

# Role of Management in Motivating Labor to Improve Labor Productivity

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**Abstract**—Labor productivity plays an important role in giving success to construction industry. However Labor productivity has decreased every year because of increasing complexity in construction projects. Many researchers hypothesized suitable motivation of labor as a key contributor to maximizing labor productivity. The aim of this research paper is to evaluate management role in maintaining motivation in labor to improve their productivity. To achieve this objective survey study was carried out at different construction sites of Pakistan and data were collected using a questionnaire. Data analysis was performed by using graphical and statistical techniques. The results indicate that management is not interested in motivation of their workers. Management claims that their company policies include motivational plans and that they provide supervision, better working environment and facilities etc. for motivation. But it was not found to be true when cross check with labor response. This study gives clear picture of role of management. The research conclusion and suggested recommendation will help management in judging themselves and diverting attention of management towards motivational factors to improve labor productivity.

**Index Terms**—labor motivation, labor productivity, management role, labor performance, Pakistan construction industry

## I. INTRODUCTION

Pakistan, a developing country, is currently experiencing a strong growth in construction activities [1]. Because of this the construction industry greatly contributes to Pakistan's gross domestic product and about 9% of Pakistan's workforce is associated with construction industry [2]. Therefore, construction in Pakistan is more labor intensive, involving 2.5-10 times as many workers per activity [3]. Productivity is one of the most important factors affecting the overall performance of any organization, large or small [4]. Construction productivity is influenced by many factors other than labor, including: material; equipment; tools; construction method; and management skills. However, these resources are inanimate, and meaningless if not

transformed into productive tools by the human element [5]. Labor productivity plays a key role in determining the financial success of a project. Therefore any improvement in labor productivity will contribute a high deal to the improvement of the overall productivity and improvement in the whole performance (cost, time, and quality) in construction industry [6]. One of the most important factors in improving labor productivity is the motivation of labor force. Suitable motivation of labor can be hypothesized as a key contributor to maximizing labor productivity [7]. It is management responsibility to motivate labor to drive out better work from them. Employees have higher levels of motivation when they perceive that management cares about their welfare, when they are involved in the management process, and when the management-labor environment is positive [8]. The work of Ref. [9] indicated ten motivation techniques which is practiced in Pakistani construction industry which include training, job security, wage increase etc. But not much importance is given to these techniques as the work progresses Owner and consultant concerns for deadlines become a priority [10]. Moreover the work of Ref. [11] indicates that there is large gap between perception of labor and management. Labors do not aware of their rights to have motivation from management. And on the other hand construction managers, however, often fail to realize the ramifications that even the smallest action can have on workers' attitude and motivation [12]. When workers lack motivation they tend to resort to anti-work behaviors such as absenteeism, negligence of duty, late-coming, failure to meet deadlines, display of open frustration and all these factors work negative to the performance and credibility of an organization [13]. Many researcher done different works to increase labor motivation but still there is need of more work which divert management towards those factors which enhance labor motivation. This research paper aim is to evaluate management role in motivating labor. This evaluation is done by using different motivational factors. Then the results are summarized in a form of tables and graphs. This study will help management in judging themselves and in

initiating motivation in labors which in turns increases productivity.

## II. RESEARCH OBJECTIVE AND SCOPE

In the light of above literature, the ultimate objective of this research paper is to evaluate management role in motivating labor to improve labor productivity.

This research is limited to building construction sites of Karachi and some sites of interior Sindh.

## III. RESEARCH SIGNIFICANCE

Since no accurate information regarding the motivation application in the Pakistan construction industry was available. It is expected that this study will provide some empirical data to evaluate role of management in providing motivation, which will aid in developing motivation in labor which in return enhance productivity in Pakistani Construction Industry.

## IV. RESEARCH METHODOLOGY

The research methodology consisted of the following steps:

- This research commenced by reviewing the relevant literature.
- To achieve above objective questionnaire was developed.
- Team development and conduction of site observation surveys at selected sites.
- Research analysis and developing conclusions and recommendations.

In the first step, literature review was done to find out the relevant information about labor motivation and to develop observation questionnaire for survey.

This was followed by designing of questionnaire. The questionnaire comprises of 18 questions which check management role in motivating labors. These questions are grouped into four different motivational major factors which include: (1) Organizational factors; (2) Work Environment Factor; (3) Money Factor and (4) Facilities Factor. These questions statement are changed into factors in analysis part for discussing each of them. Respondents were asked to endorse the statements of questionnaire using a five-point Likert-type scale (from 1= "strongly disagree" to 5= "strongly agree". Appendix A give questionnaire detail which is summarized below in Table I:

TABLE I. DETAIL OF SURVEY QUESTIONNAIRE

S. No.	Motivational Factors of Questionnaire	Survey Questions
1	Organizational factors	4
2	Work Environment Factor	4
3	Money Factor	4
4	Facilities Factor	6
Total		18

In the third step, survey was undertaken by a team that collected data from different construction sites of Karachi and interior Sindh. The survey covered 60 sites in total

From each site 1 management respondent filled questionnaire and same questionnaire was asked by 5 labors to cross check management response is right or not. Table II gives number of questionnaires and Fig. 1 shows valid respondents numbers.

TABLE II. NO. OF QUESTIONNAIRE

Questionnaires	floatated	360
	received	300
	valid	300
Response rate		83.3%

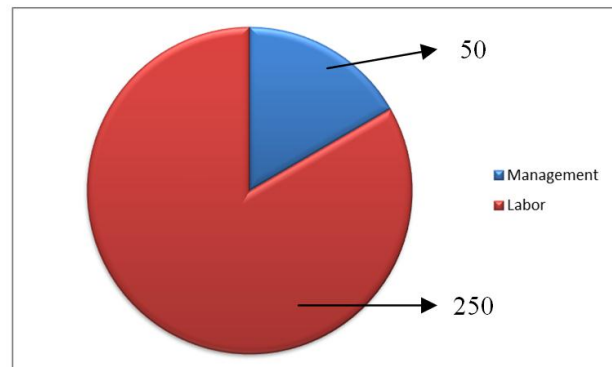


Figure 1. Respondents numbers

To obtain correct information, we deal with different experience holding management respondents. Both skilled and unskilled labor responses were taken and they were within different experience ranges. These are summarized below in Table III, IV and V.

TABLE III. MANAGEMENT RESPONDENTS EXPERIENCE

Experience	No. of Respondents
<5	15
5-10	8
10-15	7
15-20	15
>20	5
Total	50

TABLE IV. NO. OF LABOR RESPONDENTS

Labor	No. of Respondents
Skilled	100
Unskilled	150
Total	250

TABLE V. NO. OF LABOR RESPONDENTS

Experience	No. of Respondents
<5	100
5-10	70
10-15	45
15-20	20
>20	15
Total	250

Finally analysis was done on collected data and conclusions and recommendations were drawn.

## V. ANALYSIS AND DISCUSSION

The data received was found valid for the analysis.

The data was then analyzed utilizing Excel and SPSS (Statistical Package for Social Science) version 17.0. The tests conducted include:

- Checking of reliability of data by Cronbach's Coefficient Alpha.
- Analysis of different motivational factor using graphs.
- Shapiro Wilk Test to Check Normality of data.
- Kruskal Wallis Test to check management role.

### A. Data Reliability and Validity

Prior to data analysis, the reliability and validity of data was assessed using Cronbach's Coefficient Alpha Method, which is commonly used as an estimate of the reliability of data. Reliability scores of data obtain from both management and labor responses indicate adequate internal consistency. The Cronbach's alpha obtained for both respondents data is listed in Table VI. All data have acceptable values, as a value of 0.70 is usually accepted as the minimum desired value of the Cronbach's alpha [14].

TABLE VI. RELIABILITY STATISTICS

Questionnaire	Cronbach's Alpha	N of Items
Labor	0.78	18
Management	0.851	18

### B. Interpretation of Motivational Factors

The major interest of this research paper is to judge management role in maintaining motivation in labors. Graphs regarding factors influencing motivation are shown in Fig. 2 to Fig. 7.

#### 1) Organizational factor

The first motivational factor is named as organizational factor. This factor includes four questions which are given in Table VII with management response percentages.

TABLE VII. ORGANIZATIONAL FACTORS

S. No.	Organizational Factor	Response %
1	Motivational plans	75
2	Labor recognition	60
3	Participation decision making	20
4	labor productivity	90

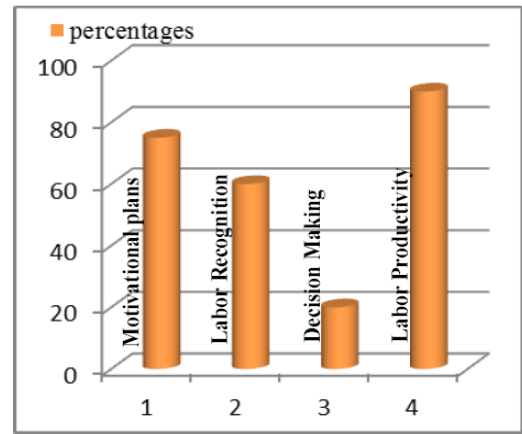


Figure 2. Organization motivational factors

In Fig. 2 management responses indicate that 75% of organizations claim that motivation plans are part of their company policy.

Moreover labor recognition which is an important motivational factor is given by 60% organization.

Participation of labor in decision making is not important for management while on the other hand 90% responses admit that motivation increase labor productivity.

#### 2) Environmental factor

The second motivational factor is environmental factor. The results are summarized below in Table VIII and Fig. 3 and Fig. 4.

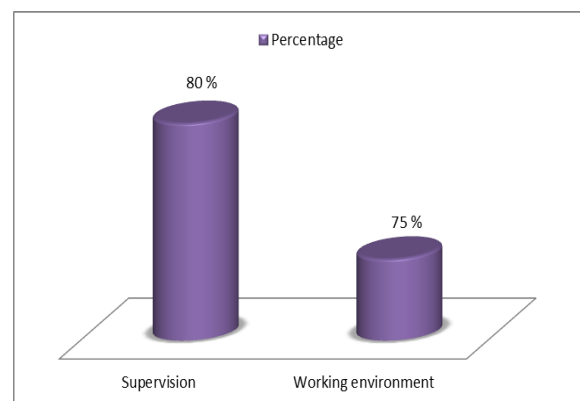


Figure 3. Supervision and working environment motivator

When the environmental factors were judged management claims that they provide good supervision

on sites to motivate labors and their workers work in good environment.

TABLE VIII. ENVIRONMENTAL FACTORS

S. No.	Environmental Factor	Response %
1	Supervision	80
2	Working environment	75
3	Right to choose work mate	15
4	Good relationship	65

Most of the management said good working relationship is necessary for motivation while on the other hand only 15% of management responses showed that labor don't have right to choose their working mates.

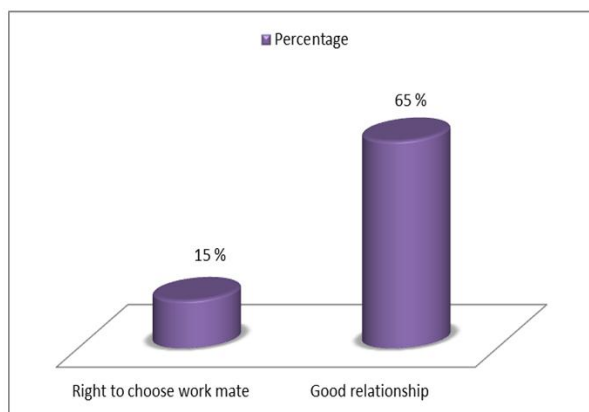


Figure 4. Work mate and relationship motivator

### 3) Money factor

The third motivational factor is Money. The third motivational factor is Money Factor. Ref. [15] claimed that money was the only motivator for construction workers. Table IX and Fig. 5 showed that in Pakistan where cheap labor is available the construction management lacks this motivational factor in their organization.

TABLE IX. MONEY FACTORS

S. No.	Money Factor	Response %
1	High wages	5
2	Performance reward	10
3	On time payment	79
4	Financial support	5

79% of the management responses stated that they provide on time payment. On time payment is helpful motivator to increase labor productivity but these payments are not sufficient. Only 5% management claimed that they provide high wage. Similarly not much attention is given to performance reward and financial support motivator factor.

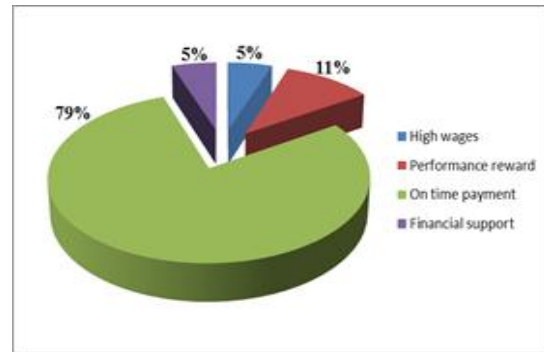


Figure 5. Money motivational factors

### 4) Facility factor

The last motivation factor to evaluate role of management is facility factor. Below Table X comprises of list of facilities and results in percentage.

TABLE X. FACILITIES FACTOR

S. No.	Facilities Factor	Response %
1	Job Security	20
2	Education/Training	5
3	Resident	20
4	Food	15
5	Medical	3
6	Transport	15

20 % management claimed that they provide job security while 80% respondents not have job security. Those organizations which provide security identify that when labor feel secure they work with full motivation and in return this increase productivity. See Fig. 6.

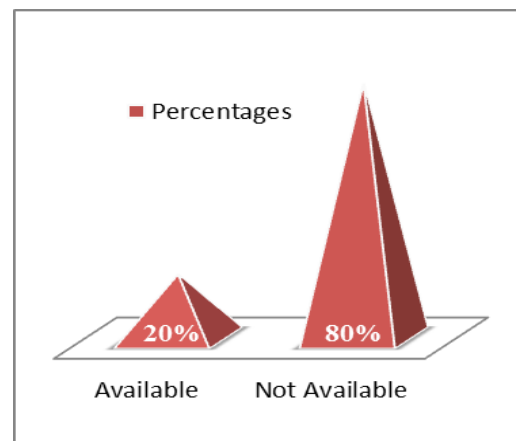


Figure 6. Job security availability by management

Other basic facilities like education, resident, canteen and medical also enhance motivation of labors. The response percentage in Table X shows that all facilities

one is not available by most of the management. See Fig. 7.

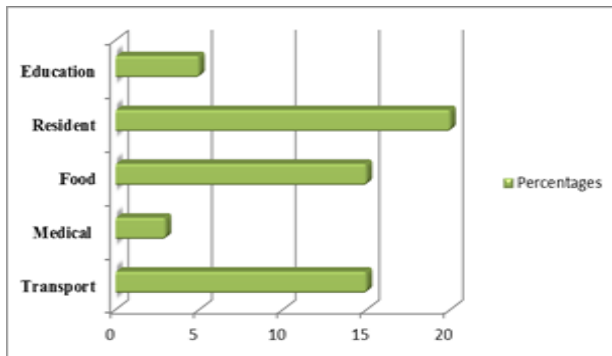


Figure 7. Environmental motivational factors

### C. Normality Test

Shapiro Wilk Test is performed to check whether the data was normal or not and this test was done on sample size  $\leq 2000$ . The null hypothesis ( $H_0$ ) for the test was that the data follows the normal distribution and is rejected if the result is significant (significance value  $\leq 0.05$  means that data is not normally distributed.)

Our data was found to be not normally distributed. So non parametric tests, like Kruskal Wallis Test can be performed for further analysis.

### D. Kruskal Wallis Test

This test was done to check whether management claims about providing motivation to labors is right or not. If significance value  $> 0.05$ , it means stakeholders have similar response and management claims are right.

For this test, mean of 5 labor questionnaire was taken for each site. Then 50 labors and 50 management responses were analyzed.

The result showed significance value  $> 0.05$  for most of the factors. This indicate that management claim about not providing motivation factors like high wage, job security, education etc. is true as the labor also not observed any motivational factor by management. Furthermore both respondents agree on the concept that labor productivity enhance by motivation as the productivity factor is highly significant.

Those factors which found to be less significant are summarized in Table XI.

TABLE XI. RESULT OF KRUSKAL WALLIS TEST

S. No.	Less Significant Factors	Significance Value
1	Motivational plans	0.00
2	Labor recognition	0.019
3	Supervision	0.03
4	Working environment	0.028

Company's management admit that their company policy include motivational plans to improve productivity of labors. But labor respondents were asked about these plans they response that they even don't know about company policy.

Moreover claim of providing of good supervision and good working environment also found to be not true. Labor responses also inform that there is no sort of labor reorganization on work places.

## VI. CONCLUSION

This study of evaluation of management role concludes:

- Motivation factors which are helpful in improving labor productivity are not provided by management.
- Management claims that their company policies include motivational plans but this not found to be right when same question was asked to labors. Labor response showed they are not aware of any policies given by the management.
- They want full labor productivity during work to meet deadlines etc. but found non-interested in motivating labors.
- Due to availability of cheap labor in Pakistan they not give any importance to money factor.
- Basic motivational facilities like transport, availability of security, residence, canteen also not found in many organizations. This again shows lack of management interest in enhancing motivational factors for labor productivity.
- Although, the management is seem to be contributing better towards providing of good supervision, good working environment etc. but when cross check with labor responses has been done it's evident that management response is found to be not true. This has resulted in lack of labor involvement, poor labor productivity and failure to meet deadline.

### Recommendations

The results could be used for the betterment of construction industry. Management should realize the importance of motivation.

- Management should provide supervision with good working environment. They should also provide labor recognition so to improve their productivity.
- There should be periodic training programs to enhance labor skill and interest in job.
- Management should increase labors wage rate, should reward them and should also give them bonuses. Moreover some financial aid should be given to labors. In this way they will take interest in their job and in returns productivity improves.
- More research should be done in this area. This study will further be conducted to develop a SEM model using factor analysis technique and AMOS software.

## APPENDIX A QUESTIONNAIRE DETAIL

<u>Survey Title:</u> Role Of Management In Motivating Labor To Improve Labor Productivity					
<u>CONFIDENTIAL STATEMENT</u>					
All information you provide will be kept strictly confidential. Your name or other identifying information will not appear on any research work—all results will be reported as statistical summaries only.					
<u>Instructions:</u> Please take a look at the following questionnaire and, based on your experience try to answer correctly and accurately.					
Part A: Respondent's information					
Name (optional)					
Company Name					
Year in this organization	<input type="checkbox"/> Less than 5	<input type="checkbox"/> 5-10	<input type="checkbox"/> 11-20	<input type="checkbox"/> 21-30	<input type="checkbox"/> Above 30
Experience	<input type="checkbox"/> Less than 5	<input type="checkbox"/> 5-10	<input type="checkbox"/> 11-20	<input type="checkbox"/> 21-30	<input type="checkbox"/> Above 30
Qualification	<input type="checkbox"/> Masters	<input type="checkbox"/> Bachelors	<input type="checkbox"/> B-Tech	<input type="checkbox"/> D.A.E.	<input type="checkbox"/> Intermediate
Job					
Sample Response: Similar response should be provided (with any degree of agreement) for upcoming statements in the questionnaire.					
1	2	3	4	5	
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Your senior management takes safety seriously.				1	2
				3	4
				5	

Factors		RATING (1= strongly disagree & 5= strongly agree)				
		1	2	3	4	5
<b>Organizational factors:</b>						
1.	Motivational plans and activities are part of company policy	1	2	3	4	5
2.	Labor are given recognition on the job	1	2	3	4	5
3.	Labor get participation in decision making by organization	1	2	3	4	5
4.	Motivation by management increase labor productivity	1	2	3	4	5
<b>Work Environment Factor:</b>						
5.	Good supervision is provided on working places	1	2	3	4	5
6.	Good working environment is set by management	1	2	3	4	5
7.	Labor have right to choose workmate	1	2	3	4	5
8.	Good relationship is necessary for motivation	1	2	3	4	5
<b>Money Factor:</b>						
9.	Higher wages are given by management to increase motivation in labor	1	2	3	4	5
10.	Management provide any performance reward	1	2	3	4	5
11.	On time payment is given by management	1	2	3	4	5
12.	There is any sort of financial help by management	1	2	3	4	5
<b>Facilities Factor:</b>						
13.	Job security is provided to labor	1	2	3	4	5
14.	Education and Training of labor are done by management	1	2	3	4	5
15.	Residential facility is available in organization	1	2	3	4	5
16.	Canteen/Food providing facility is present in organization	1	2	3	4	5
17.	Medical care is given to labors	1	2	3	4	5
18.	Transport facilities are part of organization.	1	2	3	4	5

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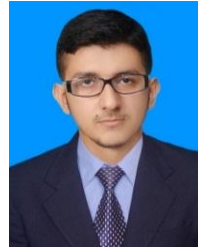
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