

Chapter 5

Conclusions and recommendations

5.1 Conclusions:

This chapter provided and discussed the major findings obtained from the previous chapters; it proposes recommendations that could assist in future research studies, related to the causes of delay in building projects. The delay is one of the most important problems facing the construction industry, in the world where it has become a global phenomenon, and Sudan is one of the countries that face this problem.

The main objective of the study was to identify the reasons for the delay in the state of Khartoum, through distribution of a questionnaire. And the analysis with Statistical program (SPSS).

The majority of respondents were, workers in large-scale projects which prevail in Sudan, and expertise ranging between 10 and 15 years and that in the public and private sectors and Consultant is the most target groups in the research.

Most participants agreed that the six factors listed in the questionnaire i.e. Financial, design, exceptional factors, management, construction and social and behavioral lead sometimes to occurrence of delay in the projects.

Most participants agreed that the owner is responsible for most of the delay caused by the financial factors and the type of delay, the delay here is non-excuse and sometimes can be Excusable-non-compensable. The design factors was the adviser is responsible for them and always be a delay resulting from non-excusable.

Everyone agreed that contractor is responsible for a large number of factors and management factors, exceptional factors, construction factors and social and behavioral factors except for a small part of these factors responsibility was attributed to the rest of the parties and the majority of the delay caused by the type of delay is non-excusable.

5.2 Recommendations:-

5.2.1 Research Recommendations:-

Based on the study carried out by the researcher and the result of the analysis of the questionnaire and the findings of the researcher, the researcher recommended that; in order to reduce the delay in the implementation of construction projects and to avoid the occurrence researcher recommended the following recommendations and proposals:

- 1- To ensure the availability of adequate budgetary allocation for the project before announcing it.

- 2- To review contractor financial efficiency and its ability to implement the project before referring.
- 3-The financial problems should be avoided, by making the payments on time.
- 4- Provide amount of money reserve amounts for each project to cover expenses resulting from the price change and height.
- 5- Provide basic information about the project and liabilities of the owner before the preparation of the design so as not to change orders during the implementation phase.
- 6- Study duration sufficient to complete the project before the conclusion of the contract and the failure to adopt a short period or inadequate.
- 7- The use of modern technologies such as fax, computer, Internet and computer software for easy transfer of information and to get a good design as required.
- 8- To develop a realistic timetable according to scientific formulas depending on the productivity of labor or previous experience.
- 9- The site should be managed properly.
- 10- Avoid delay in reviewing and approving of design documents than the anticipate.
- 11- The subcontractors should complete their work on time and the suppliers should supply the materials on time.
- 12- The materials quality should be checked properly so that less errors and problems happen.
- 13- Prepare well thought out plans for the development and training of workers in the construction sector and constantly updated to keep pace with the development in the construction industry.
- 14- Expanding in establishing the training professional academies to provide the staff in the construction sector with scientific, theoretical, knowledgeable and professional experiences.
- 15- Raising the standard of awareness concerning the importance of time, its limitations, how to invest and decreasing the waste time to become general culture that motivates the working staff minds.

5.2.2 Recommendations of the coming studies:-

- 1-The researcher recommended action research where the Contractor is the biggest target in the questionnaire.
- 2-The researcher recommended action research where the owner is the biggest target in the questionnaire
- 3-The researcher recommended job search compared to the house of delays in projects in Sudan and other countries.
- 4-The researcher recommended action questionnaire in Arabic to facilitate the distribution and filling.