

The Impact of Human Resource Management on Performance of Oil and Gas Industry in Iran

¹Assistant Professor Dr. Rouhollah Mojtahedzadeh and ²Reza Izadi

¹A Lecturer of Allameh Mohaddes Noori Institute of higher education- Noor -Iran)

²Faculty Member of Allameh Mohaddes Noori Institute of Higher Education and PhD student at the university of Mofid, Iran

ABSTRACT

The article estimates the impacts of H R M (human resource management) practices on performance in Oil and Gas Industry in Iran. Confirmatory Factor analysis (CFA) was applied to recognize Human Resource Management (HRM) practices. Questionnaire survey was carried out between January-July 2011. Primary data was collected from a sample of 20 randomly selected companies operating in Oil and Gas Industry in Iran. The companies were chosen from the directory of Ministry of Petroleum and Natural Resource, Government of Iran. Two hundred questionnaires were dispatched to these companies. A total of 175 filled questionnaires were received with a response rate of 87.5%. The respondents were managers in these companies. A total of 175 managers of 20 randomly selected firms from Oil and Gas Industry responded to self-reported questionnaire that measured five HRM practices and subjective measures of financial performance. Regression analysis indicated a positive and statistically significant association of these practices with performance. The study provides insight to management to use these practices as strategic tool for superior performance, and add to the limited empirical knowledge that exists in Iran context. It is hoped that this paper can provide an academic source for both academicians and managers due to investigate the relationship between Human Resource Management Practices and financial Performance in a systematic manner to increase successful rate of Human Resource Management.

Key words: Human resource management, HRM, Performance, Oil and gas industry, Iran.

Introduction

Changing business environment in knowledge economy has made adoption of human resource management (HRM) imperative for competitive advantage. The impact of human resource management practices on business performance has been extensively studied in the recent past. These studies have found a positive association between HRM practices and firms' performance (Becker & Huselid, 1998; Chang, P. L., & Chen, W. L. 2002; Jarventaus, 2007; Rizov & Croucher, 2008; Sang, 2005). Most of these studies have been undertaken in the United States, and Europe (Boseli *et al.*, 2005; Hoque, 1999) and Asia (Bjo'rkman, I. and Xiucheng, 2002; Kundu & Malhan, 2007; Ngo *et al.*, 1998). Within Iran, limited research has been done to examine the relationship of HRM practices and organizational performance. According to Narimisa and Basri, (2011) the strategic role of HRM has been well established. In Iran, there has been immense realization of the impact of strategic use of HRM practices and visionary companies are setting the pace to leverage this aspect for competitive advantage. HRM practitioners are striving to meet the emerging challenges of new values of knowledge workers who have necessitated a new paradigm of peoples' management characterized by heavy investment in human capital and innovative use of HRM practices for attraction and retention of talents for organizational sustainability.

Literature review:

Barney, 1991 pointed out that H R M has emerged as an essential factor for sustained competitive advantage. Research highlights that organizations develop sustained competitive advantage through management of scarce and valuable resources (Barney, 1991). The main aim of Human resource management is achieving optimization of resource, effectiveness, and continuous improvement consistently (Wernerfelt, 1984). An organization take time to nurture and develop human capital in the form of knowledge, motivation, interpersonal relationship, skills, abilities, motivation, attitude, interpersonal relationship, and makes it difficult for competitors to imitate (Becker & Gerhart, 1998). Pfeffer (1998) pointed out that human resource has been fundamental rule for firm sustained performance. In knowledge economy, the human resource has been recognized as a strategic tool, essential to organizational profitability and sustainability. This realization has led to the new role of human resource managers as strategic partners in formulation and implementing organizational strategy (as demonstrated by Myloni *et al.*, 2004). Organizations are pursuing proactively human

Corresponding Author: Assistant Professor Dr. Rouhollah Mojtahedzadeh, A Lecturer of Allameh Mohaddes Noori Institute of higher education- Noor -Iran).

E-mail: ril_mojtahedzade@yahoo.com

Tel: +98-911-1220540

resource management (HRM) practices and systems to capitalize on strength of this vital asset for sustained competitive advantage in knowledge economy (Jackson & Schuler, 2000; Mac Duffie, 1995)

Previous literature showed essential human resource management practices namely workforce planning (Matthis & Jackson, 2004); job analysis (Cascio, 2006; Dessler, 2003); training and development (Kundo, 2007); recruitment and selection (Kulik, 2004); compensation and reward (Milkovich & Newmen, 1999); performance appraisal (Bernardin & Russel, 1993); career management; human resource information system (Wolfe, 1998); quality of work life, personnel diversity, employees attitude surveys (Armstrong, 2005; Bracken, 2000; Hayes, 1999).

Becker & Huselid, (1998) pointed out that in recent years, the focus of research on HRM has shifted from study and relationship of individual HRM practices on business performance to entire HRM system and its influence on organizational performance. The researchers have different views about this new paradigm. Some researchers claim that the system view of HRM is appropriate, but others contend "that to arbitrarily combine multiple [HRM sub-] dimensions into one measure creates unnecessary reliability problems" (Becker & Huselid, 1998). In addition, comprehensive examination of individual HRM practices highlights the significant predictor of business performance (According to Bjo'rkman & Budhwar, 2007).

Previous researchers namely Dreher and Dougherty, (2005) have used financial and non financial metrics to measure organizational performance. The financial measures include profit, sales, and market share. Non-financial measures include productivity, quality, efficiency, and the attitudinal and behavioral measures such as commitment, intention to quit, and satisfaction.

Divergent views exist to measure the organizational performance based on financial as well as non-financial measures. Hoskisson *et al.*, (2000) identified the problems related to measurement of financial dimensions in emerging economies. It has been argued that lack of market based financial reporting, inadequate regulatory mechanism and enforcement about financial reporting, lack of transparency in financial reporting, and provision of fictitious financial information are important issues facing emerging economies (Hoskisson *et al.*, 2000).

A subjective measure facilitates managers to take into account organizational goals when evaluating its performance. Researchers argue that though perceptual measure may introduce limitations, the benefits are far greater than the risks. Several researchers have "raised persuasive doubts about the causal distance between an HR input and such output based on financial performance. Put simply, so many other variables and events, both internal and external, affect organizations that this direct relationship rather strains credibility (cited in Boselie *et al.*, 2005)." The researchers argued that more proximal measures over which employees exert influence are theoretically more plausible and methodically easier to link. These include productivity (Chang & Chen, 2002; Huselid, 1995; Kato 2006; quality of product and service (MacDuffie, 1995), job satisfaction (Bjo'rkman, *et al* 2007), employees turnover intentions (Batt, 2002), absenteeism (Dreher *et al* 2005), trust in management (Cascio, W.F. 2006), and commitment (Tsai, C.-J. 2006) Researchers also examined the negative impact of HRM practices on firm performance that include employees' stress level (Rahman, S. A. 2006); job-home spill over (Wright, P.M., and Boswell, W.R. (2002). In literature, primacy exists with regard to the use of subjective measures in earlier studies (Delaney & Huselid, 1996). Strong evidence exist in prior studies that subjective measurement associate well with objective measures of organization's performance (Geringer & Hebert, 1991; Powell, 1992). Wall *et al.* (2004) found that self-reported data is related to limited biases.

The researchers have investigated empirically the effects of HRM practices on organizational performance (Becker & Huselid, 1998; Boselie, 2005). Recent studies reflect an impressive influence of HRM practices on organizational performance. Researchers have divergent views about impact of HRM practices and firms' performance. They argue that HRM practices and performance research have common attributes as well as contradictions (Boselie *et al.*, 2005; Katou & Budhwar, 2006; Wall, 2004, Wright & Boswell, 2002).

In a study conducted by Katou and Bedhwar (2006) in Greece, the influencing factors of HRM practices including staffing, training and promotion, involvement of employees, incentives, and safety and health which have positive relationship with firms' performance.

In a study by Sang (2005) from Taiwan and Cambodia, the respondents which called managers concluded that workforce planning; staffing; compensation, and incentives; teamwork; training, and employee security had a positive and significant influence on non-financial and financial dimensions of organizational performance. The study validated the positive effects on operational dimensions of performance, namely, production flexibility, product cost, product quality, and product delivery.

In a comparative study of United States and Japan, Backer, B. and Gerhart, B. (1996) found that Japanese firms were more productive than United States' firms on account of implementing HRM practices.

In a study in Taiwanese high technology firms, Chang and Chen (2002) established that HRM practices of workforce planning, training and development, benefits, teamwork, and performance appraisal significantly affected productivity. The study also found the negative relationship between human resource planning and employees' turnover.

In a study in New Zealand, Guthrie (2003) validated the impact of HRM practices on employee turnover and profitability. Lee and Lee (2007) established that workforce planning, teamwork, training and development,

compensation and incentives, performance appraisal, and employees' security are important HRM dimensions that affect productivity, product quality, and business performance. In a study in Taiwan, Chang and Chen (2002) determined significantly positive relationship of HRM practices with organizational performance. The study also found a negative relationship of workforce planning with employees' turnover. It is argued that HRM practices enhance employees' competency and motivation that affect organizational performance (Harel & Tzafrir, 1996) contended that HRM practices based on quality hiring, development, and retention boosts firms' capability.

This study indicated five Human Resource Management practices namely; performance appraisal, Recruitment and selection, training and development, compensation and reward, and employee relation and examined the effects of these practices on subjective measures of performance (product quality, productivity efficiency and overall perceived performance compared to industry average).

Research Questions:

The main research questions of this study are as below:

What are the influencing factors of Human Resource Management in Iranian Oil and Gas industry?

What is the relationship between HRM factors on Performance in Iranian Oil and Gas industry?

Research Objectives:

The general objective of this research is to describe the influence of HRM factors on Performance in Iranian Oil and Gas industry.

The specific objectives of this research study are as below:

- To evaluate the influencing factors of Human Resource Management in Iranian Oil and Gas industry;
- To discover the relationship between HRM factors and Performance in Iranian Oil and Gas industry

Research Methodology:

Questionnaire survey was carried out between January-July 2011. Presently twenty eight companies (Public and Private Sectors) are operating in Pakistan. Primary data was collected from a sample of 20 randomly selected companies operating in public and private sectors in Oil and Gas Industry in Iran. The companies were chosen from the directory of Ministry of Petroleum and Natural Resource, Government of Iran. Two hundred questionnaires were dispatched to these companies. A total of 150 filled questionnaires were received with a response rate of 75%. The respondents were managers in these companies at various tiers of management.

Theoretical Model:

This model was shaped from two comprehensive variables including Human resource management and performance. The HRM is represented by the five critical factors including Recruitment and selection, Training and development, Performance appraisal, Compensation and rewards, and Employee relations. Performance is shown by product quality, productivity efficiency and overall perceived performance compared to industry average. These variables extracted from review of academic literatures. Furthermore, the linkages between variables are developed based on the theoretical framework.

The Figure 1 portrayed the theoretical model of the current study.

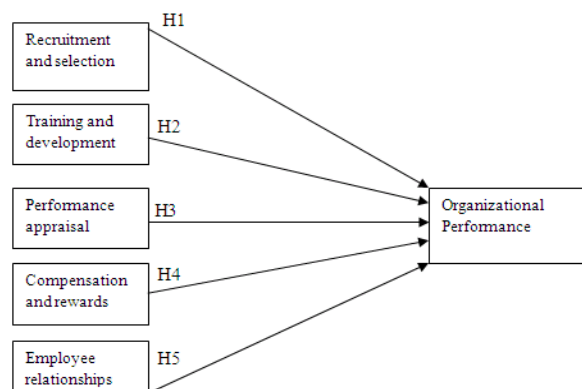


Figure 1: The Theoretical Model

Hypotheses Development:

Based on the comprehensive study of literature, following hypotheses emerge:

- H 1:** Recruitment and selection has significant relationship with organizational performance.
H 2: Training and development has significant relationship with organizational performance.
H 3: Performance appraisal has significant relationship with organizational performance
H 4: Compensation and rewards has significant relationship with organizational performance.
H 5: Employee relations have significant relationship with organizational performance.

*Results and Analysis:**Descriptive Statistics:*

The results of descriptive statistics indicated general agreement of the respondents to the different HRM practices. The mean values ranged from highest 4.876 to lowest 4.123. The results for training and development indicated highest concurrence (*Mean* = 4.876, *Standard Deviation* = 0.715); recruitment and selection (*Mean* = 4.431, *Standard Deviation* = 0.829); performance appraisal (*Mean* = 4.217, *Standard Deviation* = 0.737); compensation and reward (*Mean* = 4.129, *Standard Deviation* = 0.924); employee participation (*Mean* = 4.123, *Standard Deviation* = 0.847); and organizational performance (*Mean* = 4.738, *Standard Deviation* = 0.571) respectively. The mean score and standard deviation reflected conformity of respondents' perception about these HRM practices and the agreement to the model.

Reliability and Validity of Data:

The results indicated Cronbach's alpha for questionnaire (35 items) was 0.924. The Cronbach's alpha for individual variable of recruitment and selection (0.875); training and development (0.932); performance appraisal (0.825); compensation and reward (0.947); Employee Relations (0.862) and organizational performance (0.875) were found above acceptable level. Results are at Table 1.

Test of Normality of Data:

Collinearity test was undertaken to determine the normality of data. Results are at Table 3. The results reflected that Tolerance levels (< or equal to 0.01) and Variation Inflation Factor (VIF) values (below 10) were within acceptable range (Kleinbaum *et al.*, 1988). Durbin Watson values for all factors were between 1.5 and 2.5). The results did not indicate multicollinearity between variables. Results are at Table 2.

Table 1: Reliability Analysis

Variables	Cronbach's Alpha
Recruitment and Selection	.875
Training and Development	.932
Performance Appraisal	.825
Compensation and Rewards	.947
Employee Relations	.862
Organizational Performance	.875
Overall Alpha for the instrument	.924

Table 2: Test of Collinearity.

Variables	Tolerance	Variance Inflation Factor (VIF)
Recruitment and Selection	.704	1.735
Training and Development	.605	1.907
Performance Appraisal	.603	1.474
Compensation and Rewards	.504	1.463
Employee Relations	.633	1.643

Regression Analysis:

The results of regression analysis based on independent variables (recruitment and selection, training and development, performance appraisal, compensation and rewards, and employee participation) are reflected in Table 3. The overall model fit for regression equation was determined by *F* statistics. The model indicates positive and statistically significant relationship ($F = 10.639, p < 0.001$). The independent variables accounted for 42.4% ($R^2 = 0.424$) of variance in dependent variable of organizational performance. Training and

development with highest beta coefficient (0.448) is the most significant HRM practice followed by recruitment and selection with beta coefficient (0.446), performance appraisal (Beta = 0.395), compensation and rewards (Beta = 0.373), and employee participation (Beta = 0.323) respectively.

Table 3: Regression Analysis.

Items	Proposed Effects	Path Coefficient	Observed t-value	Significance level
Recruitment and Selection	+	.446	5.157	.000
Training and Development	+	.448	5.362	.000
Performance Appraisal	+	.395	4.715	.000
Compensation and Rewards	+	.373	3.986	.000
Employee Relations	+	.323	3.822	.000

Future Research:

Despite the above limitations, the study makes significant contribution about understanding and implementation of HRM practice in one of the most important sector affecting Iran's economy. Future research may include large scale sample in other industries in Iran to statistically validate the results of present study. It would be valuable to examine the effect of contextual factors of regulations, labour market environment, organizational climate, and cultural values, and style of leadership that moderate or mediate the relationship between HRM practices and organizational exist (Collin & Smith, 2006; Richard & Johnson, 2001). To further explore the relationship between these two constructs, future research may also focus on longitudinal study.

Conclusion:

This study evaluated the effects of HRM practices on organizational performance in Oil and Gas Sector of a developing economy. Review of literature provides strong evidence of effective HRM practices and their relationship with firms' performance in physical and attitudinal dimensions. Our research empirically substantiated the results of earlier studies with regard to this linkage. The study highlights the importance of HRM practices to achieve and sustain superior performance in changing business environment and need for an integrated approach toward formulation and implementation of HRM practices. The organizations need to proactively pursue a strategic approach to HRM practices and invest in such practices to achieve sustainable competitive advantage in tangible and intangible dimensions.

References

- Armstrong, M.A., 2005. "Handbook of Human Resource Management", Practice, New Delhi: Kogan Page India.
- Backer, B. and B. Gerhart, 1996. "The impact of human resource management on organizational performance: progress and prospects", *Academy of Management Journal*, 39: 779-801.
- Barney, J.B., 1991. "Firm resource and sustained competitive advantage", *Journal of Management*, 17: 99-120.
- Batt, R., 2002. "Managing Customer Services: Human Resource Practices, Quit Rates, and Sales Growth", *Academy of Management Journal*, 45: 587-97.
- Becker, B.E. and M.A. Huselid, 1998. "High Performance Work Systems and Firm Performance: A Synthesis of Research and Managerial Implications", *Research in Personnel and Human Resource Management*, 16: 53-101.
- Bernardin, H.J. and J.E.A. Russell, 1993. *Human Resource Management: An Experiential Approach*, Singapore: McGraw-Hill Inc.
- Björkman, I. and P. Budhwar, 2007. "When in Rome . . . ? Human resource management and the performance of foreign firms operating in India", *Employee Relations*, 29(6): 595-610.
- Björkman, I. and F. Xiucheng, 2002. "Human Resource Management and Performance of Western Firms in China", *International Journal of Human Resource Management*, 13: 853-64.
- Boselie, J., G. Dietz and C. Boon, 2005. "Commonalities and contradictions in HRM and Performance research", *Human Resource Management Journal*, 15(3): 67-94.
- Bracken, D.W., 2000. "Designing and using organizational surveys", *Personnel Psychology*, 53: 206-209.
- Cascio, W.F., 2006. "Managing Human Resource: Productivity, Quality of Work Life, Profits", New Delhi: Tata McGraw-Hill.
- Chang, P.L. and W.L. Chen, 2002. "The effect of human resource management practices on firm performance: empirical evidence from high-tech firms in Taiwan", *International Journal of Management*, 19(4): 622-38.
- Collins, C.J. and K.G. Smith, 2006. "Knowledge Exchange and Combination: The Role of Human Resource Practices in the Performance of High-Technology Firms", *Academy of Management Journal*, 49(3): 544-560.

- Delaney, J.T. and M.A. Huselid, 1996. "The Impact of Human Resource Management Practices on Perceptions of Organizational Performance", *Academy of Management Journal*, 39(4): 949-969.
- Dessler, G., 2003. *Human Resource Management*, Delhi: Pearson Education Asia.
- Dreher, G.F. and T.W. Dougherty, 2005. "*Human Resource Strategy: A Behavioral Perspective for the General Manager*", New Delhi: Tata McGraw-Hill Publishing Company Limited.
- Geringer, M.J. and L. Hebert, 1991. "Measuring performance of international joint ventures", *Journal of International Business Studies*, 28: 249-63.
- Guthrie, J., 2001. "High-involvement work practices, turnover and productivity: evidence from New Zealand", *Academy of Management Journal*, 44: 180-192.
- Harel, G.H. and S.S. Tzafirir, 1996. "The Effects of Human Resource Management Practices on the Perceptions of Organizational and Market Performance of the Firm", *Human Resource Management*, 38: 185-200.
- Hayes, E., 1999. "*Winning at Diversity, Executive Excellence*", New Delhi: Sage, July, pp: 9.
- Hoque, K., 1999. "Human Resource Management and Performance in the UK Hotel Industry", *British Journal of Industrial Relations*, 37: 419-43.
- Hoskisson, R.E., L. Eden, C.M. Lau and M. Wright, 2000. "Strategy in Emerging Economies", *Academy of Management Journal*, 43(3): 249-267.
- Huselid, M.A., 1995. "The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance", *Academy of Management Journal*, 38(3): 635-672.
- Jackson, S.E. and R.S. Schuler, 2000. *Managing Human Resource, A Partnership Perspective*, Southern-Western College Publishing, London.
- Jarventaus, J., 2007. Training in a risky industry. T+D Magazine, March, available at: www.astd.org/astd/Publications/TD_Magazine/2007_pdf/March/0703_ExecSum.htm.
- Katou, A. and P. Budhwar, 2006. "The Effect of Human Resource Management Systems on Organizational Performance: Test of a Mediating Model", *International Journal of Human Resource Management*, 17(7): 1223-1253.
- Kulik, C.T., 2004. "*Human Resource for the non-HR Manager*", New Jersey: Lawrence Erlbaum Associates Publishers.
- Kundu, S.C., D. Malhan, 2007. "Human Resource Management Practices in Insurance Companies Operating in India: A Study", Proceedings of the 13th Asia Pacific Management Conference, Melbourne, Australia, pp: 472-488.
- Lee, Feng-Hui, Lee, Fzai-Zang, 2007. "The relationships between HRM practices, Leadership style, competitive strategy and business performance in Taiwanese steel industry", Proceedings of the 13th Asia Pacific Management Conference, Melbourne, Australia, 953-971.
- MacDuffie, J.P., 1995. "Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry", *Industrial and Labor Relations Review*, 48: 197-221.
- Mathis, R.L. and J.H. Jackson, 2004. "*Human Resource Management, Singapore*", Thomson Asia Pte. Ltd.
- Milkovich, G.T. and J.M. Newman, 1999. *Compensation*, New York: Irwin/McGraw-Hill.
- Myloni, B., A.W.K. Harzing and H. Mirza, 2004. "Host country specific factors and the transfer of human resource management practices in multinational companies", *International Journal of Manpower*, 25(6): 518-534.
- Narimisa, R.M., A.E.N. Basri, 2011. A model for environmental impact assessment of oil refinery in Iran a case study: Tehran oil refinery, 6(4): 329-333.
- Ngo, H.Y., T. Daniel, L. Chung-Ming and L. Siu-yun, 1998. "Human Resource Practices and Firm Performance of Multinational Corporations: Influences of Country Origin", *International Journal of Human Resource Management*, 9: 632-52.
- Pfeffer, J., 1998. "Seven practices of successful organizations", *California Management Review*, 40(2): 96-124.
- Powell, T.C., 1992. "Organizational alignment as a competitive advantage", *Strategic Management Journal*, 13: 119-34.
- Rahman, S.A., 2006. "Attitudes of Malaysian teaches towards a performance appraisal system", *Journal of Applied Social Psychology*, 36(12): 3031-3042.
- Richard, O.C., and B.N. Johnson, 2001. "Strategic Human Resource Management Effectiveness and Firm Performance", *International Journal of Human Resource Management*, 12: 299-310.
- Rizov, M., R. Croucher, 2008. "Human resource management and performance in European firms", *Cambridge Journal of Economics*, 33: 253-272.
- Sang, C., 2005. "Relationship between HRM practices and the perception of organizational performance, roles of management style, social capital, and culture: comparison between manufacturing firms in Cambodia and Taiwan", National Cheng Kung University, Tainan, Taiwan.

- Tsai, C.J., 2006. "High Performance Work Systems and Organizational Performance: An Empirical Study of Taiwan's Semiconductor Design Firms", *International Journal of Human Resource Management*, 17(9): 1512-1530.
- Wall, T.D., J. Michie, M. Patterson, S. Wood, M. Sheehan, C.W. Clegg and M. West, 2004. "On the validity of subjective measures of company performance", *Personnel Psychology*, 57: 95-118.
- Wernerfelt, B., 1984. A resource-based view of the firm. *Strategic Management Journal*, 5: 171-180.
- Wolfe, S., 1998. HRIS usability: why you can't afford to ignore it, *IHRIM Link*, January 1998.
- Wright, P.M. and W.R. Boswell, 2002. "Desegregating HRM: A Review and Synthesis of Micro and Macro Human Resource Management Research", *Journal of Management*, 28(3): 247-276.