Conceptual Framework for Motivating Construction Workers in Developing Countries

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Abstract

Increasing construction worker productivity by treating workers as unit of production is flawed because labour is not interchangeable. The human resource approach provides a better framework on how to motivate workers. The conceptual model based on the Expectancy theory of worker motivation is presented with explanation on how it may be used. Research studies available on worker motivation are based on developed countries, thus, this paper explains the research necessary to understand motivating workers in developing countries.

Keywords: Motivation, expectancy, instrumentality, valence, developing countries, construction workers.

CONSTRUCTION IN DEVELOPING COUNTRIES

The construction industry in the developing countries is beset by serious difficulties including shortages of semi-skilled and skilled labour, inadequate production of construction materials, lack of capital and poor management. These countries, for the most part, depend on large international contractors from countries like Germany, United States, France and United Kingdom for construction of the major infrastructures and large scale projects that are needed in the economy.

It is generally believed that most developing countries are characterized by abundant supplies of labour. However, they are plagued with scarcity of skilled construction workers. Training of construction craft workers is not very common in these countries, and when they are available, they may not be adequate. To exacerbate the situation, informal on-the-job training are not well developed and not common. The lack of serious craft training can be attributed to the fact that constructors even in the developed countries take a short-term view of craft training. Another reason is the fluctuations in construction projects. Construction craft workers, once they complete their task on a project are laid off, and hence, must move to another project. As a result, construction workers tend to identify more with their trade than with a construction firm. Also, constructors keep workers on their payroll only when they have projects. The culture of contractor organizations or even constructors being involved in formal training of the various skills required in the industry is non-existent.

The significance of the construction industry as an important factor in economic growth cannot be overemphasized. It is an important contributor to any country’s gross national product (GNP), and a major source of employment. Because the industry is labour-intensive, investment in construction will provide greater number of jobs than will investment in less labour-intensive industries. It is not uncommon to see abandoned projects in the developing countries. These projects are abandoned not only because of inadequate funding, but also due to inadequate supply of skilled labour. Because of this phenomenon, there is a lack of continuity of
work, resulting in casual labour. As a consequence, there is little long-term employment, and this inhibits the emergence of a skilled and experienced labour force.

Another factor affecting the industry in developing countries is that the work done in the industry may not all be in the formal sector. We define the formal sector as that segment where firms or individuals execute their projects through formal, designs, planning, contracting, permits and approvals. The informal sector, on the other hand, engage in construction without obtaining the necessary design and construction documents. There are more informal construction in the rural areas than in the cities. However, informal construction also flourish in the urban areas because of the illegal structures that exist on the outskirts of the urban areas. In both the formal and informal sectors, they are all characterized by low productivity because of frequent shortages of vital construction resources such as manpower, machinery, materials and capital. The informal sector rarely attracts high caliber workers who prefer to work for the larger contractors and the foreign firms. In any case, what the industry needs more than anything is a pool of qualified skilled workers. Even if the investment capital is available, the industry may not be able to provide the much needed infrastructure to boost the economy. The machinery and materials needed in the industry cannot be produced unless the plants are in place. Importation of all the materials may not be a good option because of foreign exchange implications.

PRODUCTIVITY STUDIES

The primary concern of constructors in developed and developing nations is with craft workers and how to increase their productivity. Although, this is of interest to constructors, there has not been significant research on how to improve construction worker productivity. Existing research on productivity view workers simply as labour, and therefore, one of the factors of production. The implication of this assumption is that management’s objective is to maximize the efficiency with which these workers are utilized. Thus, one unit of labour is perceived as interchangeable with another. This view of interchangeability of labour leads management to focus on the work and the environment instead of the worker.

The assumption of this “engineering view of worker” is that the worker possesses the necessary abilities (mental and physical) to successfully perform a given task. Thus, management can enhance worker performance by providing the necessary equipment, materials, tools, instructions and the environment that is conducive for expected level of performance. As a result, performance is indicative of the effort expended by the worker due to resources provided by management.

Performance is influenced by four variables. The duration of effort the worker is willing to exert in the task, the intensity of the workers effort, the effectiveness with which the worker’s effort is combined with technology and other resources, and the efficiency of the workers effort. The proportion of time that the worker is engaged in productive work during work period is the duration of the worker’s effort. This time may be influenced by the availability of resources and the worker’s motivation. Similarly, it may also provide an insight on a worker’s ability. The effectiveness with which a worker’s effort is combined with technology and other resources is a measure of the degree to which the productive potential of technology and other resources has been utilized. As an illustration, a worker can move bricks by either a wheel barrow or a forklift. In the latter case, the worker’s effort has been combined much more effectively with the available modern technology. The efficiency of a worker’s effort is a measure of the quantity of acceptable quality output provided by a worker as a result of effort expended. It is possible for a worker to expend effort very intensely over a period of time, but if the quality of work is poor, then the worker’s efficiency and performance will be low. On the other hand, a worker may take extreme care to produce high quality product, but, because of time expended in producing this high quality product, not enough quantity is produced. In this case, the worker’s efficiency and performance are low. This is true if the quality of the individual’s work is far more superior than is required by the task. Using
rough carpentry as an illustration, it is not necessary to measure a piece of lumber to the same tolerance as we
would in finish carpentry.

From this brief discussion, it is obvious that, management has significant impact on these variables. It has been
found that effective planning and scheduling of construction activities can minimize delays, thus increasing the
duration of a worker’s effort. The time spent by a worker waiting or looking for resources is defined as
unproductive work and leads to delays. Further, management can influence a worker’s efficiency by specifying
the quality of work that is acceptable, providing worker’s with instructions, and enforcing such.

Ineffective management can also cause poor worker performance. It is clear that if management is effective, it
will result in improved performance by the individual worker. However, there are firms that have effective
management in which the worker and, consequently, the organization performance is low, or not to the level
that is expected of the workers. In essence, if through effective management, the physical factors that lower
individual worker’s performance is eliminated, the difference in worker performance is individual differences.

The basic deficiency of the engineering view is the assumption that units of labour are interchangeable. In
economics, the assumption of interchangeability is valid because it permits economic analysis. However, when
this concept is applied to labour it falls short. This is principally because it assumes that all workers are created
equal. That is the problem with the engineering view. Human beings are basically different. Some workers are
more endowed than others and therefore produce quality work due to innate abilities, training and motivation.
Because of this difference, some workers produce more with better quality than do other workers. Considering
human differences, the engineering view falls short as a useful analytical tool. Thus, it is posited in this paper
that it is useful to view workers as human resources.

**Human resource view**

In the human resource view of workers’, each unit of labour is viewed as an individual, and differences between
individual workers are important. When a constructor seeks to hire a mason he does not want to hire just any
mason; rather the constructor wants to hire the best mason in the market. Thus, a constructor will want to hire
the mason who will do a better job than any other mason. In the human resource view, the mason is viewed as
an investment. The constructor can enhance the worker’s performance through training programs or informal
on-the-job-training.

In the human resource view of workers, the worker interacts with his job and attempts to attain some control
over his job. There are benefits and costs associated with each job and each also places physical and mental
requirements on the worker. Psychological factors determine how a worker responds to his job. Due to
individual differences, a worker may respond positively in a situation while another will respond negatively.
Not only are there differences between workers response to a specific job, but a worker will respond differently
to the same job at different times because of the change in the workers need. The degree of autonomy,
significance, skill variety and feed back contained in the job affects how a worker responds to the job. Other
factors such as the opportunity to acquire new skills, on-the-job training will also influence the workers
response to the job.

Some dimensions of work context will also influence worker’s response to a job. As an example, pay,
promotions, recognition, and working conditions are important contextual factors. Pay includes all elements of
compensation. The amount of pay, method of payment, and equity will influence the worker. In the same view,
the opportunity for promotion, whether it is fair or not will also influence the worker.

Interpersonal dimensions of the job are important influences. The level of supervision that a worker receives
including such factors as the supervisory style, human relations, all influence the workers response to the job.
The influence of co-workers is also important. The competence, helpfulfulness, and friendliness of co-workers
and the policies of the firms management also impact on the worker. Therefore, based on human resource view, the individual worker is the primary unit of analysis and what the worker wants from the job is an important question. As a result, psychological factors are important in analyzing and predicting worker performance.

CONCEPTUAL FRAMEWORK

Studies into worker performance in other industries resulted in the development of the expectancy theory of worker motivation and performance. This model was developed by Vroom (1964) and Parter and Lawler (1967). The model is now a primary model that is used in the analysis of worker performance. A detailed discussion on this model can be found in Vroom (1964). The first attempt to use this model in the construction industry was done by Maloney (1985). However, his emphasis was on developed nations. This paper is the first effort in suggesting that this model can be used in the developing countries.

This framework is based on the expectancy theory of worker motivation, performance and satisfaction. This framework in shown in figure 1. People engage in work to accomplish something for themselves. They have a particular job that they have to complete. By doing the job they receive some rewards which they hope will satisfy their needs. The important variables in the expectancy model are expectancy, instrumentality and valence.

Expectancy, which is the link between an individual’s expenditure of effort and his performance of a task, is defined as the individuals belief that he can convert his effort into performance of the specified task. In essence, it is the persons belief that his effort can be expected to lead to successful performance. As a result, expectancy can have values between 0 and 1. An expectancy value of 0 indicates that the worker perceives no chance of being able to perform the task if he tries to do so. Conversely, an expectancy of 1, indicates that the worker believes that by exerting the effort, he will perform the task every time he tries.

Instrumentality, on the other hand, is the relationship of performance of the task to the potential outcomes that may be received by the worker as a result of performing the task. It may be defined as the workers belief that his performance of the task will lead to the receipt of a specific reward or outcome. An instrumentality of 0 indicates that there is absolutely no chance that the worker will receive the specific reward if he performs the specified task. An instrumentality of 1 indicates that the reward will be received every time the task is performed.
Rewards or outcomes is evaluated by its ability to satisfy the recipient’s needs. This ability is the valence of the reward and is defined as the anticipated satisfaction associated with the specific outcome. The satisfaction can only be determined after the outcome has been received. Thus, it is possible that a workers valance may be, positive, negative or neutral. When it is neutral it is viewed as neither having the ability to enhance nor prevent future satisfaction. An outcome that is negative on the other hand is perceived as eliminating current and preventing future satisfaction; while a positive valence indicates that the worker perceives the outcome as having a great ability to satisfy his needs.

Thus, the expectancy theory indicates that the more attractive the performance of a task, the more motivated the worker will be to perform it. Attractiveness is the expected value of anticipated satisfaction of the rewards or outcomes associated with the performance of a task. The greater the attractiveness, the stronger the motivational force on the worker.

IMPLEMENTING THE MODEL IN DEVELOPING COUNTRIES

One advantage developing countries have is to learn from developed countries and implement those lessons that have been proven to be effective. One such lesson from the United States is the realization that the development of the industry work force is a partnership between the stakeholders. Essentially, it is a partnership between the owners of construction and the constructors. If the owners expect quality projects to be completed on time and under budget, then they should be willing to work with constructors in developing the workforce required. Uwakweh (1999) has proposed that this partnership may be made possible through the organization of Local User Councils (LUC) or other similar arrangements that will bring all stakeholders together. Through this council, the industry can develop programs that will enhance the development of quality workforce. With a pool of quality workers in place, the next concern is how to motivate them to perform at an acceptable level.

The expectancy theory which was presented conceptually has three major variables, expectancy, instrumentality and valence that are critical in managing construction workers performance. Of these three variables, management has influence over expectancy and instrumentality, while the worker has influence over valence. The first important factor in implementing the expectancy model is the need for the industry or the Local User Council member to conduct a study to determine what factors are important to these workers and what they want from their job. This is where the engineering view of workers as a factor of production differs from human resource view which treats workers as being different from each other and come to jobs hoping to satisfy some needs.

Managing expectancy

Because expectancy deals with worker’s belief of being able to perform, contractors must seek to design jobs on sites that workers can accomplish. They should also provide these workers with tools, training and effective direction on site so that they can do their task. As an illustration, no matter how much belief a carpenter has on his ability to measure and cut lumber, if the carpenter is not provided with adequate cutting saw, it is virtually impossible for the him to perform that task successfully. Further, there are some workers who may have all the tools but need more instructions than others. In essence, management must focus on what workers need to perform their task.

Managing instrumentality

Workers come to their jobs expecting that if they perform they will receive some rewards. Therefore, management must make rewards contingent on performance. One of the problems in the developing countries
is a high degree of nepotism and subjective management. It is not uncommon for foremen or even managers to reward persons they know more than the others, even when they have not performed nearly as well as the others. The first assumption that is made in this recommendation is that wage rate must be published or provided to the worker before engaging him in the work. In other words, the rate should be well defined and not be a secret. Other types of rewards, in addition to adequate wages could be, retirement benefits, medical benefits, job security and paid vacations. These are examples, and may not be valid in all instances.

Another factor that should be treated with care is equity. When workers perceive that the reward system is not equitable and it is not related to performance, then it will act as a de-motivator. Rewards can be extrinsic or intrinsic. Rewarding workers may be as simple as praising workers for high performance. Constant use of negative extrinsic rewards such as criticism for poor performance may inhibit workers in performing effectively.

**Managing valences**

This is the factor that clearly distinguishes human resources as an effective method of motivating workers. If we define motivation as the force that will drive an individual to engage in a behavior, then, our goal should be to determine the forces that will drive workers to perform. To determine the forces, it is recommended that constructors should study workers either by survey or interview to identify what workers value most. While it is virtually impossible to have a system that will cater to each individual worker, this system however, will assist in determining the set of rewards that workers value. What is important is determining the rewards that can be implemented and linked to performance. For example, in the United States, wages are not motivational because workers must receive pay for showing up for work. Therefore, the concern in the United States is for those rewards that encourage worker performance beyond the minimum expectation. As an illustration a paid day off from work because of high performance may be more rewarding to a worker than extra pay. This is because, the worker may use the paid day off to attend to his personal needs or other obligations. While extra pay may be good, in this instance it fails to allow this worker to meet these needs.

**Future research**

This paper has presented a framework that is believed will help in motivating construction workers. It has analyzed the three major variables that are critical in motivating workers. What is now needed is an actual study of workers in the various developing countries. It is virtually impossible to study all the countries of the world but a regional study can provide some insight as to how best to motivate construction workers. For example, the study can be done by classifying the developing countries based on the level of income, population, infrastructure need and the gross product development (GPD). By this approach, it is possible to determine factors that will be germaine at the time. As an example, in predominant Moslem countries, it may be that Friday off is of more value to the Moslems for worship. In return, they may be willing to work either on Saturday or Sunday. What is obvious is that the findings in the developed countries may not be useful to developing countries because the needs of the workers in these countries are different. As an illustration construction workers in Nigeria do not have retirement benefits while their counterparts in the United States have such through either the firm they work for or through their union. Therefore, in Nigeria workers may view value retirement benefits as a motivator while in the United States, it is expected by law and hence may not lead the worker to perform at higher level.

There are several reasons why it is necessary to conduct these studies. Through these studies we hope to elevate the status of the construction industry and enhance construction workers performance. This is the key resource needed in the development of most economies.
REFERENCES
