

Investigation on Labor Productivity In Construction Industries

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Abstract- This thesis summarizes the various parameters that affect the labor productivity in construction industries. Labors play the vital role in the construction industry because if there is any delay in labor productivity, it entirely collapse the project cost, work frequency, scheduling and time management of the construction project. For this study, I prepare a data collection which includes various parameters affect workmanship and conducts questionnaire survey in various construction industries. This project report helps us to identify the factors affect the productivity and improve labor productivity. Thereby, we reduce the over cost-run, discard of scheduling, time wastage etc..

Keywords- Construction, Delay factors, R.I.I.

I. INTRODUCTION

Labor productivity is defined as real economic output per labor hour. Growth in labor productivity is measured by the change in economic output per labor hour over a defined period. It's also known as workforce productivity in which measure a individual worker's output.

Labor productivity can also indicate short-term and cyclical changes in the cost of the project..

II. DATA COLLECTION

List of factors influencing labor productivity in industries:

1. Project Factors
2. In the design process:
3. The Equipment
4. Execution and Construction
5. External
6. Financial
7. Health and Safety
8. Labors
9. Leadership and Supervision
10. Material

DATA COLLECTION

In this study, labor productivity is measured by the Relative Importance Index method.

The followings are the identity factors that are used to rate the labor productivity in a scale range from 1 (Very Low) to 5 (Very High)

Table.1 Scale Range

| Notation Used | Scale Range | Key Factor affect Labor Productivity |
|------------------|-------------|--------------------------------------|
| L.P ₁ | 1 | Very Low |
| L.P ₂ | 2 | Low |
| L.P ₃ | 3 | Medium |
| L.P ₄ | 4 | High |
| L.P ₅ | 5 | Very High |

III. RESULT AND DISCUSSION

DATA ANALYSIS

The collected data's are analyzed by using Relative Importance Index (RII) method.

The relative importance of procrastination factors was quantified by the relative importance index (RII) method prior to ranking. A multistage sampling technique was used in selecting the sample. The findings revealed that 'too many works in one time' is one of the top three factors contributing to procrastination in all groups.

Relative Importance Index (RII) technique is used for the analysis of the survey data. RII is calculated by given formula,

$$RII = \frac{1(LP_1) + 2(LP_2) + 3(LP_3) + 4(LP_4) + 5(LP_5)}{5(LP_1 + LP_2 + LP_3 + LP_4 + LP_5)}$$

Where,

LP₁ = Total number of persons who ticked the labor productivity affect is very low.

LP₂ = Total number of persons who ticked the labor productivity affect is low.

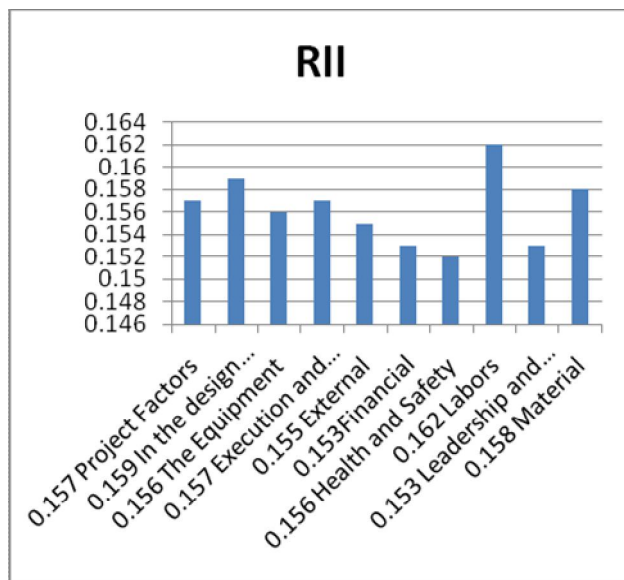
LP₃ = Total number of persons who ticked the labor productivity affect is medium.

LP₄ = Total number of persons who ticked the labor productivity affect is high.

LP₅ = Total number of persons who ticked the labor productivity affect is very High.

Table.2

IV. OVERALL ANALYSIS



V. CONCLUSION AND RECOMMENDATIONS

Conclusion:

This project deals with the various factors affects the labor productivity in construction industries. For this study, I collected the many literature collections and studied. From which I identify various different sources of key factors influencing the labor productivity. These factors not only affect the labor productivity, it also affects the cost of the project, overrun of cost, disturbing the schedule and time rate of the project.

In Phase – I; I collected and prepared the questionnaire survey by studying various literature and data collection.

In Phase – II; I conducted a questionnaire survey among the construction industry located in **Bangalore White filed**. And also analysed the survey report and give the

suggestions to control the factors the affects labor productivity.

Recommendations:

- The result of survey gives the most vital and simultaneous factors that are often affecting the nature of duty, goal of the company and project, project life cycle, cost overrun, lack of inventory control and economy of the construction firm.
- The most affected factors in this project analysis is labor factor which is ranked as first position, second one is lack of concentration in designing process and third one is lack of material management system.
- To rectify the labor factor; the organization must be develop good communication system, labor welfare association, give recognition to well equipped labor and their efforts, employ high skilled labors.

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