PROFILING WORK MOTIVATION OF PROJECT WORKERS

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ABSTRACT

The purpose of this study is to understand the constructs of work motivation in project—based organizations. We first juxtapose work motivation in traditional and project—based organizations to put forward an operational definition of work motivation for our study. We then present the research methodology where we profile work motivation as perceived by project workers using principal component analysis. We obtain a five factor structure of work motivation. Finally, we discuss these results by putting them within the project management perspective and suggest managerial implications.

Key Words: *project management, work motivation, intrinsic motivation¸ job—enrichment, job—enlargement, socio—technical system*

INTRODUCTION

Work motivation is a driver to organization's performance. As organizations are increasingly moving towards being project-oriented, understanding work motivation and comparing it in project based and traditional organizational set ups is of primary interest. Questions on what factors lead to work motivation in project based environment (and how different are they from the factors in traditional environment) have to be addressed. Also the managerial implications of these findings have to be understood. Thus, we set forth the following objectives of this study:

- What is work motivation and how is it different in traditional and project-based organizations?

- What are the constructs that constitute work motivation in project-based organizations?

Our research has been designed to be deductive in nature and reflect objective inquiry. In this paper, we seek to present an acceptable notion of work motivation as perceived by project workers. To do this, we have gathered precise observations and facts of work motivation. Thus, epistemologically, we have adopted a positivist approach. From the ontological perspective, we are addressing the nature of work motivation—what is it and what are the categories (constructs) of work motivation. This again tends towards positivism. Hence, we have adopted a quantitative methodology to explore work motivation and its dimensions.

The organization of this paper is as follows. First, we review the content and process based theories of motivation to understand the popular notion of work motivation. Next, we juxtapose work motivation in traditional and project-based environments. Following

this, we will present our research methodology. Here, we will present the constructs of work motivation and introduce the items which are used to measure these constructs. Following an explanation of the procedure, sampling, and statistical test employed, we will present the results of the principal component analysis (PCA) in the next section. In the discussion section that follows, we will a). Discuss the five factors that constitute work motivation, and b). Examine these factors in the project management perspective. This will then help us better appreciate the managerial implications of these results.

THEORY

Origins of Work Motivation

Pinder (1998) defines work motivation as a set of energetic forces that originate both from within as well as beyond the individual's being to initiate work-related behavior, and to determine its form, direction, intensity, and duration. Annotating this definition, Meyer, Becker, and Vanderberge (2004) posit that work motivation is a force that induces actions in the employees and also explains the direction, intensity, and duration of this behavior. These definitions of work motivation are firmly grounded in the various theories of motivation such as Theory of needs (McClelland, 1961), Equity theory (Adams, 1963), Goal setting theory (Locke, 1968), and Job characteristic model (Hackman & Oldham, 1976) where references to specific features of work that are motivating to the employees have been given.

At a broad level, theories of motivation are classified into two schools—'content' based theories of motivation (*which focus on what motivates workers*) and 'process' based

theories (*which explain how workers are motivated*). Work as source of motivation has been a subject of study in both these schools.

Early studies on work motivation have been studied by social scientists such as Frederick Taylor and his colleagues when they advocated the scientific management movement. Their attention was on increasing the efficiency of the workers by making changes to their job design, giving them on the job training and linking rewards to performance. These studies closely conformed to what we would later know as the content based theories of motivation. In the 1930's, social scientists such as Max Weber Mary Parker Follet, and Benedix highlighted the role of group dynamics and the need to understand employees as complex beings with multidimensional motivational influences (Steers, Mowday, & Shapiro, 2004).

Continuing in the same vein, there was the formal emergence of content centric theories in the 1950's in the works of Abraham Maslow's 'Needs Hierarchy theory' (1943; hierarchy of needs starting from the physiological needs, job security, affiliate needs, esteem needs, and self actualization), McClelland's 'Needs theory' (1961; individual's need for achievement, power, and affiliation where the work environment acts as a platform in satisfying these motives), and Herzberg's 'Two factor theory' (Herzberg et al, 1959; factors such as nature of work which are motivating to the individual, and adequate pay; the absence of which is dissatisfying to the individual). In this, Herzberg and his colleagues especially highlighted the importance of job enrichment in motivating the employees. This has been later adopted in other theories of work motivation such as

the Hackman and Oldham's 'Job Characteristic Model' (1976; task variety, task significance, training, and feedback on the performance are the essential characteristics of a motivating job), and Deci's 'Self Determination theory' (1975; the influence of social context on an individual's volition to act).

The *Process based theories of work motivation* gained prominence in the 1960's. These theories view motivation as being dynamic across time (during the tenure of the individual's employment), looking for causal factors pertaining to time (tenure), and events (job content, and job context). Most notable contributions came from Vroom's Expectancy theory (1964; employees' evaluate the attractiveness of the job in terms of rewards they would obtain; this largely determines their motivation towards a job), Porter and Lawler's model (1968, that included individual's ability, skills, and role clarity in addition to the rewards obtained on the job as being determinants of motivation), and Locke's 'Goal setting theory' (1968, goal clarity as being a determinant of work motivation).

Thus, we see that work motivation has traditionally been associated with constructs such as secured and interesting job, ability to perform the job, recognition from superiors and colleagues, adequate pay, and feedback on performance.

In the last twenty five years, there has been an increasing interest in defining work motivation through the identification of constructs for work motivation (Jung et al, 1986; Fried & Ferris, 1987). 'Challenging nature of work' (Jung et al, 1986), 'feedback on

performance' (Klien, 1989), 'enjoyable nature of work' (Campion & Thayer, 1987), 'task identity', 'task significance', and 'job autonomy' (Tyagi, 1985a, 1985b, 1985c) were the constructs that were identified.

Partly contradicting these views, and calling for refining the theory of work motivation, Shamir (1991) pointed that the then existent theory of work motivation is highly individualistic in nature and does not account for other variables such as leadership.

Further, there was a strong influence of Vroom's expectancy theory on the social scientists then and concept of *self efficacy* came into picture. Ability to control work situation (Orpen, 1997), and job accomplishment (Dubinksy et al, 1993) were identified as constructs in addition to the existing dimensions of job variety, job challenge, job significance, and work group cooperation .

It was only in the last seven years that issues pertaining to groups and teams were considered an important part of work motivation. With the coming to the fore of the concept of 'shared identity', dimensions such as 'need for relatedness', 'cohesiveness', and 'solidarity' among the employees became important. Further, building on the emphasis of the employees being provided goal clarity in order to be motivated, the senior management communicating the organization's mission and how it fits with the employees' goals (Bono & Judge, 2003), and importance of documented information that will help the employees to perform their tasks effectively (thus contributing to self efficacy thence motivation; deTreville et al, 2005) have been discussed.

Based on this knowledge of work motivation¸ we now set out to juxtapose work motivation in traditional and what is of our interest, project-based organizations. Identifying the notions of work motivation as perceived in these two contexts will be important for us to 'operationalize' the definition of work motivation for this study.

Work motivation in traditional versus project—based organizations

Let us first revisit briefly the differences between traditional and project based organizations.

The traditional management structures were characterized by vertical structure for the flow of authority and communication. The unit of performance was the specific function (example HRD, Marketing, Engineering) and more often than not, the integration of these functions had been ineffective. There has been very little customer focus and the organization structure does not provide much scope for innovation. However, recent business developments (evolving technology, stockholder demands, position in the market) have changed the way traditional organizations operate (Nicholas, 2001).

On the other hand, projects are temporary structures that create unique products or services. It involves utilization of skills and talents from different functions. It will require people to come up with new ideas or use new approaches as projects operate in an uncertain environment (Turner & Simister, 2004). Further, projects are characterized by various constraints such as time, scope, cost, and quality within which they need to deliver the product/ service. As such, Mintzberg (1998) suggests that project workers

would not respond well to command and control from their leader as much as they would for his inspiration (Piccoli & Ives, 2003).

Perhaps, this difference between the traditional and project management approach will provide clues on the management of human resources in projects.

From the theory standpoint, we observe that job characteristic model (Hackman and Oldham, 1976) seems to be very dominant when explaining work motivation in traditional organization set-ups (*c.f.* Rungtusanatham, 1999; Wall & Clegg, 1981). Job characteristic model identifies five dimensions to work motivation—Skill variety, Task identity, Task significance, Training, and Feedback on performance. We observe that these five dimensions are translated into actionable items through the application of methods, and techniques (drawn from operations research/ operations management fields). We elucidate these impressions of work motivation through a few examples considered from operations management discipline.

Studies focusing on flexible manufacturing systems (*c.f.* Blumberg and Alber, 1982; Cummings & Blumberg, 1987; Toikka, 1985) reported that these jobs offered little autonomy and skill variety to the workers and therefore are not motivating. These arguments find further support in the works of Wall and Clegg (1981) who argued that semi-autonomous groups led to creation of group identity which increased the work motivation among workers. Building on these observations¸ Adler (1991) observed that traditional manufacturing organizations typically relied on job rotation, voluntary job switching, and formal job descriptions. However, incentive pay was absent. More recently, in a survey of 5000 manufacturing firms by SESSI (Industrial Statistics

Department of the French Ministry of Economics, Finance, and Industry), it was observed that practices such as autonomy at work, incentives to promote creativity have been adopted to motivate the employees (Galia, 2008).

However¸ study of work motivation in traditional industries has been reported to be paradoxical in nature. A case in focus is that of Standard Operating Procedures (SOP's). An SOP is a document that describes in detail the way an operator should perform a given operation. This will include the purpose of the operation, the equipment that has to be used, materials required, performing maintenance and shutdown operations, trouble shooting, information about list of spare parts, illustrations, and job checklist (de Treville, Antonakis, & Edelson, 2005).

Previous studies in work motivation, and job design literatures have suggested that SOP leads to a reduction in work autonomy which in turn reduces the sense of responsibility among the workers (Amiable, 1997; Spreitzer, 1996). However, the results suggest the contrary in the operations management literature where positive relation between presence of SOP's and work motivation has been reported (Suzaki, 1993). Another study has been the implementation of *Kaizen* principles in American manufacturing facilities with more than 200 workers (Cheser, 1998). Adopting *Kaizen* would mean that the employees are given challenging work across a range of production operations, are given autonomy to make decisions related to their own production, and are trained extensively. As such, the workers experience task significance. Thus, the workers reported higher levels of work motivation in such an environment.

Another similar example is the use of Statistical Process Control (SPC) and how it leads to work motivation. SPC is a method of monitoring, controlling, and ideally improving a process through statistical analysis. It comprises of four steps—measuring of process, eliminating variances in the process, monitoring the process, and improving the process to achieve best value. It's implementation will involve *formation of natural work units, combining tasks, establishing client relationships, vertical loading, and establishing open feedback channels that will improve the quality of working experience and individual productivity*(Rungtusanatham, 1999). He further argues that application of SPC will enrich the front-line operator's job in terms of offering greater skill variety (as the front-line operator must be able to learn task—related and SPC—related skills), direct feedback from work (since performance of the production process is monitored directly by the front-line operator), sense of task significance (since the front-line operator's work is critical enough to warrant monitoring), and more autonomy (as it is the front-line operator who decides when a production process produces a poor quality output). This will greatly motivate the workers.

Thus, we observe that in a traditional environment¸ the perception of work motivation is largely related to the job characteristics such as the worker's ability to use his skills¸ opportunities to improve his competence, obtaining feedback on his performance, and most importantly having a certain degree of autonomy on his job. Further, the motivating nature of work is firmly grounded in the methods and techniques such as SOP, SPC, and *Kaizen* that are practiced on the shop-floor. Hence, we assert that factors important to foster work motivation, however limited or prevalent they may be in case of traditional

organization structures, are formally put in place through various methods and techniques.

As compared to the traditional organization structures¸ studies on work motivation in project management has been limited. However, it has been more diversified.

In a survey of 288 open source contributors to an online project, Roberts, Hann, and Slaughter (2006) observed that the contributors' status motives (recognition) is largely driving their work motivation. Further, task specific interventions directed at improving their on the job performance are highly motivating to professionals. These observations are reflective of studies by Markus, Manville, and Agres (2000) on open source professionals who also add that apart from recognition and task specific interventions, members have a high degree of autonomy over their work. These arguments are further reinforced when Ang and Slaughter (2001) opine that information systems professionals whose jobs do not offer variety, are unchallenging, and lack autonomy report lower levels of work motivation.

 Another example comes from the construction industry. In case of construction projects, the organization structures are becoming increasingly flat. Achieving greater client focus with multifunctional teams that are adequately empowered is the key to success. Thus, employee empowerment through training has become an important source of work motivation (Price, Bryman, & Dainty, 2004).

Other important dimensions to work motivation in case of project management have been identified as goal clarity, feedback on performance, and communication among the project team members (Turner, 2003).

To summarize the discussion so far, we posit that the constructs of work motivation in traditional and project—based organizations as perceived by the employees may not be strikingly different. This seems to be plausible as employees' expectations about his or her job environment would remain constant. However, what is different is the 'source' of work motivation in these two environments.

In the formal work environment, factors contributing to work motivation are put in place through formal methods, tools, and techniques. In case of project environments, the nature (creation of unique products/service, high degree of risk and innovation, limited resources), and structure (flat, temporary) of the project itself acts as a source of work motivation.

OPERATIONAL DEFINITION OF WORK MOTIVATION

For the purpose of this study, we connote to Pinder's definition of work motivation (1998) which is a set of energetic forces that originates both from within and beyond the individual that lead to positive work—related behavior. Further, from our discussion of the various content and process theories of motivation in the 'Theory' section of this paper, we argue that the constructs for work motivation are related to *job enrichment, job enlargement, intrinsic work motivation,* and *socio—technical systems* (Hackman & Oldham, 1980). These dimensions to motivation are measured using the items presented in table 1 (see page 36).

METHOD

Sample

We adopted a positivist approach and hence quantitative research methodology to understand the dimensions of work motivation among project workers. The sample comprised of 109 students pursuing the MBA program and the other masters' program in the authors' business schools, and 13 delegates of an international project management research conference that was organized by the authors' business school. The projects were mainly based out of India, mainland Europe, and UK. The average age of the respondents was 24.3 years (*S.D.= 2.41)* and the average work experience was 4.3 years (*S.D.= 2.46).* Industry-wise profile of the respondents is summarized in figure 1(see page 35).

Insert Figure 1 about here

Metrics

To measure work motivation, we used motivational items included as a part of the 'multi method job design questionnaire' (MJDQ, Campion, 1988, Campion and Thayer, 1985). Campion (1988) modified the original MJDQ to study employees from 92 different jobs using this instrument (N=1024). The self-report data from this sample produced an internal consistency reliability of .85 for the 'Motivational Items'. The measures are detailed in table 1 (see page 36). We have assigned codes for each of these variables for the purpose of our analysis.

Insert Table 1 about here

Procedure

All the potential participants identified were contacted in person by the authors. Only those who were working in a project-based organization were contacted. A comprehensive explanation of the purpose of the research study, and its outcomes summarized in an explanatory cover letter accompanied the survey instrument. We handed in 210 questionnaires in total and obtained 122 valid responses, thus giving us a healthy response rate of 58%. We applied principal component analysis (using varimax rotation) to identify the factors constituting work motivation among project workers.

Validity

The suitability for conducting the factor analysis was ensured using the Kaiser-Mayer-Olkin (KMO) test. The KMO test measures the adequacy of a sample in terms of the distribution of values for the execution of factor analysis (Geourge, Mallery, 1999). The KMO statistic can be calculated for individual and multiple variables and represents the ratio of the squared correlation between variables to the squared partial correlation between variables. A value of 0 shows that the sum of partial correlations is large relative to the sum of correlations, indicating that variance common to all the variables is absent. The acceptable value for KMO should be greater than 0.5 (Geourge & Mallery, 1999). Besides, values between 0.5 and 0.7 are mediocre and values between 0.7 and 0.8 are considered good. The result of the KMO test in this case was 0.77. Sampling error was minimized by using a large sample pool in relation to the number of items to be factored (Nunnally, 1978). Grimm and Yarnold (1995) state that to substantiate the reliability of the observed results of PCA (Principal Component Analysis), a minimum of 100

observations must be considered. All of these criteria have been fully satisfied by our research design.

OBSERVATIONS

A principal-component analysis (varimax rotation) revealed the presence of five distinct factors that profiled the project workers' work motivation. These five factors accounted for 61.3% of the variance.

The first factor accounting for 19.6% of total variance and loads essentially, and in that order, variables ADVJOB, KNWLHIGH, ACVMT, KNWLVAR, PPTTIONDM, and LNROPP. We label this factor as *Employee Empowerment*. The second factor that explains 13.3% of variance loads variables FRDMWRK, FDBWRK, FDBCOLL, ADQTPY, and ADQTRCGN. We call this factor *Motivating Organization Climate*. Factor three which accounts for 10.3% of variance, loads the variables CMPLTWRK, CLRGLS, and SGNFJB. This factor is labeled as *Task identity and significance.* Factor four called *Communication* contains variables SCLINTRTION and COMMACCS explaining 6.1% of variance. Finally, factor five which we name *Job variety and security* has the variables JBSCRTY and TSKVAR, explaining 5.6% of variance. These results are summarized in table 2 (see page 37).

Insert Table 2 about here

DISCUSSION

Our observations of project workers' perception of work motivation reveal that it is multi-dimensional in nature. Factors such as challenging work, stimulating work environment, extent of formal and informal communication, and job security are perceived as essential features of their job by the employees. These factors are further explained in this section.

Factor 1: Employee Empowerment

Empowering management practices are the formal and the informal organizational procedures that encourage the employees to take on more responsibilities (Wilkinson, 1998). The concept of employee empowerment has its roots in various substantive issues such as intrinsic motivation, job design, participative decision making, social learning theory and self-management theory (Liden & Tewksbury, 1995). Our observations for this factor—Employee Empowerment supports these arguments through the loading of variables related to enriching job design (knowledge variety, high level of knowledge, advancement on the job), social learning (opportunities to learn on the job), participative decision making , and intrinsic motivation (employees having a sense of achievement). These findings are supported by the works of Spreitzer (1996) who posits that employees feel empowered when they find their work meaningful, are given opportunities that will help them enhance their job related skills, and are given freedom on the job. The proclivity for empowering nature of work is truer in case of project workers because their work requires a great deal of flexibility, innovation, creativity, and intellectual analysis.

They also need to operate under ambiguous standards coping with uncertainty of outcomes. Moreover, methods for doing the work are established and shared by the professional themselves. Thus, control over their work by the management at least at the operational level would prove to be counter productive (Raelin, 1989).

Factor 2: Motivating Organizational Climate

Organizational climate is defined as a set of shared perceptions regarding the policies, practices, and procedures that an organization rewards, supports, and expects (James, Joyce, & Slocum, 1988; Schneider & Reichers, 1983). It largely reflects descriptive beliefs individuals hold regarding the characteristics of the organization and therefore is subjective in nature. It becomes important to understand organization climate because this is a key driver shaping the employees' attitude and behavior (Schneider, 2000).

While it is true that perceptions of climate germinate within the individuals, they soon become 'shared perceptions' because individuals may be working in the same unit, are bound by same strategies, goals, and technology and other influences (Schneider, 2000).

An important determinant of employees' positive perception of the organization's climate is the information which the employee obtains on his or her performance on the job. Professionals, in this case the project workers especially value a sense of responsibility. These expectations are expressed in their proclivity for autonomy at work and also in obtaining feedback on their performance. Obtaining such information on their performance is perceived as a symbol of recognition and as a non financial reward by the

employees (Robbins & Sanghi, 2005). Further, getting such feedback on the performance is important in determining the employees' satisfaction with the pay (Britton, Paul, and Chadwick, 1999). Thus, this factor brings forward the various elements of organization climate; an environment that adds credence to the employees' work through feedback on performance, and fostering positive equity about recognition and pay.

Factor 3: Task Identity and Significance

Task identity and task significance are two of the core job dimensions that constitute the job characteristic model (Hackman & Oldham, 1975,1976). Task identity refers to the extent to which a job requires completion of a whole or identifiable piece of work. Task significance is another core dimension that is defined as the degree to which the job has a substantial impact on the lives or work of other people (Robins & Sanghi, 2005). These two job dimensions contribute to what Hackman and Oldham (1975) called Experienced Meaningfulness of the Work, a psychological state where the individual feels that they have performed well on the task that they care about.

In our case, the two variables corresponding to these core job dimensions to constitute a factor. This again seems to connote to the project workers' propensity to assume responsibilities on the job. They would want to take responsibility for a task in entirety (for example a deliverable). This would then necessitate the goals and the scope of the task to be defined clearly. Such a job design will lend psychological significance to the task and therefore would be motivating to the employee.

Factor 4: Communication

The importance of communication has been underscored in the works of Peter Drucker when he stated that 'one's effectiveness depends on the ability to reach others through the spoken or written word when working in large organizations, and this ability to communicate is perhaps the most important of all the skills an individual can posses (Druker, 1952). This is true even in case of a project that is tied together by a network of communication (Cleland & Ireland, 2002).

In a project based organization, the project workers' necessity to communicate stems from two reasons. The first reason is that project team and the manager need to constantly interact with the client and the other project stakeholder to understand their requirements. They also need to communicate to keep the stakeholders apprised of the project's performance during the course of the project. Even when the project is completed, the project manager needs to inform the stakeholders about its completion to facilitate transfer of deliverables to the client and release of the project resources. This communication is largely handled by various project documents and through formal team meetings. Complementing the formal exchange of information is the informal communication. This now brings us to the second reason why communication is important to the project workers. The individual's drive to communicate stems from his or desire for social contact, companionship, and emotional support which he or she gains by being a part of a team.

Srivastava et al (2006) underscore the importance of communication—sharing task related ideas and other information among the team members by stating that exchange of such knowledge is a critical team process that leverages the cognitive resources available within the team (Argote, 1999). Thus there is a clear relation between an individual's proclivity for job related communication and informal interaction at work. These arguments are supported by our observations where in this factor, formal 'on the job' communication seems to be closely related to the informal interaction among the project workers.

Factor 5: Job variety and security

An interesting result of our study is the emergence of the factor 'Job variety and security'. Job security has been defined as a hygiene factor in the two-factor theory proposed by Herzberg and his colleagues (1959) and also has been identified as an 'existence need' in the ERG theory proposed by Alderfer (1972). It is typically perceived as an antecedent for job satisfaction (Hundley, 2001; Probst, 2003; Buitendach & Witte, 2005). However, recent studies have shown that it is also likely to be an important determinant of performance (Rutte, Vermunt, Kompier, Doorewaard, 2007).

On the other hand, the employees experiencing job enlargement also predicts performance (DeVaro, Li & Brookshire, 2007). A plausible explanation for this result lies in the current economic scenario. Given that organizations are reducing their headcount, the onus is on the employees to demonstrate their value to the organization by accepting

additional responsibilities. Thus, job security inadvertently is coupled with job enlargement.

This discussion is summed up in figure 2 (see page 38). The factor loadings for the variables are indicated on top of the arrows.

Putting the results within the Project Perspective:

The factors of work motivation that we have obtained are reflective of the nature of projects and project management. Projects are managed by professionals or knowledge workers (Janz, Colquitt, & Noe¸2006). Further, projects are designed and deployed to provide specialized solutions to the clients using limited resources (Turner, 2000). In this context¸ the importance of human variables to ensure that the project is successful in achieving its intended objectives has gained momentum in the recent past (Ulri & Ulri, 2000).

Consider the first factor employee empowerment. This is closely related to the way rewards are managed in project—based organizations. Unlike the traditional firms that rely on 'upward' career development, the flat project based organizations have to depend on new forms of rewards and recognition to nurture and retain talent. Hence, project—based organizations develop a culture where individuals are encouraged to take in greater responsibility, complexity, and challenges at work. This in turn requires the organizations to develop project oriented competencies through various learning opportunities and job assignments.

A different point of view is that because projects are unique endeavors, it becomes important for the project workers constantly update their knowledge and skills to suit the new project. This is more unlikely in case of a traditional firm where the jobs are routinized and continuous upgrading of employees' knowledge or skills may not be a priority.

Another interesting facet that has been discovered when comparing work motivation in traditional and project based environments is the higher esteem needs of the project workers. This is reflected in their sense of achievement when they accomplish a complex task under stringent constraints of time, budget, and customer satisfaction. This again may be uncharacteristic of traditional operations environment.

The next factor to be considered is *motivating organizational climate*. Organization climate as we have mentioned earlier is the way employees perceive the organization's policies, practices and procedures by their employees. Previous research in general management (Grant, 2007) and project management (Aibinu, 2006) strongly connotes to Equity theory of motivation and emphasizes on equitable rewards and recognition to motivate the employees.

More often, projects are managed by milestones and stages. The scope of the project to be completed, time for completion, quality of the deliverable, and the budget are pre-determined for every stage of the project. Thus, projects give an opportunity for the workers to have immediate feedback on their performance at every stage of the project vis-à-vis operations which are continuous in nature and therefore characterized by less frequent evaluations.

The third factor to be discussed is *Task identity and significance*. It is common knowledge that projects are managed through deliverables, deliverables which can be further divided into work packages, and further, specific tasks that constitute these work packages. Project management success is defined in terms of how well the scope, time, cost, and quality has been managed at each of these levels. Given that projects are flat structures¸ they provide an ideal opportunity for an individual or a team to take responsibility for the completion of whole chunk of work (a deliverable, work package, or task). Thus, the work to be completed while being interdependent (completion of tasks, work packages, and deliverables being related to one another), also delineates the responsibility for their completion among the project workers. This arrangement lends task significance and identity to the work. However, in case of operations, the responsibility for completion of work can only be made possible through clear job descriptions and having adoption of philosophy, methods, and techniques such as Total Quality Management (TQM), Kaizen, and SPC.

Communication is the next factor that we will address. Projects are characterized by both formal (example proposals, reports, procedures, memoranda), and informal forms of communication (example grapevine communication, social interaction among colleagues etc.) One instance where the importance of communication is brought forward in case of projects is understanding of the user requirements.

Charvat (1998) argued that understanding the user requirements is an important stage for any project because these requirements provide inputs for the selection of appropriate project management methodology (for example CIPOC: Client—Input—Process—

Output—Client approach). It then becomes important for the project organization to communicate these end-user requirements through project plans, tasks to be performed, and deliverables to be produced to the project team (Thamhain, 1998). Various documents such as *project charters¸ statement of work, issue logs¸risk logs,* and *project completion reports* are used to exchange information during the various stages of the project. In addition to these mechanisms, project workers also indulge in informal communication in order to fill the general gaps in their knowledge and skills (Baron & Kreps¸1999). Thus, in case of projects, formal and informal communication complements each other so that the team is able to better perform.

Finally, we will focus on the factor *Job variety and security*. Project workers' motive for this factor is reflective of the current scenario today where the turbulent economy necessitates organizations to reduce their headcount. Job security is passé! Employees today need to demonstrate their value to the organization by bringing to table tangible results and diverse skills. It is not uncommon for companies to engage in cross-training for their employees so that they meet the manpower shortage cost effectively. Thus, individuals' demonstrating cross — functional skills (by taking up responsibilities) is intricately linked to their job security (Desombre, Kelliher, & MacFarleene¸2006).

MANAGERIAL IMPLICATIONS

Talent management is a major challenge confronting the industries today. While a few years ago, retention of the employees was important for industries such as Information Technology (IT), Information Technology Enabled Services (ITES), and Business Process Outsourcing (BPO), today in these times of economic recession¸ retaining the

right people has become an absolute priority for the organizations. Thus¸ the results of our study point to managerial implications in terms of empowering the employees, free exchange of formal and informal communication, and job security so that the right talent can be nurtured and retained.

First, the project workers' proclivity for empowerment is reflective of the business trends today. PricewaterhouseCoopers survey on Global Human Capital in 2003 revealed that employees who are empowered and actively engaged contributed significantly to the bottom line. A similar study by Watson Wyatt in 2002 shows that better human capital practices such as collegial workplace, effective communication, and clear accountability and rewards lead to an average of 30% increase in the shareholder value. These human resource practices are institutionalized by Indian information technology majors like Wipro. The company's core values include effective employee communication, right rewards for performance, and employee learning.

Next, reflective of these practices are the human resource management initiatives at SAP Labs private limited. Employee participation in generating innovative ideas is promoted through 'Ideas Management', an intranet where the employees' post their suggestions. These are reviewed at the end of every quarter and the employees' rewarded. Another example is that of McDonalds where the new employees are taken on international market visits and are given responsibilities in a short span of time. Thus, a stimulating work environment that focuses on free flow of communication and job enrichment helps these organizations to retain their best performers.

Finally, we look at the case of Proctor and Gamble (P&G) and how is it addressing the employees' concerns of job security. P&G offers the highest base salary as a percentage of salary in the community. The employees are encouraged to spend long careers in the company. Consequently, a higher base salary implies higher retirement contributions by the organization. Though it is a higher cost model, it shows the organization's long term commitment towards its employees. Further, the International Stock Ownership Program is available for all the employees across the board. It is not surprising then that P&G has been rated amongst the best places to work.

CONCLUSION

Our objectives for this study to know how project workers perceive work motivation. Our first step was to see how work motivation is positioned in project management vis-à-vis traditional operations environment. The concept of work motivation may not be very different in these two environments; however the source of work motivation may be different. This is primarily attributed to the structure and nature of projects. Further, we observe that the concept of work motivation has become more inclusive in the recent years. Variables such as alignment of the individual—organizational goals, employee empowerment, and communication have come to define work motivation along with nature of work itself. These trends are reflected in our analysis of the project workers. The multi dimensional nature of work motivation reveal that initiatives directed towards empowering the employee, providing a motivating work environment, challenging and interesting nature of work, formal and informal communication, and job security

significantly explain work motivation in a project context. The application of these practices in the industry is also discussed through examples which are to say that our recommendations are actionable. Thus, we expect that our findings will significantly contribute to an understanding of work motivation theory and practice in the context of project management.

REFERENCES

Adams, J. S. 1963. "Toward an understanding of equity". *Journal of Abnormal and Social Psychology*, 2: 436

Adler, P.S. 1991. "Workers and flexible manufacturing systems: Three installations compated", *Journal of Organizational Behavior*, 12(5): 447-460

Aibinu, A.A. 2006. "The relationship between distribution of control, fairness and potential for dispute in the claims handling process", *Construction Management & Economics*, 24(1):45-54

Alderfer, C.P. 1972. *Existence, Relatedness and Growth: Human Needs in Organizational Setting*, New York: The Free Press

Amiable, T.M. 1997. "Motivating creativity in organizations: on doing what you love and loving what you do", *California Management Review*, 40(1): 39-58

Analoui, F. 2000. "What Motivates Senior Managers?" *Journal of Managerial Psychology*, 15(4): 324-341

Ang, S., Slaughter, S.A. .2001."Work outcomes and job design for contract versus permanent information systems professionals on software development teams", *MIS Quarterly*, 3: 321-350

Argote, L. 1999. *Organizational learning: Creating, retraining, and transferring knowledge*, Boston: Kluwer Academic

Baron, J.M.,Kreps, D.M. 1999. *Strategic human resources-Framework for general managers,* US: John Wiley & Sons Inc

Blumberg, A., Alber, A. 1982. "The human element: Its impact on the productivity of advanced batch manufacturing systems", *Journal of Manufacturing Systems*, 1,1

Bono, J., Judge, T. 2003. "Self-Concordance at Work: Toward Understanding the Motivational Effects of Transformational Leaders". *Academy of Management Journal*, 46(5): 554-571

Britton, P., Paul, B., Chadwick, S. (1999). "Rewards of Work". *Ivey Business Journal*, 63(4): 46-53

Buitendach, J.H., De Witte, H. 2005. "Job insecurity, extrinsic and intrinsic job satisfaction and affective organisational commitment of maintenance of workers in a parasatal." *South African Journal of Business Management*, 36(2): 27-37

Campion, M.A. 1988. "Interdisciplinary approaches to job design: A constructive replication with extensions". *Journal of Applied Psychology*, 73: 467-481

Campion, M.A., Thayer, P.W. 1987. Job Design: Approaches, Outcomes, and Trade-offs. Organizational Dynamics, 15(3), 66-79

Campion, M.A., Thayer, P.W. 1985. "Development and field evaluation of an interdisciplinary measure of job design". *Journal of Applied Psychology*, 70: 29-43

Cheser, R.N. 1998. "The effect of Japanese Kaizen on employee motivation in US manufacturing", *International Journal of Organizational Analysis*, 6(3): 197-212

Cleland, I., Ireland, R. 2002. *Project Management--Strategic Design and Implementation* (4th Ed), NY: McGraw-Hill

Cummings, T., Blumberg, M. 1987. "Advanced manufacturing technology and work design", In Wall T.D., Clegg, C.W., Kemp, N.J. (Eds) *The human side of advanced manufacturing technology*, West Sussex: John Wiley & Sons Inc

Desombre, T., Kelliher, C., Macfarlene, F., Ozbiligin, M. 2006. "Re-organizing work roles in health care: evidence from the implementation of functional flexibility", *British Journal of Management*, 17(2): 139-151

de Treville, S., Antonakis, J., Edelson, N.M. 2005. 'Can Standard Operating Procedures be Motivating? Reconciling Process Variablity Issues and Behavioral Outcomes.' *Total Quality Management & Business Excellence*, 16(2): 231-241

Deci, E L. 1975. *Intrinsic motivation*, New York: Plenum

DeVaro, J., Li, R., Brookshire, D. 2007. "Analyzing the job characteristics model: new suppirt from a cross-section of establishments." *International Journal of Human Resource Management*, 18(6): 986-1003

Drucker, P F. 1952. *How to be an employee*, Fortune

Dubinksy, A.J. Jolson, M.A., Michaels, R.E. Kotabe, M., Chae, U.L. 1993. "Perceptions of Motivational Components: Salesmen and Saleswomen Revisited." *Journal of Personal Selling & Sales Management*, 6(1): 49-72

Fried, Y., Ferris, G.R. 1987. "The Validity of the Job Charectiristics Model: A Review and Meta-Analysis." *Personnel Psychology*, 40(2): 287-322

Galia, F. 2008. "Intrinsic-Extrinsic Motivations and Knowledge Sharing in French Firms", *The ICFAI Journal of Knowledge Management*, VI(1): 56-80

Geourge, D., Mallery, P. 1999. *SPSS for windows step by step: a simple guide and reference*, USA:Allyn and Bacon

Grant, A M. 2007. "Relational job design and the motivation to make a prosocial difference." *Academy of Management Review*, 32(2): 393-417

Grimm, L.G., Yarnold, P R. 1995. *Reading and Understanding Multivariate Statistics*, Washington DC: American Psychology Association

Hackman, J.R., Oldham, G.R. 1975. "Development of the job diagnostic survey", *Journal of applied Pscyhology*, 60:159-170

Hackman, J.R., Oldham, G.R. 1976. "Motivation through the design of work: Test of a theory." *Organizational Behavior and Human Performance*, 16: 250-279

Herzberg, F., Mausner, B., Snyderman, B. 1959. *The motivation to work*, New York: John Wiley & Sons

Hundley, G. 2001. "Why and When Are the Self-Employed More Satisfied with Their Work?" *Industrial Relations*, 40(2): 293-316

James, L.R., Joyce, W.F., Slocum, J.W. 1988. "Comment: Organizations do not cognize." *Academy of Management Review*, 13: 129-132

Janz, B.D., Colquitt, J.A., Noe, R.A. 1997. "Knowledge Worker Team Effectiveness: The Role of Autonomy, Interdependence, Team Development, and Contextual Support Variables." *Personnel Psychology*, 50(4): 877-904

Jung, K.G., Dalessio, A., Johnson, S.M. 1986. "Stability of the Factor Structure of the Job Descriptive Index." *Academy of Management Journal*, 29(3): 609-616

Klein, H. J. 1989. "An integrated control theory model of work motivation". *Academy of Management Review*, 14, pp.150-172

Liden, R.C., Tewksbury, T.W. 1995. "Empowerment and work teams. In G.R.Ferris, S.D.Rosen, & D.T.Barnum (ed.) *Handbook of human resource management*, England: Blackwell, pp.386-403

Locke, E A .1968. "Toward a Theory of Task Motivation and Incentives", *Organizational Behavior and Human Performance*, 3: 157-89.

Markus, M.L., Manville, B., Agres, C.E. 2000. "What makes a virtual organization work?", *Sloan Management Review*, 42: 13-26

Maslow, A.H. 1943. "A theory of human motivation." *Psychological Review*, 370-96

McClelland, C .1961. "The Achieving Story." In S. Robbins, (ed.) *Organizational Behavior*, NJ: Prentice Hall

Meyer, J P., Becker, T E., Vandenberge, C. 2004. "Employee Commitment and Motivation: A Conceptual Analysis and Integrative Model." *Journal of Applied Psychology*, 89(6): 991-1007

Mintzberg, H. 1998**.** "Covert Leadership: Notes on Managing Professionals", *Harvard Business Review*, 76(6):140-147

Nicholas, J.M. 2001. *Project Management for Business and Technology*(2nd Ed), India: Peaeson Education

Nunnally, J.C. 1978. *Psychometric theory* (2nd Ed), NY:McGraw-Hill

Orpen, C. 1994. "Interactive effects of work motivation and personal control on employee job performance and satisfaction." *Journal of Social Psychology*, 134(6): 855-856

Piccoli, G., Ives, B. 2003. "Trust and the unintended effects of behavior control in virtual teams", *MIS Quarterly*, 27(3): 365-395

Pinder, C. 1998. *Work Motivation in Organizational Behavior*, Upper Saddle River, NJ: Prentice-Hall

Porter, L.W., Lawler, E.E. 1968. *Managerial Attitudes and Performance*, Homewood, IL: Irwin

Price, A.F., Bryman, A;, Dainty, A.R.J. 2004. "Empowerment as a strategy for improving construction performance", *Leadership and Management in Engineering,* 4(1):27-37

Probst, T. M. 2003. "Development and validation of the job security index and the job security satisfaction scale: A classical test theory and IRT approach". *Journal of Occupational & Organizational Psychology*, 76(4): 451-467

Raelin, J.A. 1989. "An Anatomy of Autonomy: Managing Professionals." *Academy of Management Executive*, 3(3): 216-228

Robbins, S.P., Sanghi, S. 2005. *Organizational Behavior*, Singapore: Pearson Education

Roberts, J., Hann, I., Slaughter, S.A. 2006. "Understanding the motivations , participation and performance of open source software developers: A longitudinal study of the Apache Projects, *Management Science*, 52(7): 984:999

Rungtusanatham, M. 1999. "The quality and motivational effects of statistical process control", *Journal of Quality Management*, 4(2): 243-265

Rutte, C., Vermunt, J.K., Kompier, M.A., Doorewaard, J.A.J. 2007. "A multi-level mediation model of the relationships between team autonomy, individual task design and psychological well-being." *Journal of Occupational Psychology*, 80(4): 647-664

Schneider, B. 2000. "The psychological life of organizations". In N.M.Ashkanasy, C.P.M. Wilderom, & M.F.Peterson (ed..) *Handbook of organizational culture and climate*, Thousand Oaks, CA: Sage, pp. xvii-xxii

Schneider, B., Reichers, A.F. 1983. "On the etilogy of climates", *Personnel Psychology*, 36: 19-39

Shamir, B. 1991. "Meaning, Self and Motivation in Organizations." *Organization Studies(Walter de Gruyter GmbH & Co. KG)*, 12(3): 405-426

Spreitzer, G.M. 1996. "Social structurral characteristics of psychological empowerment." *Academy of Management Journal*, 39(2): 483-504

Srivastava, A., Bartol, K.M., Locke, E.A. 2006. "Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance." *Academy of management journa*l, 49(6): 1239-1251

Steers, R.M., Mowday, R.T., & Shapiro, D.L. 2004. "Introduction to Special Topic Forum: The Future of Work Motivation." *Academy of Management Review*, 29(3):379-387

Suzaki, K. 1993. *The New Shop Floor Management: Empowering People for Continuous Improvement,* New York: The Free Press

Thamhain, H.J. 1998. "Integrating project management tools with the project team, In proceedings of *29th Annual Symposium of the Project Management Institute, October 2008*

Toikka, K. 1985. "Development of work in FMS-Case study on new manpower strategy", In Brodner, P. (Ed.) *Skill Based Automoated Manufacturing*, Oxford: Pergamon Press

Turner, R.J. 2003. "Projects and Project Management", In R.J. Turner & S.J.Simister (Ed) *Gower Handbook of Project Management* (3rd Ed), UK:Gower

Turner, R.J., Simister, S.J. 2004. *Project Management: A Comprehensive Handbook*, New Delhi: Gower

Tyagi, P K. 1985a. "Organizational Climate, Inequalities, and Attractiveness of Salesperson Rewards." *Journal of Personal Selling & Sales Management*, 5(2): 31-38

Tyagi, P K. 1985b. "Relative importance of key job dimensions and leadership behaviors in motivating salesperson work performance." *Journal of Marketing*, 49 (3): 253-271

Tyagi, P K. 1985c. "Work motivation through the design of salespersons jobs." *Journal of Personal Selling & Sales Management*, 5(1): 41-52.

Ulri, B., Ulri, D. 2000. "Project management in North America: Stability of the concepts", *Project Management Journal*, 31(3): 33-43

Vroom, V.H. 1964. *Work and Motivation*, NY: Wiley

Wall, T.D., Clegg, W. 1981. "A longitudinal field study of group work design", *Journal of Occupational Psychology*, 2(1): 31-49

Wilkinson, A. 1998. "Empowerment: Theory and practice." *Personnel Review*, 27(1): 40

Figure 1. Industry wise Respondent Profile

INDUSTRY WISE RESPONDENT PROFILE (%)

Others 3%

Supply Chain Management 1%

Human and Social Service 13%

Business Process Outsourcing/ Knowledge Process Outsourcing 8%

Automobile 1%

Health Services 7%

Manufacturing 17%

Retail 4%

Construction 8%

Education 3%

Resources 4%

Aerospace 1%

Information Technology/ Information Systems 30%
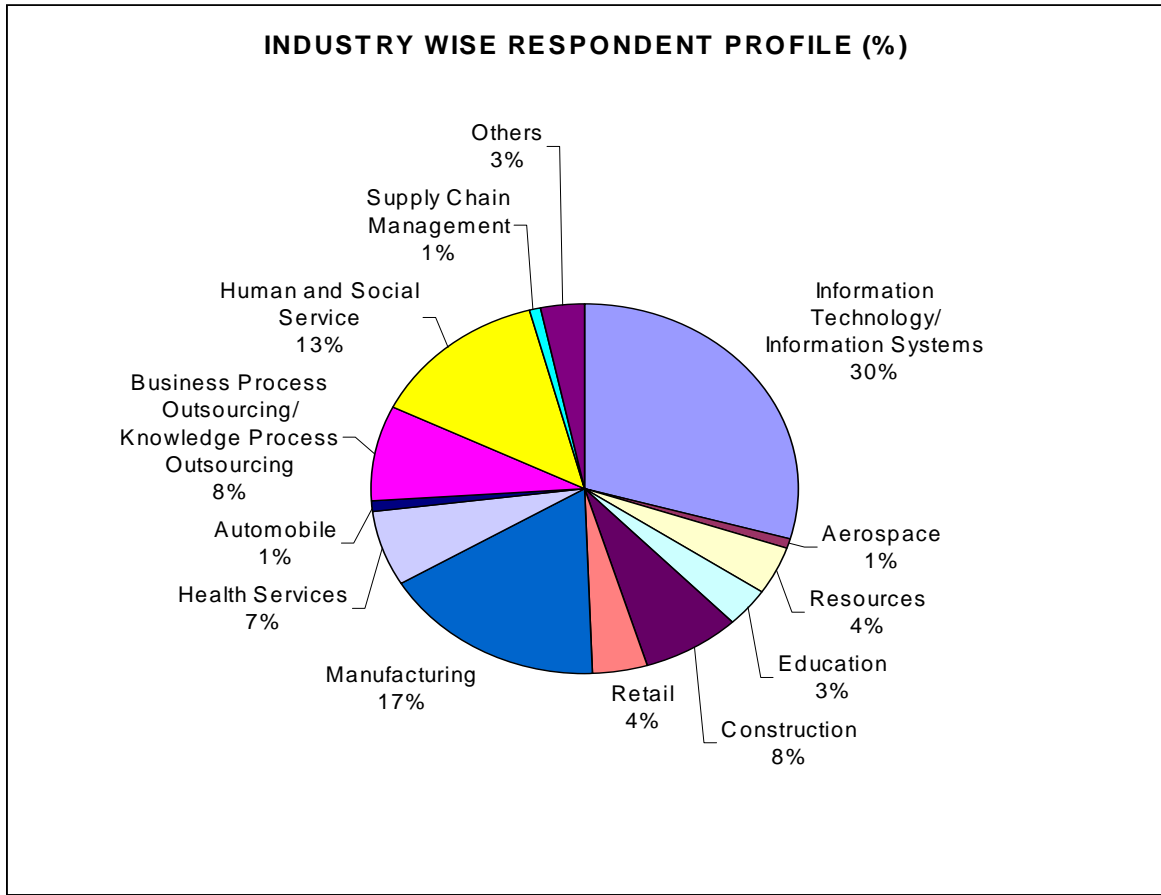
Table 1. Metrics for work motivation

Construct	Item	Code
Intrinsic Motivation	The job allows freedom, independence, or discretion in work scheduling, sequence methods, procedures, quality control, or other decision making	FRDMWRK
	My job is significant and important compared with other jobs at the organization	SGNFJB
	My job gives me a feeling of achievement and accomplishment	ACVMT
	My job gives me the opportunity to participate in decisions that affect my job	PPTTIONDM
	The job requires completion of a whole and identifiable piece of work. It gives you a chance to do an entire piece of work from beginning to end	CMPLTWRK
Socio—technical system	The work I do provides me with direct feedback about the effectiveness (eg. Quality and Quantity) of my performance	FDBWRK
	My managers and coworkers provide me with feedback about the effectiveness (eg. Quality and quantity) of my performance	FDBCOLL
	My job provides the opportunity for social interaction such as team work or coworker assistance	SCLINTRTION
	The job duties, requirements, and goals are clear and specific	CLRGLS
	The job has access to relevant communication channels and information flows	COMMACCS
	My job offers adequate pay compared with the job requirements and with pay in similar jobs	ADQTPY
	The job provides acknowledgement and recognition from others	ADQTRCGN
	My job offers job security as long as I do a good job	JBSCRTY
Job enrichment	I have a variety of duties, tasks, and activities on my job	TSKVAR
	My job requires a variety of knowledge and skills	KNWLVAR
	My job requires a variety of knowledge and skills	KNWLVAR
Job enlargement	My job requires a high level variety of knowledge and skills	KNWLHIGH
	My job provides opportunity for advancement to higher level jobs	ADVJOB

Table 2. Results of Principal Component Analysis

variable	rotated component matrix				
	Component				
	1	2	3	4	5
ADVJOB	**.83**	.13	-.03	-.07	.13
KNWLHIGH	**.71**	-.11	.25	.19	-.02
ACVMT	**.70**	.21	.16	.33	-.08
KNWLVAR	**.66**	.01	.31	.16	-.06
PPTTIONDM	**.64**	.36	-.13	.03	.21
LNROPP	**.63**	.03	.40	.19	-0.12
FRDMWRK	.15	**.79**	.18	-.10	.09
FDBWRK	.26	**.58**	.17	.22	-.00
FDBCOLL	-.08	**.57**	.15	.33	.10
ADQTPY	-.02	**.56**	-.31	.05	.35
ADQTRCGN	.12	**.54**	.06	.41	-.09
CMPLTWRK	.15	.06	**.74**	.17	-.12
CLRGLS	.13	.37	**.58**	.07	.22
SGNFJB	.44	.10	**.52**	-.05	.17
SCLINTRTION	.14	.13	.03	**.76**	.20
COMMACCS	.34	.25	.16	**.65**	-.10
JBSCRTY	-.02	.18	-.02	-.09	**.85**
TSKVAR	.26	-.04	.32	.41	**.57**
Variance Explained (%)					
Factor 1. Employee Empowerment					19.67
Factor 2. Motivating Organization Climate					13.31
Factor 3. Task identity and significance					10.37
Factor 4. Communication					9.9%
Factor 5. Job variety and security					8.02
Total Variance Explained					**61.3**

Figure 2. Factors of work motivation