



A Study On Factors Affecting The Labour Productivity In Construction Industry

Kirubananthan.R.*1

*1 PG Student, Construction Engineering and Management, Mahendra Institute of Engineering and Technology, Namakkal, Tamil Nadu, India

Vinoth.#2

2 Assistant Professor, Department of Civil Engineering, Mahendra Institute of Engineering and Technology, Namakkal, Tamil Nadu, India

Abstract

Labour is an important component of construction industry. Labour in construction industry would be defined as all workforces involved to carryout construction activities. Labour organizes Materials and Equipment and plays key role in productivity. Good productivity results in good performance of the project. Poor productivity of construction labours is one of the causes of cost and time increase in construction projects. As construction is a labour-based industry, this project focuses on labour productivity in the construction industry. Labour productivity analysis is very important in construction industry of our country, where most of the works is still on manual basis. The aim of this study was to identify the factors affecting labour productivity on the basis of questionnaires administered to the engineers. The questionnaires were distributed to twenty construction companies. Then, the analysis of questionnaire was carried out by important index, frequency index & severity index and ranks the factors according to the severity index value. In this project the labour productivity factors are categorized into fifteen groups. This study covers the construction labour productivity definitions, aspects, identifying factors causing variation of productivity and providing solutions to solve the factors affecting productivity in day to day activities. This study provides necessary guidelines required to improve construction labour productivity.

Keywords: *labour productivity, productivity, factors affecting labour, indentifying factors, severity index.*

Introduction

Construction is a key sector of the national economy for countries all around the world, as traditionally it took up a big portion in nation's total employment and its significant contribution to a nation's revenue as whole. However, until today, construction industry is still facing number of problems regarding the low productivity, poor safety and in sufficient quality. So productivity improvement is essential for every organization.

Understanding about productivity has always been a very important issue in the construction industry. Productivity is the one of the most important factor that affects overall performance of any small or medium or large construction industry. There are number of factors that directly affect the productivity of construction industry. Productivity has now becomes an everyday watchword. There are many factors that affect the labour productivity both directly and indirectly. So it is necessary to identify those factors and take necessary steps to improve labour productivity. If the productivity improves, it saves cost and time of the project and results in better performance of the project.



The word productivity is defined as “faculty to produce” by the changes of time the modification was made in the definition “the relationship between output and means employed to produce that output” was developed.

At the project site, contractors are defined productivity in terms of labour productivity and in the following ways-

Labour productivity = OUTPUT/LABOUR COST

Or

Labour productivity = OUTPUT/WORKHOUR

There is no standard definition of productivity and some contractors use the inverse of above,

Labour productivity = (LABOURCOST/WORKHOUR)/OUTPUT

The most accepted definition of productivity is the quantity of work done per labour hour. This definition of productivity is used in this study. It is expressed as,

Productivity= Q/T

Where, Q= Quantity of work done in a day

T= Total number of labours X Total working hours

Objective

The following are the main objectives of the study:

- To identify the factors affecting labour productivity.
- To analyze and calculate important index, frequency index & severity index of those factors.
- To identify the current scenario followed in human resource management in construction industry.
- To study the impact of human resource management in construction labour productivity.
- To improve labour productivity through other resources in construction industry.
- To provide solutions to contractor/manager for efficient utilization of labour.
- To reduce/eliminate unnecessary labour cost incurred by variation in productivity.
- To stop the delay in progress of work caused by low productivity.
- To provide recommendations to improve productivity.

Methodology

Methodology adopted for the study

The major processes which are involved in conducting this study are shown in figure 3.1. The preliminary insight of the subject data for this study has been collected through a literature

review. On the basis of literature study, definition and different problems which contributes in lowering the labour productivity was derived.

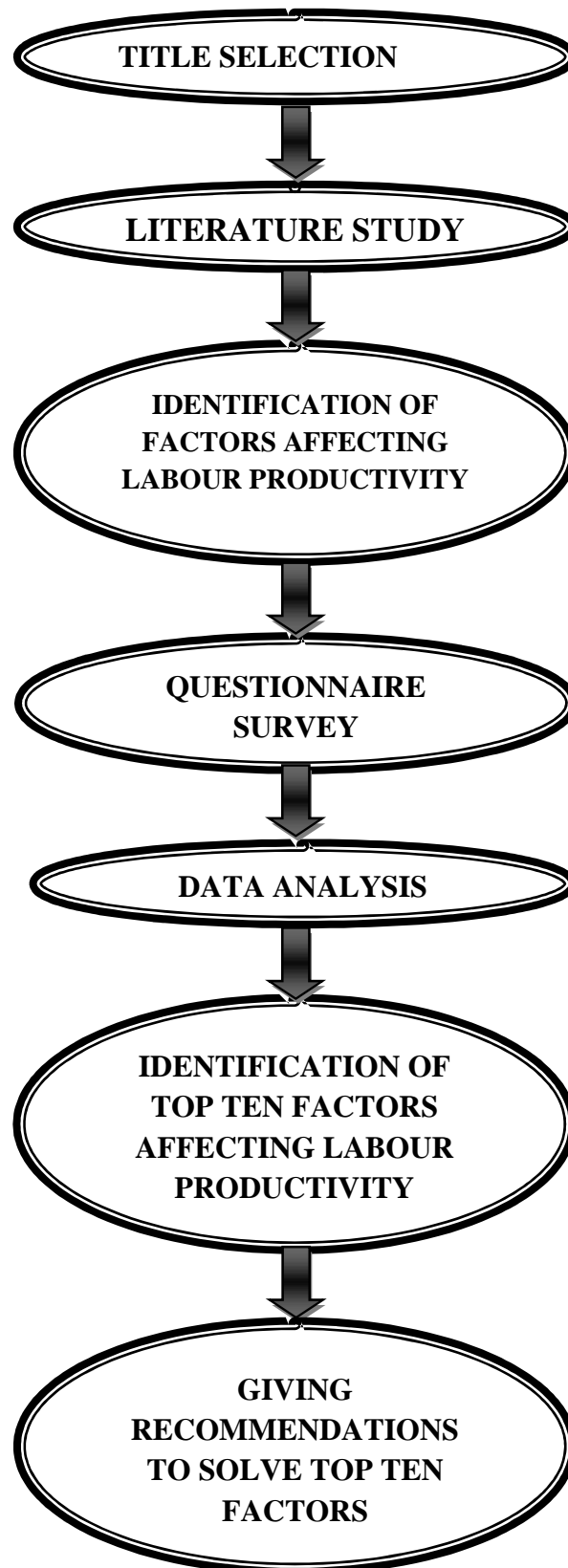


Figure 3.1 Methodology flow chart**Analysis methodology**

1. The factors shall be taken from relevant literature, as well as from the practical experience also.

2. The “important index” was derived for each factor for following formula,

$$\text{Important index} = (5n_1 + 4n_2 + 3n_3 + 2n_4 + n_5) / 5(n_1 + n_2 + n_3 + n_4 + n_5)$$

Where, n_1 = the number of respondents who answered “very high”.

n_2 = the number of respondents who answered “high”.

n_3 = the number of respondents who answered “medium”.

n_4 = the number of respondents who answered “low”.

n_5 = the number of respondents who answered “very low”.

3. The “frequency index” for each factor was derived from the following formula,

$$\text{Frequency index} = (3n_1 + 2n_2 + n_3) / 3(n_1 + n_2 + n_3)$$

Where, n_1 = the number of respondents who answered “high”.

n_2 = the number of respondents who answered “medium”.

n_3 = the number of respondents who answered “low”

4. The severity index is used to rank the overall effect of each factor or reason on labour productivity and is given by formula

$$\text{“Severity index”} = (\text{important index}) \times (\text{frequency index})$$

5. After that rank the factor according to the severity index. The higher value of severity index is ranked as first and same as on.

Survey results analysis

For the analysis of factors important index, frequency index & severity index of each factor is founded out and rank them as the higher value of severity index is ranked as first and same as on. After going to processing the information from the questionnaires, some clear trends were observed with respect to the main factors influencing labour productivity. It defines the severity index to state the ranking of the most relevant influence items. For this ranking analysis 97



factors are considered grouped under 15 categories and these factors were taken from different

FACTORS IDENTIFIED	RATING SCALE	IMPORTANT INDEX
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literature review.

Calculation of Important Index of each factor



	VH	H	M	L	VL	
I. MANPOWER FACTORS						
1. Absenteeism & Dullness						
· Personal problems/psychological problems	3	6	6	5	0	0.67
· Social factors (festivals)	5	5	7	1	2	0.7
· Physical fatigue (tired of overtime work & continuous work)	4	4	7	5	0	0.67
· Boredom with job	0	4	6	9	1	0.53
· Simply not working	2	3	8	2	5	0.55
· Lack of responsibility & carelessness	2	5	8	4	1	0.63
· Feeling Discomfort	1	2	7	5	5	0.49
· Health problems	0	1	8	8	3	0.47
· Treating the labour	0	6	5	4	5	0.52
· Unproductive time (interval delay, extra time, waiting, relaxations)	2	3	11	4	0	0.63
2. Use of alcohol & drugs	2	6	5	4	3	0.6
3. Lack of training	4	6	4	5	1	0.67
4. Increased age of labour	2	3	8	5	2	0.58
5. Better wages, better working & safety conditions elsewhere	0	7	9	3	1	0.62
6. Fear (While working at high places, fear about accidents, etc.,)	3	4	7	5	1	0.63
7. Mishandling of equipment & materials	0	5	8	7	0	0.58
8. Working time	1	6	6	6	1	0.6
9. Cultural difference among workers	0	2	9	7	2	0.51
10. Work satisfaction	0	4	12	4	0	0.6
II. MANAGERIAL FACTORS						



1. Staff Oriented						
· Inadequate Site Staffs						
i. supervisors/site engineers	5	3	9	2	1	0.69
ii. safety engineers	2	3	9	4	2	0.59
· Staff Absenteeism	1	1	12	2	4	0.53
2. Labour Oriented						
· Lack of experienced & skilled labours	4	5	7	4	0	0.69
· Labour shortage	3	6	7	4	0	0.68
· Recruitment of extra labour	1	5	7	4	3	0.57
3. Organization Oriented						
· Centralised decision making	0	5	11	3	1	0.6
· Improper resource management	0	7	8	5	0	0.62
· Lack of leadership (of contractor/manager to organize activities)	4	5	5	5	1	0.66
· Poor site management	1	7	5	5	2	0.6
4. Consultant & Client Oriented						
· Unrealistic deadline for project completion set by client	1	9	5	5	0	0.66
· Delay in getting verification of work from consultant	1	7	7	5	0	0.64
5. Use of old equipment/methods	0	6	7	5	2	0.57
6. Change orders	3	6	6	5	0	0.67
III. SAFETY FACTORS						
1. No safety precautions	2	6	6	3	3	0.61
2. Ignoring safety precautions						
· Minor accidents (Injuries)	1	5	9	4	1	0.61
· Major accidents (Hospitalizing accidents)	0	5	5	5	5	0.5



IV. QUALITY FACTORS						
1. Rework						
· Low quality of raw materials	2	5	6	4	3	0.59
· Low quality of work done	1	8	4	4	3	0.6
· Construction errors	2	3	7	5	3	0.56
2. Quality inspection delay	2	4	7	5	2	0.59
3. No tendency of doing work with quality	0	5	10	2	3	0.57
V. FINANCIAL FACTORS						
1. Nonpayment or Delayed payment or Partial payment to						
· Workers by contractors	2	4	5	6	3	0.56
· Contractor by client	2	4	11	3	0	0.65
· Material suppliers by contractors	1	6	7	4	2	0.6
2. Financial incapability of contractor and client	1	6	10	2	1	0.64
VI. CO-ORDINATION FACTORS						
1. Lack of co-ordination						
· Among labours	3	2	6	8	1	0.58
· Between labour and supervisor/site engineer/safety engineer/manager	2	3	8	5	2	0.58
· Between contractor and consultant	2	5	7	4	2	0.61
· Between contractor and client	2	3	8	5	2	0.58
2. Disputes						
· Among labours	1	3	8	5	3	0.54
· Between labour and supervisor/site engineer/safety engineer/manager	1	2	9	5	3	0.53
3. Communication problems						
· Miscommunication	1	3	8	6	2	0.55



· Improper communication	2	3	8	7	0	0.6
· Lack of communication	3	7	4	3	3	0.64
VII. SUPERVISION FACTORS						
1. No supervision	3	7	4	3	3	0.64
2. Supervision delay	2	5	6	5	2	0.6
3. Inadequate supervision						
· No supervision or continuous supervision	3	2	6	3	6	0.53
· Incapability of supervisor/site engineer	3	1	8	6	2	0.57
VIII. SCHEDULE FACTORS						
1. No schedule	2	4	7	3	4	0.57
2. Variation or discontinuity of schedule	1	5	10	4	0	0.63
3. Tendency of contractor/manager to follow the schedule	1	4	10	2	3	0.58
IX. EXTERNAL FACTORS						
1. Getting approval from government authorities	4	3	8	2	3	0.63
X. DESIGN FACTORS						
1. Design changes	2	3	10	3	2	0.6
2. Difficult designs	0	5	3	8	4	0.49
3. Incomplete drawings	2	3	7	6	2	0.57
4. Non clarity of technical specifications	1	5	4	7	3	0.54
5. Inaccurate designs	0	5	8	5	2	0.56
6. Late issuance of drawings	1	1	9	7	2	0.52
XI. MOTIVATION FACTORS						
1. Lack of motivation to labour	5	6	7	0	2	0.72
XII. MATERIAL FACTORS						



1. Material shortage	2	6	9	2	1	0.66
2. Delayed supply of materials	3	10	1	4	2	0.68
3. Non availability or low availability of materials in work place	2	8	7	1	2	0.67
4. Unsuitability of storage location	5	5	6	3	1	0.7
XIII. EQUIPMENT/TOOL FACTORS						
1. Old and inefficient Equipment	2	9	6	3	0	0.7
2. Equipment shortage	1	10	6	3	0	0.69
XIV. ENVIRONMENTAL FACTORS						
1. Rain	4	1	11	3	1	0.64
2. Soil condition	1	5	9	4	1	0.61
3. High temperature	4	5	10	1	0	0.72
4. Snowfall	0	3	6	2	9	0.43
XV. SITE CONDITIONS						
1. Poor site facilities	1	7	10	1	1	0.66
2. Improper lighting	0	5	12	3	0	0.62
3. Harsh working conditions	1	3	10	5	1	0.58
4. Site congestion	1	2	12	4	1	0.58
5. Site location/access	2	2	10	6	0	0.6

Calculation of Frequency Index of each factor



FACTORS IDENTIFIED	RATING SCALE			FREQUENCY INDEX
	H	M	L	
I. MANPOWER FACTORS				
1. Absenteeism & Dullness				
· Personal / psychological problems	6	6	5	0.69
· Social factors (festivals)	5	7	1	0.77
· Physical fatigue (tired of overtime work & continuous work)	4	7	5	0.65
· Boredom with job	4	6	9	0.58
· Simply not working	3	8	2	0.69
· Lack of responsibility & carelessness	5	8	4	0.69
· Feeling Discomfort	2	7	5	0.60
· Health problems	1	8	8	0.53
· Treating the labour	6	5	4	0.71
· Unproductive time (interval delay, extra time, waiting, relaxations)	3	11	4	0.65
2. Use of alcohol & drugs	6	5	4	0.71
3. Lack of training	6	4	5	0.69
4. Increased age of labour	3	8	5	0.63
5. Better wages, better working & safety conditions elsewhere	7	9	3	0.74
6. Fear (While working at high places, fear about accidents, etc.,)	4	7	5	0.65
7. Mishandling of equipment & materials	5	8	7	0.63
8. Working time	6	6	6	0.67
9. Cultural difference among workers	2	9	7	0.57
10. Work satisfaction	4	12	4	0.67
II. MANAGERIAL FACTORS				



1. Staff Oriented				
· Inadequate Site Staffs				
i. supervisors/site engineers	3	9	2	0.69
ii. safety engineers	3	9	4	0.65
· Staff Absenteeism	1	12	2	0.64
2. Labour Oriented				
· Lack of experienced & skilled labours	5	7	4	0.69
· Labour shortage	6	7	4	0.71
· Recruitment of extra labour	5	7	4	0.69
3. Organization Oriented				
· Centralised decision making	5	11	3	0.70
· Improper resource management	7	8	5	0.70
· Lack of leadership (of contractor/manager to organize activities)	5	5	5	0.67
· Poor site management	7	5	5	0.71
4. Consultant & Client Oriented				
· Unrealistic deadline for project completion set by client	9	5	5	0.74
· Delay in getting verification of work from consultant	7	7	5	0.70
5. Use of old equipment/methods	6	7	5	0.69
6. Change orders	6	6	5	0.69
III. SAFETY FACTORS				
1. No safety precautions	6	6	3	0.73
2. Ignoring safety precautions				
· Minor accidents (Injuries)	5	9	4	0.69
· Major accidents (Hospitalizing accidents)	5	5	5	0.67



IV. QUALITY FACTORS				
1. Rework				
· Low quality of raw materials	5	6	4	0.69
· Low quality of work done	8	4	4	0.75
· Construction errors	3	7	5	0.62
2. Quality inspection delay	4	7	5	0.65
3. No tendency of doing work with quality	5	10	2	0.73
V. FINANCIAL FACTORS				
1. Nonpayment or Delayed payment or Partial payment to				
· Workers by contractors	4	5	6	0.62
· Contractor by client	4	11	3	0.69
· Material suppliers by contractors	6	7	4	0.71
2. Financial incapability of contractor and client	6	10	2	0.74
VI. CO-ORDINATION FACTORS				
1. Lack of co-ordination				
· Among labours	2	6	8	0.54
· Between labour and supervisor/site engineer/safety engineer/manager	3	8	5	0.63
· Between contractor and consultant	5	7	4	0.69
· Between contractor and client	3	8	5	0.63
2. Disputes				
· Among labours	3	8	5	0.63
· Between labour and supervisor/site engineer/safety engineer/manager	2	9	5	0.60
3. Communication problems				
· Miscommunication	3	8	6	0.61
· Improper communication	3	8	7	0.59



· Lack of communication	7	4	3	0.76
VII. SUPERVISION FACTORS				
1. No supervision	7	4	3	0.76
2. Supervision delay	5	6	5	0.67
3. Inadequate supervision				
· No supervision or continuous supervision	2	6	3	0.64
· Incapability of supervisor/site engineer	1	8	6	0.56
VIII. SCHEDULE FACTORS				
1. No schedule	4	7	3	0.69
2. Variation or discontinuity of schedule	5	10	4	0.68
3. Tendency of contractor/manager to follow the schedule	4	10	2	0.71
IX. EXTERNAL FACTORS				
1. Getting approval from government authorities	3	8	2	0.69
X. DESIGN FACTORS				
1. Design changes	3	10	3	0.67
2. Difficult designs	5	3	8	0.60
3. Incomplete drawings	3	7	6	0.60
4. Non clarity of technical specifications	5	4	7	0.63
5. Inaccurate designs	5	8	5	0.67
6. Late issuance of drawings	1	9	7	0.55
XI. MOTIVATION FACTORS				
1. Lack of motivation to labour	6	7	0	0.82
XII. MATERIAL FACTORS				
1. Material shortage	6	9	2	0.75
2. Delayed supply of materials	10	1	4	0.80
3. Non availability or low availability of materials	8	7	1	0.81



in work place				
4. Unsuitability of storage location	5	6	3	0.71
XIII. EQUIPMENT/TOOL FACTORS				
1. Old and inefficient Equipment	9	6	3	0.78
2. Equipment shortage	10	6	3	0.79
XIV. ENVIRONMENTAL FACTORS				
1. Rain	1	11	3	0.62
2. Soil condition	5	9	4	0.69
3. High temperature	5	10	1	0.75
4. Snowfall	3	6	2	0.70
XV. SITE CONDITIONS				
1. Poor site facilities	7	10	1	0.78
2. Improper lighting	5	12	3	0.70
3. Harsh working conditions	3	10	5	0.63
4. Site congestion	2	12	4	0.63
5. Site location/access	2	10	6	0.59

Calculation of Severity Index of each factor



FACTORS IDENTIFIED	IMPORTANT INDEX	FREQUENCY INDEX	SEVERITY INDEX
I. MANPOWER FACTORS			
1. Absenteeism & Dullness			
· Personal/psychological problems	0.67	0.69	0.46
· Social factors (festivals)	0.7	0.77	0.54
· Physical fatigue (tired of overtime work & continuous work)	0.67	0.65	0.43
· Boredom with job	0.53	0.58	0.31
· Simply not working	0.55	0.69	0.38
· Lack of responsibility & carelessness	0.63	0.69	0.43
· Feeling Discomfort	0.49	0.60	0.29
· Health problems	0.47	0.53	0.25
· Treating the labour	0.52	0.71	0.37
· Unproductive time (interval delay, extra time, waiting, relaxations)	0.63	0.65	0.41
2. Use of alcohol & drugs	0.6	0.71	0.43
3. Lack of training	0.67	0.69	0.46
4. Increased age of labour	0.58	0.63	0.36
5. Better wages, better working & safety conditions elsewhere	0.62	0.74	0.46
6. Fear (While working at high places, fear about accidents, etc.,)	0.63	0.65	0.41
7. Mishandling of equipment & materials	0.58	0.63	0.37
8. Working time	0.6	0.67	0.40
9. Cultural difference among workers	0.51	0.57	0.29
10. Work satisfaction	0.6	0.67	0.40
II. MANAGERIAL FACTORS			



1. Staff Oriented			
· Inadequate Site Staffs			
i. supervisors/site engineers	0.69	0.69	0.48
ii. safety engineers	0.59	0.65	0.38
· Staff Absenteeism	0.53	0.64	0.34
2. Labour Oriented			
· Lack of experienced & skilled labours	0.69	0.69	0.47
· Labour shortage	0.68	0.71	0.48
· Recruitment of extra labour	0.57	0.69	0.39
3. Organization Oriented			
· Centralised decision making	0.6	0.70	0.42
· Improper resource management	0.62	0.70	0.43
· Lack of leadership (of contractor/manager to organize activities)	0.66	0.67	0.44
· Poor site management	0.6	0.71	0.42
4. Consultant & Client Oriented			
· Unrealistic deadline for project completion set by client	0.66	0.74	0.49
· Delay in getting verification of work from consultant	0.64	0.70	0.45
5. Use of old equipment/methods	0.57	0.69	0.39
6. Change orders	0.67	0.69	0.46
III. SAFETY FACTORS			
1. No safety precautions	0.61	0.73	0.45
2. Ignoring safety precautions			
· Minor accidents (Injuries)	0.61	0.69	0.42
· Major accidents (Hospitalizing)	0.5	0.67	0.33



accidents)			
IV. QUALITY FACTORS			
1. Rework			
· Low quality of raw materials	0.59	0.69	0.41
· Low quality of work done	0.6	0.75	0.45
· Construction errors	0.56	0.62	0.35
2. Quality inspection delay	0.59	0.65	0.38
3. No tendency of doing work with quality	0.57	0.73	0.41
V. FINANCIAL FACTORS			
1. Nonpayment or Delayed payment or Partial payment to			
· Workers by contractors	0.56	0.62	0.35
· Contractor by client	0.65	0.69	0.45
· Material suppliers by contractors	0.6	0.71	0.42
2. Financial incapability of contractor and client	0.64	0.74	0.47
VI. CO-ORDINATION FACTORS			
1. Lack of co-ordination			
· Among labours	0.58	0.54	0.31
· Between labour and supervisor/site engineer/safety engineer/manager	0.58	0.63	0.36
· Between contractor and consultant	0.61	0.69	0.42
· Between contractor and client	0.58	0.63	0.36
2. Disputes			
· Among labours	0.54	0.63	0.34
· Between labour and supervisor/site engineer/safety engineer/manager	0.53	0.60	0.32



3. Communication problems			
· Miscommunication	0.55	0.61	0.33
· Improper communication	0.6	0.59	0.36
· Lack of communication	0.64	0.76	0.49
VII. SUPERVISION FACTORS			
1. No supervision	0.64	0.76	0.49
2. Supervision delay	0.6	0.67	0.40
3. Inadequate supervision			
· No supervision or continuous supervision	0.53	0.64	0.34
· Incapability of supervisor/site engineer	0.57	0.56	0.32
VIII. SCHEDULE FACTORS			
1. No schedule	0.57	0.69	0.39
2. Variation or discontinuity of schedule	0.63	0.68	0.43
3. Tendency of contractor/manager to follow the schedule	0.58	0.71	0.41
IX. EXTERNAL FACTORS			
1. Getting approval from government authorities	0.63	0.69	0.44
X. DESIGN FACTORS			
1. Design changes	0.6	0.67	0.40
2. Difficult designs	0.49	0.60	0.30
3. Incomplete drawings	0.57	0.60	0.34
4. Non clarity of technical specifications	0.54	0.63	0.34
5. Inaccurate designs	0.56	0.67	0.37
6. Late issuance of drawings	0.52	0.55	0.29
XI. MOTIVATION FACTORS			

1. Lack of motivation to labour	0.72	0.82	0.59
XII. MATERIAL FACTORS			
1. Material shortage	0.66	0.75	0.49
2. Delayed supply of materials	0.68	0.80	0.54
3. Non availability or low availability of materials in work place	0.67	0.81	0.54
4. Unsuitability of storage location	0.7	0.71	0.50
XIII. EQUIPMENT/TOOL FACTORS			
1. Old and inefficient Equipment	0.7	0.78	0.54
2. Equipment shortage	0.69	0.79	0.54
XIV. ENVIRONMENTAL FACTORS			
1. Rain	0.64	0.62	0.40
2. Soil condition	0.61	0.69	0.42
3. High temperature	0.72	0.75	0.54
4. Snowfall	0.43	0.70	0.30
XV. SITE CONDITIONS			
1. Poor site facilities	0.66	0.78	0.51
2. Improper lighting	0.62	0.70	0.43
3. Harsh working conditions	0.58	0.63	0.37
4. Site congestion	0.58	0.63	0.37
5. Site location/access	0.6	0.59	0.36

Identification of top ten factors

The top ten factors having more impacts on labour productivity which are obtained from higher value of severity index of questionnaire survey are as follows:

1. Lack of motivation to labour
2. Equipment shortage



3. Old and inefficient Equipment
4. Non availability or low availability of materials in work place
5. Delayed supply of materials
6. High temperature
7. Social factors (festivals)
8. Poor site facilities
9. Unsuitability of storage location
10. Material shortage

Recommendations

The following recommendations were arrived for the top ten factors which were identified from their higher severity index:

1. Lack of motivation to labour:

- Paying proper wages in correct time prevents the occurrence of labour absenteeism, dullness and motivates the labour to work towards it.

2. Equipment shortage:

- The equipments required for the workers needed in construction site must be kept high in numbers and proper maintenance of equipments prevents equipment shortage.

3. Old and inefficient Equipment:

- Using up of new efficient equipments results finishing of work in time than expected and provide higher productivity of work.

4. Non availability or low availability of materials in work place:

- Proper supervision should ensure whether the adequate materials are shifted to work place for carrying out that day's work by avoiding low availability of materials.

5. Delayed supply of materials:

- If the materials are unavailable with the supplier, they shall be purchased from other suppliers without cost increment to prevent delayed supply of materials.

6. High temperature:

- Providing up of energy drinks to workers during high temperatures protects the workers from sweat, thirst and tiredness instead of affecting productivity.



7. Social factors (festivals):

- Scheduling of project must be prepared by considering local traditions & festivals of labours and ensure that does not affect work.

8. Poor site facilities:

- Basic amenities such as drinking water, toilet facilities must provided near site because it reduces productivity.

9. Unsuitability of storage location:

- Materials must be stored nearer to the site, transportation of materials takes less time and productivity of work will be high.

10. Material shortage:

- Proper resource and site management processes eliminates material shortage.

Conclusion

This study identifies and ranks the factors affecting labour productivity in construction industry. The top ten factors having their highest impact on labour productivity are Lack of motivation to labour, Equipment shortage, Old and inefficient Equipment, Non availability or low availability of materials in work place, Delayed supply of materials, High temperature, Social factors (festivals), Poor site facilities, Unsuitability of storage location, Material shortage. The results of the study can help in achieving higher labour productivity by focusing and acting upon the most important factors affecting the productivity. It is practically, impossible to get 100% productivity. But if we control the factors affecting productivity, productivity can be improved to a larger extent.

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