DOI : 10.18843/ijms/v5i2(1)/10
DOI URL :http://dx.doi.org/10.18843/ijms/v5i2(1)/10

The Impact of Reforms on Job Stress Level of Employees of Punjab State Power Corp. Ltd. (PSPCL)

Palki Sharma,
Research Scholar,
IKG Punjab Technical University, India.

Dr. Sanjeev Sharma,
Jt. Chief Auditor,
Punjab State Power Corp. Ltd., India.

ABSTRACT

This study explains the concepts of power sector reforms in India and Job stress along with examining major studies on various factors affecting the job stress level of employees. It aims to assess the impact of reforms on job stress level of employees in power sector in Punjab by comparing the volume of work of employees of Punjab State Power Corp. Ltd. (PSPCL) in post-reforms period as compared to Punjab State Electricity Board (PSEB) in pre-reforms period. The results show that reforms process in power sector in Punjab has significantly increased the volume of work of employees of PSPCL.

Keywords: Power sector Reforms, Job stress, Volume of work, Post-reforms, Pre-reforms.

INTRODUCTION:

Power Sector Reforms:

The State Electricity Boards (SEBs) carried the generation, transmission and distribution of electricity in India under the provisions of the Electricity Supply Act, 1948 (Gupta 1998, Ramana 2001). During the 1980's, the SEBs started facing major problems like imbalance in demand and supply of power, poor financial health, huge Transmission & Distribution (T&D) losses and poor billing & collection of revenue (World Bank 1991, TERI 1993, Rao et.al. 1998). The consumers of electricity also faced a lot of problems like long power cuts, poor voltage, lack of responsiveness of staff and inadequate grievance redressal mechanisms (Paul 1995, Report on India's Power Sector 2003). The power sector reforms involve changes in management, ownership, structure and regulation of the power sector (Haldea 2001, Phadke et. al 2003). The power sector reforms in India were initiated as a part of major economic reforms carried out in 1991 (Ganesh 2001, Sarkar 2002). The Electricity Act, 2003 introduced a number of policy changes in the power sector like Delicensing of power generation, Restructuring of State Electricity Boards (SEBs), Electricity Regulatory Commissions (ERCs), Power trading and Open access for consumers among others (Dubash & Rao, 2007). Power sector reforms in Punjab were initiated with the establishment of Punjab State Electricity Regulatory Commission (PSERC) on 31.03.1999 (Ahluwalia 2000, Kumar 2004). A decade later, Punjab state electricity board (PSEB) was unbundled into PSPCL and PSTCL to separate the power transmission under the provisions of the Electricity Act 2003 on 16.04.10 to take the reforms process further in power sector in the state.

Job Stress:

Beehr and Newman (1978) have defined job stress as the conditions arising from the interaction of people and their jobs, characterized by changes within people that force them to deviate from their normal functioning. Arnold and Feldman (1986) explained job stress as a person's reaction towards new or threatening factors in the atmosphere of work. A person feels job stress due to specific job factors. Randall and Elizabeth (1994) have explained job stress as the interaction of work conditions with the characteristics of the worker such that the demands of the work exceed the ability of the worker to cope with them. Job stress or Work place stress can be defined as an emotional state that people experience in situations where they perceive an imbalance between the

demands placed on them and their ability to meet these demands. National Institute of Occupational Safety and Health (NIOSH) has more specifically defined work related stress as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resource needs of the workers. Considering these definitions, job stress is defined as an adaptive response to an external situation that places special physical, psychological and behavioral demands upon a person on job.

Factors affecting the Job Stress level of employees:

There are many studies based on various factors affecting the job stress level of employees working in different sectors which are as follows:

Richards (1998) analyzed the factors leading to high level of stress in work life as misfit between work demands and abilities of person, combined effect of high work load and low control and lack of reciprocity between efforts spent and reward obtained at work.

Allen et. al (2000) analyzed reasons for low level of quality of work life (QWL) among IT professionals and found out that higher work responsibility is a potential source of stress because managing the increased work demands results into spillover to family life thus creating an imbalance leading to increased level of job stress in employees.

Maslach and Leiter (2001) opined that job stress and burnout is defined by the three dimensions of exhaustion, cynicism, and inefficacy. According to the authors, the past research has established the complexity of the construct, and places the individual stress experience within a larger organizational context of people's relation to their work.

Saraji & Dargahi (2006) examined the major factors affecting the stress management of TUMS hospital employees, it was found that large volume of work and relations at work place were major contributors to stress and low level of QWL among hospital employees.

Argentero et al., (2007) conducted a study to explore factors affecting the level of job stress in Italian health workers, it was found that relationships with colleagues in work organization and the weekly number of patients seemed to be important to determine the differences among the workers in the level of job stress experienced by them.

Dolan et. al (2008) examined the factors affecting stress level and QWL of public health care employees in Spain. The study found that lack of supervisory support coupled with high job demands resulted into high stress levels and low QWL of employees.

Ravindran and Vijayalakshmi (2010) conducted a study in Nokia Siemens Networks, Bangalore, to identify the factors influencing stress, the study revealed that ambitious targets, long working hours and working at night are the major factors influencing stress among the employees in the company.

Khattak et. al (2011) investigated the reasons of occupational stress in bank employees of Pakistan, it was found that workload, long working hours, relationship at work, time for family and job worries at home are major factors of occupational stress in banking sector.

Jeyarathnam and Malarvizhi (2011) explored the reasons of job stress of sugar mill employees in Tamilnadu, it was found that factors like work demands, unhealthy peer relations, tedious work and fatigue were responsible for a high level of job stress.

Rajagopalan and Noyaline (2012) examined the reasons for increasing level of job stress in BPO employees and the reasons for high level of stress were found to be heavy work load, emotional exhaustion and health issues.

Kumar (2012) analyzed the reasons for high level of job stress among BPO employees, it was found that the major factor responsible for job stress was overwork and long working hours which was affecting the work life balance of employees resulting into job stress.

It can be seen from above mentioned studies that various factors affecting the job stress level of employees are volume of work, emotional exhaustion, working relations, personal abilities and nature of work. The volume of work has been considered a major factor by almost all the studies mentioned above, therefore it is analyzed in detail to ascertain the job stress level due to volume of work of employees of PSPCL.

METHODOLOGY:

Based on above mentioned studies on factors affecting the job stress, the major factor of volume of work affecting the job stress level of employees of PSPCL is analyzed in detail with the help of secondary data from annual administrative reports (ARR) of PSPCL from the year 2004-05 to the year 2015-16 (12 years time period) over various parameters like number of consumers, number of employees, annual sale of power (in million units), number of units sold per employee, number of consumers per employee as various parameters for comparison of volume of work in pre-reforms period (2004-05 to 2009-10) with post-reforms period (2010-11 to 2015-16). The data collected has been analyzed by using mean, Standard Deviation and T-ratio to

determine the significance of difference in various parameters of volume of work of employees in PSPCL.

FINDINGS:

Table 1: Year wise Average number of Consumers

Pre-reforms	No. of Consumers	Post-reforms	No. of Consumers
2004-05	5897583	2010-11	7320631
2005-06	6033653	2011-12	7604644
2006-07	6231240	2012-13	7885076
2007-08	6373890	2013-14	8112286
2008-09	6631407	2014-15	8329976
2009-10	6918145	2015-16	8590146
Mean/SD	**6347653**	**Mean/SD**	**7973793**
T-value = 6.606, Sig. = .000			

Source: Annual Administrative Reports, PSPCL.

The comparative analysis of average number of consumers in table 1 shows that the average number of consumers of PSPCL has expanded to 7973793 consumers in post-reforms period as compared to 6347653 consumers in pre-reforms period which is a healthy increase of 25.62%, the t-value of difference in average number of consumers in post-reforms period as compared to pre-reforms period is 6.606 which is significant at .01 level showing that there is significant difference in volume of work on the parameter of number of consumers in post-reforms period as compared to pre-reforms period in power sector in the state.

Table 2: Year wise Number of Employees of PSPCL

PSEB	No. of Employees	PSPCL	No. of Employees
2004-05	79826	2010-11	55547
2005-06	76853	2011-12	53557
2006-07	73432	2012-13	49082
2007-08	70767	2013-14	46323
2008-09	66886	2014-15	43123
2009-10	64308	2015-16	40370
Mean/SD	**72012**	**Mean/SD**	**48000**
T-value = 7.055, Sig. = .000			

Source: Annual Administrative Reports, PSPCL.

The comparative analysis of average number of employees in table 2 shows that the average number of employees of PSPCL has decreased to 48000 employees in post-reforms period as compared to 72012 consumers in pre-reforms period which is a sharp decrease of 33.34%, the t-value of difference in average number of employees in post-reforms period as compared to pre-reforms period is 7.055 which is significant at .01 level showing that there is significant difference in volume of work on the parameter of number of employees in post-reforms period as compared to pre-reforms period in power sector in the state.

Table 3: Year wise Sale of power (in million units) by PSPCL

PSEB	Sale (in MUs)	PSPCL	Sale (in MUs)
2004-05	23139	2010-11	35463
2005-06	25161	2011-12	36167
2006-07	27594	2012-13	37855
2007-08	31819	2013-14	39469
2008-09	32323	2014-15	40403
2009-10	33742	2015-16	41330
Mean/SD	**28963**	**Mean/SD**	**38448**
T-value = 4.739, Sig. = .001			

Source: Annual Administrative Reports, PSPCL.

The comparative analysis of average annual sale of power (in MUs) in table 3 shows that the average annual sale of power (in MUs) of PSPCL has increased to 38448 MUs in post-reforms period as compared to 28963 MUs in pre-reforms period which is a sharp increase of 32.75%, the t-value of difference in average annual sale of power (in MUs) in post-reforms period as compared to pre-reforms period is 4.739 which is significant at .01 level showing that there is significant difference in volume of work on the parameter of annual sale of power (in MUs) of PSPCL in post-reforms period as compared to pre-reforms period in power sector in the state.

Table 4: Year wise Number of Million Units (MUs) sold per Employee by PSPCL

PSEB	MUs sold per Employee	PSPCL	MUs sold per Employee
2004-05	0.29	2010-11	0.64
2005-06	0.33	2011-12	0.68
2006-07	0.38	2012-13	0.77
2007-08	0.45	2013-14	0.85
2008-09	0.48	2014-15	0.94
2009-10	0.52	2015-16	1.02
Mean/SD	**0.41**	**Mean/SD**	**0.82**
T-value = 5.774, Sig. = .000			

Source: Annual Administrative Reports, PSPCL.

The comparative analysis of average number of MUs sold per employee in table 4 shows that the average number of MUs sold per employee of PSPCL has increased to 0.82 MU in post-reforms period as compared to 0.41 MU in pre-reforms period which is a sharp increase of 100%, the t-value of difference in average number of MUs sold per employee in post-reforms period as compared to pre-reforms period is 5.774 which is significant at .01 level showing that there is significant difference in volume of work on the parameter of number of MUs sold per employee of PSPCL in post-reforms period as compared to pre-reforms period in power sector in the state.

Table 5: Year wise Number of Consumers per Employee of PSPCL

PSEB	Consumers per Employee	PSPCL	Consumers per Employee
2004-05	73.88	2010-11	131.71
2005-06	78.51	2011-12	141.99
2006-07	84.86	2012-13	160.65
2007-08	90.07	2013-14	175.12
2008-09	99.14	2014-15	193.17
2009-10	107.58	2015-16	212.79
Mean/SD	**89**	**Mean/SD**	**169.24**
T-value = 5.907, Sig. = .000			

Source: Annual Administrative Reports, PSPCL.

The comparative analysis of average number of consumers per employee in table 5 shows that the average number of consumers per employee of PSPCL has increased to 169.24 consumers in post-reforms period as compared to 89 consumers in pre-reforms period which is a sharp increase of 90.2%, the t-value of difference in average number of consumers per employee in post-reforms period as compared to pre-reforms period is 5.907 which is significant at .01 level showing that there is significant difference in volume of work on the parameter of number of consumers per employee of PSPCL in post-reforms period as compared to pre-reforms period in power sector in the state.

CONCLUSION AND RECOMMENDATIONS:

It can be concluded that there is significant increase in volume of work of employees of PSPCL on all parameters in last decade as compared to decade before that, it leads to the conclusion that job stress level of employees of PSPCL has increased due to factor of volume of work. However, the impact of other factors affecting the job stress level needs to be ascertained before the net increase/decrease in job stress level of employees of PSPCL can be ascertained.

Future Course of Action:

The future research in this area should focus on extraction of various factors affecting the job stress level of

employees of PSPCL as it has not been explored so far. It can be of immense use for policy makers to know these factors to introduce stress management techniques in order to improve the QWL of employees of PSPCL.

REFERENCES:

Ahluwalia, Sanjeev and Bhatiani P. (2000). Power Tariff Reform in India**.** *Economic & Political Weekly*, Vol. 35, No. 38, pp. 3407.

Allen, D.R. and Rao, T.R. (2000). *Analysis of Customer Satisfaction Data*, ASQ Quality Press, Milwaukee, WI.

Argentero, P., Miglioretti, M. and Angilletta, C. (2007). Quality of Work Life in a Cohort of Italian Health Workers, *Supplemento A, Pricologia*, 29 (1), 50-54.

Arnold, J. & Feldman, C. (1986). Organizational Behavior, McGraw Hill, New York.

Beehr, T.A. & Newman, J.E. (1978). Job stress, employee health & organizational effectiveness: A facet analysis, *Model and Literature review, Personal Psychology,* pp. 665-669.

Dolan, S. L., Garcia, S., Cabezas, S. and Tzafrir, S.S. (2008). Predictors of QWL and poor health among primary health care personnel in Catalonia, *International Journal of Health Care Quality Assurance,* 21(2), 203-218.

Dubash, Navroz K & Rao, D Narasimha (2007). *The Practice and Politics of Regulation: Regulatory Governance in Indian Electricity,* MacMillan, New Delhi.

Ganesh, G. (2001). *Privatisation in India.* Mittal Publications, New Delhi.

Gupta, G. S. (1998). Privatisation: Theory, Practice and Issues, *Indian Economic Journal*, Vol.46, No-2, pp. 96-106.

Haldea, Gajendra (2001). Whither Electricity Reforms? *Economic and Political Weekly,* Vol. 36, No. 17, pp. 1389-1391.

Jeyarathnam, M. & Malarvizhi, V. (2011). QWL among sugar mill employees in Tamilnadu, *Zenith International Journal of Business Eco. and Manag.*, 1(3) December.

Khattack, J. K., Muhammad, A. K., Ul Haq A., Muhammad A. and Minhas, A. A. (2011). Occupational stress and burnout in Pakistan's banking sector, *African Journal of Business Management,* 5(3), 810-817, 4 February.

Kumar, Surinder (2004). *Electricity Theft: Empowering People and Reforming Power Sector,* Manohar Publication, Delhi.

Kumar, Arun (2012). *A study to find out the present level of attrition in BPO industry,* Unpublished MBA dissertation submitted to Karunya University, Coimbatore.

Maslach. C., Schanfeli. W.B. and Leiter. MP. (2001). Job burnout, *Annual Review of Psychology,* 52(1), 397-422.

Paul, Samuel (1995). *A Report Card on Public Services in Three Indian cities: A view from below,* Public Affair Centre, Bangalore, pp. 2-5.

Phadke Amol and Sudhir C Rajan (2003). Electricity Reforms in India: Not Too Late to Go back to the Drawing Board, *Eco. and Pol. Weekly*, Vol. 38, No. 29.

Rajagopalan. V. and Noyaline. A. (2012). Stress Management- An empirical analysis, *SMART Journal of Business Management Studies*, 8 (2), July-December.

Ramana D V (2001). Privatisation of Power Sector: Experiments and Experiences, *The Journal of Public Enterprises,* Vol. 24, No. 3& 4, pp. 102-129.

Randall, R. Ross and Elizabeth M. Altmaier (1994). *Intervention in Occupational Stress,* Sage Publications, New Delhi.

Rao, M. Govind, Shant, R. T. and Kalirajan, K. P. (1998). State Electricity Boards: A Performance Evaluation. *The Indian Economic Journal*, Vol.-46, pp. 33-58.

Ravindran, G. and Vijayalakshmi, R. (2010). Factors influencing stress among employees working in Nokia Siemens Networks (NSN), Bangalore, *Business Plus,* 1(2), July.

Reports on India's Power Sector (2003). *Academic Foundation,* New Delhi.

Richards. J. (1998). Stress at work, *Mental Health Care* 1(8), 278.

Saraji, G. Nasl. and Dargahi, H. (2006). Study of Quality of Work Life, *Iranian Journal of Public Health*, 35(4), 8-14.

Sarkar, S.K. (2002). Privatization and Beyond: The Indian Experience in Infrastructure Services. *Management in Government,* April-June, pp. 43-63.

Tata Energy Research Institute. (1993). Performance of the power sector in India. *Conference on Power Sector Reforms in India, Jaipur, India*, October 29-31.

World Bank (1991). *India: Long Term Issues in the Power Sector*. Washington, D.C.: Cambridge MA, The MIT Press.
