

# THE IMPACT OF CONSTRUCTION CONTRACT MODELS ON CONSTRUCTION CLAIMS IN SAUDI ARABIA

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The construction industry represents one of the important pillars in the national industry and contributes to a handsome portion of the gross national product in Saudi Arabia. This industry has since the seventies undergone a great boom that produced a new infra structure for the country and lasted for almost a decade. During the boom new construction contract models were introduced and extensively applied while still in their imported versions. Furthermore, new procurement methods were tried such as design / build, construction management and build-own-and transfer (BOT). Some new pricing models were introduced as well such as lump sum and cost plus, etc. Some hardships were encountered due to these experiments, either due to non conformity of these ideas to the type of project in which they were applied, or because the personnel on those projects did not fully digest the new concepts. Some disputes and claims arose due to the new application of these concepts, which exhausted all the parties to construction and jammed the litigation bodies. This paper looks into the contract models mostly used in Saudi Arabia and their effect on construction claims. A survey was conducted using a questionnaire to identify these relations and the results were analysed. It was shown that the contract model used in a project will have no direct impact on the type, intensity, or source of claim. Half of all construction projects do not use professionally produced contract forms. Time and money were the two major impacted variables irrelevant of the contract model used. Recommendations and further research were also discussed.

Keywords: Construction claims, contract models, Saudi Arabia.

## INTRODUCTION

Claims management in Saudi Arabia is quite new to the local industry and environment. Only when mega-projects were planned and built and international contractors were involved was the word construction claims ever heard of locally. Zahlan (1984) estimated the planned 1980 to 1985 annual expenditure on public works and defence construction in Saudi Arabia alone as \$26.5 billion excluding private sector expenditure. He said that foreign firms had a dominant position in the Arab construction industry as a whole. The local construction industry had only one contract model to use and that was for the government projects only. This contract, the Public Works Contract (PWC), was a one-sided form of contract that puts too many risks on contractors. It is disliked by local contractors and many local interest groups have, and still are, struggling to modify it and to minimize the risks allocated to the contractor in this contract. Smith (1996) sees that realistic and equitable allocation of risk in the contract documents has been shown to be the best way to create a level playing field for the conduct of the project and thus prevent disputes.

Other forms of contracts were used on a small scale for some government agencies, specially those employing international contractors.

The private sector used several models that were not produced by any professional body. Some even wrote their own models which aggravated the situation in courts and arbitration bodies, due to the great inflow of disputes and claims arising out of these projects; public and private as well.

Some international contract formats were introduced in the local market. These were the FIDIC format and to a lesser extent the AIA format. The Sharia law applicable in Saudi Arabia is different in some aspects to the common law or the civil law environment from which these international contracts originated. Russel (1975) mentioned that looked at as a legal system, the basic sources of the Shari'a are four:

- 1- The Koran – i.e., the Word of God
- 2- The Sunna-the practice of the prophet;
- 3- Ijma'a, or the consensus; and
- 4- Qiyas, or analogy

Thus application of these contract forms posed some difficulties to the parties of a contract when going to court. Russel (1975) when discussing disputes of international companies said that overseas businessmen are more apprehensive of solving possible disputes in the Middle East than any other aspect of their work there. When addressing the topics of force majeure and its clauses in the Sharia law he said that these were normally considerably wider than the English Act of God concept. Amin (1985) said that the modern commercial practice and international trade has made a significant contribution in the course of the development of the contemporary Saudi Arabian legal system, and that the expert commercial lawyers of the Western world who participate in drafting and negotiating contracts on behalf of their clients have in effect introduced the bulk of modern business law (basically American legal concepts) to the Saudi Arabian legal environment. These detailed and elaborate agreements are borrowed from Anglo-Saxon legal systems and used in Saudi Arabia. Amin (1985) sees some change taking place in the local Saudi legal system. He added that the King can issue royal decrees to supplement the Shari'ah law when new situations arise that justify such regulations. As such government aims to achieve an acceptable balance between the traditional Islamic legal and moral concepts on the one hand and the needs and requirements of the modern Saudi Arabia on the other. He added that the modern Saudi Arabian legal system was designed to cope with the industrialized age, as its traditional legal frame work has been considered inadequate in dealing with the legal problems with which a developing country such as Saudi Arabia is confronted, and that there has been a considerable growth in royal decrees and tendency to codify the areas of business law in general and laws dealing with investment and foreign trade in particular. Amin saw the Saudi Arabian system of dispute resolution as dual ; on the one hand there is a hierarchy of Shari'ah courts which exercise general and universal jurisdiction, on the other hand, and in parallel with the judiciary, there are other specialized judicial organs and administrative tribunals which have the jurisdiction to dispose of specific issues.

There is a lack of research on the construction industry in Saudi Arabia especially on claims and contracts. Conlin *et al.* (1996) see the same in the UK and said that there has been a substantial gap in the available knowledge of the sources, causes and effects of conflict in the UK construction industry. A study on conflicts and

procurement methods used in a project by Conlin *et al.* (1996) showed that the procurement method used, and the type of client procuring the project, had an effect on the nature, frequency and spread of conflict occurring on a project.

This paper looks into those contract forms mostly used in the Saudi construction industry and what claims arise out of each form.

## **METHODOLOGY**

A questionnaire was designed and sent out randomly to groups of owners, contractors and consultants. This questionnaire was built on the views of a pre-selected sample of the three categories as a pilot project of the questionnaire.

A hundred and two answers were received representing the three categories. The questionnaire had two major sections; the first asked general questions about each of the different categories (client, contractor, consultant) and specific questions on the project which each respondent chose to mention for the purpose of this research. The second section asked about the kind and intensity of claims arising in that project.

The information on the project in section 1 was as follows:

- 1- Owner category: whether government or private
- 2- Kind of project: residential, commercial, industrial
- 3- Duration of the project
- 4- Complexity of the project
- 5- Value of the contract
- 6- Bases of award of contract: on a least-cost basis or by technical evaluation
- 7- Pricing method of the contract: lump sum, unit rate or other.
- 8- Contract format; Public Works Contract (PWC) (a local model for the government's projects), FIDIC, AIA, or other.

The information on section 2 addressed the type of claim and its intensity. Conlin *et al.* (1996) grouped conflict causes into six broad groups. These groups covered: payment and budget; performance; delay and time; negligence; quality and administration. Claims in the questionnaire were grouped into six groups as follows:

- 1- Acts of God claims
- 2- Man-made (Force Majeure) claims
- 3- Site condition-based claims
- 4- Market-driven claims
- 5- Contract administration-based claims
- 6- Information-based claims

Intensity of the impact of the claim appeared in the questionnaire as either weak, medium, strong or very strong, while the impact was shown on eight variables: time, money, operation, future relations, reputation, quality, life expectancy of the project and function of the project.

## HYPOTHESIS

Several hypotheses were tested in this research. They were as follows:

**H1:** The contract format used in a project has no direct impact on the type, intensity, or source of claims in a project

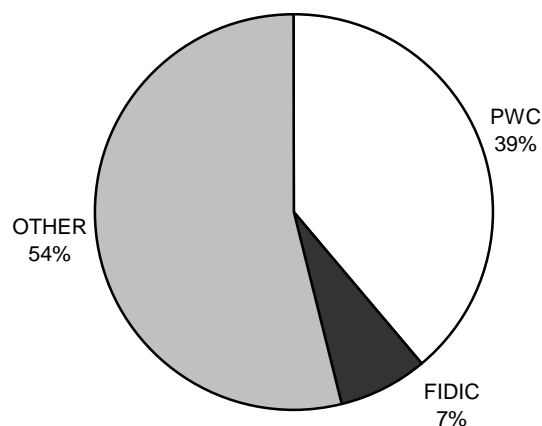
**H2:** Time, money and quality are the three major factors affected by claims arising in any project irrespective of the contract format adopted.

**H3:** Information-based claims and contract administration based claims are the two major claim groups arising out of the two variables: pricing method and contract format.

## RESULTS

The respondents filling out the questionnaire were 25% Owners, 29% Contractors and 46% Consultants. 71% of the sample had technical duties, 27% had administration duties, while 2% had accounting duties. Private projects accounted for 62% while government projects were 38% of the sample. 40% of the sample projects were residential, 17% commercial, 9% industrial and 34% as other categories.

On the duration of the project 26% were under 12 months, 52% were between 12 and 36 months and 22% were over 36 months. On the cost of construction, 38% were under one million Saudi Riyals (266,000 US dollars), 28% were between 5 and 20 million Saudi Riyals and 34% were over 20 million Riyals. 63% of the projects in the sample were awarded based on the least-cost basis, while 37% were awarded after technical evaluation. 44% of the projects had a lump-sum price, while 46% had a unit-rate reimbursement policy, with 10% mentioning other pricing methods. 39% used the PWC model of contract while 7% used the FIDIC contract. 54% used other forms or models but did not name any (Figure 1).



**Figure 1:** Percentage of respondents using different contract formats

It is clear from Table 1 that the highest impact of claims was due to late payment claims, arising out of the PW contract, which not only affected the money and time variables in their relative projects but also impacted to a lesser extent the future relations of the parties to the contract, the operation of the project and the reputation of the parties. It is also clear that contract administration based claims ranked at the top of the table, with information based claims accounting for second place. Other

categories of claims (such as acts of god or site conditions etc.) were not recorded on the list of the ten highest-ranking claims. The time factor showed the greatest impact followed by the money factor.

**Table 1:** Ten highest-ranking claim causes with respective weights arising from (PW) contracts

Rank	Claim	Claim category	Factor impacted	Weighed impact
1	Late payments	Contract administration	Money	32
2	Late payments	Contract administration	Time	29
3	Dispute over cost of added or deleted work.	Information based	Money	24
4	Dispute over cost of added or deleted work.	Information based	Time	22
5	Late payments	Contract administration	Future relations	20
6	Late payments	Contract administration	Operation	20
7	Late payments	Contract administration	Reputation	18
8	Late approval of drawings	Information based	Time	18
9	Big diff .bet .B.O.Q and executed quantities	Information based	Money	17
10	Dispute over extension of time	Contract administration	Time	16

The claims arising out of the FIDIC contract in Table 2 show the highest impact on time and money due to late payments, which is the same with the PW contract. This could mean that late payments are inherent to the local construction industry irrelevant of what the contract format was.

Lewis and Atherlay (1996) showed that late payments by the client come in fifth place (out of ten major causes) affecting construction delays in terms of cost but come in second place in terms of impact on time.

Claims based on sub-surface conditions are in second place, while these do not show in the PW contract. This could show that site condition clauses in the FIDIC contract are not thoroughly understood in the local industry, or that these claims need some adjustment to suit the local environment.

Here too the contract administration based claims ranked sweepingly first and again the time factor showed the greatest impact followed by the money factor.

Smith (1996) mentioned a top ten list of root causes of disputes in the US construction industry as follows:

- 1- Contract clauses that unrealistically and unfairly shift project risks.
- 2- Unrealistic expectations on the part of certain parties.
- 3- Ambiguous contract provisions.
- 4- Contractors who submit unrealistically low bids.
- 5- Poor communications between and among the parties.
- 6- Deficient management, supervision, and coordination efforts on the part of the general contractor.

- 7- Reluctance on the part of project participants to deal promptly with changes and unexpected conditions.
- 8- The absence of team spirit among the project participants.
- 9- A predisposition toward adversarial relationships on the part of some or all of the parties to the project.
- 10- Contract administrators who want to avoid making tough decisions by passing the problem to a higher authority, rather than resolving the problem at the project level.

**Table 2:** Ten highest ranking claim causes with respective weights arising from (FIDIC) contract

Rank	Claim	Claim category	Factor impacted	Weighed impactor
1	Late payments	Contract administration	Time	7
2	Late payments	Contract administration	Money	7
3	Sub-surface condition	Site conditions	Money	6
4	Sub-surface condition	Site conditions	Time	5
5	Late payments	Contract administration	Operation	5
6	Late payments	Contract administration	Future relations	5
7	Too many variation orders	Contract administration	Time	5
8	Too many variation orders	Contract administration	Money	5
9	Dispute over cost of added or deleted work.	Information based	Time	4
10	Dispute V.O. pricing	Contract administration	Time	4

From Table 3 it is seen that impacts of claims are homogeneous in all contracts on the variables; with time accounting for first place followed by money and operation. The least impacted variables were life expectancy and function of the project, with future relations, reputation and quality ranking in the middle. The impacts arising out of contracts other than PW or FIDIC were high. This could mean that these other contract formats are as frequently used as the other two. These were not specified by the respondents which gives an indication that these are local versions, which are very popular in the Saudi construction industry, but are not produced by any professional body.

**Table 3:** Weighed impacts of claims on the variables

Variable	(PW) Contract	FIDIC Contract	OTHER
Time	610	108	680
Money	576	107	608
Operation	458	90	510
Future Relations	443	84	461
Reputation	417	80	447
Quality	314	65	465
Life Expect.	260	60	318
Function	252	45	298

Table 4 shows the weighed impacts of claims arising from the various contract formats on the six categories of claims mentioned earlier. The highest impact was on

the information based category of claims, followed by the contract administration based category. These ranks were homogeneous with all contracts.

As with Table 3 the weighed impact on other formats surpasses that on either the PW contract or FIDIC. This still implies the wide use of those contract formats not produced by any professional body, which is characteristic of the Saudi construction industry.

Kumaraswamy (1996) showed that inappropriate contract form and inappropriate payment modalities were of the main direct causes of claims in a study in Hong Kong.

**Table 4:** Weighed Impacts of claims on the six categories of claims

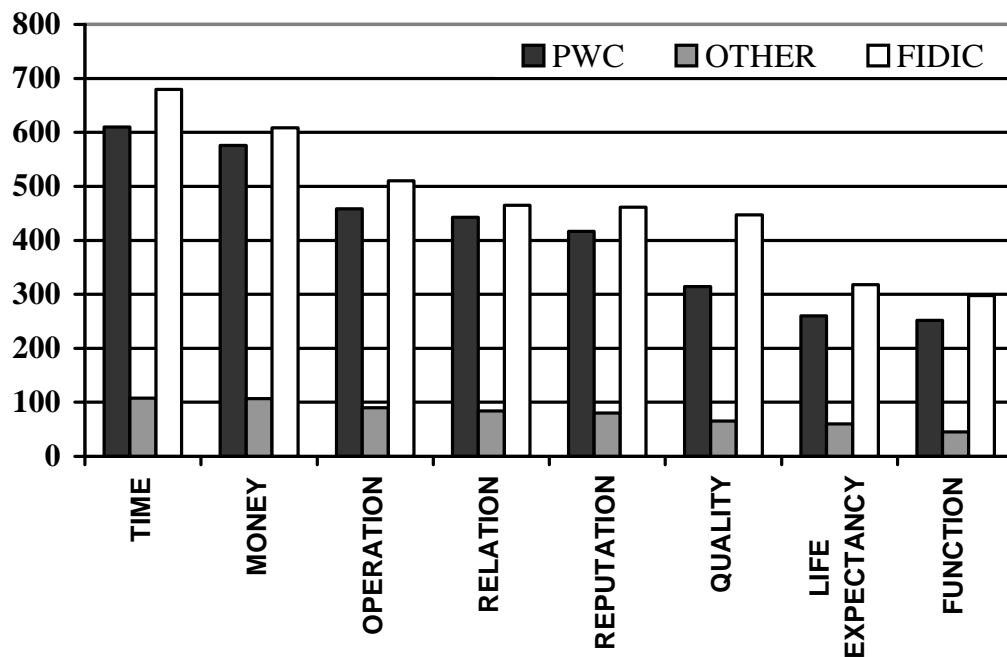
Category of Claim	(PW) Contract	FIDIC Contract	OTHER
Information-based	51	7	59
Contract administration-based	47	14	56
Market-driven	27	4	16
Site conditions	20	7	28
Acts of God	13	2	15
Man-made causes	11	2	11

## DISCUSSION OF THE HYPOTHESIS

**H1:** Statistical tests on the SPSS package using the chi square test showed that the hypothesis is accepted that the contract format in a project has no direct impact on the type, intensity, or source of claims arising in that project. It was seen in the results discussed earlier that late payment claims were common in contracts based on PW or FIDIC formats alike.

**H2:** Tests showed that we accept the hypothesis that time, money and quality are the three major factors affected by claims arising in any project irrelative of the contract format adopted. Part of this hypothesis, however, has to be amended; as quality did not show as a major impacted factor due to claims arising out of contracts adopting PW or FIDIC formats. Instead, operations of the project and future relations between the parties to a contract were the most evident impacted factors after time and money (see Figure 2).

**H3:** Analysis of the results shows that we accept the hypothesis that information based claims and contract administration based claims are the two major claims categories arising out of the contract format variable. Out of six categories these two were dominant in the ten highest-ranking claims causes.



*Figure 2: Weights of impacts of claims on the different variables*

## CONCLUSION

It has been shown that the contract format used in a project will have no direct impact on the type, intensity, or source of claims. It was also found that over half of all construction projects do not use a professionally written contract format.

Time, money, operation of the project and future relations between the contract parties were the major factors impacted by claims arising out of a contract irrelevant of the contract format used. Out of six claims categories those of information based and contract administration-based claims were the two major ones.

## RECOMMENDATIONS

The researcher recommends that a local contract format should be put up for the private sector by a local professional body, as there is an evident gap that has to be filled by such a format. Further attention should be exerted to stop the spread of claims built over late payments. More attention should be made to make good use of the FIDIC form of contract through further research on how to best introduce it to the local industry.

## FURTHER WORK

There is room for further research on the impact of using different cost methods on claims arising out of the previously mentioned contract formats.

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