

Enhancing Construction Project Profitability: The Critical Role of Effective Materials Management

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Abstract: *The majority of construction development firms in India still do not consider the issue of materials management, material management is very essential for the implementation of good project management & materials management affects project profitability and contractor durability in the construction process. In order to carry out this study, both primary and secondary sources of data were used to collect data. The objectives were highlighted as being to identify the factors that affect effective materials management in construction projects and to assess the effect of materials management on project profitability. Simple percentages have been used to analyze the data, response frequencies and related percentages. Evaluating issues related to efficiency of materials management in building projects was done using the relative importance index (Risk rating). The elements with high effect on material management approach include complexity of details in plans, modifications to the design while construction is active, inadequate storage leading to depreciation, in order to increase project profitability, adequate materials management procedures should be taken into account from the beginning of project execution.*

Keywords: Construction waste, Management techniques, Economic relevance, Existing situation

REFERENCES

- [1]. L.C. Bell, G. Stukhart "Attributes of material management systems", ASCE, Vol.112, No. 1, March 1986
- [2]. K.V. Patel, C.M. Vyas "Construction material management on project sites", national conference on recent trends in engineering and technology,1314 May 2011
- [3]. E.A. Haddad "Construction material management system for gaza strip building contractors", Dec 2006.
- [4]. D.U. Kini "The material management is key to successful project management", journal of management in engineering/January/February 1999
- [5]. Albert, I., Shakantu, W., & Ibrahim, K. (2018). Impact of Materials Management Practices in the Nigerian Building Construction Industry. *Journals.Co.Za*, June 2018, 1–10.
- [6]. Duong, L. N. K., Wang, J. X., Wood, L. C., Reiners, T., & Koushan, M. (2021). The value of incremental environmental sustainability innovation in the construction industry.
- [7]. Patil, A. R., & Pataskar, S. V. (2013). Analyzing Material Management Techniques on Construction Project.
- [8]. Govindaiah, S., & Petty, M. D. (2021). Applying reinforcement learning to plan manufacturing material handling. In *Discover Artificial Intelligence* (Vol. 1, Issue 1). Springer International Publishing.
- [9]. Joshi, B. R., & Gupta, A. R. (2021). View of Comparative analysis of inventory control techniques in the construction project.
- [10]. G. Kanimozhi, P. Latha, Material Management in Constuction Industry, *Indian Journal of Applied Research*, 4(4), 2014.
- [11]. S V. Desale, S V. Deodhar, Identification And Eliminating Waste in Construction by Using Lean and Six Sigma Principles, *International Journal of Innovative Research in Science, Engineering and Technology*.
- [12]. Ammar, M., Haleem, A., Javaid, M., Walia, R., & Bahl, S. (2021). Improving material quality management and manufacturing organizations system through Industry 4.0 technologies.
- [13]. Donyavi, S., & Flanagan, R. (2009). The impact of effective material management on construction site performance for small and medium sized construction enterprises.

- [14]. Barletta, I., Despeisse, M., Hoffenson, S., & Johansson, B. (2021). Organisational sustainability readiness: A model and assessment tool for manufacturing companies.
- [15]. Bauzon, J., Murphy, C., & Wahi-Gururaj, S. (2021). Using macros in microsoft excel to facilitate cleaning of research data. Journal of Community Hospital Internal Medicine Perspectives.