Effectiveness of Performance Management Systems in the Indian Construction sector

Prof. Soumi Rai and Dr. Vishwanath Lele

National Institute of Construction Management and Research (NICMAR)

Author Note

Prof. Soumi Rai

Assistant Professor

Correspondence address: srai@nicmar.ac.in, soumirai@gmail.com

Dr. Vishwanath Lele

Professor

Correspondence address: vlele@nicmar.ac.in

Abstract

This exploratory study seeks to specifically understand Performance management systems, their applicability and effectiveness in relation to the Indian construction sector[1]. The sample for the study consisted of 138 employees from 3 major Indian construction firms. Factor analysis and chi-square test was conducted to understand factors that contributed significantly to the effectiveness of PMS in Indian construction firms. Results showed fair understanding of PMS systems and its linkage to HR sub-systems (Training & Development and Pay & Rewards). Major concern areas outlined in the study related to managerial aspects of 'understanding appraisee viewpoint', 'objectivity in review' and 'periodic review'. Recommendations have been provided with an outlook to improve effectiveness of PMS in Indian construction firms.

Keywords: construction, feedback, Indian, PMS, performance.

Introduction

The Indian construction sector has rapidly grown in the last few decades and has consistently been deemed important for socio-economic development in a country where infrastructure growth remains a priority. Construction sector is understood to be the second largest sector after agriculture, with steady growth of 8%-10% per annum. Doloi, Iyer and Rentala, (2012) outline that this sector has rapidly accelerated in the last five years, having generated 31.46 million jobs (2008-2009) with a potential to add another 2.5 million jobs in the coming years; the level of sophistication, inconsistent performance, inconsistent quality and lack of talented manpower remains areas of key concerns for the sector. Their study highlights that in terms of project performance in this sector, India depicts the worst schedule overrun (55% of

[1] Previous studies in the HRM context and PMS context have been generic with focus across Indian industries. Refer studies by (Amba-Rao, 1994, 2000), (Budhwar et al., 1997, 2001, 2003, 2004), (Rao S.A., 2007)

actual schedule). Their study details a report by MOSPI (Ministry of Statistics and Project Implementation) that found 309 projects having cost overruns and 474 projects being behind schedule out of the total 951 infrastructure projects being monitored by the ministry.

Studies in the context of the Indian construction sector have been generally technical or financial in nature with majority focusing on technical reasons of project performance and reasons for financial delays and losses. However for a sector that contributes substantially to the GDP and generates jobs for the working class; there is a limitation of studies related to the people or 'human resources' that drive growth for this sector and may be the real factors behind delays or losses in construction/infrastructure projects. Human resource management or optimal utilization of manpower and leveraging their potential for sustained growth, hardly figures in studies related to the Indian construction sector. Probably the aspect of human resource management is still at a nascent stage in this industry; it is neither organized in nature nor has permanent employment factors evidently visible in static production industries.

This research study is fuelled from the absence of research related to HR practices in the Indian construction sector. As outlined by Doloi, Iyer and Rentala, (2012), some of the major factors related to delay in Indian construction projects are attributable to human factors (lack of commitment; lack of communication; lack of clarity; improper planning and co-ordination etc). Which means to understand how these factors can be resolved, it is important to understand if Indian constructions projects actually have standardized practices that give clear outlines of projects, improve project co-ordination and manage project communication effectively; ultimately resulting in enhancing performance both for individual and organization in tandem. The authors believe that this understanding can be partly achieved if one tries to understand how Individual Performance Management Systems are outlined in companies belonging to the Indian

construction sector, as this will help the researchers outline and link how individual performance factors can impact organizational factors; in this context project factors leading to overall project delays and losses. This study thus seeks to specifically understand Performance management systems, their applicability and effectiveness in relation to the Indian construction sector (previous studies in the HRM context and PMS context have been generic with focus across Indian industries). There remains a dearth of studies both globally and in the context of India, related to Individual performance management in this specific sector. Most studies have focused on project performance; factors for success or failure of project performance with human resource factors being considered a part of Project performance factors (see Turner and Muller, 2003; Huemann, Keegan and Turner, 2007; Tabassi and Bakar, 2009; Doloi, Iyer and Rentala, 2012). Given the dearth of research studies on performance management processes and systems for team based work in project oriented construction sector companies; the researchers attempted to understand the significance of PMS in India through previous studies done across generic industries; thereby seeking to apply this knowledge in undertaking a maiden study on relevance of PMS in the Indian construction sector.

Indian Construction sector: Brief background

The construction industry accounts for a sizeable proportion of worldwide economic activity. Construction industry in India is second largest economic activity, the influence of Industry spans across several sub-sectors of economy & the stature has multi-dimensional posture. The sector is labor intensive and, including indirect jobs, provides employment to around 33 million people. It is estimated that about 70 per cent of these are employed in the infrastructure segment and the remaining 30 per cent in the real estate segment. About 250 ancillary industries such as cement, steel, brick, timber and building material are dependent on

the construction industry. Thus the chain of backward and forward linkages that the sector has with other sectors of the economy leads to a multiplier effect that a unit increase in expenditure in this sector has on related sectors. The sector is critical for enhancing the productive capacity of the overall economy. The construction industry witnessed a slowdown in 2012, after the economy showed some resilience in the preceding two years. Project financing became difficult on the back of the increasing gestation periods of the projects, thereby leading financial institutions to take a cautious approach towards funding projects in the sector.

The main characteristic feature of construction industry is a mix of organized and unorganized players in all sub sectors right from construction workers to Supervisors, Contractors and material manufactures / suppliers etc. This being a labor intensive industry, a lack of good quality manpower and shortages of critical skill sets at various junctures of the project can serve to increase project costs, cause delays and reduce the credibility of the project owners. Moreover, manpower planning becomes ineffective and causes snags in the project execution.

The Government of India has introduced many progressive reforms and measures to unlock the potential of the sector and also meet increasing demand levels. Since the sector was given industry status in 2000, there have been more initiatives by the government to undertake projects on Public Private Partnership. HRM has the potential to release a significant amount of productive potential in the construction industry, which has remained untapped because of widespread ignorance of good practice in this area. A paradoxical situation exists due to the nature of the work in the sector; manpower is critical yet a large part of the workforce is temporary in nature; traditional models of HR are still being followed without understanding the complexity and nature of the sector.

Literature Review

Performance in common parlance refers to measurement of output which may be related to any aspect of work whether individual or organizational. At the initial stages, the focus on understanding work processes was limited to the onus of performance being with the individual, hence the focus was more on appraising the Individual and understand aspects of his/her positive/negative performance outputs. However over the time, post 1970 the focus shifted from being individual centric to assessment of performance in the Individual-Organizational context giving birth to the concept of Performance Management; wherein individual goals are aligned with organizational goals in a definitive framework for high performance output at both levels leading to increased organizational effectiveness.

Performance management thus can be defined as a systematic process for improving organizational performance by developing the performance of individuals and teams. It is a means of getting better results by understanding and managing performance within an agreed framework of planned goals, standards and competency requirements (Armstrong 2006, pg 495). PMS aims to help individuals and organizations understand systems of evolving and managing high performance for overall business improvement and effectiveness.

Flethcher (1993) elaborates on the concept of PMS as, “The real concept of performance management is associated with an approach to creating a shared vision of the purpose and aims of the organization, helping each employee understand and recognize their part in contributing to them, and in so doing, manage and enhance the performance of both individuals and the organization”.

Performance Management Systems (PMS) are an approach that incorporate following aspects:-

1. Understanding of the Performance framework (objectives, roles and standards of performance)
2. Planning for performance improvement both at individual and organizational level
3. Assessment and continuous review of performance output at all levels
4. Constructive feedback and support

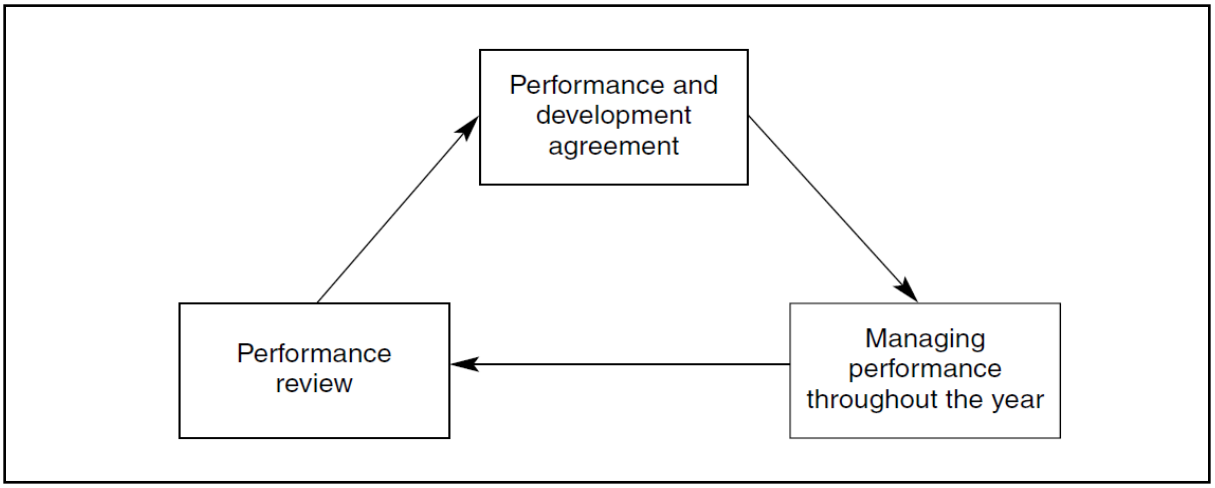

Fig 1.1: The Performance Management Framework
(Source: Armstrong, 2006: p504)

Literature review in relation to understanding of workforce management practices in the Indian context has primarily been based on the post-liberalization era, wherein the focus has been generic in nature; studying the Indian way of managing human resources across wide spectrum of the Indian industry. The focus has been on understanding what does Human Resource Management signify in the Indian context across the industries (see Singh, 2005), how does this particular discipline help Indian firms cope against competition from emerging multinational companies post-liberalization (Som, 2006, 2008), with majority of studies being conducted in the cross – cultural context through comparative analysis of HRM practices existing in US and UK (Amba-Rao, 1994, 2000; Budhwar et al., 1997, 2001, 2003, 2004).

India has traditionally been a country with high power distance in working relationships, implying reverence and high authority for the superiors (Ra,i 2012). Mendonca and Kanungo, (1990) pointed out the typical aspects of the Indian way of management wherein decision process was centralized, allowing less scope for employees to be updated about different aspects of management. Similar views about leadership and supervisory styles of management across Indian organizations have been detailed by (Kakar, 1971; Sinha, 1990; Virmani and Guptan, 1991). These studies through understanding of Indian work cultures and values emphasize a different perspective towards management of employees by Indian supervisors. Indian managers following a paternalistic way of management find it difficult to adhere to the process of stringent and objective Performance Appraisal systems (Rai, 2012). They generally tend to follow an ad-hoc system of appraising performance which is more subjective and relationship oriented than objective and statistically measurable. Their conflict in catering to the their professional role while maintaining balance with their social role in reflected in a superficial commitment to the process of Performance appraisal and true value determination of the subordinates (Rai, 2012). Amba-Rao et al., (2000) tried to understand Performance Appraisal systems in India by way of a comparative study across 116 firms in India, comprising both public sector, private sector and MNC/JV firms. The study revealed the impact of culture and values on the functioning of Indian managers and their perception towards the process of performance appraisal. Most firms conduct the routine annual performance appraisal process, but the objectivity and evaluation parameter varies. For public sector organizations, the process is more of a formality given its rules and adherence to legislations; the focus is more on understanding venues for developmental perspectives than evaluation for assessing value and worth of an individual. The discussion process initiated for understanding an employee's performance is structured and formal, with

less scope for the employee to understand his current performance or any future avenue for improvement (Rai, 2012). This data is backed by seniority and service based pay cum progression systems across Indian public sectors, reducing the credibility of performance appraisal process as a comprehensive evaluation tool. Sadananda, (2009) details a study of NALCO's (National Aluminium Company Limited- A Navratana PSU[2]) Performance Management System through a book chapter. The study highlights aspects of PMS which is based on Management by Objectives, and is an annual exercise for both executives and non-executives of the organization. The survey depicts lacuna in communication of goals, review of performance and use of key PA techniques like Assessment Centers for objective analysis of multiple evaluation parameters. Although NALCO follows the mode of Coaching and mentoring for employee development, the system has not been implemented to great success and surveyed employees still feel that it is more of a formality than an actually intended developmental effort. The private sector and MNC/JV firms under competitive market conditions are forced to look at the objective side of performance appraisal, thereby linking it to competitive pay and rewards practices along with comprehensive developmental initiatives for its employees to ensure survival Managers in such firms are more open in the discussion process with their subordinates and actually make an effort to understand the differences in performance along with issues related to lack of resources for optimum performance. They follow ethical performance appraisal processes by way of being more objective and unbiased during evaluation; ensuring true demarcation between meritorious and average performance (Rai, 2012).

Rao, (2007) illustrates on the effectiveness of performance appraisal systems across Indian manufacturing sector through his case based study of ten manufacturing companies - viz

[2] Navratna PSU – One of the nine jeweled (benchmarked) Public sector organization

Bhiwani Textiles, Staple Fibres, Chemical Industries, Grasim Cements, Jayashree Textiles, Birla NGK Insulators, Indian Aluminium Industries Ltd., Essel Mining Industries, Hi-tech Carbon Industries and Management Services Cell. His finding reveal that for all organizations studied, the entire process of performance planning including individual goal setting, linkage to organizational effectiveness and communication by superior is not treated as a potentially serious exercise, resulting in role ambiguity and lack of efforts. There is a clear distinction between '*knowing what to do*' and *'actually doing it'*. The entire process still remains a mere formality with no specific linkage to pay and reward system; lacking proper feedback mechanism and any option of grievance redressal by the employees. The focus is more on the rating parameters than actually discussing and trying to understand the performance of an employee. The developmental aspect of performance evaluation also remains more of procedure with no direct linkage between objective evaluation and training needs identified for individual employee.

Rationale and objectives of the study

Construction project environment is understood to be quite different from other manufacturing/production oriented environments. A key aspect that differentiates this industry is its unpredictability relative to static production industries (Loosemore et al., 2003). That is, the construction project environment is characterized by groups of individuals working together for short periods of time before being disbanded and redeployed elsewhere within the organization (Atkins and Gilbert, 2003). Projects also involve undertaking a range of work activities for a finite period with one or more defined objectives (Turner and Muller, 2003). This short-term interaction presents one of the greatest challenges to the individuals managing performance within it (Turner and Muller, 2003).

Studies related to the aspect of Performance management and its effectiveness has been limited in the context of India (Amba Rao et al, 2000; Budhwar et al 1997, 2001, 2003, 2004; Rao, 2007; Sadananda, 2009). Most studies have been generic in nature wherein a gamut of Indian industries have been undertaken as the focus of research to understand whether Indian managers understand the aspect of Performance Management and also whether they have an inclination to adopt this system. The reasons for these studies have been based on an understanding that Indian managers are *'paternalist'* in cultural value orientation; hence they find it difficult to adhere to systematic processes of employee evaluation or giving direct feedback to the employees. Sinha, (1984) gives reference to *sneh* (affection) and *shraddha* (respect) in supervisor-subordinate relationship in the Indian organizational context. He cites that in this relationship, workers (subordinates/employees) value the paternal image of the supervisor ensuring that they put in their best efforts to avoid any loss of face by their supervisor. This particular characteristics displayed by the supervisors and subordinates can be attributed to Indian culture which is based on high uncertainty avoidance wherein employees prefer their relationships to be more personalized than contractual assuming guidance by the leader for doing work as specified (Sinha, 1984).

During the course of literature review, the authors had limitations on research work related to understanding of Performance Management Systems in the Indian Construction sector. Reasons could be attributable to the fact that the nature of the construction sector itself is dynamic due to increasing uncertainties in technology, budgets, and development processes. Again HRM as a discipline and formidable tool of managing people in the Indian construction sector is yet to be explored wherein processes of managing people are still at an evolutionary phase and in its nascent stages. The researchers felt that while considerable study has been

conducted on Indian organizations in generic terms, it was needed that focus be shifted to a sector wherein people management processes are yet not so well defined, neither followed within structure and system.

Taking on from previous studies by Amba Rao et al., (2000) and Rao, (2007), the authors intended to look at the aspect of Performance Management and its effectiveness for a sector that is inherently variable and dynamic in nature. It was important to understand whether Performance management systems that are seemingly applicable to static production industries, have any effectiveness in the construction sector. While studies in the global context have outlined PMS as a formidable tool for team management in Project based Construction firms albeit not in-depth (see Loosemore et al., 2003; Turner and Muller, 2003), it was important to understand if this will work in the Indian context also. The authors intend to conduct this study in two phases.

In **Phase I** the study will only focus on understanding the following:-

1. What does PMS signify to managers and employees in the Indian Construction sector?
2. How do factors like performance system, performance planning, managerial support and performance feedback/review influence effectiveness of PMS system in construction sector firms operating within India?
3. Do Indian Construction sector firms leverage PMS data for HR sub-activities like Training & Development and Pay & Rewards?
4. What is the outlook of Indian Construction sector firm managers towards PMS activity and processes?

Phase II: Development of Framework/Model of PMS specific to the Indian Construction sector wherein dynamic nature of the industry is taken into consideration. The authors intend to

carry forward this research and conduct Phase II as part of future research initiatives, currently outside the purview of this paper.

Hypothesis 1: Performance management factors like performance system understanding, performance planning, managerial support and performance feedback/review influence effectiveness of PMS system in Indian origin construction sector firms.

Hypothesis 2: Performance Management System is linked to HR sub-systems like Training & Development and Pay & Rewards in Indian origin construction sector firms.

Hypothesis 3: Indian construction firm managers consider PMS as an administrative tool than developmental tool.

Method

Participants

This research study particularly targeted employees across Executive and Managerial levels in the construction firms. The study was conducted across three major Construction companies in India, which together contribute to 80% of total business for the sector with Business turnovers above 1000 crores. The study targeted both employees who were appraised (Appraisee) and supervisors/managers who appraised employees (Appraisers). The intention was to understand if the point of view of Appraisee differed from Appraiser and when Appraisers are also Appraisee in their context, does their view towards PMS undergo radical change process. This specific input was assessed through some interviews with Managerial/Supervisory personnel wherein the Interviews were recorded in written format and transcribed to the best possible understanding of the authors for analysis as part of qualitative study.

The composition of survey respondents were important in understanding the perspective of the majority working population in the construction sector, hence it was decided to collect composition data from the respondents by way of age, job level and years of experience. This was deemed necessary to understand if perspectives differed on the basis of these variables.

In terms of age, majority of the respondents (67) belonged to the age category of 31years-40 years, 50 respondents belonged to the age group of 21years-30 years with 21 belonging to the age group of 41years-50 years demonstrating that majority responses were from members belonging to Gen X and Gen Y work groups[3].

In terms of job levels, majority responses came from the Middle management level (87 responses), while 49 responses were availed from Junior management level and only 2 responses from Senior management level; this remains an area of concern as it was difficult to avail responses of Senior Management through questionnaire format hence the researchers opined to avail personalized Interviews of Senior management employees through personal interview format. Details of the same have been given in subsequent sections.

In terms of work experience, majority of the respondents had 2years-10 years of work experience (67 respondents), another 63 respondents fell in the experience range of 11years-20 years with 7 respondents belong to above 21 years experience range and only 1 respondent having work experience of 1year. This shows that the surveyed respondents have sufficient work experience to have an understanding of the aspect of Performance Management, hence their opinions and perspectives on its effectiveness carries credibility and weightage in the current context.

[3] Gen Y are understood to be people in the age group of 19-30 years and Gen X are people in the age group of 31-45 years; a age based categorization understood to influence perspectives towards life and work in general as people belonging to different cohorts experience similar incidents during their lifetime enabling similarity in perspectives. However at this point, this particular aspect remains outside the purview of this research study.

Procedure and Measures

The study commenced with designing of appropriate questionnaire in line with the dynamic nature of the Indian Construction sector. Since this study specifically focused on the construction sector, hence previous studies conducted on PMS across Indian industries in generic form by Amba Rao et al (2000) and Rao A.S. (2007) were only taken as reference studies and the current study questionnaire was designed taking these into consideration.

The questionnaire was divided into six sections that looked at various aspects of performance Management Systems, viz. Performance Management Systems factors (understanding of the system and its parameters), Performance Planning process and its variables, Feedback and review factors, Performance improvement factors, Reward and recognition factors and Managerial/Supervisory support factors. The rating scale for the questionnaire was a 5 point Likert scale that varied from 1=’Strongly disagree’ to 5=’Strongly agree’ with a mean value of 2.5.

The data collection process involved sending questionnaire via email and also by availing hard copies to the respondents who could be reached at the headquarter locations. A major problem with availing responses in this sector is related to availability of employees at one location, as this industry being Project specific, most of the manpower is spread across the country at different locations with limited access to web connectivity hence under utilization of web or email format of questionnaires. Efforts were made to collect as many responses as possible from the targeted population, resulting in 145 filled questionnaires. After eliminating few half filled questionnaires, the data stood as 138 fully filled questionnaires. The data collected through the questionnaires was analyzed under quantitative study using Business analytics

software – SPSS version 11. The details of the data collected, finding and analysis have been given in the subsequent chapters.

The questionnaire was tested for validity and reliability using Cronbach alpha test on SPSS version 11. The results of the Cronbach alpha test for each sub-section of the questionnaire and some sample questions under each section have been given herewith for reference.

Table 1.1

PMS QUestionnaire (Sample questions)	Cronbach Alpha Values
1. Performance Management System factors	**0.77**
The Company clearly communicates organizational objectives and purpose of Performance Management System (PMS) to all employees	
Team and individual objectives are aligned with business objectives and strategy of the organization	
Managers/supervisors are accountable for effective implementation of PMS	
2. Performance planning variables	**0.66**
Performance goals are mutually developed and have specific time frames. (Well written KRA/goals)	
Managers consider views of appraisee's during goal setting process for making best use of appraisees' skills and abilities	
3. Performance feedback and review factors	**0.70**

Feedback is given on a periodical basis to help appraisee's work upon improving performance (ex – quarterly/bi-annual basis)	
Managers give honest performance feedback during review	
4. Performance improvement factors	**0.52**
Outcomes of performance review are linked to HR-subsystems (like rewards and training & development) to help improve employee performance	
Managers consider PMS as administrative tool rather than developmental tool	
5. Reward and recognition factors	**0.80**
PMS establishes a clear connection between performance and rewards.	
High potential employees are retained through rewards linked to PMS	
6. Managerial support factors	**0.74**
Managers use a supportive approach in the performance review process	
Managers consider that performance feedback is helpful in improving subordinate's performance	
Senior management is concerned about human capital and uses PMS for enhancing employee productivity	
Overall Reliability of the instrument	**0.91**

The overall Reliability of the Instrument scale stood at **0.91** indicating that the instrument constructed for the purpose of research was highly reliable in terms of availing responses in line with the objectives of the research. A particular item related to utilizing PMS for Performance improvement indicates a reliability scale of 0.52 indicating that responses for this particular factor seems to be varied wherein the consensus on use of PMS as a performance improvement tool is limited which may be attributable to the factor of PMS being used as a administrative tool than as a developmental tool across major Construction firms in India.

Results and Discussion

To understand factors that contributed to understanding 'Effectiveness of PMS' in Indian construction firms, an exploratory factor analysis was conducted through Principal Component Analysis with varimax rotation at eigen value 1. Factors values were in the range of 0.60 – 0.80 indicating that respondents considered most factors to be important and critical for effectiveness of PMS. However Q7 ('PMS enables organization and department to identify underperformers') gave a factor value of 0.59 indicating that respondents varied on this particular item implying that most respondents didn't believe that PMS can help identify underperformers. This variation may also be due to samples collected from different Construction firms wherein there may exist difference in implementation and adherence to PMS policies and processes. Q28 ('Managers conduct objective performance reviews') scored a factor value of 0.82, indicating respondents favor towards this item and the importance attached to this particular item under the factor of Supervisory support as part of PMS. Objective reviews by managers remain a critical aspect of PMS wherein continuous efforts towards reducing 'subjectivity' and 'human error' in the process has been a subject of research. Respondents in this survey indicate this factor to be highly important as they believe that this item influences their performance evaluation in a fair and

objective manner (Procedural justice), thus impacting their growth and continuity in their respective organizations.

Before testing the hypothesis, it was intended to look at the descriptive aspects of the study and interpret various factors that influence effectiveness of PMS in Indian construction firms.The first major factor of the study (Effectiveness of PMS) looked at the aspect of PMS understanding within employees (PMS factors) with sample questions like "KRA's are clearly communicated by superiors to ensure employees understand departmental business plans" and "PMS is viewed by employees as a formidable tool for managing how work gets done and how effective each individual is performing". Results showed that while majority of the employees agreed on a clear understanding of this criterion, the views differed in terms of aspect of integration of employee and team objectives with organizational objectives or on managers seeking employee views while setting Performance parameters with substantial respondents remaining either neutral or disagreeing moderately in their responses. The mean for Q6 ('Superiors consider the views of appraisees in goal setting') was lowest at 3.35 while the mean for Q10 ('Effective implementation of PMS improves company's performance') was highest at 4.54 indicating that employees do have an understanding of the PMS factors and believe that its effective implementation can help improve organization's overall performance in the long run. Another item on the scale, Q2 ('Senior management is accountable for effective implementation of PMS') availed a mean of 4.04 indicating that employees strongly believe that for effective implementation of PMS, strong support from Senior management team is needed and accountability of its effective implementation and functioning also rests with the concerned senior management team.

The second factor looked at variables that helped both Appraiser and Appraise plan their goals and understand their performance parameters (Performance planning). The mean values herein again varied with majority of respondents giving responses in either neutral or disagreement category. The mean (3.35) is lowest for Q13 ('Employees are clear about how their performance is going to be measured') implying that employees have less understanding of how their performances will be measured in objective terminology, with most believing that this particular aspect has more subjectivity as organizations (herein construction firms) lack objective parameters for performance measurement under their PMS.

The third factor looked at availing performance feedback to employees for self development (Performance feedback and review) and also the quality of feedback; that is whether the feedback was honest in detailing areas of critical improvement for the employees concerned. The responses were varied with majority believing that the feedback was not given on periodical basis (Q14) with a mean value of 3.20. This factor emphasized that most firms have an annual review system wherein even feedback availed to employees was annual and not intermittent (quarterly or bi-annual) to address ongoing issues of performance improvement.

The fourth factor was a crucial factor as it looked at perspectives amongst employees related to utilization of PMS data for employee developmental purposes; linking PMS data to HR sub systems like Pay & Rewards and Training & Development. Q17 ('Outcomes of performance review are linked to HR-subsystems to help improve employee performance') which addressed this aspect had a higher mean of 4.04 while the other items in this factor had mean values from 3.6 to 3.8 indicating affirmation by respondents on PMS data being linked to HR sub-systems; that is using the performance review data for training need analysis and linking it to pay &

rewards (Q24: 'High potential employees are retained through rewards linked to PMS', Mean 4.00).

The fifth and last factor considered in the study was Managerial Support wherein most respondents indicated their affirmation of supportive approach and help in improving subordinates performance; however respondents vary on Q28 ('Managers conduct objective performance reviews') with the lowest mean at 3.22 in the factor item group, implying that this aspect is not very well adhered to in PMS process of their respective organizations. Factor analysis of this item scored a higher value (0.82) but the mean of responses scored a lower value indicating that while respondents give higher level of importance to this item in Managerial support factor; lacuna of objectivity in PMS lowers their expectations and in the current context they believe that the process of 'objectivity' is not followed by their Managers during their Individual performance reviews under PMS.

To test the Hypothesis; Chi-square test for Goodness-of-fit was applied to the data.

Hypothesis 1: *Performance management factors like performance system understanding, performance planning, managerial support and performance feedback/review influence effectiveness of PMS system in Indian origin construction sector firms.*

Table 1.2

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Chi-Square	37.628	41	39.791	22.87	26.606	34.492	58.896	18.511	30.179	141.48
df	3	3	3	3	3	3	3	3	3	3
Asymp.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Sig.										

	Q11	Q12	Q13	Q14	Q15	Q16	Q26	Q27	Q28	Q29	Q30
Chi-Square	14.059	20.727	7.375	2.131	47.2	45.761	46.754	47.333	7.212	49.758	22
df	3	3	3	3	3	3	3	3	3	3	3
Asymp. Sig.	0.003	0.000	0.061	0.546	0.000	0.000	0.000	0.000	0.065	0.000	0.000

The data shows varied chi-square values with df=3, all items of the concerned factors being highly significant ($p<0.001$) in influencing PMS; with exception of Q13 (Performance planning factor), Q14 (Performance review factor) and Q28 (Managerial support factor) not being significant towards influencing effectiveness of PMS in Indian construction sector firms. Hyp 1 stands majorly accepted with elimination of the above items.

Hypothesis 2: *Performance Management System is linked to HR sub-systems like Training & Development and Pay & Rewards in Indian origin construction sector firms.*

Table 1.3

	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25
Chi-Square	37.471	37.652	17.706	53.706	19.163	45.333	13.224	38.353	54.358
df	3	3	3	3	3	3	3	3	3
Asymp. Sig.	0.000	0.000	0.001	0.000	0.000	0.000	0.004	0.000	0.000

The data depicts chi-square values at df=3, with all items in the factors being significant ($p<0.005$) or highly significant ($p<0.005$) implying that respondents fairly agree on PMS being linked to HR sub-systems like training & development and pay & rewards. Hyp 2 thus stands accepted.

Hypothesis 3: *Indian construction firm managers consider PMS as an administrative tool than developmental tool.*

This hypothesis was tested through a particular item in the instrument; Q21. The chi-square value was 19.61, df=3 and ($p<0.001$), indicating that respondents accept the proposition of PMS being used more as an administrative tool than developmental tool.

Conclusion

This study was an exploratory study focused on a sector that is dynamic in nature and short term in perspective. This study looked at understanding issues of Performance Management for a sector characterized by groups of individuals working together for short periods of time before being disbanded and redeployed elsewhere within the organization (Atkins and Gilbert, 2003). The challenges for this sector has been immense with its inherent nature being non-permanent and workforce being contractual and scattered across project locations. As identified by Doloi et al., (2012), Indian construction sector has been plagued with multiple issue of improper planning, lack of co-ordination, clarity and process stabilization. Part of this is attributable to the nature of the industry while part to its accelerated growth in the last five years wherein rapid expansion and requirement of workforce has resulted in HR processes which are still in their nascent stages; with expansive scope of further improvisation and stabilization.

The study found that respondents (both Appraiser and Appraisee) had a fair level of understanding of PMS in their respective organizations which may be attributable to the sample being taken from 3 of the largest and dominant players of the Indian construction sector, having established HR systems and processes at the ground level. However the study also found that while PMS remains a formidable system, its effective implementations rests on the Managers/Supervisors who interact with employees at Individual levels hence an understanding of PMS at that level was critical and imperative for effectiveness of the system. Respondents believed that PMS was effective as a strong process of reviewing employee performance, however Managers/supervisors accountable for this process lacked objectivity in the review process and also failed to give periodic feedback to appraise; enabling him/her to improve upon his/her performance levels. The study highlights that a fair level of understanding exists amongst respondents relating to performance planning, review and feedback process but majority of concerns centre around the Managerial aspects related to 'understanding appraisee viewpoint', 'objectivity in review' and 'periodic review'. Most respondents consider PMS as an effective tool for employee development and reward management outlining affirmation to practices of PMS linked to training and pay; however they differ on its actual implementation in the given context. Respondents outline that formidable aspect of PMS is reduced during the implementation phase wherein Managers/supervisors treat it as an administrative tool for record keeping purposes than utilizing the power of this system for holistic employee development.

The results outlined through quantitative study is corroborated with qualitative interview with selected managers/supervisors and some sample employees. Questions seeking their viewpoint on improvement in PMS and its effectiveness generated interesting responses,

indicating their thought process and views towards effectiveness of PMS. Some samples (verbatim responses) are given below for reference.

'*Appreciating the employee from time to time for his outstanding accomplishments.'*

'Maintaining feedback process on monthly basis of employee performance and objectives achieved.'

'Project based appraisal needs to be done i.e. projects teams need to be evaluated on project performance where all factors need to be considered.'

The study recommends that PMS effectiveness can be vastly improved in the Indian construction sector with implementation of the following:-

1. Specific training and mentor induced sessions for Middle level managers and supervisors/team leaders who are responsible for effective implementation of PMS. Clarity related to potential of PMS, its effectiveness and long term effect in organizational context needs to be given to this group.
2. Senior management needs to take accountability for effective PMS implementation, by way of mentoring middle level managers and also by way of sporadic interactions with ground level employees (at Project sites) to understand their issues and lack of adherence to PMS.
3. PMS across the Indian construction sector needs to evolve as a bi-annual/quarterly mechanism than an annual mechanism that defeats the very purpose of feedback effectiveness due to long time gap between actual performances done and review initiated, with strong support in terms of adherence to its objective and its implementation. (While there exists as a bi-annual system in some of the sampled firms, its ground level

implementation and adherence in true spirit seems to be lacking, hence most respondents outline PMS as being used as an administrative tool than developmental tool)

4. PMS needs to incorporate objective parameters related to either Job families or Job levels in respective organizations. A precursor to this exercise can include objective Job evaluation (Hay's model) linking each job parameter with concerned performance parameter during the goal setting process under PMS; further linking performance review and achievements to developmental needs and reward systems for employee motivation and retention.

5. Inter-departmental functional goals need to be in aligned cross-functionally and thereafter linkage with organizational goals need to be established during the PMS goal setting process enabling departments to work in mutual co-ordination.

This sector comprises of a dynamic workforce, hence the need is to understand Project location based issues while outlining performance parameters as each geographical location in itself may pose performance challenges for project employees undermining setting up of standardized performance parameters across Projects. Managerial support in this context plays a crucial role, as Project managers are first point of contact for project based workforce; hence their support in understanding project based performance issues and incorporating such nuances in the PMS will imply adaptability and robustness of the system. The adage 'one shoe fits all' cannot be applicable to Project based Construction firms, wherein localized issues/interpretations may reduce effectiveness of the system. The need would be to create a system that incorporates the dynamic nature of this industry and yet delivers an output that is objective and developmental in perspective.

Limitations

This study was conducted on a limited population of Construction sector employees from major firms in this sector, implying that the levels of PMS understanding in this sample may be higher due to better HR systems already existing in the concerned firms. However the results may vary with inclusion of SME's in this sector or Contractual firms that deal with third party employees with limited working tenures. While age or level doesn't really impact effectiveness of PMS in project oriented companies, tenure of job may impact PMS effectiveness. Currently that research area remains a limitation of the current study as the concerned sample consisted of full time employees of the sampled construction firms.

References

Amba-Rao, S. C. Petrick, J. A., Gupta, J. N. D. & Von der Embse, T. J. (2000). Comparative performance appraisal practices & management values among foreign & domestic firms in India. International Journal of Human Resource Management, 11(1), 60-89.

Armstrong, M. (2006). A Handbook of Human Resource Management, 10th ed. London: Kogan Page.

Atkins, S., & Gilbert, G. (2003). The role of induction and training in team effectiveness. Project Management Journal, 34(2), 44–52.

Budhwar P. & Khatri N. (2001), A comparative study of HR practices in Britain & India, International Journal. of Human Resource Management 12(5), 800–826.

Budhwar P. (2003). Employment Relations in India. Employee Relations, 25(2), 132-148.

Budhwar, P. & Baruch, Y. (2003). Career Management practices in India, an empirical study. The International Journal of Manpower, 24(6), 699-719.

Budhwar, P. & Boyne, G. (2004). Human resource management in the Indian public & private sectors, an empirical comparison. The International Journal of Human Resource Management, 15(2), 346-370.

Doloi H.; Sawhney A.; Iyer K.C. & Rentala S.(2012). Analysing factors affecting delays in Indian construction projects. International Journal of Project Management, 30(4), 479-489.

Fletcher, C. (1993). Appraisal: Routes to improved performance. Institute of Personnel Management, London.

Huemann, M.; Keegan, A. & Turner, J.R. (2007). Human resource management in the project-oriented company: A review. International Journal of Project Management, 25(1), 315-323.

Kakar, S. (1971). Authority Patterns & Subordinate Behavior in Indian Organizations. Administrative Science Quarterly, 16(3), 298-307.

Loosemore, M.; Dainty, A.R.J. & Lingard, H. (2003). Human Resource Management in Construction Projects. Strategic and Operational Approaches. London: Spon Press.

Rai, S. (2012). Human Resource Management & Labour Relations in the Indian Industrial sector. in Jürgen's U.(eds), Human Resource Management & Labour Relations in the BRICs, Volkswagen Aktiengesellschaft, AutoUni-– Schriftenreihe, Berlin: Logos Verlag.

Rao, A. S. (2007). Effectiveness of performance management systems, an empirical study in Indian companies. The International Journal of Human Resource Management, 18(10), 1812-1840.

Sadananda, P. (2009). Performance Management System on Development of HR – A study of NALCO. In: G. Jegadeesan (Ed.), Industrial sector in India (HR Issues and Practices). Hyderabad: ICFAI University Press, 119-141.Singh, J. P. (1990). Managerial Culture & Work-related Values in India. Organization Studies, 11(1), 75-101.

Singh, A.K. (2005). HRD practices and philosophy of management in Indian Organizations. Vikalpa, 30(2), 71-79.

Sinha J.B.P, (1984). A Model of Effective Leadership Styles in India. International Studies of Management & Organizations, 14(2-3), 86-98.

Som, A. (2006). Bracing MNC Competition through Innovative HRM practices – The way ahead for Indian Firms. Thunderbird International Review, 48(2), 207-237.Som, A. (2008). Innovative human resource management & corporate performance in the context of economic liberalization in India. The International Journal of Human Resource Management, 19(7), 1278-1297.

Tabassi, A.A. & Bakar. A.A.H. (2009). Training, motivation, and performance: The case of human resource management in construction projects in Mashhad, Iran. International Journal of Project Management, 27(1), 471-480.

Turner, J. R., & Muller, R. (2003). On the nature of the project as a temporary organization. International Journal of Project Management, 21(1), 1–8.

Virmani, B. & Guptan, S. (1991). Indian Management. New Delhi: Vision Book.