

A Comparative Study on the Impact of ESOP on Financial Performance between Software and Pharmaceutical Sectors in India

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Abstract

Due to the effect of globalization of Indian business, ESOP idea spreads across corporate India and corporates began looking at ESOPs as an attractive tool to hire and retain employees after SEBI ESOS & ESPP Guidelines 1999. Despite the sociological importance of employee stock ownership to altering traditional patterns of wealth distribution the phenomenon has received little academic attention in India. The present paper throws light into ESOP practices and ESOP impact on corporate financial performance in technology intensive and people driven sectors such as software and pharmaceuticals. These sectors are increasingly becoming the engine of growth in our Indian economy. The study empirically analyses pre- and post- financial performance of 80 ESOP companies listed in BSE India. This study is first of its kind in India examining the financial impact among firm's pre-ESOP and post-ESOP allotment using financial measures as a means of assessing organizational performance in software and pharmaceutical sectors with unexplored Indian data.

Key Words: Employee Stock Ownership, Pre & Post Financial Performance, India

Introduction

According to European Federation of Employee Share Ownership (EFES, 2012) nearly 53.4% of companies in Europe are estimated to be employee-owned, in France, Japan, US and UK and it is 80 to 90%. Whereas in India at present only 4.5 percent (out of 5000 listed BSE companies) listed companies in India have allotted ESOP (source: Prowess data base); which shows that the ESOP idea has penetrated into Indian companies. Employee Stock Option Plans in India are rapidly gaining popularity due to emergence of India as a knowledge economy, globalization of Indian workforce, and awareness about innovative compensation trends. ESOP became popular in IT sector after Security Exchange Board of India's EPSS and ESOP guidelines 1999 after that slowly the idea of ESOP penetrated into other sectors as well. Thus the birth of Employee Stock Option Plans in India has been attracting attention of the researchers during the past few years; Thus there is an immediate need to collect academic evidence available to enhance understanding of complex topic (i.e. ESOPs) and examine its impact on corporate financial performance in India due to the fact that they aid in boosting economic growth and promoting a fairer distribution of income and wealth. The visible outcomes such as increased productivity and performance have not been measured in totality in India in multiple sectors. Thus this study examines the impact and of ESOP on corporate financial performance in India in selected Indian Industries since the employee ownership is considered as an important tool for economic growth and restructuring business enterprise in the period of economic crises.

Statement of the Problem

Employee Stock Option Plans have long been promoted as a motivational tool. It is believed that ESOP rewards create incentives for employees to work harder and smarter, in turn rewarding the companies that lavish options on the workforce with better performance and greater shareholder value. The present study tries to draw on the theory about how ESOPs affects the performance potential of the companies before and after ESOP allotment.

Review of Literature

Globally, employee stock option is being hotly debated and western researchers have done most of the empirical research on the effect of ESOPs on the performance of the firm. In India not much of the research focussed on the ESOP potential for better economic performance particularly through enhanced motivation and commitment from employees who have a direct stake in the firm's performance.

Poornima et al. (2013) in their paper empirically analyzed 59 software companies listed in Indian stock market which has adopted employee stock option plan and analyzed its impact on firm performance. The study indicated that employee behaviours that enhance productivity are apparently more prevalent in stock option firms which have resulted in improved employee productivity. The correlation analysis indicated that there is significant relationship between employee size, employee productivity and return on assets. But with respect to net profit margin, ESOP allotment has not improved the profit margins of the company in spite of improved employee productivity.

Employee Ownership Foundation (2012) surveyed 1,400 members of the ESOP Association. The results were based on 450 responses, indicating 32% response rate. Out of 450 respondents 68.5% indicated a better performance; 17% indicated a worse performance; and 14.5% indicated a nearly identical performance to the previous year. 76.2% indicated revenue increase; 23.8% indicated revenue decrease. 70.5% indicated profitability increase; 29.5% indicated profitability decrease. 63.8% of companies indicated they have created an ESOP education programme or ESOP advisory committee since establishing the ESOP.

Martes (2012) in his thesis delineated the effect of employee share ownership on firm performance and corporate R&D expenditures for the largest European companies who have employee ownership plans during 2006-2010 using European Federation of Employee Share Ownership (EFES) dataset. The empirical results using linear regression indicated there was a negative association between employee ownership, profit margin and/or production growth. On the long-term using longitudinal data, employee ownership was found to have a positive impact on ROE and ROA. The study concluded that higher share of employee ownership does not guarantee higher performance of a firm and supports the argument that employee ownership alone does not guarantee better performance.

Abdelaziz et al. (2011) in their paper analyzed the determinants of the top executive compensation of 40 major French companies listed on the Paris's stock exchange and the impact of the equity-based compensation on the firm's market and accounting performance. The results indicated that stock options grant for 40 French top-executives are uncorrelated with its determinants and had no impact on the firm performance over the period of analysis. The results supported the theoretical approach of the managerial power and entrenchment.

Kruse and Blasi (2011) analyzed the effects of employee ownership, profit and gain sharing, and broad-based stock options (shared capitalism) on employee attitudes, turnover, and performance. The sample size included were 780 firms from period 2005 to 2007. The results reported that shared capitalism is linked to employee-reported empowerment measures (participation in decisions, information sharing, high-trust supervision), and several measures of positive workplace culture. The results also highlighted that shared capitalism has favourable effects on voluntary turnover and employee intention to stay when combined with employee

empowerment and positive workplace culture; similar patterns were noted when examining return on equity and Tobin's Q among the public companies in the sample.

Guedri and Hollandts (2008) in his study examined the impact of employee stock ownership and board employee representation on firm performance. The study addressed the inconsistency of the results studied so far in the literature examining the performance implication of employee performance by proposing a theoretical framework and providing empirical support for the hypotheses suggesting that the relationship between employee ownership and accounting based-performance measure. However, when a market-based performance measure was used the relationship was not supported. The study highlighted that the inflection point of the inverted U-shaped relationship between employee ownership and firms' performance does not depend upon the level of employee representation on the board. The study results drawn from a longitudinal analysis of a sample of 230 French firms over the period 2000-2005 provided support for an inverted-U shaped relationship between employee ownership and accounting-based performance measure. The findings suggested that managers and shareholders should be careful when launching and increasing the level of employee ownership to not to go beyond specific inflection point.

Kroumova and Sesil (2005) examined the impact of broad-based stock options on firm performance for 312 firms. The study used three dependent variables that reflect different aspects of firm performance; labour productivity, return on assets (ROA), and profit margins. The study analyzed whether firm size is associated with broad-based stock options. The review of literature predicted that stock options would be effective in small firms but the results indicated that both small and large firms benefit from the broad dispersion of stock options. The study concluded that broad-based stock options promote superior performance outcomes across all size categories.

Kumar (2004) in his paper examined the effect of ESOP adoption on the productivity and performance of Indian companies. The study explored the link between ESOPs and various economic indicators characterizing company performance, risk levels and ESOP variables with the primary focus on the distinctive characteristics of ESOP companies compared to non-ESOP companies. Econometric analysis was carried out using a sample of 125 companies (including 118 listed companies) of which 38 were ESOP companies and 87 non-ESOP companies. The change in each of the productivity and performance measures was calculated over two periods, year -1 to +1, year -1 to +2. Linear regression was employed to analyze the data set. The study results indicated that ESOPs established in Indian firms have little effect on firm's productivity and profitability.

D'Arcimoles and Trebucq (2002) in their study examined how employee ownership affects corporate performance and risk in France. The sample size was approximately 220 listed French firms. The study used ownership, performance and risk and control variables. The study results showed some positive links between the presence of ESOPs and some financial performance measures, such as the result on equity and the return on investments. The presence of ESOPs reduces the return on equity variability, but increases beta co-efficient. The study concluded that investors tend to consider firms with ESOPs to be more risky, even if their profitability is more stable.

Based on the literature review it is found that the subject of employee share ownership is a diffuse and complex one. In India, despite broad and sustained public policy interest in ESOP, literature on the subject remains limited. Literature review in ESOP related issues reached the following conclusions like studies are split between favourable and unfavourable findings on the relationship between employee ownership, firm performance and stock performance.

Objectives of the Study

- To study the ESOP design practices by corporates in India.

- To compare and contrast the overall impact of ESOP on corporate financial performance between software and pharmaceutical sector.

Research Methodology:

Research Design: The research is primarily descriptive and analytical in nature.

Population of the Study: The population of the study consists of listed companies in BSE which have allotted employee stock options from the year 1st April 2000 to 31st March 2008 in software and pharmaceutical sectors. There are about 124 companies belonging to heterogeneous group during the period which have allotted employee stock options.

Sampling method: The sampling method used in the study is purposive sampling (i.e. the shortlisted 124 companies belong to 5 different sectors. Out of these 5 sectors, sectors which have at least 5% of companies which have allotted ESOPs are selected for final sample to draw meaningful conclusion in that particular sector). Out of 124 ESOP companies the final sample constitutes 80 ESOP companies i.e. 60 in software and 20 in pharmaceutical sectors for which data was available were considered for the study.

Sources of Data: For the purpose of study the financial and non-financial data have been mainly drawn from Centre for Monitoring Indian Economy (CMIE) "PROWESS" and Capitaline Database of Capital Market and annual reports of companies.

Period of study: Financial data pertaining to the period 1st April 1996 to 31st March 2012 are used for the study. The study took the assumption that ESOP allotment year as 0, pre allotment years as (-1,-2,-3 -4) and post allotment years as (1, 2, 3, 4) respectively. Totally eight years financial data for each company were drawn and analyzed.

Framework of Analysis: The statistical tools like Percentage analysis, Mann-Whitney U test, and Regression has been used to test statistical significance of relationship and interrelationship between various independent variables like, ESOP period (pre/post), Debt to Equity ratio, Sales Growth, Employee Growth, Age, Main Shareholder Power, Total Assets, Value Added per Employee, Asset Turnover Ratio and Capital Intensity Ratio on dependent variable (performance variables), i.e. Return on Equity, Return on Assets, Return on Capital Employed, Market Capitalization to Net worth) and on Systematic Risk (Beta) in Software and Pharmaceuticals sectors have been used to find out the impact of ESOP on corporate performance of select companies. The analysis has been conducted with the help of software packages like Microsoft Excel and SPSS.

Limitations of the Study

Data has been analyzed for eight years only pre four years and post four years. In-depth analysis for long period of time was not taken due to the factor that ESOP was adopted in different years by the corporate and data available was limited. Impact of ESOP on financial performance of companies due to certain other factors such as change in industry, economy and stock market and other macro-economic factors have not been covered by this study.

Results:

Based on Percentage Analysis

Industry Profile

Table 1: Industry Profile

Sector	ESOP Companies	Percentage
Software	60	75
Pharmaceuticals	20	25
Total	80	100

Source: Prowess Database; values computed

The table 1 indicates that out of 80 Employee Stock Option Plans (ESOP) implemented companies, 60 companies (75 %) belong to IT/ software sector, 20 (25 %) companies belong to pharmaceutical sector. It is evident that the IT/ Software sector continues to predominantly concentrated in the ESOPs. There is an upward/growing trend in the pharmaceuticals industry in the allotment of ESOP to employees.

Year of ESOP Allotment

Table 2: Year of ESOP allotment

S.no	Year	No. of Companies	Percentage
1	2000-2002	3	4
2	2003-2005	8	9.7
3	2006-2008	69	86.3
	Total	80	100

Source: Prowess Database; values computed

The table 2 shows that a majority of 69 (86.3 %) companies have allotted ESOP between the years 2006-2008, 8 companies (9.7 %) have allotted ESOP between the years 2003-2005 and 3 companies (4 %) have allotted ESOP between the years 2000-2002. It is observed that majority of the companies have allotted ESOP between the years 2006 - 2008.

Coverage of Employees

Table 3: Coverage of Employees

S.no	Coverage of Plan	No of Companies	Percentage
1	Broad-based (options granted to employees at different levels)	34	42.74
2	Key Employees	46	57.26
	Total	80	100

Source: Prowess Database; values computed

The table 3 shows that 46 (57.26 %) companies have allotted stock options to key employees and 34 (42.74%) companies have broad-based stock options plans, i.e. stock options were granted to employees at different levels. It is inferred that most of the companies have allotted stock options to its key employees, since retention of key employees is more crucial for the companies. Also companies have granted options to employees belonging to different levels in the company.

Magnitude of ESOP

Table 4: Magnitude of ESOP

S.no	Magnitude of ESOP	Number of Companies	Percent
1	Low	24	29.8
2	Moderate	32	40.3
3	High	24	29.8
	Total	80	100

Source: Prowess Database; values computed

The companies are categorized into three groups such as low, moderate and high ESOP companies based upon their employee stock option percentage. The results reveal that among 80 companies; 40.3 % companies have moderate percent of ESOP, 29.8 % of companies have high as well as low ESOP percent each.

Based on Mann-Whitney U test

Table 5: Significance of value added per employee ratio in pre- and post-ESOP

Sector	PERIOD	Mean rank	Sum of ranks	Mann-Whitney U	Z value	Sig
Software	Pre- ESOP	202.51	43742	20306	2.329	*
	Post- ESOP	230.49	49786			
Pharmaceuticals	Pre-ESOP	65.96	5277	2037	3.969	**
	Post-ESOP	95.04	7603			

Significant at 1% level, * - Significant at 5% level, Ns- Not significant

The above table 5 shows that for testing significant difference between pre- and post-ESOP periods in value added per employee Mann Whitney U test has been applied. The results indicate that significant differences in software and pharmaceutical sectors. Also, the difference in value added per employee in software and pharmaceutical, sector is significant on the increasing side. Thus it is concluded that there is significant association between magnitude of ESOP and increase in value added per employee (employee productivity metric).

Based on Regression Analysis:

In software Sector

Table-6: Regression Synthesis for Software Sector

Regression Summary					
	Dependent variables				Risk BET A
	Performance ROE	ROA	ROC E	MCN W	
Independent Variables:					
ESOP Period (Pre/Post)	Ns	(+) **	(+) **	(-) **	(-) **
Debt to Equity Ratio	Ns	Ns	Ns	Ns	(+) *
Sales Growth	Ns	Ns	Ns	Ns	Ns
Employee Growth	Ns	Ns	Ns	Ns	Ns
Age	Ns	Ns	Ns	(+) **	(+) **
Main Shareholder Power	(-) **	Ns	(-) **	(-) **	(+) *
Total Assets	Ns	(+) *	Ns	Ns	
Value Added per Employee	Ns	Ns	Ns	Ns	
Asset Turnover Ratio	(+) **	Ns	(+) **	Ns	
Capital Intensity Ratio	Ns	Ns	Ns	Ns	

(+) or (-) Symbol of the relationship , ** Significant at 1 % level, * Significant at 5 % level;

Source: Computed

It is found that ESOP in software sector has significant positive impact on Return on Assets and Return on Capital employed but negative effect on Market Capitalization to Net Worth indicating that ESOP has some positive influence on firm performance but market anticipation of future performance of the firms is negative. The study did not find any significant impact of ESOP on Return on Equity. Increase in Shareholder Power has negative impact on performance. In case of Systematic risk it is found that post-ESOP has less systematic risk inferring that low-beta stocks of software firms in post-ESOP pose less risk as well as lower returns; whereas increase in Age and Shareholder power increases systematic risk in ESOP companies. Although software sector has been the pioneers in establishing ESOP; it is found that absence of significant relationship between the various accounting performance indicators and magnitude of ESOP.

In Pharmaceutical Sector

Table – 7: Regression Synthesis for Pharmaceutical Sector

Regression Summary					
	Dependent variables				
	Performance:				Risk:
	ROE	ROA	ROCE	MCN W	BET A
Independent variables:					
ESOP Period (Pre/Post)	Ns	Ns	(+) **	(-) **	Ns
Debt to Equity Ratio	Ns	Ns	Ns	(-) **	Ns
Sales Growth	Ns	(+) **	Ns	Ns	Ns
Employee Growth	Ns	Ns	Ns	Ns	Ns
Age	Ns	Ns	Ns	(+) **	Ns
Main Shareholder Power	(-) *	Ns	Ns	Ns	Ns
Total Assets	Ns	Ns	Ns	(+) **	
Value Added per Employee	Ns	Ns	Ns	Ns	
Asset Turnover Ratio	Ns	(+) *	Ns	Ns	
Capital Intensity Ratio	Ns	Ns	Ns	Ns	

(+) or (-) Symbol of the relationship, ** Significant at 1 % level, * Significant at 5 % level

Source: Computed

It is found that ESOP in pharmaceutical sector Return on Capital Employed, Age, Sales Growth, increase in Assets, and Asset Turnover ratio have impact on the performance of ESOP firms. However, leverage and ESOP period is found to have significant negative impact on market performance. It is also found that ESOP did not have any significant impact on systematic risk.

It is noted from the present study that out of 80 ESOP companies, the top 3 high ESOP and high performing companies were identified as Aurobindo Pharma Ltd, IPCA laboratories Ltd and Divi's laboratories Ltd. It shows that in spite of recession the ESOP pharmaceuticals companies have outperformed ESOP software companies.

Conclusion and Implications

The study found mixed results associated with the use of broad-based stock options. On the positive side the magnitude of stock option plans is associated with value added per employee. Value added per employee, as measure of employee productivity that most closely captures employee effort and motivation, provides some evidence that stock options positively influence employee productivity to some extent. The study's result indicates that value added per employee increased after the adoption of the stock option plan but did not improve profitability and overall financial performance of companies after ESOP allotment. It is also identified that percentage of capital owned by employee shareholders are relatively insufficient to change employee attitudes and behaviour in a way that improves overall performance of the firm. It is observed from the present study that ESOP companies with more years of existence were found to have significant impact on performance in Software as well as in Pharmaceutical sectors. Although software sectors were pioneers in establishing ESOP in India, present study reveals that pharmaceutical ESOP companies namely Aurobindo Pharma Ltd, IPCA laboratories Ltd and Divi's laboratories Ltd were outperforming software ESOP companies; this indicates that success of ESOP is sector specific, also in spite of recession pharma companies in India have significant sings of growth in-spite of recession.

The study on the negative side revealed that absence of significant relationship between the various accounting performance indicators and magnitude of ESOP. The results suggest that other economic variables (like recession) could have influenced the relationship between ESOP and performance. Most of the companies have allotted stock options between 2006-2008 i.e. during the period of recession when the profit graphs were falling down nearly majority of the companies (86%) have allotted ESOPs. Thus the study indicates that ESOPs were not immune to impacts of the great recession in India.

The corporates can redesign the timing of allotment of employee stock options and increase the magnitude of ESOP such as to achieve the desired objectives of the plans. Awareness and communication is the key to any plan. A stock option programme without serious communication programme will not achieve the desired objectives fully thus companies should be ready to invest more time and effort in this communicating exercise to create awareness of employee stock option usage. The use of ESOP will be beneficial to employer and employee through stable relationship, associability, and trust between employee and employer in long run.

The present paper concludes with a note that "A well-managed employee-owned company is not a destination, it is a journey..." - J. Michael Keeling, President of The ESOP Association- USA.

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Annexure

LIST OF SAMPLE ESOP COMPANIES

S. No	Companies	ESOP Year	S. No	Companies	ESOP Year
Software/ IT Companies			41	Oracle Financial Services Software Ltd.	2006
1	3I Infotech Ltd.	2005	42	Patni Computer Systems Ltd.	2006
2	Aftek Ltd.	2006	43	Polaris Financial Technology Ltd.	2007
3	Allied Digital Services Ltd.	2008	44	Quintegra Solutions Ltd.	2007
4	Allsec Technologies Ltd.	2007	45	R S Software (India) Ltd.	2000
5	Aptech Ltd.	2006	46	R Systems International Ltd.	2006
6	Aztecsoft Ltd.	2005	47	Ramco Systems Ltd.	2003
7	Bartronics India Ltd.	2008	48	Rolta India Ltd.	2006
8	C S STechnergy Ltd.	2008	49	Saksoft Ltd.	2004
9	Compulink Systems Ltd.	2004	50	Sasken Communication Technologies Ltd.	2006
10	Cybertech Systems & Software Ltd.	2007	51	Satyam Computer Services Ltd.	2006
11	Datamatics Global Services Ltd.	2007	52	Subex Ltd.	2007
12	Eclerx Services Ltd.	2008	53	Tech Mahindra Ltd.	2006
13	Educomp Solutions Ltd.	2008	54	Thinksoft Global Services Ltd.	2003
14	F C S Software Solutions Ltd.	2006	55	Tricom India Ltd.	2007
15	Financial Technologies (India) Ltd.	2006	56	Trigyn Technologies Ltd.	2008
16	Geodesic Ltd.	2003	57	Virinchi Technologies Ltd.	2007
17	Geometric Ltd.	2006	58	Wipro Ltd.	2002
18	GlodyneTechnoserve Ltd.	2008	59	Zen Technologies Ltd.	2007
19	H C L Technologies Ltd.	2006	60	Zensar Technologies Ltd.	2006
20	Hexaware Technologies Ltd.	2006	Pharmaceutical Companies		
21	I C S A (India) Ltd.	2007	1	Aurobindo Pharma Ltd.	2006
22	Igate Global Solutions Ltd.	2006	2	Bal Pharma Ltd.	2008
23	Infosys Ltd.	2006	3	Bliss G V S Pharma Ltd.	2007

3				
2 4	Infotech Enterprises Ltd.	2007	4	Divi'S Laboratories Ltd. 2007
2 5	K L G Systel Ltd.	2007	5	Dr. Reddy'S Laboratories Ltd. 2004
2 6	K P I T Cummins Infosystems Ltd.	2006	6	Elder Pharmaceuticals Ltd. 2007
2 7	Logix Microsystems Ltd.	2006	7	Glenmark Pharmaceuticals Ltd. 2006
2 8	Mastek Ltd.	2006	8	Granules India Ltd. 2006
2 9	Megasoft Ltd.	2006	9	Ipcalaboratories Ltd. 2007
3 0	Mindteck (India) Ltd.	2007	10	J B Chemicals & Pharmaceuticals Ltd. 2007
3 1	Moschip Semiconductor Technology Ltd.	2007	11	Jubilant Life Sciences Ltd. 2007
3 2	Moser Baer India Ltd.	2006	12	Lupin Ltd. 2006
3 3	Mphasis Ltd.	2006	13	NatcoPharma Ltd. 2006
3 4	N I I T Ltd.	2006	14	Orchid Chemicals & Pharmaceuticals Ltd. 2006
3 5	N I I T Technologies Ltd.	2002	15	Ranbaxy Laboratories Ltd. 2002
3 6	Nucleus Software Exports Ltd.	2003	16	Shasun Pharmaceuticals Ltd. 2003
3 7	O R G Informatics Ltd.	2007	17	Suven Life Sciences Ltd. 2007
3 8	Odyssey Technologies Ltd.	2006	18	Unichem Laboratories Ltd. 2006
3 9	Onmobile Global Ltd.	2007	19	Venus Remedies Ltd. 2007
4 0	Onward Technologies Ltd.	2006	20	Wockhardt Ltd. 2006

*** END ***