

## The Impact of Unskilled Labour on the Project Performance in the Construction Industry

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### **Abstract**

*This research looks at the effects of unskilled labour on project performance within the construction industry. Recognizing the pivotal function that labour skills play in project execution, the research investigates how the presence of unskilled labour influences various aspects of performance, including productivity, quality, safety, efficiency, cost, and overall reputation. By means of an extensive assessment of the literature and empirical examination, the research identifies the negative consequences of inexperienced personnel on project results. The results emphasise the necessity of focused actions to lessen these adverse effects. The study ends with a set of suggestions meant to increase unskilled workers' talents and skills, which should eventually result in better project performance in the construction sector. These recommendations encompass training and development programs, effective supervision and management strategies, the adoption of modern technology and tools, and the implementation of robust safety measures. By addressing the challenges posed by unskilled labour, construction companies can enhance their project outcomes, maintain competitiveness, and safeguard their reputation within the industry.*

**Keywords:** *Unskilled Labour, Project Performance, Construction Industry, Productivity, Safety*

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### **Introduction**

Project performance is commonly recognised to be dependent on the labourers' capabilities during project execution, since their talents might impact the project's progress to several levels. This is generally the case with construction projects. Manual labor is used to complete duties on the building site, and the project is frequently overseen and managed by the project supervisor, assistant construction supervisor, building technician, construction architect, contractors, or subcontractors. The building industry needs a large workforce (Hosseini, 2018). The primary focus of the present research is the effect of inexperienced workers on the execution of projects in the construction sector. Differently skilled workers play distinct roles, It is necessary for a project to be completed successfully to ensure that sustainability and competitiveness, performance is crucial in every industry (Muthuveloo, 2017).

In any industry, performance is the most important metric since it determines the industry's longevity (Wang, 2015). Therefore, the impact of unskilled labour should be well understood so as to help industries devise means to avoid poor performance. The individuals in charge of the

operations determine whether the construction sector succeeds or fails. Construction industry is a major sector in Nigeria and the success rate depends on the ability of the workers. Employees, or workers, are necessary to complete the project. Labour costs account for a sizeable portion (30%–50%) of the project's actual cost (Karimi, 2017). Thus, workforce productivity and abilities play a crucial role in the success of the project (Hanna, 2005). A project is constructed or completed by unskilled workers when a contractor, project manager, or both are unable to find enough trained labourers to achieve the necessary high standard of quality. When skilled labour quantity issues prevent a project from meeting its basic labour demands, the project's success deteriorates. Because they are considered the primary performers in carrying out the primary goals and actions associated with project construction, labourers have a considerable impact on productivity (Maloney, 1983). Project productivity may be significantly impacted by a skilled personnel shortage (Hossein, 2018). Lack of skilled labourers can lead to higher labour and material costs, poor scheduling, incomplete work which is completed after the deadline, and delays in project completion. In addition, fewer trained or skilled labourers comprehend less about safety incidents because they don't comprehend basic building techniques and procedures (Karimi, 2016). After conducting a study, Glazner (2005) found that the most frequent reasons for damages during project building were inappropriate acts, inexperience, and a lack of follow-up safety instructions. Additionally, the survey found that 54.5% of damages resulted from a failure to implement safety precautions during construction. In order to address labour skills issues swiftly and efficiently, it is imperative that labour skills-related issues be anticipated or identified throughout project design and planning. Failure to recognise these problems may lead to unpredictable and erratic behaviour that delays the completion of construction projects. Comprehending the complexities of the job marketplace is crucial for the construction industry to guarantee a consistent supply of labour skills. All key players in the construction sector ought to understand the significance of labour market challenges and take steps to improve planning and policies for labour force conditions and requirements. This will enable them to support efforts to enhance labour force skills and ensure that workers are prepared to meet the industry's present and future demands (Wong, 2006).

Our goal in conducting this study is to provide an empirical framework that will assist professionals as well as researchers understand how unskilled laborers can affect project performance.

### Literature Review

Research has shown that Infrastructure projects' productivity is greatly influenced by

the labour force or personnel. However, the consequences of unskilled labour on the execution of construction industry projects have mostly been ignored in the literature. Research has shown that the performance of construction projects is significantly impacted by the labour force or personnel. However, the impact of both skilled and unskilled labour on infrastructure projects' success has mostly been ignored in the literature. One of the biggest obstacles to long-term economic viability and project performance is the paucity of competent labour. Projects with a skilled labour shortage typically have a strict timeline to meet their objectives (Hossein et al., 2018). According to Mahamid (2011), one of the key factors affecting project performance in the Palestinian construction sector is low labour productivity. In

construction projects, poor resource management can have a significant impact on schedule, budget, quality, and safety. Thus, it is essential that contractors, service providers, and construction managers understand the methods and procedures used to evaluate employees' productivity across a range of competencies (Shehata & El-Gohary, 2012). According to Meng (2012), construction projects frequently perform poorly in terms of schedule delays, cost overruns, and quality flaws. One of the main reasons for this is inexperienced labour. Human mistake and a shortage of trained labour in the business are cited as the main project performance flaws (Atkinson, 1999; Love & Li, 2000). Both labour quantity and quality difficulties might have an impact on skilled labour issues on a project. When a contractor or project manager is unable to enlist the necessary number of skilled workers, the project is carried out or built by inexperienced and unskilled workers. Undoubtedly, inadequate expertise and unskilled workers lead to project completion delays, exceeding budget and timelines, and subpar building projects. (Au-Yong, 2013) came to the conclusion that the primary factors contributing to a subpar result were a lack of maintenance personnel, a lack of unskilled labourers, a lack of capability, and a lack of expertise. Nigeria's building sector significantly increases the country's GDP. There are three fundamental planning components: time, money, and quality. It is a significant measure of Nigeria's economic growth. These ideas are closely related to one another in terms of worker productivity, which is also a crucial idea in construction planning and directly relates to the triple constraint. There is a clear correlation between interrupted work, rework, and changes in work and lower labour performance. When changes are made, efficiency is lost by 30% on average.

The two biggest sorts of disruptions are needing to complete the activity out of order and not having enough materials or knowledge. The lack of trained workers in the construction sector is a complicated problem brought on by a number of variables. The ageing workforce is one of the main causes of the skilled worker shortage in the construction sector. Specialised skills are necessary for being a skilled worker, and they must be acquired via years of education and experience. Thus, the industry is losing a sizable share of its trained workforce when many talented workers retire without having sufficient replacements (CPWR 2018).

Furthermore, because it can significantly affect the cost-performance of building projects, the shortage of competent personnel is an important concern (Habibi, 2018). For instance, a lack of trained labour might cause contractors to struggle to locate the labour they need to finish projects on time, which can lead to delays in projects (Abbasi, 2020).

### Research Methodology

Data on unskilled labour and project performance in the designated labour-intensive industries were gathered through the administration of a survey. There were two components to the survey. The responders had to enter their demographic information in the first area. In the second portion, participants were asked to rank the extent to which each industry is experiencing a skilled labour shortage based on their personal experiences working on previous projects. Additionally, respondents had to rank how unskilled labour affected the industry-wide cost performance of projects.

These led to the distribution of questionnaires to these professionals in the construction sector, and 25 of these professionals replied.

### Discussion Of Findings

It was discovered from these findings that unskilled labour in the construction industry impacts project performance in many ways, these are; Productivity, quality of work, safety, efficiency, cost overruns and reputation.

**Productivity:** Unskilled labour tends to have lower productivity compared to skilled labour. This can result in longer project timelines and higher labour costs as more time and effort are required to complete tasks.

**Quality of Work:** When unskilled labour is engaged, the quality of the work may degrade. Errors and poor-quality work can result in more waste, more rework, and eventually more expenses. The entire integrity and safety of the construction project might also be impacted by subpar quality.

**Safety:** Unskilled labourers are often less familiar with safety protocols and procedures, which can lead to a higher incidence of accidents and injuries on the job site. This not only poses a risk to workers but can also result in delays, legal issues, and increased insurance premiums.

**Efficiency:** The lack of experience and training in unskilled labour can lead to inefficiencies. Tasks may take longer to complete, and there may be more downtime as workers wait for instructions or corrections to their work.

**Cost Overruns:** The combination of lower productivity, quality issues, safety concerns, and inefficiencies can lead to cost overruns. These factors can compound over the course of a project, making it difficult to stay within budget.

**Reputation:** Consistently delivering projects that are delayed, over budget, or of poor quality due to unskilled labour can damage a construction company's reputation. This can impact future business opportunities and client trust.

### Conclusion And Recommendations

In conclusion, unskilled labour has a significant detrimental effect on the construction industry's total project performance. It can also seriously harm the industry's reputation, which lowers the likelihood of securing future contracts. The following suggestions are offered in an effort to lessen these detrimental effects on project performance:

**Training and Development Programs:** On-the-Job Training: Assist unskilled workers in developing their abilities by matching them with trained mentors who can coach and instruct them. This should be done on a continuous basis.

**Formal Training Programs:** Implement formal training programs that cover essential skills, safety protocols, and construction techniques.

**Certification Courses:** Encourage unskilled workers to pursue certification courses that can enhance their qualifications and skills.

**Supervision and Management:** Experienced Supervisors: Employ experienced supervisors and foremen who can provide close supervision and immediate feedback to unskilled labourers.

**Clear Instructions:** Ensure that clear, concise instructions and work plans are provided to all workers to minimize misunderstandings and errors.

**Regular Monitoring:** Perform routine site inspections and performance reviews to make sure the work is being done according to the necessary standards.

**Technology and Tools: Modern Equipment:** Invest in modern construction equipment and tools that can simplify tasks and reduce the reliance on manual labour.

**Construction Software:** Utilize construction management software to streamline planning, scheduling, and communication, ensuring that all workers are on the same page.

**Prefabrication:** Use prefabrication and modular construction methods to reduce the complexity of on-site work, making it easier for unskilled labour to contribute effectively.

**Safety Programs: Comprehensive Safety Training:** Implement comprehensive safety training programs to ensure that all workers understand and adhere to safety protocols.

**Safety Officers:** Employ dedicated safety officers to monitor compliance and address safety concerns promptly.

**Personal Protective Equipment (PPE):** Ensure that all workers have access to and use appropriate PPE to minimize accidents and injuries.

**Balanced Workforce: Skilled and Unskilled Mix:** Maintain a balanced mix of skilled and unskilled labour to ensure that critical tasks are performed by experienced workers, while unskilled labour can assist and learn.

**Specialized Teams:** Form specialized teams for complex tasks that require higher skill levels, leaving simpler tasks to less experienced workers.

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