

Expert Views and Analysis of the New Yellow Book (Plant Contract)

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Abstract

FIDIC has updated the standard forms and published four new Standard Forms of Contracts which are suitable for the majority of construction and plant installation projects around the world. "The Conditions of Contract for Electrical and Mechanical Works" including Erection on Site (The Yellow Book (1987)) was renewed to "The Conditions of Contract for Plant and Design – Build" which is for Electrical and Mechanical Plant and for Building and Engineering Works Designed by the Contractor. Owners, builders, engineers and designers should have the knowledge and skill to negotiate a favorable contract.

The objective of this study is twofold: the first is to evaluate the efficiency of the New Yellow Book to avoid the falling of projects outside the scope of the new forms; the second is to identify the significance of the different clauses of the New Yellow Book (The Plant Contract) in projects that have been designed by the contractor. A questionnaire was designed in order to capture the feedback of construction contract experts in Egypt. The responses of forty participating experts were further analyzed. The opinions of the experts were focused on the importance and significance of FIDIC clauses to the Egyptian market.

The study evaluates an importance factor for each individual clause of the FIDIC, depending on the expert's responses. The study is viewed as a valuable asset for any international organization aiming at joining the Egyptian Construction industry through The Plant Contract (FIDIC).

Keywords

FIDIC, Construction Contracts, New Yellow Book, Plant Contract, International Contracts.

1. Introduction

FIDIC, the International Federation of Consulting Engineers represents the international business interests of firms belonging to national Member Associations of engineering-based consulting companies. Founded in 1913, FIDIC membership today numbers 64 Member Associations representing some 560 000 professionals. Egypt is one of these international member Associations.

FIDIC has noted that certain projects have fallen outside the scope of the existing Standard forms. Accordingly, FIDIC has updated the Standard forms, expanded the range, and in 1999, published four new

Standard Forms of Contracts which are suitable for the majority of construction and plant installation projects around the world.

During its current work in updating the Conditions of Contract for Electrical and Mechanical Works including Erection on Site (The Yellow Book (1987)), was renewed to Electrical and Mechanical Plant and for Building and Engineering Works Designed by the Contractor (The Plant Contract).

Contract law is an important study in the legal profession. Although lawyers can be an important asset in contract negotiations owners, builders, engineers and designers should have the knowledge and skill to negotiate a favorable contract.

The last few years sent the world into grouping international works as consortium or joint ventures companies, going towards globalization. Most contractors started to work outside borders. Egypt, as a developing country, encouraged international construction companies to heavily participate in the different mega projects. Some of these projects are designed by the contractor, some abide by the FIDIC contracts, others should adhere to the Egyptian law and others have in their contracts a mixture of clauses from both sources.

2. Purpose and Scope

The objective of this study is twofold: the first is to evaluate the efficiency of the New Yellow Book to avoid the falling of projects outside the scope of the new forms; the second is to identify the significance of the different clauses of the New Yellow Book (The Conditions of Contract for Plant and Design – Build) in projects that have been designed by the contractor. A questionnaire was designed in order to capture the feedback of construction contract experts in Egypt. The responses of seventy participating experts were further analyzed. The opinions of the experts were focused on the importance and significance of FIDIC clauses to the Egyptian market.

The study evaluates an importance factor for each individual clause of the FIDIC, depending on the expert's responses. As international and construction firms are moving toward globalization, the study is viewed as a valuable asset for any international organization aiming at joining the Egyptian Construction industry through The Plant Contract (FIDIC). It is expected to act as useful tool in providing strategic implementations for management of such moves to Egypt.

3. Background

During its current work in updating the FIDIC, "The New Yellow book" (First Ed, 1999) was published to be used for any type of works that are be designed by the contractor. Egypt is one of the FIDIC members and the Egyptian consultants shared in updating the yellow book.

The latest Egyptian law for tenders and construction is law 89 for 1998, which was launched in 1998. The time span between the publication of FIDIC conditions and the new Egyptian law is very short. Realizing the advertised objective of the Egyptian government to attract more foreign investments, including the construction industry, experts were prompted to get acquainted with the international contracts. This resulted in a clear perception of the new FIDIC by Egyptian experts.

4. Methodology

It is well known, in the construction industry, that the tender forms and contracts are essential elements of any construction project. It is also known that disputes when arising during construction limit the success potential of the project with respect to cost and time and may even cause its termination. It should be noted that the present study was not intended for evaluating the new yellow book of FIDIC, neither was it planned to suggest any modifications. However, it was essentially initiated to avoid the falling of projects outside the scope of the new forms; and to identify the significance of the different clauses of the New Yellow Book in reference to the Egyptian construction industry.

Thus, the proposed methodology is based on designing and launching a technical questionnaire among the Egyptian experts, who are employing both FIDIC and Egyptian law, at mega projects, in their previous and current experiences. A critical property of the proposed questionnaire is its flexibility, thus, allowing experts to explain their views freely.

In this paper, the responses of contributors were analyzed and their individual suggestions were also taken into consideration. To estimate the required number of contributors, a statistical analysis was performed. The statistical bases for estimating the representative sample size is discussed in the following section.

5. Data Sample Characteristics

It is well known that a sample represents a number of elements selected from a larger group, i.e., the population. Conclusions deduced from any statistical analysis are as good and representative as the size of the employed sample. Therefore, it is considered a crucial step, in this study, to accurately estimate the size of a representative sample. There are several documented techniques that are employed in determining the proper sample size. These include using a census for small populations, imitating a sample size of similar studies, using published tables, and applying formulas to calculate a sample size. (Mary Natrella 1963, Bazaraa 1984).

For the purpose of this study, the data is considered as a Continuous Data. The total population number was obtained from “The Building & Construction Directory” (a directory published by an Egyptian governmental authority which is responsible to organize and classify all the technical persons working in the construction industry in Egypt).

Employing published statistical tables, using a confidence level of 95 %, a degree of accuracy of + 0.05 and a proportion of sample of 0.50, the sample size required was found to be equal to 67. To avoid the outlier sample, the estimated sample size was taken equal to 80 contributors. The sample space was classified into two major classes based on the nature of the construction company being governmental or private. Data sets of 40 contributors were collected. Twenty one contributors replied that their own opinion is: all clauses and sub clauses are very important; however they refused to reply in writing at the questionnaire form. All other contributors, i.e. nineteen, declined to share their views because of lack of experience in reference to the New Yellow book. Therefore, the analysis was only conducted for forty questionnaire forms.

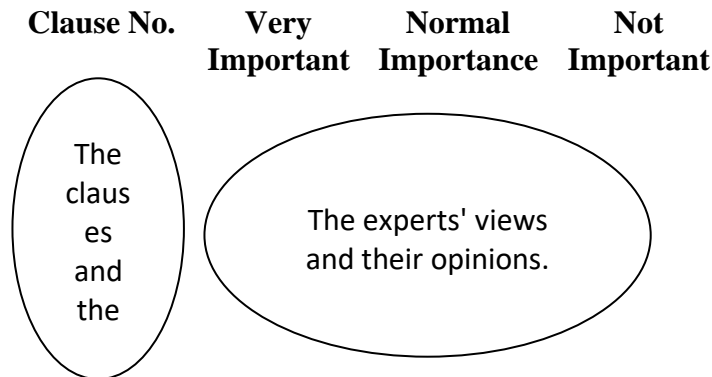
6. Questionnaire Design

The questionnaire was designed to gauge the experts' views of the twenty clauses and sub clauses, as well. The questionnaire is presented in two main sections. The first requires basic technical background information regarding previous experiences and type of firm employing the contributor. The objective of

this questionnaire is to find out the degree of importance, according to Egyptian experts' views, of each clause and sub-clause in the new FIDIC.

The questionnaire was launched in both Arabic and English languages to avoid any misunderstanding or misconceptions. It was structured in a table format showing different rankings for each clause, as shown in table 1. The questionnaire was designed to accept any remarks that may arise from individual experts.

Table 1: A Sample of the Questionnaire Form



7. Analysis and Results

The sample space was classified into two major classes based on the nature of the construction company being governmental or private. Further classification was performed in order to reflect the role of the interviewed expert, i.e., consultant, contractor or owner. Table 2 shows the individual classifications for the contributors, according to their experience and employers. The analyzed results varied according to each sub clause not only the clause itself. However, it was noticed, as expected, that all the governmental contributors, regardless of their job titles, had similar responses regarding the same clauses. In other words, the governmental contributors had the same views and ideas, while the private sector contributors had different views according to their different experiences. As in clause number (4) which is considered the contractor's obligations, all the governmental experts agree with its importance 100%, while the contractor's contributors vary between "normal importance" and "not important".

Table 2: Contributors Classification

Type of the employer	Number of contributors	Consultant	The job title Contractor	owner
Government	25	6	15	4
Private sector	15	8	7	--

Each contributor was asked to fill in the degree of importance as: "very important", "normal importance" and "not important" for every clause and sub-clause, depending on his/her own view. For example, if 20 contributors replied about clause (1-1-1) "Definitions of Contract" to be very important, so the percentage of agreement is 50%. For the same clause (1-1-1) the other 50% will vary between "normal important" and "not important" rankings.

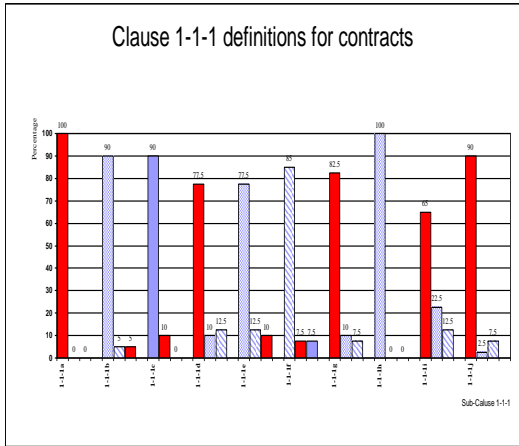


Figure 1: Column Chart for Opinions on clause no. (1-1-1)

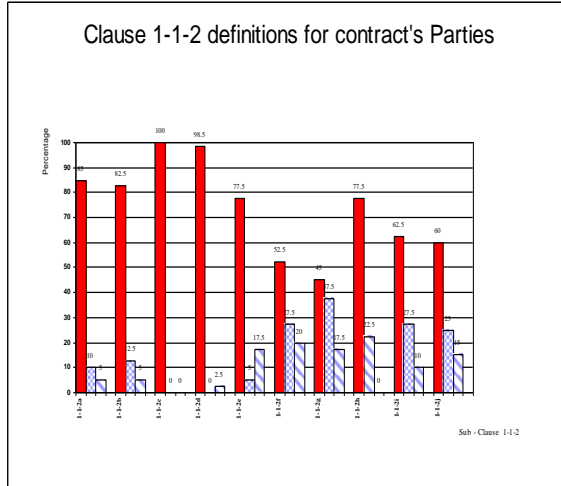


Figure 2: Column Chart for Opinions on clause no. (1-1-2)

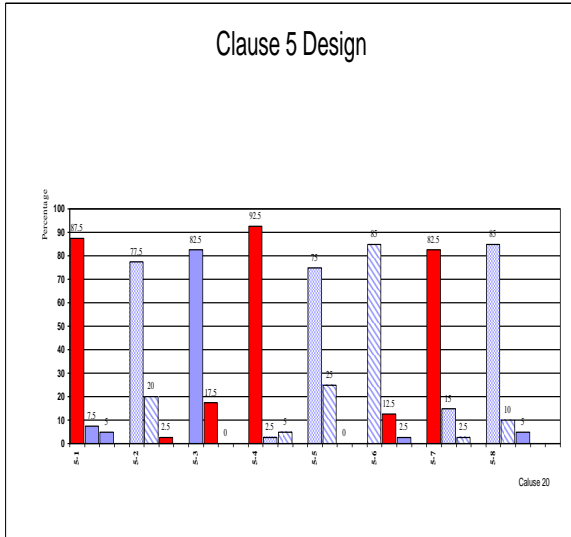


Figure 3: Column Chart for Opinions on clause no. (5).

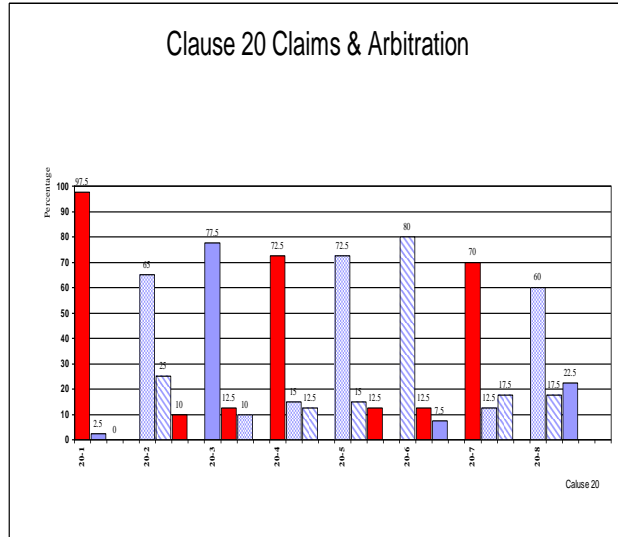


Figure 3: Column Chart for Opinions on clause no. (20)

To summarize the results of the study, a column charts were developed for each clause and sub-clause. Figures 1, 2, 3 and 4 show an example for such column charts.

Several hundred curves were developed to summarize the results for each clause and sub-clause. In this paper, only three samples are presented. The first two charts, figure 1 and 2, are for two sub-clauses of clause one, sub-clause (1-1-1) for "Definitions of Contract" and sub-clause (1-1-2) for "Definitions of The Contract's Parties". Figure 3 represents the opinions of experts on clause five "Design". Figure 4 represents the opinions of experts on clause twenty "Claims, Disputes and Arbitration". These curves helped in analyzing and comparing all results.

Table 3 reflects the total number of clauses that were perceived as of great importance from the Egyptian experts' view. Table 3, shows that there is a very small number of clauses, that are considered not important,

by Egyptian experts. In this table, all sub-clauses were considered having equal weights of importance for this study. It was structured based on the percentage of the contributors' replies. It was divided into four categories according to the percentage of agreement between experts' views.

Table 3: Summarize for the Number of Clauses with the contributors' views

Percentage %	Number of Clauses		
	Very Important	Normal importance	Not important
Less than 30 %	2	188	152
31 - 50 %	18	18	3
51 - 80 %	84	1	-
81 - 100 %	121	-	-

8. Summary and Conclusions

Egyptian experts' views of the twenty clauses and sub clauses, of the new yellow book were gauged through a technical questionnaire. The questionnaire was originally launched among 80 experts. The sample size was estimated based on Mary Natrella (1963). The sample was classified into two major categories and then further classified into three sub categories. Data sets of 40 contributors were received, twenty one of which rated all clauses and sub clause to be "very important"; however they refused to reply in writing at the questionnaire form. Such oral and general replies were discarded and ignored in the analysis. The results presented in this paper are based on the forty written questionnaire forms that were received.

In summary, it is the finding of this study that most clauses are very important. Only three clauses were considered not important for about fifty percent of the Egyptian experts.

This study may give an overall view of the Egyptian Law clauses and how it was formed while either ignoring or modifying the related FIDIC clauses, to meet the Egyptian industry needs.

9. References

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