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# Managing the motivation of information technology staff for higher organizational productivity and employee job satisfaction

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## ABSTRACT

*Motivating Information Technology (IT) employees has become more and more difficult because of the rapid technological changes and global competitiveness in the marketplace. IT managers can use a plethora of techniques to improve staff productivity and quality of output through better employee motivation techniques. This paper discusses some of those methods that can improve productivity as well as staff satisfaction with their work.*

## INTRODUCTION

As the use of Information Technologies (IT) has become widespread in all types of organizations, organizations' strategies should include and integrate the use of IT and motivate the professionals who run them to improve productivity and the quality of their work. These strategies should insure smooth operations of the IS business function. It is well known that one of the major roles of top management is to state and define the organizational mission and identify strategies and use scarce resources to achieve stated goals. The typical executive is more familiar with and feels more at ease dealing with key functional areas in the organization such as finance, production and marketing of his company than he does about IT (Lucas & Turner, 1982). If the manager knows little about other emerging functional areas such as IT, it will be difficult if not impossible for the manager to handle key issues such as motivating employees in that particular functional area. Managing IT personnel is challenging and fraught with many pitfalls. According to Couger's study (1989) of IT professionals, "the majority of chief information officers believe that motivating employees will continue to be a major problem."

Increasingly, organizations are investing in IT technology to improve efficiency and overall organizational effectiveness. At the same time one has to assess the benefits in terms of return on investment which is difficult to measure and quantify. This paper covers strategies to produce motivated IT personnel to achieve higher productivity, firm profitability, and ultimately employee job satisfaction. Review of literature in this area as it applies to motivating IT professionals will be covered. However, the IT industry is by no means monolithic, therefore, some of the techniques have to be refined further so they apply to the specific situations

in question. The relationships of rewards (monetary or otherwise) as tools to increase productivity and job satisfaction as observed in other similar technically oriented organizations will be used and an attempt will be made to extend it to IT. The article, furthermore, includes a framework for Chief Information Officer (CIO) to direct and control IT professionals for higher employees' motivation resulting in higher productivity.

## **A BRIEF LITERATURE REVIEW**

From a management theory perspective, organizations are either mechanistic (rigid) or organic (flexible) (Dickson & Wetherbe, 1985). Furthermore, mechanistic organizations that are rigid in their management approach are more successful in environments that require routine and repetitive decision making by management. However, in situations such as the information technology industry or when information technology is used extensively in an organization, management of professionals requires a more flexible management approach because of the high uncertainty and complexity of the tasks involved.

In the information technology industry task variety and the ability of professionals to be involved in job-design for a productive work environment, in most instances are lacking or difficult to implement if IT professionals are to achieve the higher order needs such as self-actualization as suggested by Maslow (1970). Motivational factors such as achievement, recognition, advancement, the work itself, personal growth, and responsibility (Herzberg, 1987) of IT professionals appear to be useful techniques to motivate IT staff. The above listed factors, for example, can be used as a framework which an IT manager can utilize to motivate his/her staff, especially application programmers and software engineers. Herzberg's (1987) ten maintenance or hygiene factors such as company policy and administration, technical supervision, interpersonal relations with supervisors, interpersonal relations with peers, interpersonal relations with subordinates, salary, job security, personal life, working conditions, and status are crucial factors that a typical manager should pay close attention with a high degree of payoff. Careful attention by the immediate supervisor to the above issues and fair resolutions of potential conflicts of personnel can increase productivity and boost overall personnel morale. The dual factors such as achievement, recognition, advancement, etc., are more fulfilling to IT professionals according to Couger and Zawacki (1978). However, others (Brayfield & Crockett, 1985) assert that there is no significant relationship between job satisfaction and job performance in other industries. Even Herzberg (1987, p. 109) stated that:

The fulfillment of the needs of the second group (hygiene factors) does not motivate the individual to high levels of job satisfaction and to extra performance on the job. All we can expect from satisfying the needs for hygiene is the prevention of dissatisfaction and poor job performance.

The need for achievement theory (McClelland & Winter, 1969) that attempts to measure motives to achieve was based on the classical behavior model, that behavior is a function of personality and environment. The need for achievement, power, belonging, etc., have early roots in childhood as many psychological theorists and practitioners believe and is difficult to alter. The implications for IT managers is that motivation activities are very complex social-behavioral systems that cannot be influenced by manipulating few variables so people/workers

can be motivated for better job productivity or efficiency. McGregor's (1960) Theory X and Theory Y is a description of assumptions of employees by management. Briefly, Theory X assumes that a typical human being is: lazy; dislikes work; has to be coerced, controlled, directed, and threatened with punishment; prefers to be directed; avoids responsibility; has little ambition; and wants security. Theory Y, according to McGregor, lists these characteristics: employees have self-control and self-direction; that work and rest effort are similar; achievement has a positive correlation to rewards; employees seek to learn and take responsibilities; employees are not fully utilized in their mental capacity. Jackson & Vitberg (1987) criticized the theory and devised ways to move X system workers to a Y system. The X and Y system continuum stretches from little work done on the X side to productive work completed on the Y continuum. The problem with this characterization is that many tasks and organizational climates will not allow an X system to shift to a Y system without causing chaos in the total organization. Imagine an IT manager attempting to shift an X-type employee to a Y-type employee to improve productivity. This method is difficult to implement because most technically oriented professionals are knowledge specific, and most employers are unwilling to retrain an employee just to motivate and increase productivity, especially in an environment where there will be few opportunities for growth and promotion due to levelling of growth and increased competitiveness. Theory Z was proposed independently by Foss (1973) and Lawless (1972). Foss' characterization of his Theory Z is that management should embrace values such as the general quality of life. Lawless (1972, p. 61) states Theory Z as follows:

As the organization changes, evolves, shifts its purposes, takes on personnel, matures, the management function will change. Theory Z management calls for the recognition that management style must adjust to the needs of the organization at whatever state of evolution it has reached.

Often times motivation and work behaviors can be analyzed using extraneous variables such as jealousy and the physical environment of the workers. A survey conducted by Miner (1990) to determine the effect of jealousy on business operations performances revealed that most respondents of the survey were directly involved in a jealous activity as a benefit provider or recipient, and a large percentage revealed they had been jealous of coworkers. Furthermore, the majority of the respondents reported jealousy with tangible rewards such as salary increase and reported jealous behavior associated with intangible rewards such as praise by coworkers or supervisors. To deal with job performance, IT managers have to face and deal with jealousy effectively, managers must admit it is an organizational problem, recognize and understand its dynamics, and find innovative solutions to improve morale among the staff.

The brief review of motivation literature supports the notion that workers' behavior can be analyzed, managed and controlled for higher motivation to result in organizational productivity and effectiveness. Based on some of these notions the next section will cover how IT professionals' motivation can be managed to increase productivity and employees' job satisfaction.

## MANAGING IT PROFESSIONALS IN A NEW WORK ENVIRONMENT

Control of IT activities is always a problematic area to top management because in most instances top management does not understand the technical aspect of IT as it evolved through different phases as shown in Table 1.

**Table 1. IT Evolution\***

Phase	Administrative Framework	Primary Target	Justifications Purpose
I	Regulated Monopoly	Organizational	Productivity/ Efficiency
II	Free Market	Individual	Effectiveness
III	Regulated Free Market	Business Process/ Interorgan.	Strategic/ Competitive

\* Source: Cash et al.

This hinders management from managing IT human resources effectively. Withington (1987) summarized six critical problems faced by managers in smaller IS departments. These include:

- Lack of challenging tasks by IS professionals
- Jealousy of non-system personnel toward IS personnel
- Salary inequities among IS personnel
- Lack of promotion opportunities
- Technical obsolescence of the staff
- Lack of IS personnel to adapt to changing roles and the need to terminate such personnel

Management should overcome its uneasiness to deal with IT related issues including dealing with idiosyncratic skilled personnel. Senior management should develop a strategic management plan to devise and implement long-term goals to increase productivity among its professionals and their career development. Jackson and Vitberg (1987, p. 58), discussing career development and job performance in the 1990s, pointed out:

The entrepreneurial spirit within the U. S. work force, the increase in mergers and acquisitions (with attendant layoffs), and corporate downsizing and reorganizations (forcing early retirement upon some workers) are having detrimental effects upon employee loyalty and morale which can be offset by the implementation of proper career planning and development programs.

Moreover, in the 1990s, they write that trial employees do not feel as secure in their jobs as they once did. Consequently, in these highly competitive times, IT management has to deal with issues that include: rating employee performance accurately and rewarding employees accordingly; helping employees to cope with changes at work; training employees to facilitate their career advancement; integrating workers' ambitions with the strategic plans of the company; encouraging managers to mentor subordinates; developing career paths that provide job security; reducing labor turnover; counseling older employees about career planning; assisting the plateau employee; and identifying career alternatives that employees will find attractive. Also, positive perceptions of the possibilities of career advancement, career development workshops focused on self-assessment, individual responsibility, and planning can improve motivations as well as productivity (Bardsley, 1987). Another angle to approach work motivation and work productivity of IT employees is to use work-related characteristics

such as the physical environment. An investigation of employee reactions to work space characteristics (social density, room darkness, number of enclosures, and interpersonal distance) on three variables—turnover, job satisfaction, and withdrawal from the office during discretionary periods—was conducted (Oldham & Fried, 1987). The results showed that the independent and joint effects of the work space characteristics influenced turnover, work satisfaction, and discretionary withdrawal of the employees. The study also found that employees were most likely to withdraw from offices and to experience dissatisfaction when the following were present: the office was rated as dark, few enclosures surrounded employees' work areas, employees were seated close to one another, and many employees occupied the office. Therefore, an IT manager should avoid assigning staff in darker rooms, seating workers close to one another, and increasing the number of employees occupying a single office. Even though these types of arrangements may increase overall cost to the organization, the benefits easily outweigh the cost through increased productivity and high employee morale.

Developing a strategic management plan to tackle issues of motivation, productivity, and career development should be one of the important organizational goals in the IT industry. Aspects of strategic management tools (Andrews, 1971) can be utilized for IT related management issues. These are:

- Improvement of productivity plan should relate to the organization's environment and how it can have an impact.
- Plan should link organization's capacity to obtain needed resources in hardware, software and to needed human resources skills.
- The plan should integrate all units of the organization for higher productivity and quality output and demonstrate how IT can facilitate the overall integration.

Once the plan of identifying the human resources skills and other resources are in place the following techniques (Dickson & Wetherbe, 1985; Novak, 1989) can be used in motivating IT personnel.

1. Employees' needs must first be identified by management and a concerted effort must be applied to increase employees' motivation in order to increase job productivity.
2. Once employees' needs are identified, tasks, responsibilities, and expectations should be clearly defined so performances can be objectively measured and appropriate rewards given for competence, productivity, and for those who are risk takers and innovators.
3. Employees' expectations and job performance should match realistic goals. Incongruencies between employees' expectations and unachievable organizational goals should be avoided to minimize frustration and resentment by employees.
4. IT managers should identify and promote individual staff social style of communication to promote a suitable environment for open communication among all concerned.

## GROUP SELF-MANAGEMENT

Group self-management provides some of the methods that IT employees can be teamed around, as experiments in the manufacturing sector have demonstrated (Sims & Manz, 1982). The method assumes that top management will have the ultimate responsibility for the teams who self-manage their group on a day-to-day basis through intermediaries such as

coordinators or supervisors selected by the group. The group or team will regulate itself and delineate objectives, goals, and measure performances of the team periodically as well as give feedback with appropriate rewards. In the manufacturing sector the following observations (Novak, 1989; McNurlin & Sprague, 1989) were attained when self-managing teams were formed:

- Group team hands out rewards and punishments among its members.
- Group team proposes schedules and task specifications.
- Group team sets goals, measures performances and provides immediate feedback.
- Group team is responsible for internal protocol such as handling conflicts, communication both internal and external, and finding solutions.
- Group team selects its own membership and evaluates itself.

In order for the above suggested guidelines to work, employees' attitudes toward their organization and their managers, in most instances, determines the employees' productivity (McNurlin & Sprague, 1989). Important management policies such as concern for employees in job-redesign, and creating the new work environment result in high employee morale and productivity. Japanese management methods (Beaird, 1980), a family spirit in the organization, concern for quality, teamwork rather than competition among employees in the information technology group are other techniques that can be used to improve motivation and job productivity.

## SUMMARY

Information technology staff tend to be preoccupied with mostly technical issues relating to hardware and software and the human side invariably receives less attention. Employees' interest and well-being can be cultivated through different techniques such as involvement of employees in job redesign, creation of a self-managed information technology group, and using Japanese techniques of management with more emphasis on cooperation rather than competition. These management approaches can result in higher motivation and improved productivity among IT professionals. The above techniques are easier said than applied because of the extreme complexities involved in balancing competing needs in implementing them. Furthermore, employees' needs and aspirations are not static over a long period of time. Multifaceted variables, individualism, personal egos, professional jealousy, cultural differences etc., involved in work and motivation makes them (motivation techniques) even more difficult to implement.

In the final analysis improving professionals' morale, motivation, and organizational productivity should consist of a continued integrated effort by the whole organization in a new work environment for the information technology group.

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