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**STUDY OF FACTORS AFFECTING LABOR PRODUCTIVITY**

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**ABSTRACT**

There are many problems arises in the construction based projects. The complex factors like cost, time duration, quality, safety and satisfaction may affect the quality of the building construction projects. In this paper, we will study the factors that affect the labor productivity in the field of building construction projects. The survey was distributed to Project Manager, Project Engineer, Architecture, and Others (Scheduler, and Estimator). It was concluded, final cost of the projects were higher than estimated cost. It's recommended to develop human resources through proper and continuous training programs frame a well-built jobs, vision and a planned approach to overcome the disturbances on the performance of the construction projects. The conversed factors are estimated to support in carrying out construction projects productively.

**KEYWORDS:** Labor productivity, cost, quality, safety.

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**INTRODUCTION**

The measure of the rate at which work is performed is called "productivity". It is a ratio of production output to what is required to produce it. The measure of productivity is defined as a total output per one unit of a total input. In construction, the output is usually expressed in weight, length, or volume, and the input resource is usually in cost of labor or man-hours. There are many standards available in the construction industry for contractors as reference values for purposes of construction cost estimation. These standards may vary in values but most are similar in principle. This white paper will explore labor factoring and how advances in technology are making management of labor productivity more predictable. The use of technology can expose inefficiencies, enable visualization of problem areas, and improve construction planning accuracy, as well as provide documentation and visualization to support or defend change order requests and construction claims.

**FACTORS AFFECTING LABOR PRODUCTIVITY**

Here are some of the most recognized factors affecting labor productivity in the industry:

**Overtime**

The overtime may possess some mental pressure on the mind of the worker that affects the labor productivity. The eight hour/Day work is sufficient work load on the labor that enhances the capability of doing work and also the quality of the product.

**Morale and Attitude**

Strength of workers based on keenness, self-belief, control, and joyfulness to execute work or tasks can be worsed due to a variety of problems, including increased disagreements, arguments, undue vulnerabilities, overtime, over-inspection, multiple contract changes, disruption of work rhythm, poor site conditions, absenteeism, unkempt workspace, and so on.

**Fatigue**

Tiredness can be caused by lingering or unusual physical effort.

**Stacking of deals**

This occurs when operations take place within physically limited space with other contractors, resulting in overcrowding of personnel, powerlessness to use or locate tools opportunely, increased loss of tools, additional security dangers, increase visitors, and anticipation of squad size optimum.

**Cooperative tenancy**

This kind of thing occurs when work is scheduled utilizing the same facility or work area that must be shared or occupied by more than one dexterity, and not projected in the original proposal or map.

**Beneficial Possession**

This is a result of working around, or in close immediacy to other dexterity, owner's personnel, or

construction tools, which may cause noise limitations, dust, or other hazardous risk. This may also prevent or cause access restrictions.

### Concurrent Operations

This is the effect of adding operations to any sequence of operations that has already been planned, without a gradual and controlled implementation of additional operations.

### Absenteeism and Turnover

There is a great deal of time and money lost associated with high turnover and absenteeism on projects. Construction projects in certain areas with low manpower and high demand for labor will usually be more impacted than others. Extreme weather conditions (such as extreme heat or cold) will also increase absenteeism and turnover. Replacement workers are usually not familiar with the work or area, and require experienced workers to stop work and show them what to do. The impact can be up to four days of lost work for each worker.

*Table 1: Possible Factors Affecting Labor Productivity (in Alphabetical Order)*

Sr.	Factors Affecting Labor Productivity at Building Construction
1	Accidents
2	Construction method
3	Drawings and specifications alternated during execution
4	Government regulation
5	High quality of required work
6	Increasing number of laborers
7	Inefficiency of equipment
8	Inspection delay
9	Insufficient transportation mean
10	Insufficient lighting
11	Labor absenteeism
12	Labor disloyalty
13	Lack of competition
14	Lack of financial motivation system
15	Lack of labor experience
16	Lack of periodic meeting with labor
17	Labor personal problems
18	Lack of place eating and relaxation
19	Lack of training sessions
20	Low quality of raw materials
21	Material shortage
22	Misunderstanding among laborers
23	Misunderstanding between laborers and superintendents
24	Misuse of time schedule
25	Payment delays
26	Rework
27	Supervisors' absenteeism
28	Tool and equipment shortages
29	Type of activities in the project
30	Unsuitability of materials storage location
31	Violation of safety precautions
32	Weather change
33	Working at high places
34	Working overtime

### CONCLUSION

In today's world, the construction industry is rated as one of the key industry. It helps in developing and achieving the goal of society. Study and knowledge of construction productivity are very important because they cause losses to the governing agencies and also influence the economics of the construction industry.

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Prior knowledge of labor productivity during construction can save money and time. Investments for these projects are very high and because of the complexity in construction, various factors can highly affect overall productivity, thus the project can end up adding even more time and money in order to be completed. This research is intended to identify the

causes of probable factors affecting labor productivity in building construction. This study investigates all possible factors through a structured questionnaire administered all over the USA. The survey results are subjected to analysis, and the ranking of factors is calculated using the Relative Important Index. The basic ideas of the research are to study various factors affecting labor productivity on construction.

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