

A study on foreign investment & its impact on growth India's food and agriculture sector

Dr. P Sri Ram

Assistant Professor, Department of Commerce, Goa University, Goa, India

Abstract

The Foreign Investment play very important role in the development of any economy as it not only bring capital in the country but it will also contribute to technology, managerial skill, employment etc. Which will help the economy to grow, but too much inflow of foreign investment is not good for any economy in long run. In this context there are many studies carried out to analyse the impact of foreign investment on economy. India is a developing economy. There are many sectors where foreign investment is made. The present study made an attempt to study and analyse the impact of foreign investment on Operating and managerial efficiency of FDI based companies in India's food and agriculture sector. The study has used regression analysis for 22 FDI based companies for ten years (2007-2016) to analysis the impact foreign investment on FDI based companies in India's food and agriculture sector. The paper concluded that foreign investment has significant impact on operating and managerial efficiency of India's Food and Agriculture sector.

Keywords: ROI, ROE, FI, FDI, BSE

Introduction

Foreign investment play very important role in the development of any county. It helps to fill the gap between demand and supply of scare resource in developing country like India and help in its growth & development. Foreign Investment has taken many forms and shapes over the years in Indian economy. There are various advantages and disadvantages attached to it. Foreign Investment in companies will improve capital availability which will influence their short term and long term growth of companies. The growth is determined by the efficiency factors of which managerial efficiency is vital. According to theories, Foreign Investment will help to improve capital position and supports managerial efficiency which will increase the productivity. Operating, managerial and technical efficiency are taken as variable to examine the impact of foreign Investment on FDI based Companies. The present study will examine the impact of Foreign Investment on managerial efficiency with the help of regression techniques in FDI based Companies in India's Food and Agriculture sector.

Review of Literature

(Iuliana, 2014) ^[5] aim of this paper is to study the relation between the foreign ownership and manufacturing firm performance of 261 companies. Variable used are Return on assets (ROA), Return on Equity (ROE) and Return on sales (ROS). The results shows that there is no significant relation between economic and financial performance and the existence of foreign ownership. (Azzam, Fouad, & Ghosh, 2013) ^[2] aim is to examine the relationship between the degree of foreign ownership and financial performance of 8,185 companies in Egypt from 2006 to 2010 by using panel data analysis. The study concluded that firm's return on assets (ROA), return on equity (ROE), debt ratio (DR) was positively related to foreign ownership. It also show that with increase in foreign ownership the financial performance of companies will also increase which is depend on sector specification. (De

Backer & Maria, 2002) made an attempt to analyse domestic forms and foreign firms in different industry and impact of foreign Direct Investment on economic structure of host economy. The study concluded that growth of foreign firms are different from domestic firms and FDI has negative impact on economy. (K.Srinivasan, Deo, & Srinivasan) Aim is to examine the performance of select Foreign Direct Invested (FDI) assisted pharmaceutical units in India for the period from 1st April 1999 to 31st March 2008, 23 FDI assisted pharmaceutical units and evaluated through the following ratios Capital Structure Ratios, Liquidity Ratios, Profitability Ratios, and Return on Investment. The study concluded that the capital has been efficiently used in gearing profits, but there was a slight decline in return on equity due to over utilization of outsider's capital it was the major reason for showing negative effects (Rastogi, 2014) ^[9] to examine the pattern of inward FDI at the industry level test for the industry-specific characteristics that have been significant in attracting foreign investment in India during. The period of study is 2000-10. FDI inflows focus on a panel of top ten investing countries, as well as individual countries with relatively stringent environmental norms. Regressions analysis has been used for the study. The result shows that the pattern of FDI in India has been largely towards capital-intensive industries, and in polluting industries with large market size. But growth in FDI inflow failed to exploit scale economies and generate jobs during the last decade. (Jayesh, 2012) ^[6] aim is to find out the impact of foreign investment on financial performance, Corporate Performance with respect to managerial & technological efficiency, R&D and CSR of Indian companies considering the case study of BSE-30. Sample size of the study is 30 companies for BSE-30 was taken for the period between 2002-2011. Simple regression technique was used to test the hypotheses along with simple descriptive statistics such as averages, simple growth rates, standard deviation, variance, co – variance.

Objective

To study the impact of Foreign Investment on Operating and managerial efficiency FDI based Companies in India’s Food and Agriculture sector.

Hypothesis

The hypotheses formulated are as follows:

- **H01:** Foreign Investment does not have a statically significant impact on Operating efficiency of FDI based companies in India’s Food and Agriculture sector.
- **H02:** Foreign Investment does not have a statically significant impact on Managerial efficiency of FDI based companies in India’s Food and Agriculture sector.

Research Methodology

This paper examines the impact of Foreign Investment on

Operating and Managerial Efficiency of FDI based companies in India’s Food and Agriculture sector. The data is collected form CMIE Prowess IQ data base from 2007 to 2016 (10 years) for companies consistently listed at BSE. Foreign Investment is taken as independent variable and Operating, managerial efficiency as dependent variables. Linear Regression analysis is used to find out the impact of foreign Investment in FDI based companies in India’s Food and Agriculture sector. The list of FDI Companies is selected on the basis of FDI definition given by IMF i.e. if Foreign Investment is 10% or more then 10% in the company then that company will be considered as FDI based companies and less than 10% Non- FDI based companies. The total number of Companies in CMIE Prowess IQ data base is 2399 out of which 22 companies are found to be FDI based companies in India’s Food and Agriculture sector.

Table 1: List of FDI Based Companies

1	Agro Tech Foods Ltd.
2	Assam Company India Ltd.
3	Britannia Industries Ltd.
4	Dharani Sugars & Chemicals Ltd.
5	Glaxosmithkline Consumer Healthcare Ltd.
6	Godfrey Phillips India Ltd.
7	Goodricke Group Ltd.
8	Harrisons Malayalam Ltd.
9	James Warren Tea Ltd.
10	Kore Foods Ltd.
11	Lotte India Corpn. Ltd.
12	Mcleod Russel India Ltd.
13	Monsanto India Ltd.
14	Nestle India Ltd.
15	Ovobel Foods Ltd.
16	Ponni Sugars (Erode) Ltd.
17	Shree Renuka Sugars Ltd.
18	Tarai Foods Ltd.
19	United Breweries Ltd.
20	United Spirits Ltd.
21	V S T Industries ltd
22	Warren Tea Ltd.

Source: CMIE-Prowess

Analysis and Interpretations

Regression analysis

1. Impact of Foreign Investment on Operating Efficiency of FDI based Companies in India’s Food and Agriculture sector.

First hypothesis of this paper is to analyse the impact of Foreign Investment on Operating efficiency of FDI based companies in India’s Food and Agriculture sector. To analyse impact three variables i.e Total Asset Turnover (TAT), Fixed Asset Turnover (FAT) and Equity Turnover (ET) are taken as depend variable and foreign investment as independent variable.

Regression equation which includes Foreign Investment of FDI based companies in selective sectors during 2007 to 2016. The Regression Model is.

The first regression equation which includes Foreign Investment of FDI based companies in selective sectors during 2007 to 2016 and is regressed with Total Asset Turnover (TAT) for the same period. The Regression Model is

$$TAT = \alpha_1 + \beta_1 FI + \mu_1$$

Where, TAT = Total Asset Turnover (TAT), α_1 = constant, FI = Foreign Investment and μ_1 = Error term

The second regression equation which includes Foreign Investment of FDI based companies in selective sectors during 2007 to 2016 and is regressed with Fixed Asset Turnover (FAT) for the same period. The Regression Model is

$$FAT = \alpha_2 + \beta_2 FI + \mu_2$$

Where, Fixed Asset Turnover (FAT), α_2 = constant, FI = Foreign Investment and μ_2 = Error Term

The third regression equation which includes Foreign Investment of FDI based companies in selective sectors during 2007 to 2016 and is regressed with Equity Turnover (ET) for the same period. The Regression Model is

$$ET = \alpha_3 + \beta_3 FI + \mu_3$$

Where, Equity Turnover (ET), α_1 = constant, FI = Foreign Investment and μ_1 = Error term

Table 2: Impact of FDI on Operating Efficiency of FDI Based Companies in India's Food and Agriculture sector

S. No	Company	Impact of FDI on Operating Efficiency of FDI Based Companies in India's Food and Agriculture sector																	
		Total Asset Turnover (TAT)						Fixed Asset Turnover (FAT)						Equity Turnover (ET)					
		con	SE	t-stat	coe	S.E	t-stat	con	SE	t-stat	coef	SE	t-stat	con	SE	t-stat	coef	SE	t-stat
1	Agro Tech Foods Ltd.	-0.0	0.00	-2.21*	0.00	0.00	3.3***	21938	5184.	4.2***	-409	103.7	-3.9***	77	44.7	1.73	-0.89	0.90	-0.99
2	Assam Company India Ltd.	0.00	0.01	-0.54	0.00	0.00	1.67	92.77	51.97	1.79	-0.79	1.29	-0.61	5.27	4.9	1.06	0.05	0.12	0.41
3	Britannia Industries Ltd.	-0.5	0.15	-3.4***	0.01	0.00	3.4***	9563	17124	0.56	-163	336.6	-0.49	343	675	5.0***	-670	132.	-5.0***
4	Dharani Sugars & Chemicals Ltd.	0.02	0.00	5.7***	0.00	0.00	-4.3***	523.9	183.6	2.85	-16.	8.64	-1.96	-11	21.0	-0.56	1.35	0.99	1.36
5	Glaxosmithkline Consumer Ltd.	0.01	0.00	6.5***	0.00	0.00	-3.8***	458.9	475.2	0.97**	11.41	8.38	1.36*	-38	20.4	-1.91*	1.99	0.36	5.5***
6	Godfrey Phillips India Ltd.	0.00	0.00	-2.3**	0.00	0.00	5.1***	-502	377.1	-1.33	50.00	13.10	3.8***	747.	110	6.7***	-15.7	3.83	-4.1***
7	Goodricke Group Ltd.	0.01	0.00	10.6***	-	-	-	545.9	12.35	44.2***	-	-	-	20.6	2.51	8.2***	-	-	-
8	Harrisons Malayalam Ltd.	0.01	0.00	33.5***	-	-	-	94.36	8.77	10.7***	-	-	-	16.6	1.05	15.8***	-	-	-
9	Kore Foods Ltd.	-0.5	0.49	-1.08	0.04	0.02	2.21*	-170.7	134.6	-1.27	10.94	5.44	2.01*	0.06	0.22	0.26	0.01	0.01	0.67
10	Lotte India Corpn. Ltd.	0.02	0.00	6.1***	0.00	0.00	3.9***	114.6	43.62	2.63**	3.17	0.99	3.20**	36.4	3.59	10.1***	0.11	0.08	1.37
11	McLeod Russel India Ltd.	0.00	0.00	1.76	0.00	0.00	1.40	403.8	139.4	2.90**	-13.1	5.57	-2.37**	124.	48.8	2.56**	-4.16	1.95	-2.13*
12	Monsanto India Ltd.	-6.0	3.49	-1.74	0.08	0.05	1.75	189	31927	5.9***	-2630	4425.	-5.9***	-63	377	-1.68	880	523.	1.68
13	Nestle India Ltd.	0.08	0.01	5.7***	0.00	0.00	-5.6***	1429	5195.	2.75**	-221	83.26	-2.66**	-305	556	-5.4***	50.01	8.92	5.6***
14	Ovobel Foods Ltd.	0.06	0.01	5.8***	0.00	0.00	-1.39	275.2	1850	0.15	169	137.9	1.23	2.61	2.64	0.99**	0.33	0.20	1.69
15	Ponni Sugars (Erode) Ltd.	0.01	0.00	4.3***	0.00	0.00	-0.25	790.7	311.4	2.5**	-51	34.74	-1.49	33.3	10.0	3.30	-1.12	1.13	-0.99
16	Shree Renuka Sugars Ltd.	0.00	0.00	4.0***	0.00	0.00	-1.02	238.7	23.05	10.3***	-2.01	1.85	-1.09	80.3	7.96	10.9***	-0.59	0.64	-0.92
17	Tarai Foods Ltd.	0.43	0.03	14.6***	-	-	-	46.79	4.70	9.9***	-	-	-	0.15	0.01	12.3***	-	-	-
18	United Breweries Ltd.	0.00	0.00	1.44	0.00	0.00	-0.98	92.79	294.7	0.31	8.54	7.75	1.10	-682	461.	-1.48	23.16	12.12	1.91*
19	United Spirits Ltd.	0.00	0.00	9.0***	0.00	0.00	-2.25*	1264	53.46	23.6***	13.7	1.93	7.1***	82.3	10.0	8.2***	1.39	0.36	3.5***
20	V S T Industries Ltd.	0.01	0.00	10.4***	-	-	-	872.9	45.94	19.0***	-	-	-	88.5	9.05	9.7***	-	-	-
21	Warren Tea Ltd.	0.03	0.01	5.8***	0.00	0.00	-1.97*	308.1	35.96	8.5***	-3.23	0.74	-4.3***	4.12	5.78	0.71	0.22	0.12	1.83
22	Winsome Breweries Ltd.	0.05	0.00	42.9***	0.00	0.00	-4.1***	628.2	121.5	5.1***	0.00	37.35	15.8**	1.66	0.27	6.2***	0.07	0.03	2.00*

Source: CMIE-Prowess & Author Compilation

In Above Table 2, Foreign Investment influence Total Asset Turnover (TAT) highly significant (1% significance level) in 15 companies out of 22 FDI based Companies in Food and Agriculture Sector, where as companies like Agro Tech Foods Ltd and Godfrey Phillips India Ltd Witnessed an impact of foreign investment on their Total Asset Turnover (TAT) at 10% Significance level. Over all out of 22 FDI based companies in Food and Agriculture Sector, 17 FDI based companies is observed to have influenced by TAT which is more than 50% of the total.

Foreign Investment influence Fixed Asset Turnover (FAT), 10 companies out of 22 FDI based Companies in Food and Agriculture Sector are found to be highly significant at 1% significance level. 5 companies are Significant at 5% and 2 companies are Significant at 10%. Over all out of 22 FDI based companies in Food and Agriculture Sector, 17 FDI based companies is observed to have influenced by FAT which is more than 50% of the total.

Foreign Investment influence Equity Turnover (ET), 11 companies out of 22 FDI based Companies in Food and Agriculture Sector are found to be highly significant at 1% significance level. Glaxosmithkline Consumer Ltd are Significant at 5% and 2 companies are Significant at 10%. Over all out of 22 FDI based companies in Food and Agriculture Sector, 14 FDI based companies is observed to have influenced by ET which is more than 50% of the total.

The remaining FDI based companies in Food and Agriculture Sector are not statistically significant at 1%, 5% and 10%. Hence null hypothesis is rejected and alternative hypothesis is accepted i.e Foreign Investment have a statically significant impact on Operating efficiency of FDI based companies in India’s Food and Agriculture sector.

2. Impact of Foreign Investment on Managerial Efficiency of FDI based Companies in India’s Food and Agriculture sector.

The second hypothesis of this paper is to analyse the impact of Foreign Investment on Managerial efficiency of FDI based companies in India’s Food and Agriculture sector. To analyse impact two variables i.e Return on Investment (ROI) and Return on Equity (ROE) are taken as depend variable and foreign investment as independent variable. Regression equation which includes Foreign Investment of FDI based companies in selective sectors during 2007 to 2016. The Regression Model is.

The fourth regression equation which includes Foreign Investment of FDI based companies in India’s Food and Agriculture sector during 2007 to 2016 and is regressed with Return on Investment (ROI) for the same period. The Regression Model is

$$ROI = \alpha_4 + \beta_4 FI + \mu_4$$

Where, ROI = Return on Investment (ROI), α_1 = constant, FI = Foreign Investment and μ_1 = Error term

The fifth regression equation which includes Foreign Investment of FDI based companies in India’s Food and Agriculture sector during 2007 to 2016 and is regressed with Return on Equity (ROE) for the same period. The Regression Model is

$$ROE = \alpha_5 + \beta_5 FI + \mu_5$$

Where, ROE = Return on Equity (ROE), α_2 = constant, FI = Foreign Investment and μ_2 = Error Term

Table 3: Impact of FDI on Managerial Efficiency of FDI Based Companies in India’s Food and Agriculture sector

S.No	FDI based Companies	Impact of FDI on Managerial Efficiency of FDI Based Companies in India’s Food and Agriculture sector											
		Return on Investment (ROI)						Return on Equity (ROE)					
		con	SE	t-stat	coef	SE	t-stat	con	SE	t-stat	coef	SE	t-stat
1	Agro Tech Foods Ltd.	-0.2	0.28	-0.72	0.01	0.01	1.27	81.79	43.12	1.90*	-0.98	0.86	-1.13
2	Assam Company India Ltd.	0.09	0.10	0.88	0.00	0.00	-0.27	8.95	5.86	1.53	-0.02	0.15	-0.12
3	Britannia Industries Ltd.	37.1	7.70	4.83***	-0.7	0.15	4.8***	348	6896	5.05***	-680.	135.5	5.0***
4	Dharani Sugars & Chemicals	0.22	0.19	1.14	-0.1	0.01	-0.64	-11.8	20.87	-0.57	1.35	0.98	1.38
5	Glaxosmithkline Consumer Ltd.	0.22	0.02	10.5***	0.00	0.00	-1.33	-43.2	21.42	-2.02*	2.12	0.38	5.6***
6	Godfrey Phillips India Ltd.	0.13	0.03	4.07***	0.00	0.00	2.25*	749.7	109.3	6.86***	15.66	3.80	4.1***
7	Goodricke Group Ltd.	0.12	0.02	6.55***	-	-	-	21.20	2.65	8.01***	-	-	-
8	Harrisons Malayalam Ltd.	0.03	0.01	3.00**	-	-	-	17.13	1.09	15.6***	-	-	-
9	Kore Foods Ltd.	0.64	0.48	1.33	-0.3	0.02	-1.35	2.15	1.85	1.16	-0.06	0.07	-0.78
10	Lotte India Corpn. Ltd.	0.05	0.01	4.99***	0.00	0.00	0.01	36.76	3.60	10.2***	0.11	0.08	1.36
11	McLeod Russel India Ltd.	0.66	0.46	1.43	-0.2	0.02	-1.18	129.5		2.50**	-4.31	2.07	-2.08*
12	Monsanto India Ltd.	362.	194.	1.87*	-5.3	2.70	-1.86*	73.70	406	-1.81	1021.	563.3	1.81
13	Nestle India Ltd.	9.38	3.31	2.84**	-0.1	0.05	2.71**	-31.8	562.0	-5.4***	50.20	9.01	5.5***
14	Ovobel Foods Ltd.	0.02	0.17	0.09	0.01	0.01	1.09	2.71	2.77	0.98	0.34	0.21	1.65
15	Ponni Sugars (Erode) Ltd	0.24	0.21	1.14	-0.1	0.02	-0.51	34.00	10.37	3.28**	-1.11	1.16	-0.96
16	Shree Renuka Sugars Ltd.	0.10	0.01	8.95***	0.00	0.00	-3.1**	80.80	7.92	10.2***	-0.60	0.64	-0.95
17	Tarai Foods Ltd.	0.39	0.28	1.41	-	-	-	0.27	0.08	3.37***	-	-	-
18	United Breweries Ltd.	-0.3	0.07	-0.45	0.00	0.00	2.53**	-67.2	461.4	-1.47	23.12	12.13	1.91*
19	United Spirits Ltd.	0.13	0.03	4.51***	0.00	0.00	0.57	83.27	9.87	8.44***	1.48	0.36	4.1***
20	V S T Industries Ltd.	0.27	0.02	15.8***	-	-	-	90.17	9.06	9.9***	-	-	-
21	Warren Tea Ltd.	0.12	0.11	1.10	0.00	0.00	0.16	4.64	5.81	0.80	0.21	0.12	1.77
22	Winsome Breweries Ltd.	0.08	0.01	11.0***	0.00	0.00	-2.3**	1.77	0.26	6.9***	0.06	0.03	1.94*

Source: CMIE-Prowess & Author Compilation

In above table 3, Foreign Investment influence Return on Investment (ROI) highly significant (1% significance level) in 5 companies out of 22 FDI based Companies in Food and Agriculture Sector, where as companies like Harrisons Malayalam Ltd, Nestle India Ltd, United Breweries Ltd and Winsome Breweries Ltd. have experienced a moderate impact of foreign investment on their ROI which appears form the fact that the coefficient P-value in case of such companies is found to be statistically significant at 5% significance level and 2 companies are Significant at 10%. Over all out of 22 FDI based companies in Food and Agriculture Sector, 17 FDI based companies is observed to have influenced by ROI which is more than 50% of the total. Over all out of 22 FDI based companies in Food and Agriculture Sector, 11 FDI based companies is observed to have influenced by ROI which is 50% of the total.

Foreign Investment influence Return on Equity (ROE), 11 companies out of 22 FDI based Companies in Food and Agriculture Sector are found to be highly significant at 1% significance level. Ponni Sugars (Erode) Ltd are Significant at 5% and 2 companies are Significant at 10%. Over all out of 22 FDI based companies in Food and Agriculture Sector, 14 FDI based companies is observed to have influenced by ROE which is more than 50% of the total. The remaining FDI based companies in Food and Agriculture Sector are not statistically significant at 1%, 5% and 10%. Hence null hypothesis is rejected and alternative hypothesis is accepted i.e Foreign Investment have a statically significant impact on Managerial efficiency of FDI based companies in India's Food and Agriculture sector.

Conclusion

This paper examines the impact of Foreign Investment on Operating and Managerial Efficiency of FDI based companies India's Food and Agriculture sector. In order to analyse the impact at operating and managerial efficiency. To analyse impact of foreign investment at Operating efficiency three variables i.e Total Asset Turnover (TAT), Fixed Asset Turnover (FAT) and Equity Turnover (ET) are taken as depend variable and foreign investment as independent variable. To analyse impact of foreign investment at Managerial efficiency two variables Return on Investment (ROI) and Return on Equity (ROE) are taken as depend variable and foreign investment as independent variable. The time period for the study is ten years (2007-2016) and simple regression technique was used. The study concludes that Foreign Investment has impact on operating and managerial efficiency of FDI based companies in India's Food and Agriculture sector.

Impact of foreign investment at operating level shows that foreign investment has impact of 17 FDI based companies at Total Asset Turnover (TAT), 17 FDI based companies at Fixed Asset Turnover (FAT) and 14 FDI based companies at Equity Turnover (ET). Hence null hypothesis is rejected and alternative hypothesis is accepted i.e Foreign Investment have a statically significant impact on Operating efficiency of FDI based companies in India's Food and Agriculture sector.

Impact of foreign investment at managerial level shows that foreign investment has impact of 11 FDI based companies at Return on Investment (ROI) and 14 FDI based companies at Return on Equity (ROE). Hence null hypothesis is rejected and alternative hypothesis is accepted i.e Foreign Investment have a statically significant impact on Managerial efficiency of FDI based companies in India's Food and Agriculture sector.

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