Review paper on factors affecting of time overrun in construction industry
Nishit kubavat1, Darshit shah2
1M.Tech Scholar, Department of Civil Engineering, Parul Institute of Engineering and technology, Parul University, 391760, Vadodara, Gujarat, India
2Assistant Professor, Department of Civil Engineering, Parul Institute of Engineering and technology, Parul University, 391760, Vadodara, Gujarat, India

ABSTRACT
One of the most serious concerns confronting the construction business today is time overrun. There are several elements that contribute to time overruns that must be understood and addressed in order to successfully complete projects on time. This is due to the fact that schedule overruns have a significant influence on building costs that can never be recovered. In India, 50 significant building projects were recognized as having a Time Overrun during construction. Out of 50 projects, 40% were delayed by 1 to 100 days. 25% projects were delayed between 101 and 200 days, 20% projects were delayed between 201 and 300 days, and 10% projects were delayed beyond 300 days. A prepared questionnaire was distributed to project management consultant staff. The data was statistically evaluated to determine the causes of time overruns. The findings of this study will improve the process of awarding building jobs to contractors.

Keywords: time overrun, factors of time overrun, quantitative methods

1 Introduction
Time overrun is one of the most serious issues in construction industry globally. Construction time overrun is the change between a project's actual contract period at the time of tender and its final contract period on which construction project finished. Time overrun can result in many negative impacts on the construction project like budget overrun, low productivity, contract expiration, work acceleration resulting in bad quality, and disputes among construction stakeholders. It is observed that many construction projects face the issue of time overrun worldwide both in developing and developed countries like USA or UK. more than 40% of projects in construction industry experiences time overrun. Construction industry is not famous in terms of project completion within time. Many construction projects failed to finish on time due to a lack of understanding of time overrun analyses. Only 47% of projects were completed. accomplished within the time limit specified, approximately 38% of Construction projects were running late, and 15% of In, building projects were completed ahead of schedule. Indonesia, as well as other countries.

TIME OVERRUN IN PROJECTS
Delay is one of the most general, major and serious issues affecting the time factor in construction projects in civil engineering. Time overload is a crucial factor, even with technical advancements and improved understanding of project management by project managers, time overrun is a critical factor. The explanations for the delay in projects are different. Delays are caused by factors such as “postponement of material delivery to the site, malfunction of equipment, political problems, and several weather conditions. Delays in some circumstances make the situation much more difficult. Recognizing the delay causes and selecting precise and correct measures to minimize the detrimental effect of delays on the length of projects is important for a thorough evaluation.

2 Literature Review
Many researchers conducted studies on the causes of time overrun in different kinds of construction projects to find factors and causes of time overrun.
1. Identified causes of time overrun were delayed payments, material shortage, changes in selected material prices, poor site management, and problems in bank credit. (1)
2. identified 83 common factors of time overrun and arranged these factors in 8 groups. By using relative importance index five causes of time overrun were identified which were poor supervision at site and site
management, delay in making decisions, owner interference in the project, ground conditions, and necessary changes from the owner. (2)

3. identified 16 causes of time overrun, the top 5 being: financial problems faced by the contractor, poor contract management, site supervision, lack of planning, and delay in material supply. (3)

4. carried out a survey through questionnaire distribution to selected experts of construction industry in Nigeria. Identified causes of time overrun were inexperienced sub-contractors, shortage of labour, poor site management, shortage of selected materials and mistakes during works. (4)

5. identified the major causes of time overrun through quantitative approach in construction projects of Vietnam. The main causes of time overrun were poor monitoring, poor project management and financial problems faced by owner. (5)

RESEARCH DESIGN

A research methodology is a method for gathering, analysing, and interpreting data. A quantitative research technique was used to assist the study's data collection and analysis method and procedure. The project's stated goal also calls for a quantitative study to be conducted. In terms of design, the study falls within the diagnostic category. It is a research strategy in which the primary goal of the study is to investigate the underlying causes of a certain situation. It is beneficial to identify the components that contribute to specific issues. A diagnostic research design entails the identification of a problem, the identification of its causes, the development of corrective measures, and the recommendation of potential solutions. Similarly, the factors causing time delays in road and building construction projects in the study area were identified via the distributed questionnaire survey.

3 Identified Factors

1. Poor site management and supervision
2. Incompetent subcontractors
3. Shortage of site workers
4. Financial difficulties of owner
5. Frequent design changes
6. Shortages of materials
7. Delay in progress payment by owner
8. Unforeseen ground condition
9. Delay Preparation and approval of drawings
10. Change in the scope of the project
11. Incomplete design at the time of tender
12. Inadequate planning and scheduling
13. Fluctuation of prices of materials
14. labor productivity
15. Effect of weather
16. Delays in decisions making
17. Mistakes during construction
18. Mistakes and Errors in design
19. Insufficient Numbers of equipment
20. Unrealistic contract duration and requirements imposed
21. Owner interference
22. Laws and Regulatory Framework
23. Delay in inspection and approval of completed works
24. Accidents on site
25. Poor project management
26. Lack of experience
27. Lack of coordination between parties
28. Lack of communication between parties
29. Late delivery of materials and equipment
30. Cash flow and financial difficulties

IV. CONCLUSION
Time overruns is a severe problem faced by large construction in India. It is resulted from various factors, which had been identified in this study. 30 causes were found as valid. In future from that 30 causes identify most critical factor using different quantitative approaches such as RII or AI or FI method.

The contractor was the most common cause or originator of time overruns. After reviewing some completed projects, the following variables were considered to be the most popular (change in economic condition and Company's lack of experience). The high proportion of time overruns in the nine examined projects was 319%. The second goal of this research was to identify the common effects of construction variation orders, which were (increase in project cost, increase in overhead expenses, and quality degradation), implying that these factors require immediate attention in order to avoid time overruns in India.

References