Nature and Causes of claims in Iraqi turnkey projects

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Abstract. The construction projects are usually related to complexity, and great overlap between project activates. Many parties contribute to achieve the objectives, differences in objectives among stakeholders are the main cause for the emergence of claims that may lead to disputes. the issue of claims and disputes remains one of the most important factors that hinder the scheduling of construction projects. However, this paper presents an overview about the nature and causes of claims in addition to disputes resolution. four government institutions were investigated as a case study in construction projects and conflict resolution methods in Iraq. These institutions are Health, Education, Planning, and Local governments in the provinces. The statistical analysis was used as a tool in this study, the result showed that 88.57% of Iraqi construction projects suffer from time extension claims, and Public holidays and religious events was the common cause of emergence of claims.

1. Introduction

Claims is a confirmed request by one of the contract’s party to the other party relating to the services and works specified in the contract, or requested the other party an additional cost, time, or both of them [1], [2].

Generally, the contractors claim comprised for additional periods and/or payments due to factors that prevent the normal flow of contractor’s work, or increasing the actual work performed on the site. While the common employer claims include liquidated and ascertained damages due to delay by the contractor without logic or legal causes. Claims can be classified into Contractual claims, and Ex-contractual claims. Contractual claims also subdivided into negative claims and positive claims. Negative claims are those where the contractor seeks to avoid a payment, such as liquidated and ascertained damages. A claim for liquidated damages is made by the employer, against the contractor for alleged breach of contract, in that the contractor has not completed the works within the agreed contract period. In order to mitigate this claim by the employer, a negative claim may be submitted by
the contractor, claims within this classification include those seeking an extension of the contract period.

The positive claims shall be entitled by contractor to obtain an extension of completion time if a delay occurred, or expected to occur in many cases. At most popular forms of contract used in the UK, Joint Contracts Tribunal conditions (JCT 2005) [3], the clauses relating to delay and time extension issues contained in a section titled ‘Adjustment of Completion Date’, which conducted; “If and when it becomes reasonably clear that the schedule of the works or any section is being or is likely to be delayed, the Contractor shall submit a written notice to the Architect/Contract manager of the physical circumstances, including the cause or causes of the delay, and shall identify in his claim any event which in his opinion is related to the following: Variations and other matters related to Variations, Certain instructions of the Architect, Deferment of possession of the site or a section, Execution of work covered by an approximate quantity in the contract bills, Suspension by the Contractor for non-payment by the Employer, Impediment, prevention, or default by the Employer or the Employer’s representatives, The carrying out of work by a Statutory Undertaker, Exceptionally adverse weather conditions, loss/damage due to the Specified Perils, Civil commotion or terrorism, Industrial unrest, Statutory intervention, Force majeure” [3],[4].

2. Methodology

In this research, four government institutions were investigated as a case study of claims in construction projects and conflict resolution methods in Iraq. These institutions are Health, Education, Planning, and Local governments in the provinces. Nine types of claims have been collected, which represent common situations in construction projects which are; Claims of Extend the tenders submission period, Claims of Re-analysis of bidding, Claims of breach the contract by companies, Claims to amend the conditions of contract cost overrun and change order claims, time extension claims, liquidated damages claims, poor performance, work quality claims, and external damages claims. Five types of dispute resolution methods were invested: early arrangement, negotiation, mediation, arbitration, and litigation.

The causes of claims and disputes were gathering using interviewing with experts and questionnaire. To rank these causes the relative importance index RII score were applied, where RII is the mean for a factor which gives it weight in the perceptions of respondents using the formula (1) and (2) [10]. However, the statistical analysis was applied using statistical product and solution services SPSS to rank the causes of claims,

\[
RII = \frac{FI}{A} * 100 \% \tag{1}
\]
where

\[ A = \text{Highest weight (i.e., 5 in this case)} \]

\[ FI = \frac{\sum(f_i \times p_i)}{\sum(p_i)} \quad (1 \leq f_i \leq 5) \quad (2) \]

Where:

\( F_i \): frequency weight (1, 2, 3, 4, or 5).

\( P_i \): number of participants who answered to option i.

while Cronbach’s alpha, which explain in formula (2) \(^{[11]}\), to show the reliability of data. The main objective of using Cronbach's alpha to measure the internal consistency between the questions of the questionnaire\(^{[12]}\). Cronbach’s alpha is going to be used to check the reliability of collection data using statistical product and solutions services (SPSS) by the formula:

\[ \alpha = \frac{N \cdot \bar{c}}{\bar{V} + (N - 1) \cdot \bar{c}} \quad (3) \]

Where:

\( N \): Number of items.

\( \bar{c} \): Average covariance between item-pairs.

\( \bar{V} \): Average variance.

3. The Result

The result comprised two main categories, first one related to nature of claims and disputes solution while the second category comprised the causes of claims in construction projects, both two categories are summarizing below:

3.1 Nature of claims

in this context, nine types of claims were investigated which represent the most frequent in Iraqi construction project as shown in the table (1), the result show that 88.57 % of Iraqi construction projects suffered from the time extension claims and 67 % of these claims resolving by early arrangement, followed by Liquidated damages claims with RII equal to 74.29 %, Cost overrun and change order claims, Poor performance and quality claims, Claims of Extend the tenders submission period. While the Claims of Re-analysis bidding were the lowest type of claims.
In respect of resolving the disputes the result showed that the common method which used in Claims of Extend the tenders submission period, claims of breach the contract by companies, Cost overrun and change order claims, and Liquidated damages claims is early arrangement. And the common method in resolving the Claims of Re-analysis bidding, claims to amend the conditions of contract, and Time extension claims is negotiation. While Poor performance and quality claims, and External damages claims is litigation.

3.2 Causes of claims

It’s necessary to explain why the claims are occurring in construction projects. Determining the causes of claims is considered the main step of reduction the disputes and success the project. So, thirty-five causes of claims are gathering using interviewing with experts and questionnaire. These causes are; Insufficient time for bidding specified in the tender announcement, Unclear or weak conditions of tender prepared by the employer, Lack of clear criteria for selection or exclusion of companies, Inadequate Iraqi conditions and instructions with projects implemented in a key handover manner. Contractual operations delayed due to routine and bureaucratic procedures, Change and amendment in the Iraqi government instructions, Vagueness of paragraphs of the contract, Different interpretation of paragraphs of the contract, Delayed delivery of drawings by the contractor, Employer approval of designs is delayed, The discrepancy between the table of quantities and design, Re-work due to design errors by the contractor, Site delayed by the employer due to obstacles, Insufficient data collection and survey before construction by the contractor, Delayed delivery by the employer due to the security situation, Poor planning or poor potential for execution by the contractor, Delayed payments for work performed due to administrative and routine procedures of the employer, Delays in payment of work performed as a result of the country's financial system, Delays in payment of work due to inaccuracy of contractor's accounts, Change the scope of work by the employer, Changing specifications or schemes during implementation by the employer, Weak quality management of the contractor, Poor equipment management or inappropriate equipment use, Poor management of human resources by the contractor or labor disputes, The procedures adopted in the country concerning the introduction of foreign labor and determining the percentage of foreign labor, The contractor shall determine the working hours of the official establishment of the employer, Accidents at work due to poor management of occupational safety, Frequent change orders by the employer due to ambiguity of requirements, Slow preparation of orders changes by the contractor, Improper storage of building materials by the contractor, Volatility of construction materials prices in local markets, Difficulty in the delivery of construction materials, construction equipment and services due to the security situation, Change the foreign exchange rate with the Iraqi dinar, Impact of climatic
factors, and Public holidays and religious events. However, the ranking of these causes are summarized in the table (2).

Table 1. Nature of claims and disputes Resolution

| Claims Nature                                      | Frequent % | Disputes Resolution |
|---------------------------------------------------|------------|---------------------|
| Claims of Extend the tenders submission period    | 42.14      | Negotiation 33%      |
|                                                   |            | Early arrangement... |
| Claims of Re-analysis bidding                     | 10.5       | Mediation 17%        |
|                                                   |            | Early arrangement... |
|                                                   |            | Negotiation 17%      |
| Claims of breach the contract by companies        | 38.57      | Mediation 20%        |
|                                                   |            | Early arrangement... |
|                                                   |            | Negotiation 60%      |
| Claims to amend the conditions of contract        | 35.71      | Negotiation 43%      |
|                                                   |            | Early arrangement... |
| Cost overrun and change order claims              | 65.71      | Mediation 17%        |
|                                                   |            | Early arrangement... |
| Time extension claims                              | 88.57      | Negotiation 67%      |
|                                                   |            | Early arrangement... |
Table 2. Ranking of claims causes according to RII score

| No | Causes of claims                                                                 | FI  | ST.DEV | RII % |
|----|----------------------------------------------------------------------------------|-----|--------|-------|
| 1  | Public holidays and religious events                                             | 4.50| 0.80   | 90.00 |
| 2  | Contractual operations delayed due to routine and bureaucratic procedures.       | 4.33| 0.78   | 86.67 |
| 3  | Delays in payment of work performed as a result of the country's financial system | 4.33| 0.52   | 86.67 |
| 4  | Delayed payments for work performed due to administrative and routine procedures of the employer | 4.17| 0.94   | 83.33 |
| 5  | Change and amendment in the Iraqi government instructions.                       | 4.00| 0.75   | 80.00 |
| 6  | Insufficient time for bidding                                                    | 3.83| 0.45   | 76.67 |
|   | Description                                                                                                                                          | Score | Standard Error | Severity |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------|----------|
| 7 | delay in transmit the site by the employer due to obstacles specified in the tender announcement                                                      | 3.83  | 0.85           | 76.67    |
| 8 | Weak quality management of the contractor                                                                                                           | 3.83  | 0.98           | 76.67    |
| 9 | Inadequate Iraqi conditions and instructions with projects implemented in a key handover manner                                                       | 3.67  | 0.55           | 73.33    |
| 10| Delayed delivery of drawings by the contractor                                                                                                      | 3.67  | 0.48           | 73.33    |
| 11| Insufficient data collection and survey before construction by the contractor                                                                     | 3.67  | 0.75           | 73.33    |
| 12| Poor equipment management or inappropriate equipment usage                                                                                         | 3.67  | 0.83           | 73.33    |
| 13| Poor management of human resources by the contractor or labor disputes                                                                             | 3.67  | 0.71           | 73.33    |
| 14| Employer approval of designs is delayed                                                                                                            | 3.50  | 0.58           | 70.00    |
| 15| The procedures adopted in the country concerning the introduction of foreign labor and determining the percentage of foreign labor                    | 3.50  | 0.90           | 70.00    |
| 16| The contractor shall determine the working hours of theian                                                                                           | 3.50  | 0.74           | 70.00    |
| No. | Issue                                                                 | Score | Standard Deviation | Contribution |
|-----|----------------------------------------------------------------------|-------|--------------------|--------------|
| 17  | Frequent change orders by the employer due to ambiguity of requirements | 3.50  | 0.60               | 70.00        |
| 18  | Lack of clear criteria for selection or exclusion of companies        | 3.33  | 0.81               | 66.67        |
| 19  | Poor planning or poor potential for execution by the contractor       | 3.33  | 0.98               | 66.67        |
| 20  | Slow preparation of orders changes by the contractor                  | 3.33  | 0.52               | 66.67        |
| 21  | Unclear or weak conditions of tender prepared by the employer         | 3.17  | 0.48               | 63.33        |
| 22  | Delayed delivery by the employer due to the security situation        | 3.17  | 0.71               | 63.33        |
| 23  | Changing specifications or schemes during implementation by the employer | 3.17 | 0.88              | 63.33        |
| 24  | Vagueness of paragraphs of the contract                               | 3.00  | 0.23               | 60.00        |
| 25  | Different interpretation of paragraphs of the contract                | 3.00  | 0.65               | 60.00        |
| 26  | The discrepancy between the table of quantities and design            | 3.00  | 0.48               | 60.00        |
|   | Description                                                                 | Weight | Impact | Probability | Risk Value |
|---|-----------------------------------------------------------------------------|--------|--------|-------------|------------|
|27 | Re-work due to design errors by the contractor.                              | 3.00   | 0.35   |             | 60.00      |
|28 | Improper storage of building materials by the contractor                     | 3.00   | 0.88   |             | 60.00      |
|29 | Volatility of construction materials prices in local markets                 | 3.00   | 0.70   |             | 60.00      |
|30 | Change the foreign exchange rate with the Iraqi dinar                        | 3.00   | 0.68   |             | 60.00      |
|31 | Change the scope of work by the employer                                     | 2.83   | 0.48   |             | 56.67      |
|32 | Accidents at work due to poor management of occupational safety.             | 2.83   | 0.60   |             | 56.67      |
|33 | Impact of rainfall and other climatic factors                               | 2.83   | 0.58   |             | 56.67      |
|34 | Delays in payment of work due to inaccuracy of contractor's accounts         | 2.67   | 0.35   |             | 53.33      |
|35 | Difficulty in the delivery of construction materials and construction equipment and services due to the security situation | 2.67   | 0.79   |             | 53.33      |

### 4. Conclusions

After discussed the result above, the following conclusions can be summarizing below;

Although official holidays in Iraq are defined previously by the authorities, we note that the Public holidays and religious events are the most influential factor in the origin of claims, and this is related to poor project planning by contractors when preparing work progress schedules.
In addition, the top ten causes of the emergence of claims are 70% of which relate to the employer, the contractor 20%, while the external causes are 10%. Often these causes are adhering to the contractual instructions and conditions. So, the adoption of new regulations such as standard documents in government contracts may have a direct impact on future claims reduction.

Also, the claims which considered associated with the duration of the completion of construction projects are the most frequent claims where we note that 88.57% of those projects suffer from time extension claims, and the Liquidated damages claims represented by 74%, whereas the claims of Re-analysis bidding are the least. the most common way of resolving disputes is early arrangement followed by negotiations and litigation and this reflects the right steps to resolve disputes.

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