

The Relationship between HR Expenditure and Firm's Performance: Case of S&P BSE SENSEX 30 Companies

Gaurav Talan^{1*}, Kanchan Sehrawat² and Gagan Deep Sharma¹

¹University School of Management Studies, Guru Gobind Singh Indraprastha University, Delhi, India; gauravtalan@gmail.com, gagan.is.sharma@gmail.com

²Faculty of Management Studies, University of Delhi, India; kanchansehrawat90@gmail.com

Abstract

In today's dynamic business environment, for companies to exist, they must continuously look for areas for improvement and gain competitive advantage. It therefore becomes quintessential for companies to know which factors can have a positive effect on the company's performance. The purpose of this article is thus to explore if there a relationship between the HR expenses of an Indian company and its financial performance and is this impact positive enough to motivate these companies to augment such efforts in improving the HR management practices. For, this purpose, data on expenditure on human resource and profit after tax (PAT) for BSE- SENSEX 30 companies was extracted for the period of 10 years. In order to test the hypothesis of this study, correlation and regression analyses were performed. Results of correlation revealed that HR expenditures are positively related to Firms performance. The findings from regression analysis revealed that HR expenditure have statistically significant effect on a firm's financial performance.

Keywords: Correlation, Financial Performance, HR Expenditure, Listed Companies, Profitability, Profit after Tax, Regression Analysis

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1. Introduction

New technologies, products, markets, manufacturing techniques and new management concepts continuously change an industrial competitive advantage (Li, 2000)¹⁴. The unique human resource (HR) which a company has can help them to gain competitive advantage over the others. However, for long human resource practitioners have struggled to demonstrate value of their work to the rest of the organization. (Drucker, 1954)¹¹ described "personnel" managers as constantly worrying about "...their ability to prove that they are making a contribution to the enterprise" (p.275). Tom Stewart also referred to HR leaders as being "...unable to describe their contribution to value added except in trendy, unquantifiable and wannabe terms..." (Stewart, 1996)(p.105)¹⁹.

To counter these enduring and repeated criticisms that expenses on HR do not add value to organizations, there has been escalation in the researches attempting to demonstrate that progressive HR practices result in higher organizational performance. Though, there have been positive results when correlating the expenses incurred on HR practices and the performance of the company, very few researches explore this relationship

between HR expenditure and performance in the Indian companies. This paper attempts to establish a relationship between the HR expenditure and the performance in the S&P BSE SENSEX 30 companies.

2. Literature Review

A number of studies show a positive relationship between HR practices and various measures of firm performance. For instance, (American Bankers Association, 2004)¹ conducted a survey of 17 banks in United States of America and found that banks falling in top 50% of training expenditure per full-time equivalent (FTE) perform better on financial indicators namely; Profitability, total shareholders return, return on assets (ROA) and return on investment (ROI). (Bartel, 1995)² in US; (Morrow, 1997)¹⁵ in US; (Bartel, 2000)³ in US; (Chochard & Davoine, 2011)⁸ in Switzerland; (Danvila & Castillo, 2009)¹⁰ in Spain, found a positive relationship between training expenditure per employee and ROI. However a mixed correlation between training expenditure and ROI is reported by (Percival, Cozzarin, & Formanek, 2013)¹⁸ on the basis of annual surveys of 3528 firms

of Canada from 1999 to 2005. (Park & Jacobs, 2011)¹⁷ in a survey of 454 firms in South Korea with more than 100 employees in 2005-2007 reported positive relation of training expenditure with profitability and ROA.

However, (Cosh, Hughes, Bullock, & Potton, 2003)⁹ in a survey of 2500 U.K firms found a mixed correlation between training expenditure per firm and per employee with profitability. A mixed relationship between Training expenditure as a percent of wage bill and as percent of workforce trained with profitability is also reported by (Hansson, 2007)¹² in a survey of 5,824 firms with 200 or more employees in 26 different countries. Whereas (Jones, Kalmi, & Kauhanen, 2012)¹³ found no correlation between profitability and training expenditure per employee and training days per employee on a data set of 233 banks in Finland.

(Blandy, Hawke, Webster, & Dockery, 2001)⁶ in survey of 41 Australian firms and (Bosworth & Loundes, 2002)⁷ in Longitudinal surveys of 3,569 business units of Australia with less than 200 employees between 1994 and 1998 found positive correlation between training expenditure and profitability.

(Bassi, Harrison, Ludwig, & McMurrer, Human Capital Investments and Firm Performance, 2001)⁴ in a survey of 575 publically traded firms of US found that a \$100 increase in training expenditure per employee increased the annual stock price by 0.8 percentage points. Another survey of 388 companies by (Bassi, Harrison, Ludwig, & McMurrer, 2004)⁵ reported firms in top the top quartile of training expenditures per employee had annual stock price returns between 1996 and 1998 of 31% while those in the bottom quartile had a return of 15%. Return on assets averaged 5.3% for the top quartile and 4.2% for the bottom.

Majority of the researches mentioned above are suggestive of a positive payoff associated with expenditure on employees. However researchers continue to debate exactly how it occurs. The predominant theory holds that training enhances employee's knowledge, skills and abilities, which improves outcomes such as productivity, product and service quality and customer satisfaction. (Paauwe, Wright, & Guest, 2013)¹⁶. These in turn can lead to higher sales and profitability.

3. Research Methodology

The important research questions addressed in this paper are: Is there a relationship between the HR expenses of an Indian company and its financial performance? Is this impact positive enough to motivate these companies to augment such efforts in improving the HR management practices?

The hypothesis relating to this issue is as follows:

H0: There is no relationship between the HR Expenditure of the Indian listed companies and their performances

H1: There is a significant positive relationship between the HR Expenditure of the Indian listed companies and their performances

To reach the conclusion, the study aimed to examine the effect of expenditure on Human Resource on performance of BSE SENSEX 30 companies. Data on expenditure on human resource and profit after tax (PAT) was extracted using Prowess IQ software.

HRM cover a wide range of activities. For the purpose of this study we focus on HR Expenditure which comprises of salaries; wages; bonus; ex-gratia provident fund and gratuities paid; staff welfare and training expenses; ESOPs; VRS amortized and payments; arrears paid during the year; payments and reimbursement of expenses; other expenses on employees; compensation to employees capitalized; compensation to employees transferred to DRE; Executive director's remuneration; and addendum information of compensation to employees. The performance of the company is limited to its profitability denoted by PAT. The period of the study for which the data comprising of HR Expenditure and PAT is collected ranges from 2007 to 2016. The research sample representing the Indian listed companies consisted of the S&P BSE SENSEX 30 companies.

The analysis techniques used for the study are regression analysis and correlation. The correlation explains the interdependence and mutual relationship between the HR Expenditure and PAT of these companies. The regression analysis establishes a statistic connection on the behavior of the variables. Regression analysis is useful for:

- Estimation of one variable holding values of the other variable(s)
- Evaluation of the measure that the independent variable(s) explain the dependent variable
- Classification of independent variables to be considered while estimating the dependent variable.

The general expression used for regression analysis is;

$$y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

where, β_0 is the intercept and β_1 is the slope. Both β_0 and β_1 are found using the least square method. The dependent variable is denoted by y_i and the independent variable by x_i . The error term ϵ_i represents influence on the dependent variable y_i other than the independent variable x_i . While formulating the regression equations of each company, PAT is taken as the dependent variable (y_i) and z scores of HR expenditure as the independent variable (x_i). SPSS (Statistical Package for Social Sciences) has been used for formulating the regression equations while Microsoft Excel has been used to calculate the correlation.

4. Empirical results

The results formulated through the correlation and regression equations with PAT of S&P BSE SENSEX 30 companies as dependent variable and their HR Expenditure as independent variable is presented in the below table as (Table 1).

70% of the companies (21 out of 30) in the above tableau are found to have a positive correlation of 0.8 and above between HR Expenditure and PAT, and more than 50%(16 companies) have a correlation in these variables at more than 0.9. This has been displayed in the below figure.

The coefficient of the determinant (R-square) in the regression equation also delivers similar results. In more than 76% of the companies, the relationship is explained by the linear regression with a significance level of 0.05 or less. Among these, more than 73% of the companies have R-Square of 0.6 and above, more than 66% of the companies have R-Square of 0.7 and above, more than 56% of the companies have R-Square of 0.8 and above and more than 36% of the companies have R-Square of 0.9 and above. Even though there are 7 companies out of 30 where the relationship between HR Expenditure and PAT cannot be established with the linear regression equation due to higher significant lev-

Table 1. Regression equations with PAT of S&P BSE SENSEX 30 companies as

S&P BSE SENSEX 30 Companies	Regression				Correlation coefficient
	R-Square	β_0	β_1	Significance	
Adani Ports & Special Economic Zone Ltd.	0.973	15175.550	9380.469	0.000	0.987
Asian Paints Ltd.	0.921	9986.920	4324.224	0.000	0.960
Axis Bank Ltd.	0.995	48233.860	26282.580	0.000	0.998
Bajaj Auto Ltd.	0.367	25886.920	6886.056	0.063	0.606
Bharti Airtel Ltd.	0.123	77234.130	8136.618	0.319	0.351
Cipla Ltd.	0.708	11541.480	2351.646	0.002	0.842
Coal India Ltd.	0.805	93320.180	50323.722	0.000	0.897
Dr. Reddy'S Laboratories Ltd.	0.633	11283.100	3757.774	0.006	0.796
G A I L (India) Ltd.	0.006	31794.060	-562.673	0.828	-0.079
H D F C Bank Ltd.	0.973	65890.320	40009.270	0.000	0.986
Hero Motocorp Ltd.	0.793	21665.120	6116.935	0.001	0.891
Hindustan Unilever Ltd.	0.882	31765.500	8727.308	0.000	0.939
Housing Development Finance Corpn. Ltd.	0.983	45772.230	18030.035	0.000	0.992
I C I C I Bank Ltd.	0.934	72321.360	27434.948	0.000	0.966
I T C Ltd.	0.983	67263.090	27413.429	0.000	0.991
Infosys Ltd.	0.923	94051.000	39174.971	0.000	0.961
Larsen & Toubro Ltd.	0.846	44524.830	9553.253	0.000	0.929
Lupin Ltd.	0.946	14906.190	9941.830	0.000	0.973
Mahindra & Mahindra Ltd.	0.771	26343.000	8795.574	0.001	0.892
Maruti Suzuki India Ltd.	0.863	27400.000	10985.163	0.000	0.929
N T P C Ltd.	0.697	97403.860	12603.305	0.003	0.835
Oil & Natural Gas Corpn. Ltd.	0.093	186403.210	9528.491	0.391	0.305
Power Grid Corpn. Of India Ltd.	0.879	36773.810	16129.860	0.000	0.938
Reliance Industries Ltd.	0.830	211934.380	36523.851	0.000	0.911
State Bank Of India	0.297	102987.230	12107.353	0.104	0.545
Sun Pharmaceutical Inds. Ltd.	0.307	328.070	-8463.171	0.096	-0.554
Tata Consultancy Services Ltd.	0.979	129183.100	72881.204	0.000	0.990
Tata Motors Ltd.	0.398	4880.830	-12365.559	0.050	-0.631
Tata Steel Ltd.	0.001	56209.320	240.923	0.939	0.028
Wipro Ltd.	0.910	57892.600	19417.031	0.000	0.954

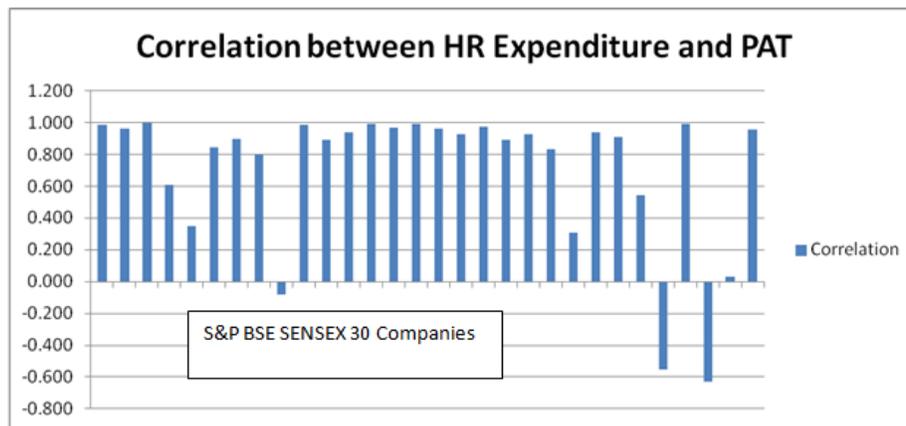


Figure 1. Significant positive relationship between the HR Expenditure.

els, based on the results of rest of the 21 companies, the study is not able to accept the null hypothesis. Hence, there is a significant positive relationship between the HR Expenditure of the Indian listed companies and their performances.

5. Conclusion

The empirical results derived by the study show that the performance or the profitability of the Indian listed companies (represented by a sample of S&P BSE SENSEX 30 Companies) is not only highly correlated with their HR expenditure but also explained with a linear regression model in more than 76% of the companies. These results throw light on the importance of the effective human resource management in the companies in order to augment the profitability and overall performances. With the relationship between the two variables is mostly explained by the expenditure on human resource alone, it is evident that human resource is the simple most important factor when it comes to financial performance of an Indian company. To achieve the objective of high profitability, it is essential for a company to focus on the following factors among many others:

- Adequate compensation to the employees in the form of salaries, wages, bonus etc.
- Active contribution by the company in schemes like provident fund, gratuities etc.
- Continuous investment in staff training and welfare
- Encourage ownership by employees in the form of ESOPs
- Timely payment of arrears, VRS, reimbursements

In order to check that the above measures are adequately followed surveys and interview techniques of the employees can be conducted in a timely manner to ensure the effectiveness of the HR policies of the company.

6. Limitations and Agenda for Future Research

The study has some inherent limitation. Firstly, the companies selected in the study i.e. S&P BSE SENSEX 30 companies may not represent all the listed companies in India due to varied HR policies and organizational structure. These 30 companies are considered to be the top companies in India representing the stock market index (SENSEX). Therefore, these companies shall have an organizational structure of a large multinational organization only. The results therefore cannot be generalized keeping in mind the different structure and employee expectations from smaller enterprises. Second, the data has been collected for last 10 years only which is a relatively short duration to generalize the effect of HR expenditure on profitability in a longer duration. The dependent variable showing the performance of the company is limited to one single factor i.e. profitability. Further, only a single independent variable (HR expenditure) has been studied as a function of the profitability of the firm which depends on several other variables also. The future researches in this area can look forward to establish this relationship between a larger set of listed companies, preferable an adequate mix of large cap, mid cap and small cap companies for a longer duration of time. In addition, the sub factors of HR Expenditure (ESOPs; VRS amortized and payments; arrears paid during the year; payments and reimbursement of expenses; other expenses on employees; compensation to employees capitalized; compensation to employees transferred to DRE; Executive director's remuneration; and addendum information of compensation to employees) can be taken as separate independent variables to measure the effect of each one of these on the profitability of the company. Apart from these financial expenditures, companies HR policies like mater-

nity benefits, flexi-time etc. can also be taken as independent variables. The dependent variable denoting the performance of the company can also be interchanged with profitability, sales, return on equity, credit ratings etc. for more accurate results. This shall be useful for the organizations to proportionately design the HR policies and framework for better profitability and overall performance.

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