

LINKAGE BETWEEN PERFORMANCE-BASED PAY AND ORGANIZATIONAL PERFORMANCE: AN EMPIRICAL STUDY

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Abstract - Employees are the backbone of any organization. Organizational growth and sustainability highly depend on the quality of performance of employees with the overall performance of the organization. Compensation is the largest single cost in most organizations. Hence the extent to which these resources are allocated effectively is likely to have a major beneficial impact on organizational performance. Making their compensation contingent on their performance can help to ensure that each employee contributes his best effort. Compensating them according to the performance of the organization as a whole can motivate strong teamwork. Even though, there are so many studies related to the performance-based pay and organizational performance, only limited studies are at the national level. Hence, the present study has made an attempt to fill up the research gap and conducted among 200 IT companies at Chennai. The objectives of the study are confined to test the validity of measurement of implementation of Performance Based Pay (PBP) at the corporates and to evaluate the impact of PBP on organizational performance of the corporates. This study concludes that performance management system and compensation system must objectively link the individual level performance of employees with the overall performance of the organization.

Keywords- *performance based pay; variable compensation; compensation policy; performance measurement*

I. INTRODUCTION

Compensation is a strategic human resource management issue (Bergman and Scarpello, 2002). The compensation includes the salary, wages, remuneration, pay system and financial incentives (Milksrich and Newman, 2004). The pay is based on the performance of the group or individual is essential for better organizational performance (Henderson, 2009). There should be a difference in the pay among the high performers and poor performers in order to retain the higher performers in the organization (Mc Shane and Von Glinow, 2005). There is a direct link between the performance-based pay (PBP) and job satisfaction among the employees (Mani, 2002). It is very difficult to search the qualified and trained employees on the sudden (Ismail et al., 2007). It requires higher cost and time (Lee et al., 1999). The cost reduction and

optimum production in any organization is positive when their employees are higher performers (Henderson, 2009).

In the globalized era, the organizations may compete their competitive when they are having cost efficiency and production efficiency (Janssen, 2001). These two are possible when there is a higher job satisfaction among the employees (Pouliakas and Theodossion, 2005). The catalyst of higher job satisfaction among the employees is their payment system and structure (Money and Graham, 1999). If the employees are perceived that they are well paid or correctly paid, the attrition rate will come down (Greenberg 2003) and their productivity will be enriched (Sharlicki and Folger, 1997). Hence, it is essential to evaluate the employees view on the level of implementation of performance based pay at their organization and the organizational performance.

II. LITERATURE REVIEW

The payment system administered by the organization were evaluated by Terpstra and Honoree, (2008); Boardman and Sunquist, (2008) and Shaw et al., (1999). All these studies indicated that the adoptions of performance pay increase the level of job satisfaction among their employees. The direct link between the adequacy of pay and job satisfaction was witnessed by Money and Graham (1999) Waite and Stites (2000); and Belfield and Heywood (2008). The pay system and performance of the organization were reviewed by Lawler (1971), Slater (1980), Riser (1978) and Obasan (2012). All these studies revealed a significant impact of performance based pay strategy on the corporate performance. It is also supported Chi and Hung (2011) and Kaplan and Norton, (2001) with the help of balance score and analysis.

Even though, there are so many studies related to the performance-based pay and organizational performance, only limited studies are at the national level. Hence, the present study has made an attempt to fill up the research gap with the help of the following conceptual model in Figure 1.

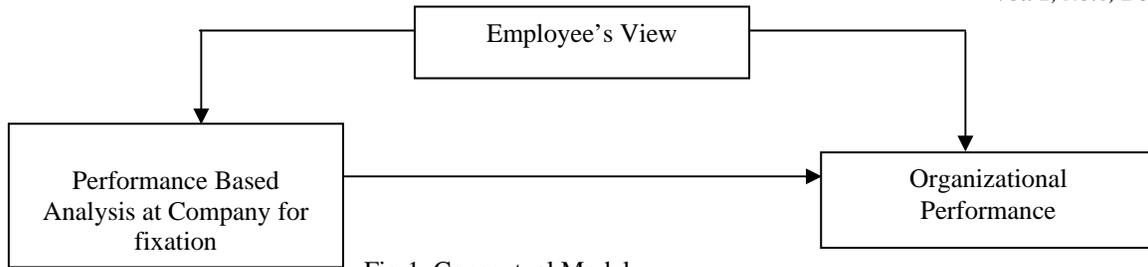


Fig:1. Conceptual Model

The concepts generated for the study are: performance based pay at the company and its organizational performance. The conceptual framework of the study is given below:

III. PERFORMANCE BASED PAY (PBP)

The performance of the employees is measured by the skill possessed by the employees (Higher, 2009). It represents the

skills required to complete a particular task (Perry, et al., 2009). It is ever in the software field (Marsden, 2004). The skill based performance index was generated to determine the compensation of the employees (Lavy, 2007). In the present study, the variables in PBP are identified with the help of reviews (Emery, 2004). The variables are listed in Table 1.

TABLE 1: VARIABLES IN PERFORMANCE BASED PAY PBP AT THE COMPANIES

S.No.	Variables in PBP	S.No.	Variables in PBP
1.	Creativity	11.	Teaching skill
2.	Authority	12.	Responsibility
3.	Problem solving ability	13.	Inspiring mind
4.	Background in basic education	14.	Familiarity in subject
5.	Creativity	15.	Experience in hand and software selection
6.	Communication skill	16.	Dynamic interface
7.	Versatility	17.	Competence in system tools and methodologies
8.	Time management skill	18.	Selling skill
9.	Understanding skill	19.	Knowledge of the basics
10.	Co-ordinating skill	20.	Planning and executing ability
		21.	Controlling skill

IV. FIRM'S PERFORMANCE

Firm's performance is the ultimate aim of all strategies implemented by the firm (Abowd, 1990). The firm's performance is also called as organization performance (Leonard, 1990). It includes the measures which are related to financial and non-financial aspects of the

organization (Jensen and Smith, 1990). In the present study the organization performance is measured with the help of variables drawn from reviews (Bai et al., 2003; Black, et al., 2006). These are presented in Table 2. The employees are asked to rate the above variables at five point scale according to the nature of these variables at their company for the past 5 years.

TABLE 2: VARIABLES IN FIRMS PERFORMANCE (FP)

S.No.	Variables in PBP	S.No.	Variables in PBP
1.	Annual turnover	5.	Shareholders network
2.	Annual profits	6.	Return on investment
3.	Equity	7.	Market value of equity
4.	Assets position		

V. OBJECTIVES AND METHODOLOGY OF THE STUDY

The objectives of the study are confined to test the validity of measurement of implementation PBP at the

corporate, to measure the extent of implementation of PBP and organizational performance and to evaluate the impact of implementation of PBP on organizational performance of the corporate.

A. Methodology

This study used the descriptive research to fulfill the objectives of the study. The study was conducted among 200 companies in information technology field at Chennai. The required data were collected with the help of structured questionnaire. The questionnaire was divided into two important parts. The first part covers the profile of the companies whereas the second part includes the rate of implementation of PBP and organizational performance of the companies. The pilot study was conducted among 30 employees working in IT companies at Chennai city. The final draft of the questionnaire was prepared to collect the data from the employees of 200 IT companies. The collected data were processed with the help of statistical package for social science (SPSS) version 16.00. Firstly the exploratory factor analysis was used to narrate the variables in PBP at corporates (Hair et al., 1998) and to assess the validity and reliability of measurement scales (Anderson and Gerking, 1988). Secondly, the multiple regression analysis was undertaken to assess the magnitude of each independent variable in dependent variable (Barm and Kenny; Foster et al., 1998). In this regression analysis, standardized co-efficient were used for all analysis (Jaccard et al., 1990).

B. Descriptive Statistics

The important years of experience of the companies included for the present study are 10 to 15 years whereas the important number of employees working in it is 50 to 75 employees. The important nature of ownership of the companies is limited company whereas the dominant nature of workforce in the companies is technical work force. The important monthly salary paid to the employees is Rs.30000 to 50000 whereas the important financial incentives to the employees are annual bonus and increment.

C. Important Performance Based Pay parameters at the Companies

The score of 21 variables in PBP which were rated at five point scale have been include for exploratory factor analysis in order to narrate the variables into important performance based pay (Brown, et al., 2010). Initially, the validity of data for exploratory factor analysis have been tested by Kaiser-Meyer-Ohlin(KMO) measure of sampling adequacy and Bartlett's test of sphericity. The results are shown in Table 3.

TABLE 3 : IMPORTANT PERFORMANCE BASED PAY (IPBP) PARAMETERS

<i>S.No.</i>	<i>IPBP</i>	<i>Weightage</i>	<i>Eigen value</i>	<i>Per cent of variation explained</i>	<i>Cumulative per cent of variation explained</i>
1.	Technical skills	6	5.1089	24.33	24.33
2.	Personal skills	4	3.8402	18.29	42.62
3.	Interpersonal skills	4	3.1177	14.85	57.47
4.	Academic qualification	4	2.9098	13.86	71.33
5.	Managerial skill	3	1.8868	8.98	80.31
KMO measure of sampling adequacy: 0.7989			Bartlett's test of sphericity chi-square value: 89.08*		

*Significant at zero per cent level.

The KMO measure of sampling adequacy and Bartlett's test of sphericity satisfy the conditions of validity of data for factor analysis (Hari, et al., 1999). The factor analysis results in five important PBP at the companies. These are technical skills, personal skills, interpersonal skills, academic qualification and managerial skills. These five important PBP have been included for further analysis.

D. Validity and Reliability Analyses for the Measurement Scales

The included measurement scales for the study are five important Performance Based Pay Scales and organizational performance. The score of the above said measurements have been included for confirmatory factor analysis in order to examine the reliability and validity of variables in each measurement (Anderson and Gerbling, 1988). The internal

consistency in each measurement is tested with the help of cronbach alpha (Nunnally, 1978). The results are given in Table 4.

The standardized factor loadings of the variables in all measurements are greater than 0.60 which reveals the content validity (Byrne, 2001).

TABLE 4 : RELIABILITY AND VALIDITY OF MEASUREMENT SCALES

S.No.	Measurement Scales	Range of Std.zed factor loadings	Range of 't' statistics	Cronbach alpha	Composite reliability	Average variance extracted
1.	Technical skills	0.8917-0.6334	3.8676*-2.4961*	0.7741	0.7542	55.17
2.	Personal skills	0.9022-0.6179	4.1884*-2.1996*	0.7962	0.7707	56.44
3.	Interpersonal skills	0.8674-0.6508	3.6502*-2.5868*	0.7596	0.7341	53.01
4.	Academic skills	0.8732-0.6884	3.7314*-2.8048*	0.7604	0.7417	54.92
5.	Managerial skills	0.8541-0.6024	3.5143*-2.0447*	0.7339	0.7045	51.96
6.	Organizational performance	0.8998-0.6547	3.9029*-2.6373*	0.8144	0.7902	58.08

VI. LEVEL OF IMPLEMENTATION OF PBP AND ORGANIZATIONAL PERFORMANCE AT THE COMPANIES

The significance of 't' statistics of the standardized factor loadings of the variables in each measurement indicates the convergent validity (Arun, 2012). It is also supported by the composite reliability and average variance extracted (AVE) since these are greater than its minimum threshold of 0.50 and 50.00 per cent respectively (Carmines and Sella, 1988). The internal consistency in each measurement is assured since the cronbach's alpha is greater than 0.60 (Nunnally, J.C., and Bernstein, 1994).

The level of implementation of PBP and organizational performance has been measured by the mean scores of the variables in each measurement. The standard deviation of each measurement has been computed to measure the consistency in the level of implementation. The discriminant validity among the measurements has been extracted with the help of mean of average variance extracted and the square of correlation co-efficient between all possible pairs. The results are shown in Table 5.

TABLE 5 : LEVEL OF IMPLEMENTATION OF PBP AND ORGANIZATIONAL PERFORMANCE

S.No	PBP & organizational performance	Mean	Standard deviation	Square of correlation co-efficient		Mean of Average Variance Extracted			
				1	2	3	4	5	6
1.	Technical skills	3.1989	0.7082		0.5581	0.5409	0.5505	0.5357	0.5663
2.	Personal skills	3.3884	0.5978	0.5149		0.5473	0.5568	0.5420	0.5726
3.	Interpersonal skills	3.2042	0.4886	0.4961	0.5242		0.5397	0.5249	0.5555
4.	Academic skills	3.0991	0.5144	0.4886	0.4909	0.5178		0.5344	0.5650
5.	Managerial skills	3.1173	0.4089	0.5102	0.4967	0.4808	0.5089		0.5502
6.	Organizational performance	2.9676	0.6844	0.4865	0.4477	0.4966	0.5099	0.5147	

The higher level of implementation of PBP is noticed in the case of personal skills and technical skills since their respective mean scores are 3.3884 and 3.1989 respectively. The higher consistency in the level of implementation of PBP is noticed in the case of managerial skills and interpersonal skills since their respective standard deviations are 0.4089 and 0.4886. The discriminated validity among the measurements has been proved since their mean of AVEs of all pairs are greater than its respective square of correlation co-efficient between the pairs (Barons and Kenny, 1986).

VII. IMPACT OF PBP ON ORGANIZATIONAL PERFORMANCE AMONG THE COMPANIES

The implementation of PBP may have its own influence on the organizational performance. It is imperative to examine the relative importance of implementation of each important PBP on organizational performance with the help of multiple

regression analysis (Foster et al., 1998). The fitted regression model is:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_5X_5 + e$$

whereas

- Y– Score on organizational performance
- X₁– Score on implementation of technical skills
- X₂– Score on implementation of personal skills
- X₃– Score on implementation of interpersonal skills
- X₄– Score on implementation of academic qualification
- X₅– Score on implementation of managerial skills
- b₁, b₂, . . . b₅– regression co-efficient of independent variables
- a– intercept and
- e – error term

The result of multiple regression analysis is summated in Table 6.

TABLE 6 :IMPACT OF PBP ON ORGANIZATIONAL PERFORMANCE AMONG THE COMPANIES

Sl.No.	PBP	Unstandardized regression co-efficient	Standard error	't' statistics	Standardized regression co-efficient
1.	Technical skills	0.1947	0.0817	2.3831*	0.1451
2.	Personal skills	0.1733	0.529	3.2759*	0.1262
3.	Interpersonal skills	0.1408	0.1096	1.2847	0.1089
4.	Academic qualification	0.0979	0.0845	1.1586	0.0452
5.	Managerial skills	0.1125	0.0473	2.3784*	0.1011
	Constant	0.4546			
	R ²	0.7991			
	F statistics	8.4542*			

*Significant at five per cent level.

The significantly influencing important PBP on the organizational performance at companies are technical skills, personal skills and managerial skills since their respective regression co-efficients are significant at five per cent level. A unit increase in organizational performance by 0.1451, 0.1262 and 0.1011 units respectively. The R² indicates that the changes in the implementation of various important PBPs explain the changes in the organizational performance at the company to an extent of 79.91 per cent.

VIII. RESEARCH IMPLICATIONS

The findings of five important performance based pay at the companies replicates the findings of Amuedo and Mach (2003) and Belfield and Heywood (2008). The validity of variables in each important PBP reveal the findings of Warr et al., (1979) and Belfield and Marsden (2003). The direct linkage between the implementation of PBP and organizational performance is similar with the findings of Heywood and Wei (2006), Omar and Ogenyi (2006) and Azam et al., (2011).

IX. CONCLUSION

The study proposed a conceptual framework based on compensative literature. The important PBP are based on technical, personal, interpersonal, managerial skills and academic qualification. The measurement scaled used in the study met the standards of validity and respectively analyses.

The implementation of PBP has a significant positive impact on organizational performance. Therefore, the present study reveals the importance of implementation of performance based pay in order to enrich the organizational performance of the companies. The ability of HR managers in practice the implementation of PBP will produce a better result in the organization especially employees' attitudes and behavior.

REFERENCES

1. Mc Shane, S.C. and Von Glinow, M.A., (2005), *Organizational Behaviour*, Irwin: Mc Graw Hill.
2. Money, R.B. and Graham, J.C., (1999), "Sales Person Performance, Pay and Job Satisfaction: Test of a Model Using Data Collected in the United States and Japan", *Journal of International Business Studies*, 30 (2), pp.149-192.
3. Kaplan, R.S. and Norton, D.P., (2001), "Transforming the Balance Score Card from Performance Measurement to Strategic Management: Part-II", *Accounting Horizon*, 15 (2), pp.147-160.
4. Der-Jang Chi and Hsn-Feng Hung (2011), "Is the balanced score card really helpful for improving performance? Evidence from software companies in China and Taiwan", *African Journal of Business Management*, 5 (1), pp.224-239.
5. Risher, H., (1978), "Job Evaluation: Mystical or Statistical?", *Personal*, September-October, pp.11-13.
6. Slater, P., (1980), *Wealth Addiction*, New York: Dulton.
7. Lawler, Edward, E., (1971), "Pay and Organizational Effectiveness: A Psychological View", New York: Mc Graw-Hill.
8. Belfield, R. and Marsden, D., (2003), "Performance Pay, Monitoring Environments and Establishment Performance", *International Journal of Manpower*, 24 (40), pp.452-471.
9. Bergmann, T.J. and Scarpello, V.G., (2002), *Compensation Decision Making: United States: South-Western Thomson Learning*.
10. Boardman, C. and Sundquist, E., (2009), "Toward Understanding Work Motivation: Worker Attitudes and Perception of Effective Public Service", *American Review of Public Administration*, 39 (5), pp.519-524.
11. Greenberg, J., (2003), "Creating Unfairness by Mandating Fair Procedures: The Hidden Words of a Pay-for-Performance Plan", *Human Resource Management Review*, 13 (1), pp.41-57.
12. Henderson, R.I., (2009), *Compensation Management in a Knowledge-Based World*, New Jersey: Prentice Hall.
13. Ismail, I., Hock, W.K. and Sulaiman (2007), "Relationship between Performance based pay features and job satisfaction: Does Interactional Justice Act as a mediating role?", *University Malaysia Sarawak*.
14. Janssen, O., (2001), "Fairness Perception as a Moderator in the Curvilinear Relationships between Job Demands, and Job Performance and Job Satisfaction", *Academy of Management Journal*, 44 (5), pp.1039-1050.
15. Lee, C. Law, K.S. and Bobko, P., (1998), "The Importance of Justice Perceptions on Pay Effectiveness: A Two Year Study of a Bhill-based Pay Plan", *Journal of Management*, 25 (6), pp.851-873.
16. Mani, B.G., (2002), "Performance Appraisal Systems, Productivity and Motivation: A Case Study", *Public Personnel Management*, 31 (2), pp.141-160.
17. Nc Causland, W.D., Pouliakas, K. and Theodossiou, I., (2005), "Some are punished and some are rewarded. A Study of the Impact of Performance Pay on Job Satisfaction", *International Journal of Manpower*, 26 (7 & 8), pp.636-659.
18. Milkovich, G.T. and Newman, J.M. (2009), *Compensation*, New York: Mc Graw Hill.
19. Money, R.B. and Graham, J.C., (1999), "Salesperson Performance, Pay and Job Satisfaction: Test of a Model Using Data Collected in the United States and Japan", *Journal of International Business Studies*, 30 (2), pp.149-172.
20. Nunally, J.C. and Bernstein, I.H., (1994), *Psychometric Theory*, New York: Mc Graw Hill.
21. Hari, J.F. Anderson, R.E., Tatham, R.C. and Black, W.C., (1998), *Multivariate Data Analysis*, New Jersey: Prentice Hall.
22. Brown, M., Hyatt, D. and Benson (2010), "Consequences of the Performance Appraisal Experience", *Personnel Review*, 39 (3), pp.379-396.
23. Anderson, J.C., and Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach?", *Psychological Bulletin*, 103(3), pp.411-423.
24. Nunnally, J.C. (1978), *Psychometric Theory*, 2nd Edition, Mc Graw Hill, New York, NY.
25. Byrne, B.M., (2001), "Structural Equation Modelling with AMOS: Basic Concepts, Applications and Programming", Lawrence Erlbaum Associates, Mahwah, NJ.
26. Arunkumar Agariya (2012), "CRM Scale Development and Validation in Indian Banking Sector", *Journal of Internet Banking and Commerce*, 17 (1), pp.1-17.
27. Carmines, E.G. and Zeller, R.A., (1988), *Reliability and Validity Assessment*, Sage Beverly Hills, CA.
28. Baron, R.M., and Kenny, D.A., (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Consideration", *Journal of Personality and Social Psychology*, Vol.51, pp.1173-1182.

29. Amuedo-Dorantes, C. and Mach, T., (2003), “Performance Pay and Fringe Benefits, Work Incentives or Compensating Wage Differentials?”, *International Journal of Manpower*, 24 (6), pp.673-698.
30. Belfield, C.R. and Heywood, J.S., (2008), “Performance Pay for Teachers: Determinants and Consequences”, *Economics of Education Review*, 27 (3), pp.243-252.
31. Foster, D.P., Stine, B. and Waterman, R., (1998), *Business Analysis using Regression: A Case Book*, Springer-Verlag.
32. Warr, P.B., Cook, I. and Wall, T.D., (1979), “Scales for Measurement of some work attitudes and aspects of Psychological Well-being”, *Journal of Occupational Psychology*, 52 (2), pp.129-148.
33. A.I.H. Mohamad, N.S.Hamid, A.Z. Sulaiman and M.M.B. Abdullah (2011), “Relationship between Performance based Pay, International Justice and Job Satisfaction: A Mediating Model Approach”, *International Journal of Business and Management*, 6 (11), pp.170-179.
34. Heywood, J.S. and Wei, X., (2006), “Performance Pay and Job Satisfaction”, *Journal of Industrial Relations*, 48 (4), pp.523-541.
35. Omar, O.E., and Ogenyi, V.O., (2006), “Determinants of Pay Satisfaction of Senior Managers in the Nigerian Civil Service”, *International Journal of Public Sector Management*, 19 (7), pp.687-701.