

# Issues affecting motivation on construction projects

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*Despite the significant improvements being made by modern technology to equipment, materials and methods of design and construction, actual productivity in the construction industry is often seen as being below par when compared with that within other industries. Some industry experts point to the need for better management of human resources.*

*The paper distils 20 points from a wide selection of empirical writings and from the authors' own experience. In the authors' view, these points need particular attention if better motivation of staff is to be achieved by project managers on construction projects. The points cover (a) the nature of the industry itself and its likely effect on employee performance, (b) a range of assumptions about individuals' motives and behaviour, and (c) a number of alternative approaches to motivation.*

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Even with the advent of more sophisticated technology, the construction industry continues to be predominantly labour-intensive. This suggests that a proper emphasis should be given to such matters as communications, participation and motivation. The latter has been defined in many texts as 'an inner state that energizes, directs and sustains people's behaviour towards goals'. Authors such as Maslow, Herzberg and McClelland<sup>1,2</sup> have proposed that human motives are based on needs and wants; these can vary from the basic requirements that preserve life, such as life's provisions, rest, shelter etc., to a higher level of needs,

such as association with others, affection, status, esteem and self-assertion. There is always a desire within the individual to fulfil these needs, so much so that he or she is often looking for opportunities to satisfy them, and thus expending mental and physical effort to attain satisfaction. Managers in organizations could well view motivation in this way, and provide opportunities for employees to aim willingly at the organization's objectives as well as their own.

The 'needs' theories were received by managers with great interest at the time that they were proposed, because they offered an easy understanding of what may be motivating to employees; however, such theories remained limited in their ability to explain the process of motivation. This led to the emergence of the 'expectancy' theory, which provided a comprehensive approach to the analysis of motivation and performance. The theory was developed by Vroom<sup>3</sup> and Porter and Lawler<sup>4</sup>, and was researched in the construction industry by Maloney and McFillen<sup>5-8</sup>. The expectancy theory sees motivation as a function of the following three factors:

- *expectancy*: related to the individual's belief in converting his or her effort to a specified level of performance,
- *instrumentality*: related to the belief that a specified level of performance will result in the reception of a specified outcome,
- *valence*: related to the ability of the outcome to satisfy specific active needs.

Optimizing the above three factors is then the key to high motivation. This may be achieved by getting construction supervisors to match employees' potential with the requirements of jobs, and also by providing opportunities for rewards that are desired by employees. The success of organizing this compatibility

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depends on the accuracy of the supervisor's perception of job requirements, abilities and needs of individuals, and his or her own understanding of how this can be communicated and put into practice.

In the UK, recent work by Claxton<sup>9</sup>, Goldthorp<sup>10</sup>, Rowdon and Mansfield<sup>11</sup> and Mansfield and Odeh<sup>12</sup> has reflected the increasing awareness of motivation and its role in offsetting the various measures of criticism of productivity levelled at the construction industry. The research in this area shows that motivating employees is more complicated than many people believe. However, a proper appreciation of the nature of the construction industry, and a genuine understanding of the behaviour of the individuals working in it, is needed first before these complexities can be reduced, and motivational programmes made easier to implement.

### **PARTICULAR CONSTRUCTION-INDUSTRY CHARACTERISTICS RELATED TO MOTIVATION**

For motivation to be effective, it has to be based on an understanding of the characteristics of the construction industry. The following are thought to be among the important points to be addressed to help reflect the psychological dimension of the nature of the industry, and its likely effect on motivation and performance.

#### **Short-term employment**

The construction industry is characterized by short-term employment, which is often based on the life of the project or part of it. This means that many employees are not allowed sufficient time to integrate with their organization in order to develop a proper understanding of the job. As a result, the prospect of mutual 'belonging' between the organization and the employees tends to suffer, and with it the performance of the workforce, who may lack a feeling of security.

#### **Environment**

The bulk of construction projects take place in the open, where work may be subjected to the adverse effects of the environment. Working under severe conditions induces physical and psychological effects that impair performance and productivity. The potential effects of working in extreme temperatures above 110°F or below -10°F include<sup>13</sup>:

- errors of judgement,
- carelessness,
- complaints,
- general lethargy,
- irritability and poor mental attitude,
- decrease in quality of workmanship,
- general slowdown of work pace,
- unscheduled stoppages of work.

#### **Unusual problems**

The occurrence of many unexpected situations that demand ingenuity and the ability to produce practical solutions is common in construction projects. These

offer good opportunities for rewarding those who rise to the challenge. On the other hand, the regulations and instructions imposed by designers, contractors and/or government authorities may sometimes frustrate staff, and prevent them from demonstrating their abilities.

### **Construction contracts**

The type of contract drawn up between clients and contractors has a very important effect on motivating managers towards performing efficiently by reducing cost, controlling time, improving productivity and quality, and attending to the long-term goals of survival and growth. Contracts vary from cost-plus contracts at one end of the spectrum to lump-sum contracts at the other; such variety may be seen to provide an economical and efficient service, as well as incorporating a reasonable level of risk. Some recommendations on risk allocation are<sup>14</sup>:

- Sufficient risk should be allocated to contracting parties to motivate them to perform in a professional manner.
- Risk allocation should be based in part on the return of profit to be realized.
- The degree of control over the risk must be considered. Responsibility for an end result must entail control over its occurrence.
- The relative ability of parties to protect themselves against the risk must be considered.

### **Availability of labour**

When the labour supply is high, it has been observed that productivity is also high, but when labour supply is lower, then productivity can also go down. The reason for this may be the needs of job security, which cause the workers to compete and show better performance in order to keep their jobs when jobs are harder to come by. Some factors that determine the availability of labour are<sup>15</sup>:

- population density in the area of a contract,
- local unemployment levels in the principal building trades,
- current competition from other contractors in the area, and the likely future competition,
- local transport facilities,
- availability of short-term housing within the area,
- the impact of local government training centres,
- the impact of legislation, e.g. early retirement, youth-opportunities programmes,
- subcontracting arrangements.

### **Management**

Managers play a major role in influencing motivation and optimizing productivity; their success in carrying out their task depends on the devotion of the required resources, and the effective management of their interaction. This can be complicated, especially in large and multicontractor projects, where management

efficiency has been observed to decrease<sup>12,16,17</sup>. However, managers should (a) plan for a sufficient degree of control over the scheduling of operations to allow smooth flows of work, (b) provide the required tools, equipment and materials, and (c) ensure clear communications and understanding of instructions. Also, managers should pay more attention to working conditions, and employees' attitudes and morale<sup>18,19</sup>.

## TYPES OF INDIVIDUAL

For motivation techniques to have an impact on employees, it must be recognized that individuals are different with respect to their needs, behaviour, and the type of reward that they prefer. Those who plan for successful motivation, therefore, must seek to know what is motivating a particular employee; once the motive is identified, a motivator is then selected to fulfil it. Over the last 60 years, managers, sociologists, psychologists and economists have classified people into the following types with regard to their natures, needs and motivation<sup>2,20,21</sup>.

- *Rational-economic man*: motivated by economic incentives, passively controlled and motivated by the organization. His or her feelings are irrational, and the organization's best approach is to neutralize employees' feelings and unpredictable traits to implement its policies effectively.
- *Social man*: motivated by social needs and association with others. This type responds to the social forces of the peer group more than to managerial controls. Satisfying desires to belong, to have positive relationships, and to give and receive loyalty, is the best way of managing this type.
- *Self-actualized man*: possesses an inherent need to use his or her capacity to the fullest extent, and is self-motivated and self-controlled. He or she is best managed by satisfying autonomy and independence needs.
- *Complex man*: This type includes a mixture of the above three. Biddle and Evenden<sup>20</sup> suggest that, with reference to complex man, 'different things are important for different people, or for the same people at different times in their life cycle'.
- *Psychological man*: In this view, it is assumed that man is complicated and unfolding, and passes through physiological and psychological stages of development. Man's strongest motive is his ego ideal; therefore this type of person is best motivated by allowing him to apply himself to his ideal.

## SIGNIFICANT MOTIVATORS IN THE CONSTRUCTION INDUSTRY

Motivators are those things that influence an individual's behaviour. They should be of great concern to managers in construction organizations, as the proper implementation of motivational programmes can encourage employees to act in the desired way to accomplish the organization's goals at the same time as they meet their own personal and professional objectives. Alternative ways to satisfy the different needs of construction employees are given below.

## Employees' attitude

Motivation is generated in the first instance by influencing the attitudes of the workmen and their supervisors. This is done by creating an atmosphere which is based on trust, understanding and cooperation. Such a policy has to start at the early stages of employment. As new jobs often cause a measure of stress, it is recommended that new employees should be given special attention before they develop poor working habits. It is important to develop orientation programmes that familiarize the new employees with the organization and provide them with feelings of security and value. The improvement of employees' attitudes should be sustained throughout the employment period, for example by keeping the employees informed about the activities of their organization, and offering training and renewal programmes.

Concerning the self-renewal of 'engineering' staff, Aronberg<sup>22</sup> referred to Gibson's recommendations, which took the form of financial support by the organization to sponsor those engineers who engage in advanced studies, encouraging engineers to participate in activities that enrich their knowledge and achievement, through being responsible for in-house seminars, publishing professional papers etc.

## Achievement

Achievement has proved to be a very influential motivating technique. Many researchers have agreed with Herzberg's<sup>23</sup> findings that this is the most powerful motivator. To develop workers and staff in construction projects into 'achievers', they should be given assignments that are suited to their best skills. Also, it is important to include challenge as part of the job, for example by introducing new and more difficult tasks, as this reinforces the urge to work at, and enjoy overcoming, difficulties in achieving success.

Construction projects usually take a long time to accomplish and materialize. This may weaken enthusiasm and continuity of performance, especially if work requirements change. However, such problems may be dealt with by scheduling the work<sup>11</sup> into specific stages. At the end of each stage, the work is evaluated, and the employees' attention is drawn to the value of their efforts in accomplishing the current stage, and to how this is related to the finished project. In line with the division of work into smaller steps, Dowling and Sayles<sup>24</sup> reported the use of 'short-interval scheduling' (SIS). This technique divides the daily or weekly task into smaller segments of short-term performance goals.

## Appreciation

The nature of civil-engineering projects provides engineers with excellent opportunities for appreciation, thus satisfying their reputation and recognition needs. This creates an obligation for high standards of performance. (Appreciation may be given publicly in the company newspaper, announced at an award dinner, or simply through personal attention and favourable comment.) However, the sensitivity of human perception regarding praise may undermine the positive outcome of such a motivator if it is overdone.

## Responsibility

Giving responsibility to employees keeps them interested in their jobs, allows the satisfaction of self-fulfilment needs, and leads to the satisfaction of other needs, such as freedom, recognition and advancement, all of which will result in improved motivation and performance. Competent workers and their supervisors who are denied responsibility feel dissatisfied, bored and frustrated. Meeting responsibility needs may be done by providing workmen with a task and letting them decide on the method of working as long as conditions of expected quality and finishing time are met.

## Money

There has been some controversy regarding the value of money as a motivator. Some researchers have opted not to link the effect of money with the performance of employees; others have reached the conclusion that money is another way of motivating employees towards better performance<sup>9,25-27</sup>. The reason for such conflict is that money can mean different things to different people; to some, it can be considered as a means of satisfying workers' differing levels of need; to others, monetary reward may represent security, increase in status, or independence. Despite the dispute that surrounds money, one can say that the vast majority of people will not reject money, and most will try to have more of it. The use of incentive schemes has been in operation for a long time in the construction industry, and, in many cases, it leads to adequate satisfaction for managers and employees alike. An interesting reference may be made here to a recent study by Blain<sup>28</sup>, who investigated the varied types of incentive schemes operating in the UK by examining the effectiveness and problems associated with each type.

The motivational value of money can change, according to current national economic stability. Kemper<sup>29</sup> reported that, when incomes are static or falling owing to high inflation, the importance of money as a motivator increases in relation to other types of reward. However, if the economy is prosperous, and employees reach a comfortable level of lifestyle, where there is a balance between spending on desires and the actual income received, then money becomes less influential. If money is to be used as a motivator, it is important to remember that the actual timing as to when employees are rewarded can be very important with respect to its effect on motivation. Regular instalments of payment have been found to have very little influence on motivation. Any reward that is given immediately after achieving any desired outcome has been shown to be the most effective.

## Advancement

Short-term employment in the construction industry appears to be a common policy; this lessens the opportunities for promotion and advancement in one organization. Also, many employees in construction are restricted with regard to the advancement ladder owing to the highly specialized nature of their jobs, and they tend to do the same work in all projects. In such

situations, advancement may therefore be looked at from different angles. Advancement can be achieved via rewarding staff with special assignments or new responsibilities, transferring them to new jobs, or in any other way that enriches experience and knowledge, such as via attendance at educational courses, or trips to another part of the country or world. On the other hand, the construction industry provides good opportunities for promoting those involved in unusual assignments that demand intelligent practical solutions.

## Participation

Participation satisfies many needs, such as recognition, affiliation and acceptance. Participation provides the engineer with a feeling of importance, in that he has valuable information to offer that will improve the efficiency of the organization<sup>30</sup>.

Amos and Sarchet<sup>31</sup> call for participation in decisions that affect work or the work place because it generates stronger commitment from employees as they become both emotionally and physically involved.

Participation improves the quality of decisions, and also makes policies easier to implement<sup>11</sup>, as the employees have had a part to play in developing them. Participation reduces defensive feelings of employees and establishes a better rapport with management.

## Competition

Research and practical business experience have shown that competition increases innovation, and mental output can improve considerably as a result. Implementing competition in construction projects opens up the way for individuals with distinguished qualities to put their potential to work, which can then lead on to opportunities for later promotion. There are many positive aspects included in competition programmes, such as bringing the right kind of challenge to site employees, to reduce boredom and make repetitive work more acceptable.

Those competing should have similar abilities; the inclusion of some with outstanding abilities may discourage others from competing at all. Also, overmuch planning of competition may threaten the quality of work, which could create dissatisfaction among the workmen<sup>12</sup> if they feel that they are being manipulated by management through such competition programmes.

## Social relationships

Construction managers can potentially achieve better results by promoting social relationships at work. The development of a good social environment and harmonious relationships encourages cooperation and satisfies acceptance and friendship needs. Some ideas for improving social relationships in construction projects are<sup>32,33</sup>:

- on the job dinner three or four times a year,
- regular gatherings designed to allow employees to get together in a nonworking atmosphere,
- supervisory and work training courses,
- sponsorship of sports teams.

This may be extended to involve the employees' families, for example by organizing family tours and outings to job sites to show them what is being built. Establishing ties and communications between management and families creates better understanding both at home and at work.

## CONCLUSIONS

Project managers attempting to motivate staff on construction projects have to be aware of the different needs of their staff. Considerable work by various authors has exposed a spectrum of needs that exist; a good manager will motivate his or her staff best when he or she can match the demands arising from the project to the individual's needs and abilities so that both these concur as much as possible with the overall objective. This can be hard to achieve, particularly in the construction industry, where staff may have become used to working on sometimes intermittent project work in an environment that can seem harsh when compared with those of other industries.

Nonetheless, actual problems in the construction environment can act as a spur to motivation, provided that the construction contract and a reasonable supply of labour allow realistic initiatives to be developed, assuming, that is, that managers themselves are actively working to bring this about. An essential part of this process is for managers to understand the different types of individual in their domain. A common fault is to assume that the staff are mirror images of the manager or some other similar type of person; not all employees achieve self-fulfilment through a contract's successful completion. Different facets of the project's organization can, however, usually assimilate a range of individuals.

To bring the best out of staff, sound attitudes have to be developed at an early stage of a contract, and project managers need to make every effort to communicate objectives all the way down the line. Recent work among construction-management post-graduates (from the University of Strathclyde, UK) has confirmed the important place that achievement occupies in the thinking of construction-related managers and aspiring managers. Imagination is continually needed in the structuring of a project to allow staff to aim for target milestones, the attainment of which can release a sense of achievement for those involved; this will not necessarily happen naturally in a project. On the other hand, the construction industry provides excellent chances for responsibility to be borne early in an individual's career. Financial incentives have traditionally been built into projects for many decades now, but it is probable that less results from this instrument than is widely recognized. Advancement as a motivator is less easy to implement unless there is a firm ambition within the individual to progress towards supervisory management. Participation and competition are more likely to act as universal vehicles for motivation.

It is the authors' view that a much greater understanding of, and emphasis on, motivation factors is needed at the present time if the construction industry is to deal satisfactorily with the changing environment that awaits it in the 1990s. In construction

situations, therefore, there is a need for project managers to be fully committed to the idea of motivation. Paying attention to some of the key areas listed below is likely to lead to the best results:

### ● *Industry characteristics:*

- *Short-term employment:* reduces chances of employee/company identification.
- *Construction environments:* can make performance outcomes unpredictable.
- *Unusual problems:* act as a spur to ingenuity.
- *Construction contracts:* (and their types) have to be matched to project risk situations.
- *Labour availability:* (in short supply) can limit initiatives.
- *Management effectiveness:* can diminish on multicontract and complex projects.

### ● *Types of individual:*

- *Rational-economic man:* motivated by economic incentives.
- *Social man:* motivated by social needs and interaction with fellows.
- *Self-actualized man:* motivated by autonomy and independence.
- *Complex man:* motivated by economic, social and autonomous needs.
- *Psychological man:* motivated by a mixture of complicated factors.

### ● *Significant motivators:*

- *Employee attitudes:* can be positively influenced through staff-orientation programmes and an overall atmosphere of trust.
- *Achievement challenges:* are easily built into project work.
- *Appreciation for effort:* should be clearly expressed through a variety of means.
- *Responsibility:* reduces boredom and frustration, if work is properly allocated.
- *Money:* acts as a strong or weak motivator, according to economic circumstances.
- *Advancement possibilities:* are reduced for employees where work is short-term or over-specialized.
- *Participation in decision making:* can generate a strong commitment from employees.
- *Competition:* stimulates innovation, and effects greater output.
- *Social relationships at work:* are improved by company-sponsored events and courses.

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