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COMPARATIVE STUDY OF LOCAL AND MIGRANT LABOURS FOR PRODUCTIVITY ENHANCEMENT IN CONSTRUCTION FIELD

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ABSTRACT

Construction labour management can make or break the profit on that job. Good relationship between workers and supervisors can improve the productivity in a high margin. By identifying the problems that each worker faces and finding appropriate actions to overcome those problems, one can improves the output to a high ratio.

In this project a checklist is prepared to compare the characteristics of local and migrant labours. Different parameters such as Resource Utilization, Communicative Ability, Work Quality, Job Knowledge, Profit Sensitivity, Cost Sensitivity and Safety Consciousness etc., are used to compare local and migrant labours. Problems are identified based on the checklist and solutions are identified in such a way that improves productivity.

The labour management is always been believed to be associated with the project performance but empirical evidence for this assertion is scarce in this project. This project aims at determining the enhancement procedures and labour management for enhancing the productivity and also to improve the performance of the project.

INTRODUCTION

GENERAL

The Construction industry is the second largest economic activity in India, and plays an important role in the nation's economy. It is a front line activity of several other key sectors of economy whose performance is dependent on the satisfactory performance of this industry.

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A change in the level of construction activity affects the GDP and manufacturing, and the general employment and incomes of people. Construction has accounted for about 40 percent of the investment in the country during the last 45 years. Around 16 percent of the nation's working population depends on it for their employment.

Construction is the world's largest and most challenging industry. Human resource today has a strategic role for productivity increase of any organization, and this makes it superior in the industrial competition. With the effective and optimum uses of it, all the advantages supplied by the productivity growth can be obtained.

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 nations revenue as a whole. However, until today, construction industries are still facing number of problems regarding the low productivity, poor safety and insufficient quality.

Productivity is the one of the most important factor that affect overall performance of any small or medium or large construction industry. There are number of factors that directly affect the productivity of labour, thus it is important for any organization to study and identify those factors and take an appropriate action for improving the labour productivity. .[7] discussed about Microwave Semiconductor Devices such as Tunnel diode, Gunn diode and valanche transit time devices and analyzes Monolithic Microwave Integrated Circuits (MMIC)

At the micro level, if we improved productivity, ultimately it reduces or decreases the unit cost of project and gives overall best performance of project. There are number of activities involved in the construction industry. Thus the effective use and proper management regarding labour is very important in construction operations without which those activities may not be possible.

OBJECTIVES OF THE WORK

- Improve Productivity
- Reduce Labour cost
- Minimize idle time
- Maximize Resource Utilization.

SCOPE OF THE WORK

The scope of the study is confined to the building workers engaged in housing construction and is specific to these parameters, namely

- Direct employment
- Productivity of labour

Labour Productivity

Productivity can be defined in many ways. In construction, productivity is usually taken to mean labour productivity, that is, units of work placed or produced per man-hour. The inverse of labour productivity, man- hours per unit (unit rate), is also commonly used. Productivity is the ratio of output to all or some of the resources used to produce that output.

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Output can be homogenous or heterogeneous. Resources comprise: labour, capital, energy, raw materials, etc.

Productivity may then be defined as the ratio of earned to actual hours. The problem with this concept is in establishing reliable, for setting standards. It also depends on the method used to measure productivity, and on the extent to which account is taken of all the factors which affect it. At a project site, contractors are often interested in labour productivity. It can be defined in one of the following ways

Labour Productivity = (Output / Labour Cost)

Productivity measures can broadly be placed into two categories. Single factor, or partial, productivity measures relate a particular measure of output to a single measure of input, such as labour or capital. Multi-factor or total productivity measures (MFP) relate a particular measure of output to a group of inputs, or total inputs used.

Productivity measures can also be distinguished by whether they rely on a particular measure of gross output or on a value-added concept that attempts to capture the movement of output. Of the most frequently used MFP measures, capital-labour MFP relies on a value-added concept of output while capital labour- energy-materials MFP relies on a particular measure of gross output.

The five most widely used productivity concepts are

Labour productivity, based on gross output

This productivity measurement traces the labour requirement per unit of output. It reflects the change in the input coefficient of labour by industry and is useful for the analysis of specific industry labour requirements.

Its main advantage as a productivity measure is its ease of measurement and readability; particularly, the gross output measure requires only price indices on gross output. However, since labour productivity is a partial productivity measure, output typically reflects the joint influence of many different factors.

Labour productivity, based on value-added

Value-added based labour productivity is useful for the analysis of micro-macro links, such as an individual industry‟ s contribution to economy-wide labour productivity and economic growth. From a policy perspective, it is important as a reference statistic in wage bargaining.

Its main advantage as a productivity measure is its ease of measurement and readability, though it does require price indices on intermediate inputs, as well as to gross output data. In addition to its limitations as a partial productivity measure, value-added labour productivity has several theoretical and practical drawbacks including the potential for double counting production of benefits and double deflation.

Capital-labour MFP, based on value-added

This productivity measurement is useful for the analysis of micro-macro links, such as the industry contribution to economy-wide MFP growth and living standards, as well as, for analysis of structural change. Its main advantage as a productivity measure is the ease of aggregation across industries.

The data for this measurement is also directly available from national accounts. The main drawback to the value-added based capital-labour MFP is that it is not a good measure of technology shifts at the industry or firm level. It also suffers the disadvantage of other value-added measures that have been double deflated with a fixed weight Laspeyres quantity index.

Capital productivity, based on value-added

Changes in capital productivity denote the degree to which output growth can be achieved with lower welfare costs in the form of foregone consumption. Its main advantage as a productivity measure is its ease of readability but capital

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productivity suffers the same limitations as other partial productivity measurements.

Multi-factor productivity

It is used in the analysis of industry-level and sectoral technical change. It is the most appropriate tool to measure technical change by industry because it fully acknowledges the role of intermediate inputs in production. Domar's aggregation of MFP across industries renders an accurate assessment of the contributions of industries to aggregate MFP change.

The major drawback to MFP is its significant data requirements, in particular timely availability of input -output tables that are consistent with national accounts. It is also more difficult to communicate inter industry links and aggregation across industries using MFP than in the case of value-added based MFP measures.

Productivity and Labour

On any construction site the contractor's financial gain is dependent, amongst other things, on completion of the work in good time and at the least cost, and the productivity of labour has a direct bearing on this being achieved. The factors affecting the performance of labour generally fall into three categories

i. The human capacity for work;

ii. The competence of site management;

iii. The motivation of the workers.

Motivation of Workers

Workers are motivated in their work by a variety of methods, all of which may be present in varying degrees. They include

A.Fear
B.Discipline
C.Jobsatisfaction
D.Financial incentives.

FACTORS AFFECTING THE HUMAN CAPACITY FOR WORK

Factor	Explanation	Comments and suggestions for improving the capacity
Age	Peak capacity for physical work is generally reached between the age of 20-35	In older persons, especially in skilled jobs, experience and efficiency compensate for lower work capacity.
Nutrition	Capacity is related to calorie protein content of food	Establish project canteens to provide balanced meals. Arrange talks on nutrition.
Temperature humidity	Affect the rate at which heat can be dissipated from the human body by radiation, convention and evaporation of sweat. heat and humidity increase dangers of heat stroke and reduce	Start work at first light and avoid working during the heat of the day.

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	work capacity	
Health	Resistance to disease is affected by diet. Good hygiene and sanitation is essential to avoid occurrence of debilitating intestinal parasites.	Enforce strict site hygiene. Arrange talks on hygiene and sanitation.
Acclimatization, adaptation, Learning.	New workers, or workers given new tasks, need time for their bodies and muscles to adapt to the work.	Unpracticed workers would initially have a lower productivity which would improve as they become acclimatized to the work, and are instructed in the best methods of working.

Labour Characteristics

Performance analysis is a common tool for assessing worker quality and contribution. Factors that might be evaluated include:

- Quality of Work - ability of work produced (or) talented.
- Quantity of Work - volume of acceptable work
- Job Knowledge - demonstrated knowledge of requirements, methods, techniques and skills involved in doing the job and in applying these to increase productivity.
- Related Work Knowledge - knowledge of effects of work upon other areas and knowledge of related areas which have influence on assigned work.
- Judgment - soundness of conclusions, decisions and actions.
- Initiative - ability to take effective action without being told.
- Resource Utilization - ability to delineate project needs and locate, plan and effectively use all resources available.
- Dependability - reliability in assuming and carrying out commitments and obligations.
- Analytical Ability - effectiveness in thinking through a problem and reaching sound conclusions.
- Communicative Ability - effectiveness in using oral and written communications

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and in keeping subordinates, associates, superiors and others adequately informed.

- Interpersonal Skills - effectiveness in relating in an appropriate and productive manner to others.
- Ability to Work Under Pressure - ability to meet tight deadlines and adapt to changes.
- Security Sensitivity - ability to handle confidential information appropriately and to exercise care in safeguarding sensitive information.
- Safety Consciousness - has knowledge of good safety practices and demonstrates awareness of own personal safety and the safety of others.
- Profit and Cost Sensitivity - ability to seek out, generate and implement profit-making ideas.
- Planning Effectiveness - ability to anticipate needs, forecast conditions, set goals and standards, plan and schedule work and measure results.
- Leadership - ability to develop in others the willingness and desire to work towards common objectives.
- Delegating - effectiveness in delegating work appropriately.
- Development People - ability to select, train and appraise personnel, set standards of performance, and provide motivation to grow in their capacity. Diversity (Equal Employment Opportunity) - ability to be sensitive to the needs of minorities, females and other protected groups and to demonstrate affirmative action in responding to these needs

Likert Scale

Item	Very Bad	Bad	Neither Good Nor Bad	Good	Very Good
Scale	1	2	3	4	5

Relative Importance Index

The analysis was done using Relative Important Index (RII) method and found the bottom most factors leading to affect the labour productivity at construction site.

CONCLUSIONS

The expected outcome of the study will reveal the proper solution to the identified problems based on survey and it will also help to control the problems prior to the start of work, which will directly improve the productivity of labours.

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