Journal of Positive School Psychology
2022, Vol.6, No.4, 3884 - 3895

http://journalppw.com

The Impact of Time Delay on Construction Projects Cost Overrun: A Case Study on Some of Construction Projects in Mogadishu-Somalia

Layla Abdullahi Osman[1], Dr.Amina Omar Mohamud[2]

[1]Faculty of Management Science, SIMAD University, Mogadishu - Somalia.
[2]Faculty of Management Science, SIMAD University, Mogadishu - Somalia.

E.mail : aminasheikhomar@simad.edu.so , Layla@simad.edu.so

Abstract:
Somalia's construction projects currently they face significant cost overrun gap. It is a norm that most construction projects take more time than the time planned for them. Therefore, the goal of this research is to discover the challenges can cause construction projects to be delayed, determine the impacts of the time delay on construction projects cost overrun, as well as, find out the method to avoid or minimize the time delay on construction project cost overrun. The methodology that this study used is quantitative methodology and to test the hypothesis a questionnaire is distributed to potential construction project companies based across Mogadishu. While the respondents were randomly divided in to construction projects managers, contractors, sub-contractors and clients. The study also discovered that using Pearson correlation, there is a positive association between the effects of time delays on building project cost overruns and measures for decreasing time delays. The study recommends that the construction companies should make sure the availability of enough budgets during the construction activities to avoid the stoppage of the work and should have the knowledgeable personnel in finance. It also recommends that there is a need to a good management of project finances to fulfill payment progress has to be done on time.

Keywords: Important of Construction Industry, delays in Construction and cost overrun.

1. INTRODUCTION

Construction projects are the basis of the development in the different sectors of life either its public sector or private sector, it is a necessary for the projects to be accomplished in the scope of planned, time and cost. Sometimes that does not happen but in contrary it may take longer than the planned time and since the time of the project have extended from its deadline most probably it will consume more than the planned cost. This study focuses the impact of time delay on construction projects cost overrun in Mogadishu.

The success criteria for the project were that it be completed on time and under budget. Time delays and cost overruns rose as a result of uncertain activities during the life cycle project. This might put the project in jeopardy (Susanti, 2019). Many building projects in India are plagued by time delays, which is one of the most critical difficulties. The ability to execute projects on time is crucial, yet the construction process is fraught with uncertainties and unpredictable components arising from a range of sources, including resource availability, external circumstances, party performance, and building style. If there is a delay, it is damaging to the project (Babu, 2015).

Delays are one of the most serious problems in the construction project. Construction After a contract's due date has past, delays are time overruns. Delays caused the initial time and cost estimates to be exceeded. Delays can only be reduced by identifying and studying the

causes of delays (Shruthi Sivaprakasam, 2017).

A delay is defined in the construction business as a length of time that extends beyond the contract completion date or the date agreed upon by the parties for project delivery. It's a project that's running late. In terms of time, money, and quality, the project's delay has a negative impact on its success (Babu, 2015).

One of the most major hurdles to project completion is cost overrun, which reduces the contractor's profit margin, causing considerable losses and jeopardizing the project. Construction cost is one of the most critical aspects in determining a project's performance throughout its lifecycle, and it is a major source of anxiety for those working in the industry. Each and every project has been redone (U.Sindhu Vaardini, 2016).

In Indonesian construction projects, cost overruns are typical. Budget overruns can lead to a host of problems in a project. As a result, it is vital for every project stakeholder to have a complete understanding of the factors that lead to cost overrun in order to avoid or minimize the risk of it occurring during the project (Nurdiana, 2019).

Construction is a big, fast-paced industry that requires a lot of money up front. In developing countries, road construction is a critical component of the construction industry. As a result, road development projects receive a significant amount of funding from the national infrastructure budget. Inflation and local government demands were the primary causes of cost increases in road development projects in the Kurdistan Region. Road construction project delays are caused by a variety of factors, including delays in payments, financial processes, and difficulties on the part of contractors and clients, contract modification, economic problems, materials procurement, changes in drawings, staffing issues, equipment unavailability, poor supervision, construction mistakes, and poor coordination on site, changes in specifications, and labor disputes and strikes. To reduce the causes and impacts of cost escalation and schedule delays in road construction projects, proper project management procedures are essential. Construction delays are a well acknowledged phenomenon, not only in the Kurdistan area, but in all countries (Muhammed, 2015).

Therefore, due to bad scheduling, poor cost estimation of projects, and external events impeding the project's execution, such as clashes around the project location, time delays and cost overruns are apparently common difficulties in the construction business in Mogadishu, Somalia. This study tried to find out how projects can prevent from the cost overrun caused by project’s time delay. It suggests using well-defined project schedule with the advantage of network techniques that can prevent occurring delays in the projects before any further costs needed to conclude the project.

Literature review

Globally, construction industry is regarded as one of the largest fragmented industry. An estimate of annual global construction output is probably closer to U.S $ 4.5 trillion in 2004. The construction industry is also a prime source of employment generation offering job opportunities to millions of unskilled, semi-skilled and skilled work force.

In a country's socioeconomic development, the building industry is critical. The industry's activities are critical to achieving national socioeconomic development goals such as providing infrastructure, refuge, and jobs. It comprises hospitals, schools, townships, offices, houses, and other structures; urban infrastructure (such as water supply, sewerage, and 280 drainage); highways, roads, ports, trains, and airports; power systems; irrigation and agriculture systems; and telecommunications, among other things. In the form of structures and

engineering improvements to land, all economic operations aiming at the development, refurbishment, repair, or extension of fixed assets are covered. Furthermore, the construction industry employs a huge number of people and, through backward and forward connections, encourages the growth of other industries. As a result, it is necessary to support this important activity in order for the economy to grow at a healthy rate (Khan, 2008).

Important of Construction Industry:

Construction is one of the industry's most active and sensitive areas. It also has a high-visibility output and supports a significant amount of economic growth through intersect oral links between construction and other industries, making the construction industry a powerful economic force. By meeting some of the most basic development goals, such as output generation, job creation, and income generation and redistribution, the construction industry makes a significant contribution to long-term economic progress. It also aids in the provision of basic physical and social necessities such as shelter, infrastructure, and consumer goods. It's critical to comprehend how the construction business reacts to changes in other industries (Durdyev & Ismail, 2012).

Furthermore, building has an important role in encouraging sustainable development, which is linked to fundamental changes in products and services, as well as the employment of economic, technological, and social innovation, as well as energy-efficient technologies, among other things. The most important problem in the structure is its inefficient energy use, which results in excessive carbon dioxide emissions into the atmosphere. In Poland, there have been few additional attempts to increase the use of renewable energy in households (the notable exception is the action of subsidies for solar collectors, funded by the National Fund) (Stasiak-Betlejewska & Potkány, 2015).

Delays in Construction:

Delays in the construction industry often mean a lot, defining the entire project and putting various types of obstacles in the way of completion, even with the schedule and plan work. Our projects are considered successful if they are completed on time, according to specifications, within budget, and to the satisfaction of our clients. Delays are the most significant issues in the construction project. In general, multiple forms of delays of the same magnitude occur in construction projects. As delays occur in construction, such situations should be minimized by teamwork and planning, with the contractor, consultant, and client all contributing to the project's non-completion within the original schedule or agreed contract period (Uddin, Ahm, & Danish, 2017).

Furthermore, delays are one of the most typical problems in the building industry in India and around the world. Construction delays can be caused by a number of factors, including the owner, the design, and the workers, as well as external factors like severe weather. Because of the construction delay, time overrun develops, meaning that the project will take longer to finish than anticipated. Time and expense overruns result in huge financial losses (Hassaan, Hamza, Nikhil, & Sufyan, 2017)

Challenges Cause Time Delay on Construction Projects:

The three basic aspects used to evaluate a project's performance are time, budget, and quality. These variables are intertwined, and delays that cause schedule overruns result in cost overruns and poor quality in building projects. As a result, delays are one of the most common occurrences in the construction sector. Identification of the causes that cause delays is required for delay prevention, control, and oversight (Aydin & Mihlayanlar, 2018)

.

Factors Contributing To Construction Delay and Cost Overrun:

A research made by Shehu, Endut and Akintoye concluded that "Time overruns affect the delivery of construction projects, turning what should have been successful projects into those incurring additional costs or losing money." they added that it can also lead the project to another unexpected negative effects (Shehu, Endut, & Akintoye, 2014). According to Ali *et* al, Construction projects are behind schedule. It is a situation in which a project cannot be completed within the estimated time frame. They argued that, Faced with such issues in the building industry around the world, particularly in developing countries, is a typical occurrence (Ali, Smith, Pitt, & Choon, 2007).

Factors Contributing to Construction Delay:

As previously said, time, money, quality, and safety are the primary goals of building projects. Unfortunately, the occurrence of delays has a negative influence on all project stakeholders, including owners, design professionals, users of construction professionals, and others. If delays occur, they risk the project's objectives and result in an extension of time, which leads to more overheads and an increase in the project's cost. Time is money, and it is an essential component of every construction plan, affecting each party's contractual obligations (Gardezi, Manarvi, & Gardezi, 2014).

The majority of the time, construction projects is accompanied by delays, and delays have become one of the most common challenges encountered in construction projects around the world (Ahmed, Azhar, Kappagantula, & Gollapudi, 2003). Various studies have identified the phenomenon of delay as the primary concern when it comes to global construction projects (Alotaibi, Sutrisna, & Chong, 2015).

Factors Contributing to the Construction Cost Overrun:

Completion on time and on budget is a key aspect in project success (Flyvbjerg, Holm, & Buhl, 2004). Furthermore, the fundamental metric for determining an organization's productivity and profitability is cost performance (Olawale & Sun, 2010). The discrepancy between the intended (estimate) and actual construction costs at completion is referred to as project cost overrun (Niazi & Painting, 2017).

Cash flow and financial difficulties faced by contractors, contractor's poor site management and supervision, inadequate contractor experience, shortage of site workers, incorrect planning and scheduling by contractor were the most severe factors, while changes in scope of project and frequent design changes were the least severe factors, according to a study conducted in Malaysia (Memon, Rahman, Abdullah, & Azis, 2010).

Minimizing or Reducing Time Delay and Cost Overrun:

As previously said, the building industry is critical to any country's development. Any construction project's success is determined by how well it meets its goals in terms of cost, quality, and length (Malkanthi, Premalal, & Mudalige, 2017). Delay in the construction's time and hence cost overrun is an essential issue that any construction project can face whether in developed countries or in the developing countries, sometimes it cannot be avoided but at same time, it can be mitigated for further losses and minimized.

Research Objectives

Identify the obstacles that cause building project delays.

Determine the impacts of the time delay on construction projects cost overrun.

Find out the method to avoid or minimize the time delay on construction project cost overrun.

Research Methodology

The study was carried out using a survey research design. However, the research employed a quantitative technique; Quantitative research entails quantifying and analyzing variables in order to arrive at conclusions. It entails the use of numerical data and the analysis of that data using certain statistical procedures in order to answer questions (Apuke, 2017). As a result, the research was carried out as a descriptive and explanatory study. In addition, the survey used to obtain primary data for this research; the population of construction companies in Mogadishu, Somalia is difficulty of attainment accurate number of population so that the researches have a preference to target the population of Kaamil Construction & Water Supply Company in Mogadishu, Somalia, which contains 63 numbers of populations. These include Project Managers, Quality Surveyors, and Engineers, Consultants and Accountants as well as others. The target population is very important because they have applicable information to the research that makes useful.

2. RESULTS AND DISCUSSIONS

Demographic Analysis

The participants in this study were divided into two groups: males and females, as well as members of selected project Managers, Engineers, Accountants, Quantity Supervisors and Consultants. Moreover, respondents with different ages, the respondent that has different education levels, involved in different Types of projects. The output generated using SPSS package was detailed below subsections.

Table 4.1 Demographic Information

		Frequency	***Percent***
Gender	Male	42	80.8
	Female	10	19.2
	Total	**52**	**100**
Age	21-30	21	40.4
	31-40	11	21.2
	41-50	11	21.2
	above 50	9	17.3
	Total	**52**	**100.0**
Marital Status	Single	17	32.7
	Married	35	67.3
	Total	**52**	**100.0**
Educational level	Higher school	2	3.8
	Diploma	2	3.8
	Bachelor	28	53.8
	Master	13	25.0
	PHD	1	1.9
	Others	6	11.5
	Total	**52**	**100.0**
Professional	Project Manager	9	17.3
	Engineer	19	36.5
	Accountant	2	3.8

	Quality Supervisor	8	15.4
	Consultant	7	13.5
	Others	7	13.5
	Total	**52**	**100.0**
Experienced	Less than 5 years	19	36.5
	5-10 years	10	19.2
	11-15 years	14	26.9
	16-20 years	3	5.8
	Above 20 years	6	11.5
	Total	**52**	**100.0**
Types of projects	Residential	16	30.8
	Roads	11	21.2
	Civil	15	28.8
	Intuitional	6	11.5
	Industrial	2	3.8
	Other	2	3.8
	Total	**52**	**100.0**

Source: primary data, 2021

The respondents' characteristics are summarized in the result of personal information. The questionnaire survey had both male and female participants. The majority of the respondents were male of 80.8%, while the remaining 19.2 were Female. This indicates that female is less than males in construction projects and almost male have the concern of time delay matters.

The majority of the respondents were between the ages of 21 and 30, indicating that those over fifty are in the minority. This indicates that most tasks in construction projects are directed by youth and old persons mostly have the role of consultation and sharing experience.

67.3 %, the majority of the respondents were married and 32.7 percentages of total respondents were Single. This indicates that most personnel in construction projects are married. In addition, the educational qualification of the respondents shows that the majority of respondents had bachelor degrees 53.8 % of total respondents. This shows that bachelor holders are most workers on construction projects in construction industries.

Professions of the respondents were Quality supervisors, Accountants, Engineers, Project Managers, Consultants and Others. The majorities the respondent were Engineers with 36.5%, followed by 17.3% Project Managers and 15.4% Quality supervisors. This indicates that these professions are the most important for construction companies to work in projects.

36.5 percent of respondents have less than 5 years of job experience, 19.2 percent have 5-10 years of work experience, 26.9% have 11-15 years of work experience, and 5.8% have 16-20 years of work experience. This indicates that the vast majority of the respondents had worked for fewer than 16 years. Civil, industrial, institutional, road, and residential projects were among those

mentioned by respondents. The findings revealed that 30.8 percent of respondents were active in residential construction, 28.8 percent in civil construction, and 3.8 percent in industrial and other sorts of projects. This shows that most respondents of construction companies involved in residential construction (30.8%) and civil buildings (28.8%).

Descriptive Analysis

Descriptive analysis the Challenges that Causes Time Delay of Construction Project

The study's first goal was to identify the obstacles that cause time delays on building projects in Mogadishu, with a focus on a few specific projects. The respondents were asked to rate their agreement with each of the statements that best described the problems that cause construction project delays. The following table summarizes the findings.

Table 4.2 Challenges that Causes Time Delay of Construction Project

No	Challenges that Causes time delay on Construction Projects	Mean	Std. Deviation
1	Lack of client's experience.	1.2281	.56750
2	Changes in the extent of the project.	1.3860	.70088
3	Lack of risk management during the execution phase.	1.4211	.56529
4	Large number of participants of project.	1.4386	.50063
5	Poor cost estimation of the project.	1.4561	.65657
6	Poor site management and supervision by contractor.	1.6667	.66368
7	Lack of resources and labor productivity.	1.9123	.89204
8	Fluctuation in prices of building materials.	1.9992	.99642
9	Mistakes and discrepancies in design documents.	2.1053	1.36713
10	Incorrect task assessment.	2.3333	1.16119
11	Shortage of materials in market.	2.3860	1.25382
12	Ineffective planning and scheduling of project.	2.4386	1.26946
13	Poor qualification of the contractor's technical staff.	2.4912	1.60844
14	Over ambitious estimates.	3.1404	1.42635
15	Ineffective communication.	3.2982	1.16011
	Over all Mean and Standard Deviation	**2.05**	**0.98**

Source: primary data, 2021

According to the above table, respondents were asked several challenges that causes time delay on construction projects, including Lack of client's experience,

Changes in the extent of the project and Poor cost estimation of the project these challenges scored with an average mean is about 2.05 and the standard deviation of 0.98, which this variance stands for acceptable, thus this suggests that total mean which stands for height and agreed that the challenges causes time delays on construction project cost overrun in Mogadishu.

Descriptive Analysis the Impacts of Time Delay on Construction Projects Cost Overrun

The study's second goal was to investigate the effects of time delays on cost overruns in building projects, with a focus on a few specific projects. The respondents were asked to rate how much they agreed with each of the statements that best described the impact of the time delay on the cost overrun of a building project. The following table summarizes the findings.

Table 4.3 Impacts of Time Delay on Construction Projects Cost Overrun

No	Impacts of Time Delay on Construction Projects Cost Overrun	Mean	Std. Deviation
1	Poor quality of project.	1.2456	.57572
2	Total change in the desired design.	1.2998	.69414
3	Arbitration between parts.	1.4959	.76745
4	Disappointment of project team.	1.6491	1.09109
5	Litigation.	1.6667	.73364
6	Poor technical performances and escalation of material prices.	1.8772	.99434
7	Agreement breakdowns.	1.8947	.98707
8	Time overrun.	1.9865	.68542
9	Conflict between project clients and contractors.	2.0877	1.15121
10	Argument between parties involved.	2.1930	1.17167
11	Increases estimated cost.	2.4561	1.31026
	Over all Mean and Standard Deviation	**1.80**	**0.92**

Source: primary data, 2021

The study focused on the influence of time delays on construction project cost overruns in this section, which included Poor quality of project, Total change in the desired design and Arbitration between parts. The average mean of impacts is about **1.80** of the total responses and the standard deviation of the section is **0.92** so that this variance stands for acceptable.

Descriptive Analysis Methods of Minimizing Time Delay on Construction Project Cost Overrun

The study's third goal was to figure out how to avoid or reduce time delays in building project cost overruns in Mogadishu, based on a case study of a few different construction projects. Respondents were asked to indicate how much they agreed with each of the statements that best described reducing building project delays. The results are summarized in the following table.

Table: 4.4 Minimizing Time Delay on Construction Project Cost Overrun

No	Ways of Minimizing Time Delay on Construction Project Cost Overrun	Mean	Std. Deviation
1	Inspection and testing by consultants in construction.	1.1930	.44072
2	Mitigate the effect of inhibiting factors in project control.	1.2807	.52625
3	Hiring experienced personnel in the field of work and avoid choose low biding.	1.2982	.49875
4	Monitoring and using technology tools or software.	1.3333	.54554
5	Project development meetings.	1.3333	.57735
6	Motivation of project workers.	1.3860	.77354
7	Sufficient funds for project should be allocated.	1.4035	.65081
8	Producing design documents on timely.	1.4211	1.34774
9	Select qualified designers to minimize potential claims.	1.4737	.78160
10	Good Strategic plan management	1.5088	.73492
11	Adequate funds should be kept for each running project.	1.5263	.60075
12	Proper decisions should be made on time	1.6491	.74381
13	Agreement between parts to enhance laws and regulations of project framework.	1.9298	1.14735
14	Effective communication both parts.	2.4035	1.38692
	Over all Mean and Standard Deviation	**1.5**	**0.76**

Source: primary data, 2021

The study discussed methods for avoiding time delays on construction project cost overruns in this part, using the example of a few selected construction projects in Mogadishu. This section's statements were recognized with an overall very high mean of 1.5 for the total replies and standard deviation is 0.76, indicating that the respondents agreed on the techniques for minimizing time delays.

3. CONCLUSION

The purpose of the study was to see how time delays influenced cost overruns in Mogadishu construction projects. In the case study of Mogadishu, Somalia, it also proposes techniques to avoid or mitigate the impact of time delays on project cost overruns. To comply with this, a poll of 54 persons was conducted, and the results revealed that "time delays have an impact on building project cost overrun." The study discovered fifteen factors that contribute to time delays, as well as eleven consequences of time delays on building project costs. There were also fourteen techniques for reducing delays identified.

In general, the study's findings suggest that delays have a negative impact on construction organizations, resulting in lower income and a higher project's final cost. Furthermore, Pearson correlation revealed a positive association between delay effects and strategies to reduce delays. The majority of respondents agreed that the overall mean was extremely high and that the delay can be reduced by using the best twelve approaches described in the study.

Time delays, on average, have a negative impact on construction project cost overrun, resulting in reduced revenue and

a higher project final cost, according to the findings of the study. According to Pearson correlation, however, there is a positive relationship between the impact of time delays and the approach for reducing delays. The vast majority of respondents felt that the overall mean was excessively high and that the delay might be decreased by employing the best twelve options outlined in the study.

Finally Time Delay can occur any construction project in every place same as the problems occurred in Mogadishu Construction Company which may happen due to the challenges of time delay and might have the impacts mentioned in the study. Furthermore, it's easy to keep truck of twelve ways to reduce lateness.

Recommendations

The study suggests the following in order to overcome delays in construction projects:

- Prepare effective planning scheduling and Suitable communication channels must be implemented during the construction process in order to have successful communication among parts involved in the each project that might reduce having communication problems.
- In order to increase the effectiveness and efficiency of construction projects, construction companies should hire experienced personnel in the field and avoid low bidders. This will allow the organization to obtain appropriate information from consultants on how to deal with problems in each task of the project.
- The construction companies should make sure the availability of enough budgets during the construction activities to avoid the stoppage of the work and should have the knowledgeable personnel in finance.
- The construction project manager should check for resources and capabilities since Equipment and construction material are important for construction project so that the project should choose the appropriate suppliers in order to continue its work and avoid lacking valuable construction materials as well, the construction companies should select suppliers that can deliver building materials in fixed prices with quality materials in order to overcome problems that arise changes in prices, and
- Construction companies should hire experienced workers in construction to continue construction projects and the company must make assessment in each tasks and milestones to correct earlier the mistakes that might occur during the construction process.
- Finally, good management of project finances to fulfill payment progress has to be done on time.

4. REFERENCE

1. Ahmed, S. M., Azhar, S., Kappagantula, P., & Gollapudi, D. (2003). Delays in Construction: A Brief Study of the Florida Construction Industry. *ASC Proceedings of the 39th Annual Conference*, (pp. 257-266). Miami.
2. Ali, A. S., Smith, A., Pitt, M., & Choon, C. H. (2007). CONTRACTORS' PERCEPTION OF FACTORS CONTRIBUTING TO PROJECT DELAY: CASE STUDIES OF COMMERCIAL PROJECTS IN KLANG VALLEY, MALAYSIA. *Journal of Design and Built Environment*. Retrieved 10 7, 2020, from https://ejournal.um.edu.my/index.php/jdbe/article/view/5300
3. Alotaibi, N., Sutrisna, M., & Chong, a. H.-Y. (2015). Managing Critical Factors Causing Delays in Public Construction Projects in Kingdom of Saudi Arabia . *The 6th International*

Conference on Engineering, Project, and Production Management, (pp. 109 -119).

4. Apuke, O. D. (2017). QUANTITATIVE RESEARCH METHODS A SYNOPSIS APPROACH. *Arabian Journal of Business and Management Review (Kuwait Chapter), 6*, 41.
5. Aydin, D., & Mihlayanlar, E. (2018). Causes and Effects of Construction Project Delays: A Local Case Study in Edirne City Centre. *5th International Project and Construction Management Conference*, (p. 478).
6. Babu, A. M. (2015, March). Study on Time Delay Analysis for ConstructionProject Delay Analysis Project Delay Analysis. *International Journal of Engineering Research & Technology (IJERT), 4*(03), 1076.
7. Durdyev, S., & Ismail, S. (2012). Role of the construction industry in economic development of Turkmenistan. *Energy Education Science and Technology Part A: Energy Science and Research* , 883.
8. Flyvbjerg, B., Holm, M. K., & Buhl, S. L. (2004). What Causes Cost Overrun in Transport Infrastructure Projects? *Transport Reviews*, 3 - 18.
9. Gardezi, S. S., Manarvi, I., & Gardezi, J. (2014). Time Extension Factors in Construction Industry of Pakistan. *Fourth International Symposium on Infrastructure Engineering in Developing Countries* (pp. 196 - 204). Elsevier Ltd.
10. Hassaan, A., Hamza, F., Nikhil, M., & Sufyan, S. (2017). A Study in Construction Delays of Residential Structures. *International Refereed Journal of Engineering and Science (IRJES)*, 42.
11. Khan, R. A. (2008). Role of Construction Sector in Economic Growth: Empirical Evidence from Pakistan Economy. *First International Conference on Construction In Developing Countries*, (pp. 279-280).
12. Malkanthi, S., Premalal, A., & Mudalige, R. (2017). Impact of Cost Control Techniques on Cost Overruns in Construction Projects. *The Institution of Engineers, Sri Lanka*, 53 - 60.
13. Memon, A. H., Rahman, I. A., Abdullah, M. R., & Azis, A. A. (2010). Factors Affecting Construction Cost in Mara Large Construction Project: Perspective of Project Management Consultant. *International Journal of Sustainable Construction Engineering Technology*, 41 - 54.
14. Muhammed, E. T. (2015). *DELAYS IN CONSTRUCTION PROJECTS.*
15. Niazi, G. A., & Painting, N. (2017). Significant Factors Causing Cost Overruns in the Construction Industry in Afghanistan. *7th International Conference on Engineering, Project, and Production Management* (pp. 510 - 517). Kapul: Elsevier Ltd.
16. Nurdiana, R. S. (2019). Cost Overrun in Construction Projects in Indonesia. *IOP Conf. Series: Earth and Environmental Science*, p. 1.
17. Olawale, Y., & Sun, M. (2010). Cost and time control of construction projects: inhibiting factors and mitigating measures in practice. *Construction Management and Economics*.
18. Shehu, Z., Endut, I., & Akintoye, A. (2014). Factors Contributing to Project Time and hence Cost Overrun in the Malaysian Construction Industry. *Journal of Financial Management of Property and Construction*.
19. Shruthi Sivaprakasam, S. a. (2017). A Review on Causes of Delay in Construction Projects. *IJSRD - International Journal for Scientific Research & Development, 5*(02), 1108.

20. Stasiak-Betlejewska, R., & Potkány, M. (2015). Construction Costs Analysis And Its Importance To The Economy. p. 37.
21. Susanti, R. (2019). Cost overrun and time delay of construction project in. *Journal of Physics: Conference Series*, 1.
22. U.Sindhu Vaardini, S. a. (2016). STUDY ON COST OVERRUNS IN CONSTRUCTION PROJECTS –A REVIEW. *International Journal of Applied Engineering Research, 11*, 356.
23. Uddin, M. A., Ahm, S. K., & Danish, M. (2017). TYPES AND CAUSES IN CONSTRUCTION DELAYS. *International Research Journal of Engineering and Technology*, 2236.