICES and TELECOM sector under lag 1 (i.e. T- static is 3.92, 0.606) and negative

influence under lag 2 (i.e. T- static is -0.36, -0.108). IT sector is negative influence under lag 1 (i.e. T- static is -4.48) and positive influence under lag 1 (i.e. T- static is 0.50). METALS sector is having positive influence under both the lags 1, 2 (i.e. T- static is 0.618, 2.182). Similarly, INFRASTRUCTURE sector is having negative influence under both the lags 1, 2 (i.e. T- static is -2.37, -0.363). Hence it is concluded that FII is having influence on these sectors.

Figure No - 2



Source: Compiled from E-views version 10 on secondary data

The following graph reports the inverse roots of the characteristic AR polynomial. From the above Figure estimated VAR is stable. All the roots are inside the circle which says the sectors are moving parallel and these sectors are influenced by the FII. In future these sectors will grow high with the help of FII.

LIMITATIONS OF THE STUDY:

1. The foreign institutional investments data has been considered from the year of 2008 onwards.
2. The study has considered the five sectors in both FDI and FII segments which are attracting the higher investment flows. But in the study Infrastructure sector has been considered in the absence of chemicals sector to compare with the FII investments.

FINDINGS OF THE STUDY:

1. The study found that the relationship of FDI flows with SERVICES sector is strong i.e., 0.9 (which is greater than standard value > 0.6), the relationship of FDI flows with IT sector is moderate i.e., 0.44 (which lies between 0.3 - 0.6).

2. The study found that relationship of FDI flows to TELECOM, METTALURGIC and CHEMICALS is weak i.e., 0.14, 0.212, 0.07 (which is less than the standard value < 0.3).
3. The study found that with the help of Granger Causality test all sectors have impact towards FDI (their probability value is greater than >0.05), i.e., SERVICES (0.0567), IT (0.278), TELECOM (0.473), METALLURGIC (0.09), CHEMICALS (0.063).
4. The study found that with the help of least square method that all the sectors have positive influence towards the FDI, whereas SERVICES and TELECOM sectors have more influence towards FDI than the other sectors.
5. The study found that with the help of leverage plots that all the sectors will attain growth in future by the influence of FDI.
6. The study found that with the help of VAR that FDI flows in sectors of SERVICES, IT, TELECOM, METALLURGIC, CHEMICALS have influence and attain growth in future.
7. The study found that the relationship of FII with all these sectors is negative, i.e. SERVICES (-0.132), IT (-0.160), TELECOM (-0.084), METAL (-0.162), INFRA (-0.162).
8. The study found that with the help of Granger Causality test except INFRA (0.02) sector, remaining all sectors have impact towards FII investments (their probability value is greater than >0.05), i.e., SERVICES (0.15), IT (0.73), TELECOM (0.35), METAL (0.10).
9. The study found that with the help of least square method that sectors like SERVICES, TELECOM and METAL have positive influence towards FII, whereas IT and INFRASTRUCTURE sectors is having negative influence towards FII.
10. The study found that with the help of VAR that FII investments in the sectors of SERVICES, IT, TELECOM, METALLURGIC, INFRA have influence and they attain growth in future.

SUGGESTIONS OF THE STUDY:

1. The study suggests improve the regulation in the service sector, so that the FDI inflows will have the positive impact on the growth of the service sector.
2. The study observed that the Information Technology and Infrastructure sectors are having negative impact by the FII. Hence the study suggests to the equity investors of domestic to be cautious for the investments in these two sectors.
3. The study suggests to central and state governments to focus in the areas where the FDI flows are very low, so that FDI attraction will push the low performing sectors, so that it will be strengthened.

CONCLUSION OF THE STUDY:

The present study has been concluded the titled “FDI and FII impact on select sectoral investment growth in India. The study has considered the secondary data from the period 2002 to 2018. The study

has picked the five sectors based on the highest investment attracted during the study period. It has been observed that FII investments are having the significance impact on the selected sectoral indicators. The study observed that the FDI is having the stronger influence on the service sector comparing with the other selected sectors. The vector auto regression analysis result stated that the selected sectors are expected to grow in both segments based on the FDI and FII. Hence, there is a need to do further research in this area by considering the macro economical factors influence on the global funds flows in to India.

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