

Construction Projects Claims In Iraq: For A Period From 2010 To 2014

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ABSTRACT

The construction industry in Iraq is one of the important areas because now we need to develop and set up a lot of projects in the sector of services and infrastructure as well as advanced industrial projects to support the Iraqi economy. Usually projects development and complexity become a companion to a lot of claims, so it became necessary for us to study and diagnosis the most important claims faced projects in Iraq and identify which are more frequently and opening the way for researchers to develop appropriate solutions to those claims.

This study was presented the claims causes and their types in Iraq construction projects for a period from (2010 to 2014) and its frequency by using an available information from more 30 claims causes for a different type of Iraqi projects. The data were collected from questionnaire distributed for this purpose and the results of this research were analyzed along with recommendations on how to prevent or reduce effect of those claims reasons, all these were shown in this paper.

Keywords: causes, claims, construction, Iraq, projects.

الخلاصة

صناعة البناء والتشييد في العراق هي واحدة من المجالات المهمة بسبب الحاجة إلى تطوير وإنشاء الكثير من المشاريع في نطاق الخدمات والبنية التحتية وكذلك لتطوير المشروعات الصناعية ودعم الاقتصاد العراقي. المشاريع المتطورة والمعقدة تصبح مصاحبة لكثير من المطالبات، لذلك أصبح من الضروري بالنسبة لنا دراسة وتشخيص أهم المطالبات التي واجهتها المشاريع في العراق وتحديد أية أكثر تكراراً، وفتح المجال أمام الباحثين لوضع الحلول المناسبة لتلك المطالبات.

يقدم هذا البحث نتائج لأسباب وأنواع المطالبات لمشاريع البناء للفترة من (2010-2014) في العراق وتكرارها باستخدام بيانات من أكثر من 30 مطالبة لمجموعة متنوعة من المشاريع العراقية. وقد تم تحليل بيانات الاستبيان الذي وزع لمعرفة أسباب المطالبات وأنواعها ونتائج هذا التحليل إلى جانب توصيات بشأن كيفية خفض أو منع أسباب تلك المطالبات قدمت في هذا البحث.

الكلمات المفتاحية: الاسباب، المطالبات، الانشائية، العراق، المشاريع.

1. INTRODUCTION

Construction industry is complex and unique compared to other industries because it involves the impact of many participants in all trends. Therefore, any event or circumstance that impacts on the construction industry has the potential to affect the whole economy.

Disputes and claims are common due to the increasing complexity of the construction process. Owners used to transfer major obligations and all risks came from to contractors. These risks were including; financial crisis, work accidents, lowers labor productivity, adverse weather, shortage of materials and bad skilled labor, and unexpected site conditions. Thus, the construction contracts are becoming more complex.

In many cases construction contracts are long and have involved documents. Consequently, difference or disputes can arise considering contractual obligations or expectations. While one of the contracting parties feels that the other parts are trying to escape from his obligations, this belief may push him to raise the claim, when they feel that they have a right to financial and/or duration replenishment. Therefore, 'Claims' represent a legal form but do not establish an entitlement.

Generally construction claims arise due to several factors including; technical, climatic and logistic events. Sometimes claims may be raised because of the changes in plan quantities, details of construction, or changes in the detailed execution schedule of time prepared by the contractor. Whether the change is caused by the employer or the engineer or other causes beyond the control of the contracting parties,

these changes in project are accompanied by several disadvantages, such as the need to extend the time of the work or to increase in costs necessary to implement the works and in both cases, the project completion will be affected negatively.

In Iraq, claims have become a repetitive phenomenon in the construction industry. Such phenomenon, if not managed efficiently, would hinder the success of many construction projects and thus slow down the wheel of development.

Usually the solution of claims problems lies in the founding of collaboration among the project parts.

2. SCOPE OF THE STUDY

Information for 36 claims for a period from (2010 to 2014) related to various Iraqi projects was gathered. The data were collected from 61 various authority (26 contractors, 14 consultants, and 21 owners) for explain ; see **Fig. 1**.

Depend on their main area of specialty, the profiles of the 61 authority are shown in **Table 1**. The 61 owners and companies were asked to provide information related to types of projects and classified the claims according to project field see **Fig. 2**. The data for the 36 claims were mainly extracted from owners, consultants, and contractors' claims database.

The parties projects were asked to provide data connected to claims causes and its types by filling a questionnaire deal with claims, cause frequent, in which they choose one of five possible preference for the frequency of each type and cause of claims: not frequent; little frequent; occasionally frequent; frequent; and most frequent. The **Fig. 2** has shown the respondents field area.

3. DATA ANALYZING

The gathered data was included different kind of projects establishment over a period vary (from 2010 until 2014). The types of projects include housing, roads and highways, pure water supply networks, sewage lines, electrical power installment, as well as some sport buildings.

4. EFFECT LEVEL

The effect level was assumed for each category of answer as explained in **Table 1**. This category of answer was assumed in order to facilitate the process of analyzing data results.

The arithmetic mean for answers calculated as follow
(**Mean**) = (total of number of iterations in the effect multiplied in the number of effect divided by the size of the sample).

The arithmetic mean is used in the analysis for each factor of the sectors and it is calculated as per **Equation 1**.

$$M = \frac{\sum_{i=1}^n xi*fi}{\sum_{i=1}^n fi} \quad (1)$$

To identification the impact of each claims type, an importance index ratio was then computed as follows in **Equation 2**.

$$I.I. = \frac{M*100}{4} \quad (2)$$

5. CLAIMS TYPES AND THEIR FREQUENCY

The data collected was demonstrated that the claims types in Iraq construction projects can be sorted depending on the type of compensation requested into four

main types: financial compensation ,work duration extension with include financial compensation, work duration Extension, and re-pricing.

In order to assess the effect of each types, the answers were collected from all surveyed samples (employers, engineers, contractors) whereas the questionnaire form number that been successfully received was sixty-one (61).

The results have been analyzed and discussed depending on the “mean” of these results which is one of central tendency (tendency of value to center on the optimal value).

Responses for the “financial compensation” type of claims, for example, indicated that one respondent answered as “never”, 2 answered as “little”, 9 answered as “occasionally”, 21 answered as “frequent”, and 28 answered as “mostly frequent” see **fig.3**.

Data were analyzed and an importance index was calculated for each claims type and their frequencies are listed in **Table 3**.

When we analyze the above results, we find that the most frequent types of claims was" Work Duration Extension", while the lower types of claims frequent was" Re-Pricing "and the importance index ratio was shown in the **fig 4**.

6. CAUSES OF CLAIMS AND THEIR FREQUENCY

We know that every risk factor causes delay or over cost on project planning, this may lead to define as causes of claims.

The data received demonstrate that there are 30 possible causes of claims. Similar to what is explained in the previous subsection for types of claims; firms were asked to choose one of five preference for the frequency of each claims cause: not frequent, little frequently, occasionally frequently, frequently, and mostly frequently with a scale for each from one to four.

Answers for the frequently of the “change orders negotiations” cause of claims, for example, indicated that 0 respondent did answered as "not frequent", 3 answered as “, little frequently”, 4 answered as “occasionally frequently”, 22 answered as “frequently”, and 32 answered as “mostly frequently”.

Arithmetic mean for each cause of claims was calculated using **Equation 1**,and the importance index ratio was then calculated using **Equation2**, as shown in **Table 4**. The results of these data were demonstrated that “change orders in work” that the most frequently claims cause with an importance index ratio of 85.65% while “awarding the project to unqualified contractor” was classified second with an importance index with ratio of 84.83%. “information” cause of claims was classified at last with an importance index with ratio of 27.88%. The classification of all claims causes is listed according to its importance index are shown in **Table 4**.

For example, the weighted average for the “payments delay” claims reasons = $(0 * 0 + 1 * 2 + 2 * 6 + 3 * 22 + 4 * 31)/61 = 3.344$, the importance index for this type of claims = $(3.344 * 100)/4 = 83.60 \%$.

7. RECOMMENDATIONS

The following recommendations were obtained from interview with industry practitioners, consultant and experts in planning department and the consulting engineering bureau on how to prevent dispute or reduce its impact:

1. Water and sewage networks projects are considered more type of projects subjected to claim a raises because most of associated works are performed underground (hidden work), which mean more obstructions during the execution phase.

2. Selecting the contractor based on the lowest bid is considered one of the most factor that negatively impacts the project due to the in-sufficient qualification of the selected contractor.
3. The general form of the contract is considered a significant factor of claims, since the government (who is employer of the most Iraqi projects) is adopting a general form of the contract; while the variety of the projects requires variety of contracts forms according to the project type.
4. The fast response of design team is a factor that has a significant effect on time schedule, since employer change requests and his change orders need a fast response from the designer in order to settle the decisions needed to finalize the employer requests with the minimum negative impact on the project.
5. Squeezing the overlap period between the design preparation and execution phases is considered an important factor since it makes the designs more flexible to execution and gives the supervision team the opportunity to express their opinions on the prepared design without affecting the project work.
6. The efficient design is considered an important factor in relation to the completed works accuracy and to avoid the change orders or additional works. Also efficient design gives the engineer the facility to understand the drawings and execution it without any need to suspend the works to verify the design.
7. The most important factor during the execution phase is the lack of contractors' resources, labors, and equipment, which would affect the execution period needed for work completion.
8. The engineer carelessness to perform his duties effects on the project work; because it may delay the completion time of works.
9. The quick completion for the executive drawings is a significant factor that has affect the time schedule of the project, since the approval of the executed works is given by the engineer without completing such drawings, which in turn delays the implementation.
10. Using scientific techniques and modern programming methods in preparing project time schedule is an important factor to utilize the facilities available within such methods, hence updating of the time schedule would be more accurate and quick.
11. the construction companies must allocate a special section where, its mission exhaustive study for project plans and all the supporting documents of the specifications and general and private conditions of contract so the company can fully understand the nature of the project, analyzing the data and determining its goals.
12. There is need for coordination between the construction companies and all those who care about the construction industry through a formal membership with the association so as to exchange experiences and discuss the problems they face during implementation.
13. Approved a quality schemes for illustrate the importance of quality achieving of construction works also the concepts and related activities.
14. Review and audit the preliminary study of the project process, in terms of project descriptions carefully and determine the requirements for it, especially the legal requirements and the full restriction of conditions and specifications for the work agreed upon.
15. The selection of the contractor must be based on the technical assessment more than a financial assessment.
16. Supplying materials and equipment necessary to work in a timely manner.

17. Applying permanent control and follow-up and make all the necessary tests during the implementation to avoid reconstruction because of a bad work due to claim arise.
18. Coordination and good communication between contract parties, and serious liability to contractual conditions, may be lead to reduce the chances of disputes.

8.CONCLUSION

This paper was tried to identify the most important claims causes in the Iraqi projects and have observed the most common problem that may be lead to dispute was “changes orders” according to this study and it necessary to take special consideration in mind to avoid it.

While “Information” was ranked as less frequented causes in the last, this may be indicated to a lack of awareness about the information importance on the project management.

According to the recommended of this study that special consideration should be taken when preparation contract clauses and conditions dealing with change orders, disputes, financial and delay. The best means to confrontation risk in construction claims is to avoid it or reduce their effect on project. There are many effective means for reducing amountof claims encountered.

The main and perfect steps that can be taken to minimize risks of claims causes include the follow:

1. Checking the whole contract documents before adoption it's and ensure harmony between the various project documents.
2. Ensuring full project cost when contracting and do not rely upon temporary cash flow.
3. Completion of all project drawings and ensure its accuracy before presenting the project to contract
4. Using modern technologies and specialized programs when preparation work plans and project time schedule
5. In advance agreement on ways to disputes resolve
6. Checking work implementation plan taking into consideration the potential risks.
7. One of the major sources of claims in construction projects is the project design drawings or design errors and the resulting additional work or additional quantities.
8. The project design must be confirmed by consultant offices to be audit by a team other than those who design it.
9. This study was demonstrated needed to develop claims management system in each project to identifying claims authorized and avoids occurrence, for example: council to resolve project disputes.

It is awaited that the outcome of this paper will assist all contract parties to avoiding or reduce claims causes impact by minimizing any delays and produced cost overruns in Iraqi projects.

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Symbols

F_i = repetition of the answer category (i) for the questionnaire factor.

I.I. = Importance index

M = Arithmetic mean of the answer.

n= number of answers.

X_i = the level of category effect (i) for the questionnaire factor.

Tables

Table 1 Respondents profiles

Type of Respondent		Designer	Contractor	Owner	Total
Number of Respondents		14	26	21	61
Company main area of specialty	Heavy Sewage				
	Water Supply				
	Roads				
	Residential and Commercial				

Table 2 Answer category evaluation

Category of Answer	Effect Level
Not Frequent	0
Little Frequent	1
Occasionally Frequent	2
Frequent	3
Mostly Frequent	4

Table 3. Frequency for each claims types

Types of claims	Effect Level				Importance Index %
	4	3	2	1	
Financial Compensation	28	21	9	2	79.92
Work Duration Extension	32	18	7	4	81.97
Financial Compensation and Work Duration Extension	21	19	14	5	71.31
Re-Pricing	9	13	10	12	43.85

Table 4 Ranking of each cause of claims based on their frequencies

Causes of Claims	Importance Index %
1. Changes order in work	85.65
2. Awarding the project to unqualified contractor	84.83
3. Change order negotiations	84.03
4. Payments delay	83.60
5. Coordination with sub-contractors	81.55
6. Actual quantities of work	81.15
7. Third-party delays	79.50
8. Quality of work and time constraints	78.70
9. Lack of consistency between contract documents as an example: drawings, bill of quantities, specifications and legislations.	77.88
10. Inflation	77.05
11. Financial failures	75.83
12. Supplies of defective materials	75.40
13 Difficulty to access the site	75.40
14. Inaccurate quantities	75.40
15. Delayed dispute resolution	73.78
16. Not coordinated design	70.90
17. Defective design (incorrect)	70.08
18. War threats	68.03
19. Accuracy of project program	67.63
20. Labor disputes	55.33
21. Adverse weather conditions	46.73
22. Accidents Occurrence and poor safety procedures	45.90
23. Varied labor and equipment productivity	44.68
24. Project complexity	42.63
25. Labor, material and equipment	38.93
26. Permits, regulations and Legislation	38.93
27. Communication	38.53
28. Scope of work defining	33.20
29. Organization and change management	31.98
30 Information	27.88

Figures

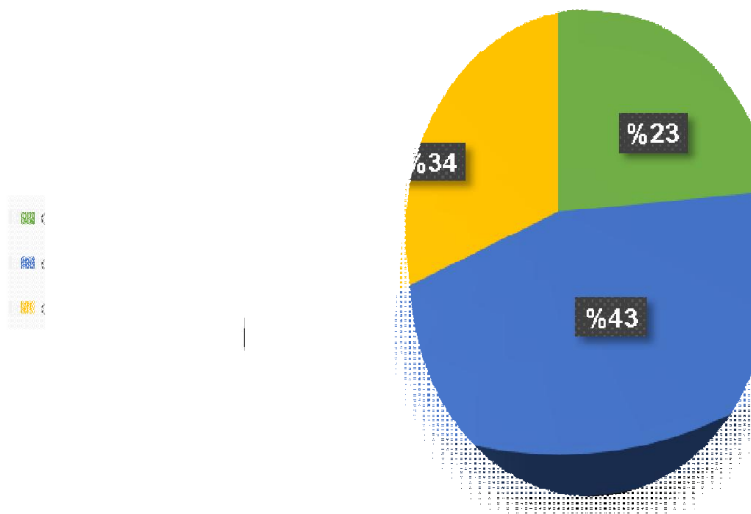


Figure 1. Respondent's entity distribution

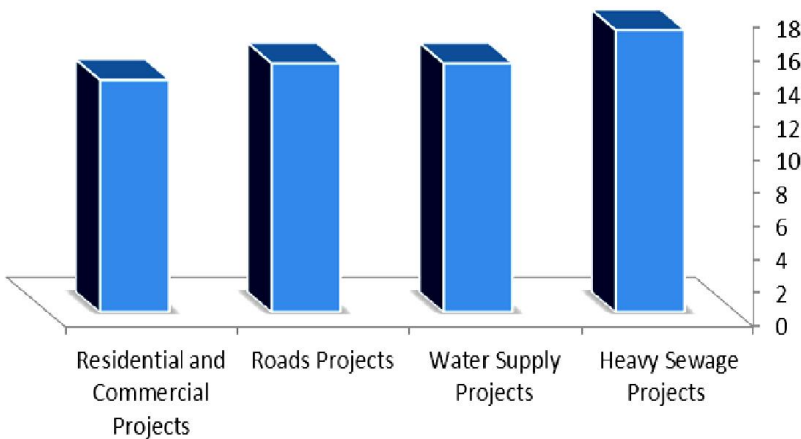


Figure2.Respondent's area specialty

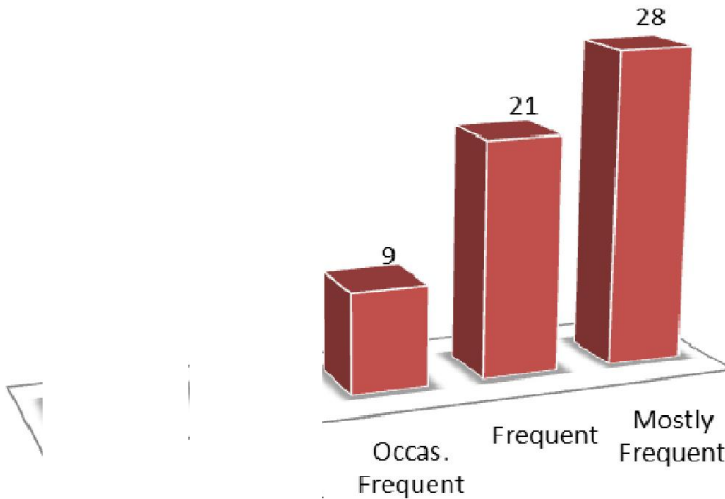


Figure 3.Frequencies of financial compensation claims

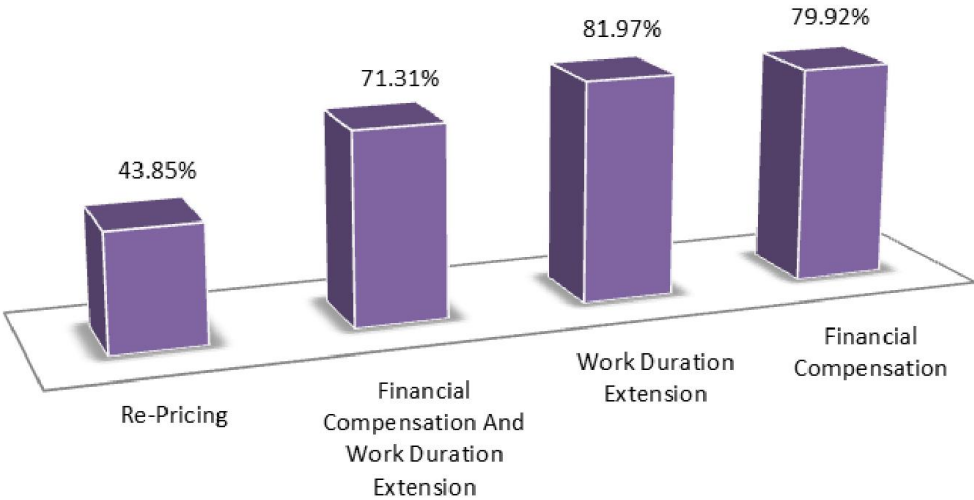


Figure 4.Frequency for each claims types