International Journal of Research in Engineering and Science (IJRES)
ISSN (Online): 2320-9364, ISSN (Print): 2320-9356
www.ijres.org Volume 11 Issue 6 ǁ June 2023 ǁ PP. 196-202

An Evaluation of the Performance-Influencing Cost Factors Based On the Category of Contractors

Miss. Sampada R. Futane[1], Prof. P. S. Mahatme[2], Prof. Syed Sabihuddin[3]
[1] *student, Prof. Ram meghe college of engineering and management Amravati*
[2] *professor, Prof. Ram meghe college of engineering and management Amravati*
[3] *professor, Prof. Ram meghe college of engineering and management Amravati*

Abstract: *- The construction industry is widely regarded as a pivotal economic sector. The performance of the construction industry is subject to the influence of various dynamic factors. Consequently, the establishment of a standardised performance benchmark and corresponding indicators is imperative for evaluating the success of projects. The objective of this study is to ascertain the most crucial Key Performance Indicators (KPIs) and evaluate their Relative Importance Index (RII). The approach employed to attain this objective encompassed a comprehensive examination of existing literature and a survey conducted among construction experts regarding project performance in the aforementioned field. The findings indicate that the key performance indicators (KPIs) of utmost importance are: Cost, Profitability, Time, Quality, Client satisfaction, Safety, Productivity, and Team satisfaction. The aforementioned outcomes may be employed to evaluate the triumph of projects for the advantage of all parties involved in the project. Assessing the performance of a project through the use of established benchmarks and indicators is a valuable tool for professionals in the construction industry. This approach facilitates effective project management, control, and enhancement, as well as the ability to anticipate future project success. The construction industry is widely regarded as a pivotal economic sector. The performance of the construction industry is subject to the influence of various dynamic factors. Consequently, the establishment of a standardised performance benchmark and corresponding indicators is imperative for evaluating the success of projects. The objective of this study is to ascertain the most crucial Key Performance Indicators (KPIs) and evaluate their Relative Importance Index (RII). The methodology to achieve this aim included a thorough literature review and a survey on projects performance among construction professionals in . The results show that the most critical KPIs are: Cost, Profitability, Time, Quality, Client satisfaction, Safety, Productivity, and Team satisfaction. The aforementioned findings can be utilised to evaluate the triumph of projects for the advantage of all involved project stakeholders. The assessment of project performance through the use of established benchmarks and indicators is a valuable tool for professionals in the construction industry. This approach facilitates effective project management, control, and enhancement, as well as the ability to forecast future project success.*

Keywords: *Key Performance Indicators, Construction projects, Relative Importance Index*

Date of Submission: 02-06-2023 Date of acceptance: 13-06-2023

I. INTRODUCTION

The construction industry is widely regarded as one of the most demanding industries globally. The construction industry in India is experiencing rapid growth on a global scale. The construction sector gives second largest employment after agriculture. India contributes approximately 11% of the global Gross Domestic Product (GDP) and serves as a source of employment for approximately 35 million individuals, both directly and indirectly. Development of construction industries shows tremendous changes in civil engineering structures. In present centuries, RCC frame structures are favored which gives better results as compare to load bearing structures. The main characters of this construction industry are engineers, architects, designers, contractors and clients. Subsequently, crucial factors include labour, materials, equipment, finance, accounting, and numerous additional variables. This study will feature a primary figure who will be examined, namely the contractor. A contractor is an individual or organisation that enters into a contractual agreement to supply materials or labour for the purpose of rendering a service or completing a task. The contractor bears the responsibility of completing the project within the allocated timeframe and budgetary constraints. The punctuality of contractor is necessary to complete the project at particular time. This attribute contributes to his recognition within his social group. Additional attributes of a contactor include the ability to envision, maintain a positive outlook, possess effective communication abilities, demonstrate ingenuity, exhibit adaptability, and maintain a strong sense of concentration. Other than these properties he should have initial finance to start the work. Contractors are categorised into different groups based on the availability of financial resources. The

construction sector is presenting burgeoning prospects for contractors of all kinds. In the context of construction, the resource requirements for residential or commercial buildings are relatively modest and uniform. However, for larger-scale projects such as dams, tunnels, and bridges, the quantity of resources required tends to escalate significantly. to fulfil this need classification of contractor is necessary. In this research, I am going to study the about the problem being faced by different class of contractors while construction and cost factors influencing the performance.

II. METHODOLOGY

The quantitative method was used in the study because the goal was to find out which of the 118 factors were important and had an effect on the reported success indicators in Malawi for SMCs. Inhibiting factors were also looked for in the study to see if there were any patterns or changes. Questionnaire surveys were chosen because they are good for descriptive and explanatory research, have a lot of questions, and can be used to get a big sample size [68]. Even though this way of collecting data has a low response rate, it is still possible to get opinions from a wide range of credible participants [69, 70]. So that the data could be compared to those of other studies, the questionnaire was set up the same way as the one used in the study by Adams [7] in Nigeria. The questions were put into three groups: those that were caused by the environment, those that were caused by clients or their agents (consultants), and those that were caused by contractors' mistakes. Adams's [7] classification method is the same as Odeh and Battaineh's [18], which is a grouping of factors that are typical of players in a traditional type of contract. The things that make it hard for SMCs to finish construction jobs have been put into three main categories: (i) factors related to the outside world, (ii) factors related to the client/client agent (consultant), and (iii) factors related to the contractor [18]. All of the contractors, clients, and advisors were given the same questionnaire. The form was made so that it had three different parts. In the first section, there were four general questions. The first question asked the people who answered how much they thought the identified causes were a problem for SMCs in Malawi. In the second question, respondents were asked to rate how much they thought the factors affected the success of SMCs in general. In the third question, respondents were asked how much they thought the factors had an effect on the success indicators of the projects that SMCs worked on. In the fourth question, respondents were asked how important they thought the four performance measures were on projects done by SMCs. These were quality of work, completion on time, tender estimation, and tender responsiveness. In the second and third parts of the questionnaire, there were questions that were meant to find out about the companies of the respondents and the respondents themselves. Size of the sample and how it was chosen. The study used quota, purposeful, and convenience sampling to choose cases, since each contractor was only given one questionnaire. The sampling rates were based on the number of contractors in three business categories (civil, building, and civil and building combined), the size of the contractors (small, medium, and large), and the three regions of Malawi. The sampling was purposeful because the only people who were asked to answer were owners or senior employees. The convenience sample method was used because the NCIC's contact information made it easy to find contractors who could be surveyed. The size of the group was based on a population of local contractors in Malawi, including those who did big jobs. This was because almost all of the indigenous contractors in the large-scale NCIC registration categories at the time of the poll had just been moved up to those grades within the last 6 years. So, it was thought that these companies had important information about SMCs. Bartlett et al. [71] made a framework for figuring out the minimum sample size needed for a given population size of continuous and categorical data. This framework was used to figure out the sample size. With a 5% margin of error, the sample number for contractors was found to be at least 296 out of a total population of 1,044 contractors. There were 62 consultants in the areas of engineering, architecture, and quantity surveying who were registered with NCIC [72]. Since there were less than 100 consultants, the poll was meant for all of them [73, 74]. In the same way, all 15 or so public client organisations and training schools were surveyed. Officials from all three regions of the country and from different jobs in the built environment were asked to take part.

III. PLAN OF RESEARCH

They will be executed in two phases. First, a study of the relevant literature and its surveys will be conducted. Examining national and international literatures, journals, and articles will aid comprehension. The study includes the identification and analysis of performance-influencing factors. The second phase will consist of a questionnaire. The list of queries will be provided to potential contractors, who may be either firms or individuals with a licence from the Indian government.

Analysis of data will be the next phase. Here, the classification of gathered data is separated into numerous titles. Under the primary title, subpoints will be discussed. There are numerous methods available for data analysis. Various statistical methods are available, such as Terrell's transformation technique, which converts data into indices, the coefficient of variation, which measures the relative variation for distributions with different means, Kendal's concordance test for assessing the level of concordance among contractors, the relative importance index method, and the relative importance matrix method.

IV. Result:

A total of 59 survey responses were received from construction stakeholders Figure 5.1 depicts the respondent's profiles as Engineer (10%), Contractor (83%), and Architect (7%). Respondents had the option of responding via online and offline modes (i.e. Google form and hardcopy) that were as user-friendly as feasible, requiring respondents to scroll down and point to select the appropriate responses for each question.

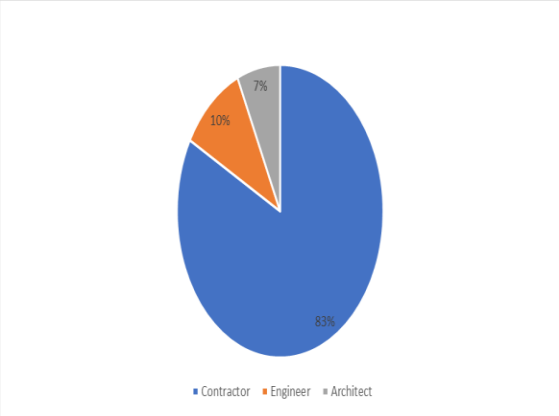

Fig 3.1: Response Profile

Table 3.1: RII & Ranking of Identified Factors Influencing Performance based on Class of Contractors Including Contractors, Engineers and Architects

SR. NO.	FACTORS	WEIGHTAGE					TOTAL	∑W	R.I.I	RANK
		1	2	3	4	5	(N)			
1	Project site	0	6	12	20	21	59	233	0.789	3
2	Site condition	1	5	14	14	25	59	234	0.793	2
3	Site preparation time	0	8	18	21	12	59	214	0.725	10
4	Rework related to design	4	7	22	21	5	59	193	0.654	20
5	Change in material specification and type	3	7	13	28	8	59	208	0.705	13
6	Complexity of design	2	10	6	35	6	59	210	0.711	6
7	Construction error	2	15	24	9	9	59	185	0.627	24
8	Production waste	5	10	30	11	3	59	175	0.593	25
9	Double taxing	6	14	21	15	3	59	172	0.583	27
10	Poor accounting	4	17	17	13	7	59	229	0.776	5
11	Inflation of prices	1	2	22	18	16	59	223	0.755	8
12	Uncertainty in price of material	1	2	8	36	12	59	233	0.789	3
13	Rapid change in economy	1	2	17	20	19	59	231	0.783	4
14	Monitory problem	2	9	32	11	5	59	185	0.627	24
15	Stability of market condition	4	7	15	20	13	59	208	0.705	13
16	High transportation cost	1	10	20	15	13	59	206	0.698	15
17	Corruption	0	14	29	4	12	59	191	0.647	21
18	Froud by employee	7	23	17	8	4	59	156	0.528	30
19	Cost escalation	4	14	22	18	1	59	175	0.593	26

The foundation type categorised as "factor" has obtained the highest ranking, specifically in first place, with a Relative Importance Index (RII) of 0.833. The majority of participants have placed significance on the type of foundation utilised in construction endeavours. Due to the presence of black cotton soil in the Amravati region, the process of laying a foundation can be challenging. The second position is achieved based on the site

condition, which has a Relative Importance Index (RII) of 0.793. Expenditures may arise in the context of site remediation and soil decontamination in order to comply with regulatory standards and guarantee a secure operational setting. The project site has achieved a ranking of third place, with a Research Impact Indicator (RII) of 0.789. In areas with high levels of risk, it may be necessary to implement security personnel, surveillance systems, or protective infrastructure. The survey participants have assigned a Relative Importance Index (RII) value of 0.783 to the fourth rank in terms of the pace of economic transformation. The labour costs can be impacted by swift modifications in the economy, such as alterations in labour market conditions or elevations in the minimum wage.

The inadequate management of financial records has been assigned the fifth position in terms of its Relative Importance Index (RII) score of 0.776. The top five factors that have been identified as affecting contractors on construction sites are the type of foundation, site conditions, project location, rapid changes in the economy, and inadequate accounting practises.

According to the respondents, the complexity of design has been assigned a rank of sixth, with a corresponding RII value of 0.711. The probability of errors or the necessity for design iterations is positively correlated with the intricacy of a design. These factors may lead to supplementary expenses related to the need for reworking, redesigning, or prototyping in order to tackle problems and attain the intended level of performance or functionality. The layout plan has been assigned a ranking of seventh place, with a Residual Information Index (RII) value of 0.762. The spatial configuration and organisation of different areas within a structure are established by the layout plan. The allocation of spaces such as rooms, corridors, service areas, and common areas can have a significant impact on the expenses associated with construction. According to the survey respondents, the structural plan has been assigned the eighth rank with a Relative Importance Index (RII) of 0.755. The construction timeline and schedule can be influenced by the structure plan. Sophisticated or elaborate structural configurations may necessitate supplementary time for manufacturing, assembly, or evaluations. According to the data collected from the respondents, trained manpower has been ranked ninth with a Relative Importance Index (RII) of 0.728. The provision of specialised skills and knowledge to human resources tends to result in increased levels of job satisfaction and engagement, thereby contributing to a decrease in employee turnover. Construction firms may face significant expenses due to high turnover rates, as they must allocate resources towards recruitment and training to replace departing employees. The RII analysis has indicated that site preparation time holds the tenth position with a score of 0.725. The occurrence of overlapping activities may result in prolonged construction durations and possible imposition of penalties for failure to meet project milestones. As a result, it can be observed that an increase in project duration leads to a corresponding rise in costs related to prolonged project management, supervision, and overhead expenditures. Extended site preparation time can lead to elevated mobilisation and demobilisation expenses, as these undertakings may require repetition or extension.

The number of stories with a Relative Importance Index (RII) of 0.718 has been assigned the eleventh rank. The quantity of storeys has an impact on the foundation prerequisites and site arrangement for a building undertaking. In general, the construction of taller buildings necessitates the implementation of more elaborate and profound foundation systems, such as pile foundations or deep footings, to provide adequate support for the increased vertical loads. The ranking of plant and equipment has been determined to be twelfth, with a corresponding RII value of 0.715. The prices of fuel are subject to variability contingent upon market dynamics and energy valuations. Effective fuel management strategies, such as the monitoring of fuel consumption, the utilisation of efficient equipment, and the implementation of energy-conservation measures, can aid in cost control and the reduction of environmental impact.

The stability of market conditions has been assigned a ranking of thirteenth, with a Relative Importance Index (RII) of 0.705. In a market characterised by stability, regulatory frameworks tend to exhibit greater predictability, thereby enabling businesses to effectively strategize and adhere to regulatory requirements. The ranking of the number of basement levels has been determined to be fourteenth, with a corresponding RII value of 0.701. The RII value of 0.698 indicates that high transport cost has been ranked as the fifteenth most significant factor. Insufficient allocation of funds for transportation costs in the project budget may result in diminished profitability or potential financial deficits for contractors and subcontractors.

The RII value of 0.691 indicates that an over-reliance on imports has been assigned the sixteenth position in the ranking. The construction sector's dependence on imports renders it vulnerable to currency exchange rate fluctuations, which can exert a substantial influence on expenses. Respondents with a RII value of 0.681 have ranked limited managerial and financial expertise, along with unfair competition, as the seventeenth most significant factor. Insufficient managerial proficiency may lead to suboptimal project planning and implementation. Inadequate familiarity with project management methodologies, tools, and techniques can result in suboptimal project sequencing, insufficient risk management, and ineffective communication. Insufficient financial knowledge could impede the capacity to obtain suitable funding and proficiently handle capital. Insufficient comprehension of financing alternatives, loan conditions, and allocation of capital may result in suboptimal financial choices, increased borrowing expenses, or inadequacy of capital. According to the

respondents, geographical location has obtained the eighteenth rank with a Relative Importance Index (RII) of 0.671. The 19th position is associated with a restricted level of technical proficiency, as indicated by a RII value of 0.657. The redesign pertaining to the associated design with a RII value of 0.596 has been assigned the twentieth position. The phenomenon of corruption has been assigned a ranking of twenty-first place, as determined by a RII value of 0.647. The resultant supplementary expenses are typically transferred to the project proprietor or governmental organisation, thereby leading to an escalation in the overall costs of the construction undertaking. The RII value of 0.644 indicates that the inability to formulate long-term strategies has been ranked 22nd. The inadequate organisation of work has been assigned a ranking of 23, with a corresponding RII value of 0.633. The issue of financial constraints has been assigned a ranking of 24 and a Relative Importance Index (RII) of 0.627. The RII value of 0.593 has been assigned to the 25th rank of production waste. The generation of production waste results in suboptimal utilisation of the available raw materials. The squandering of materials during the manufacturing process results in a direct escalation of production costs, as additional raw materials must be procured to offset the loss. The phenomenon of cost escalation has been assigned a ranking of 26, accompanied by a Relative Importance Index (RII) value of 0.593. Modifications to the project's blueprint, resulting from client demands, design inaccuracies, or unanticipated on-site circumstances, have the potential to cause an increase in expenses. The practise of double taxation has been assigned a ranking of 27 and a Relative Importance Index (RII) of 0.583. The inability to adhere to a set timeline has been assigned a ranking of twenty-eighth, with a corresponding Relative Importance Index (RII) of 0.572. The level of political interference has been assessed and assigned a ranking of 29, with a corresponding Rescaled Importance Index (RII) value of 0.535. The involvement of political actors in construction projects can result in a deceleration of the decision-making procedures. The approval processes, permits, and licences necessary for construction may be subject to disruption due to political considerations, bureaucratic factors, or shifts in political leadership. The employee's level of fraudulence has been assessed and found to be ranked at the 30th percentile, with a corresponding Relative Importance Index (RII) value of 0.528.

V. CONCLUSION

The results of the questionnaire survey revealed a rating of the elements based on the respondents' knowledge and experience. All factors have relative significance index values that range from 0.557 to 0.754. In addition, researchers have looked into several influencing aspects that can be managed on-site by experts. The key finding based on questionnaire research and field research is as follows.

1. During the study, more than 128 factors connected to cost considerations that were impacted by the class of contractors were discovered; however, only a few of these elements, such as difficulties brought on by a lack of resources, a lack of supply, errors in calculations, etc., were explored.
2. According to contractors, the project site came in third with a RII of 0.795, providing site condition came in second with a RII of 0.808, and kind of foundation came in first with a RII of 0.833. According to the engineer's point of view, gross floor space and double taxation came in first with RII values of 0.833, 0.8, 0.8, and 0.766 respectively. Changes in material specifications and the number of stories came in second and third, respectively, with RII values of 0.8 and 0.8. According to architects, the number of basement levels was ranked first with a RII of 1, the number of stories, the structural plan, and the layout plan were ranked second with a RII of 0.95, and the location of the project, the state of the site, price inflation, material price uncertainty, high transportation costs, and site conditions were ranked third with a RII of 0.85.
3. The majority of respondents emphasised the relevance of site conditions and foundation type in construction work. This component was given a RII of 0.833 and 0.793, respectively, placing it first.
4. The element site condition was revealed to be the second most important factor in this study, with a RII of 0.793. Among all the respondents, finding the ideal location for building is the rarest coincidence. The most typical tasks on a construction site that require a significant portion of the estimate are cutting and filling.
5. Offering The project site has a RII of 0.789, which places it third. Transporting workers, equipment, and supplies to the construction site may result in additional costs. Project costs may be impacted by the accessibility and state of infrastructure systems including sewage, energy, and water. Increased costs may ensue if the site does not already have these services available or if extra investments are needed to build the appropriate infrastructure. Costs may grow in some areas due to security issues or the requirement for more security measures.
6. Rapid economic change was another significant factor that came in at number four with a RII of 0.783. The availability and price of raw resources might change as the economy shifts. The cost of producing goods for firms may rise if there is inflation or a shortage of raw materials in the economy. Interest rate changes are frequently the outcome of economic changes. Business borrowing costs may rise as a result of higher interest rates, making it more expensive to fund initiatives or expand operations.
7. It was discovered throughout this investigation that the factor inadequate accounting, which had a RII of 0.776, was also significant. Financial statements may contain errors and inaccuracies as a result of poor accounting procedures. By misrepresenting the company's financial situation, this may cause stakeholders to

make bad decisions. A fine or penalty could emerge from it as well as legal or regulatory problems. Poor accounting procedures can lead to inefficiencies and higher operating costs. For instance, poor inventory management can result in overstocking or stockouts, both of which can be expensive for the company.

8. With a RII of 0.711, the factor complexity of design overrun has received the most attention from responders. Engineers and designers frequently spend more time and energy on complex designs. Advanced modelling, testing, and research could all be part of the process. Costs associated with development and engineering may rise as a result. It can call for specialised or custom-made materials, which can be more expensive.

9. The layout plan, which had a RII of 0.762, was also crucial. The overall size and floor area of the structure are determined by the layout plan. Larger buildings typically require more resources, labour, and time during construction, which raises the cost. The layout plan affects the building's configuration, size, and shape, which might affect construction costs.

REFERENCES: -

[1]. G. Sibanda, Creating an Enabling Environment for Small-Scale Contractors, Bulletin no. 9, International Labour Organisation/Advisory Support Information Services and Training for Labour-Based Programmes, Harare, Zimbabwe, 1999.

[2]. National Construction Industry of Council (NCIC) of Malawi, "Construction firms classified by the national construction industry of council of Malawi," Annual Report, NCIC, Lilongwe, Malawi, 2010.

[3]. C. M. Rogerson, "Road construction and small enterprise development: the experience of the N4 Maputo corridor," Development Southern Africa, vol. 17, no. 4, pp. 535–566, 2000.

[4]. W. D.Thwala and M. Mvubu, "Current challenges and problems facing small and medium scale contractors in Swaziland," African Journal of Business Management, vol. 2, no. 5, pp. 93– 98, 2008.

[5]. P. Bentall, A. Beusch, and J. Veen, Employment-Intensive Infrastructure Programmes: Capacity Building for Contracting in the Construction Sector Guidelines, ILO Publication, Geneva, Switzerland, 1999.

[6]. R. L. Chilipunde, Constraints and challenges faced by small, medium and micro enterprise contractors in Malawi [M.S. thesis], Nelson Mandela Metropolitan University, Port Elizabeth, South Africa, 2010.

[7]. O. Adams, "Contractor development in Nigeria: perceptions of contractors and professionals," Construction Management and Economics, vol. 15, no. 1, pp. 95–108, 1997.

[8]. A. K. Eyiah, "An integrated approach to financing small contractors in developing countries: a conceptual model," Construction Management and Economics, vol. 19, no. 5, pp. 511–518, 2001.

[9]. A. K. Eyiah and P. Cook, "Financing small and medium-scale contractors in developing countries: a Ghana case study," Construction Management and Economics, vol. 21, no. 4, pp. 357–367, 2003.

[10]. Y. Frimpong, J. Oluwoye, and L. Crawford, "Causes of delay and cost overruns in construction of groundwater projects in a developing country: Ghana as a case study," International Journal of Project Management, vol. 21, no. 5, pp. 321–326, 2003.

[11]. J. Mbachu and R. Nkado, "Factors constraining successful building project implementation in South Africa," Construction Management and Economics, vol. 25, no. 1, pp. 39–54, 2007.

[12]. C. Kaliba, M. Muya, and K. Mumba, "Cost escalation and schedule delays in road construction projects in Zambia," International Journal of Project Management, vol. 27, no. 5, pp. 522–531, 2009.

[13]. O. I. Aje, K. T. Odusami, and D. R. Ogunsemi, "The impact of contractors' management capability on cost and time performance of construction projects in Nigeria," Journal of Financial Management of Property and Construction, vol. 14, no. 2, pp. 171– 187, 2009.

[14]. F. D. K. Fugar and A. B. Agyakwah-Baah, "Delays in building construction projects in Ghana," Australasian Journal of Construction Economics and Building, vol. 10, no. 1-2, pp. 103–116, 2010.

[15]. S. O. Ogunlana, K. Promkuntong, and V. Jearkjirm, "Construction delays in a fast-growing economy: comparing Thailand with other economies," International Journal of Project Management, vol. 14, no. 1, pp. 37–45, 1996.

[16]. M. Zakeri, P. O. Olomolaiye, G. D. Holt, and F. C. Harris, "A survey of constraints on Iranian construction operatives' productivity," Construction Management and Economics, vol. 14, no. 5, pp. 417–426, 1996.

[17]. P. Kaming, P. Olomolaiye, G. Holt, and F. Harris, "Factors influencing construction time and cost overruns on highrise projects in Indonesia," Construction Management and Economics, vol. 15, no. 1, pp. 83–94, 1997.

[18]. A. M. Odeh and H. T. Battaineh, "Causes of construction delay: traditional contracts," International Journal of Project Management, vol. 20, no. 1, pp. 67–73, 2002.

[19]. K. C. Iyer and K. N. Jha, "Factors affecting cost performance: evidence from Indian construction projects," International Journal of Project Management, vol. 23, no. 4, pp. 283–295, 2005.

[20]. P. A. Koushki, K. Al-Rashid, and N. Kartam, "Delays and cost increases in the construction of private residential projects in Kuwait," Construction Management and Economics, vol. 23, no. 3, pp. 285–294, 2005.

[21]. S. A. Assaf and S. Al-Hejji, "Causes of delay in large construction projects," International Journal of Project Management, vol. 24, no. 4, pp. 349–357, 2006.

[22]. W. Alaghbari, M. R. A. Kadir, and A. Salim, "The significant factors causing delay of building construction projects in Malaysia," Engineering, Construction and Architectural Management, vol. 14, no. 2, pp. 192–206, 2007.

[23]. G. Sweis, R. Sweis, A. Abu Hammad, and A. Shboul, "Delays in construction projects: the case of Jordan," International Journal of Project Management, vol. 26, no. 6, pp. 665–674, 2008.

[24]. J.-K. Lee, "Cost overrun and cause in Korean social overhead capital projects: roads, rails, airports, and ports," Journal of Urban Planning and Development, vol. 134, no. 2, pp. 59–62, 2008.

[25]. A. Al-Kharashi and M. Skitmore, "Causes of delays in Saudi Arabia public sector construction projects," International Journal of Project Management, vol. 27, no. 1, pp. 3–23, 2009.

[26]. Paul John Kulemeka,1,2 Grant Kululanga,3 and Danny Morton2critical Factors Inhibiting Performance of Small- and Medium-Scale Contractors in Sub-Saharan Region: A Case for Malawi

[27]. ABDELNASER OMRAN S0chool of Housing, Building and Planning, 11800, Minden, Universiti Sains Malaysia, Pulau Pinang E-mail: naser_elamroni@yahoo.co.uk FACTORS AFFECTING COST PERFORMANCE IN

[28]. CONSTRUCTION PROJECTS WITHIN KELANTAN STATE IN MALAYSIA.

[29]. Jie Yang, Hetong Yuan , and Lin Zhang Influence Factors on General Contractor Capability in the Context of Transforming China

[30]. Gwahula Raphael Department of Accounting and Finance, The Open University of Tanzania, P.O. Box 23409, Dar Es Salaam, Tanzania Tel: 255-022-266-7450 E-mail: gwahulagr@gmail.com Augustine Wittonde Phillip Regional Manager TANROADS, P.O. Box 62, Shinyanga, Tanzania Tel: 255-076-983-9382 E-mail: pwittonde@yahoo.co.uk An Assessment of Critical Factors Affecting Quality Performance of Government Financed Construction Projects: Evidence from Tanzania