

Owners' Perception towards Causes of Claims on Construction Projects in Palestine

رؤية أصحاب العمل نحو أسباب المطالبات في مشاريع الإنشاءات في فلسطين

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Abstract: The construction industry is one of the main Palestinian industries as it is considered an essential requirement and a major foundation for economic activities. A key factor to a successful construction project is to complete the project without the existence of claims. The objective of this paper is to identify and rank causes of claims in the construction industry from the perspective of local clients. Quantitative method was used in this research. The questionnaire was sent to 120 clients in the Gaza Strip and 101 valid responses were received and analyzed. The results found the main causes of claims are: borders closures, awarding bid to the lower bidder, road blockage, difficulties to pass between cities and governorate, residents' interference during project implementation, and unexpected increase in material prices. Border closures found to be a political problem which is not easy to resolve. The findings indicate that owners may not award the contract to the lowest bidder. During project preparation and design, owners need to coordinate with the local residents of the area to inform them about the benefits of projects. The findings reveal that owners may assist contractors in removing obstacles of the project sites to avoid delays. Finally, these findings will be useful for international engineering and construction companies seeking a share in the Palestine market.

Keywords: Claim, dispute, clients, construction, Palestine.

المستخلص: تعتبر صناعة الإنشاءات أحد أهم الصناعات في فلسطين حيث أنها تعتبر متطلب وأساس للنشاطات الاقتصادية الأخرى التي تعتمد عليها. كما يعتبر تنفيذ أي مشروع بدون وجود مطالبات أحد أهم عوامل النجاح في هذا المشروع. تهدف هذه الدراسة إلى التعرف على أسباب المطالبات وتقييمها في مشاريع الإنشاءات من وجهة نظر أصحاب العمل، وقد تم استخدام طريقة الاستبانة في هذه الدراسة حيث تم توزيع 120 استبانة إلى أصحاب العمل في قطاع غزة، وقد قام 101 من أصحاب العمل بتعبئة الاستبانة. ولقد أظهرت النتائج أن أهم الأسباب التي تؤدي إلى مطالبات هي: إغلاق المعابر الحدودية، ترسيه العطاء على أقل سعر للمتنافسين، إغلاق الطرق وصعوبة الحركة بين المدن، تدخل المواطنين في تنفيذ المشروع وكذلك الزيادة غير المتوقعة للأسعار خلال التصميم والتحضير للمشروع، وقد أوصت الدراسة أن هناك

حاجة لأصحاب العمل للتنسيق مع المواطنين في منطقة المشروع وتزويدهم بالمعلومات الكافية عن أهمية المشروع والنتائج التي سوف يحققها حتى يتم تخفيف أو إنهاء تدخل المواطنين في العمل. فضلاً عن أصحاب العمل غير ملزمين بتربيته العطاء على أقل الأسعار كما يجب على أصحاب العمل مساعدة المقاولين في إزالة العوائق التي قد تؤدي إلى تأخير المشروع.

كلمات مدخلية: المطالبات، الخلافات، أصحاب العمل، الإنشاءات، فلسطين.

INTRODUCTION

The construction industry has been one of the main Palestinian industries. Since the establishment of the Palestinian National Authority (PNA) in 1994, construction projects implemented by the government and private sectors have supported the development of numerous related industries in the local market. The construction industry shares a significant 33% of the total Palestine local production. Furthermore the industry influences other economic, social, educational and professional sectors (PCU, 2005).

The construction industry is a major supporter of employment and contributes 10.8% to employment directly and 30% indirectly by supporting related industries that work in production and services sectors. Following the breakout of the second Intifada in 2000, the construction and other major industries have shown a down turn, mainly because of borders closures, preventing the supply of materials to all industrial and commercial sectors, cities and towns. These frequent closures have badly affected the construction industry and contributed to the increase in the already high rate of unemployment in Palestine (PCBS, 2006).

The local Palestinian authorities deal with funds to implement the donor's regulations, which in some cases are difficult to follow by contractors because they are not compatible with local construction standards. Nevertheless, the local construction industry, in recent years, has experienced major changes in its methods and procedures. Almost every aspect of the construction process has undergone extensive modifications. Nonetheless, the present construction industry is characterized by the increasing number of costs claims and disputes between contractors and owners. These claims stem out because of many causes including varied interpretation of contract

specifications, unpredictable and uncontrollable delays, and non performance of firms involved in the construction process. These claims disputes over cost jeopardize a contractor's profitability and the financial success of the project for the project owner (Al-khalil and Al-Ghaffly, 1999; Al- Moumani, 2000).

Construction claims and disputes occur in both public and private funded projects, and in projects of small as well as large currency amounts. In fact, no project is to be considered shielded from a potential claims. These claims lead to significant financial damages. All parties including project owner, designer and contractor, therefore, need to understand the process of claim. Owners and contractors needed to be capable of taking steps to prevent claims from even happening. On the other hand, they must be able to focus on how to manage construction claims. Thus, the claim management process in the construction industry has to be clear and be understood by all parties especially the local contractors in order to know how to manage them.

In the Palestinian construction industry, the number of claims continues to increase in recent years. Also there is a lack of information related to the causes of construction claims particularly from the clients' views. This research, therefore, aims to identify and rank the existing causes of claims according to their relative importance in the construction industry from owners' perspective for suggesting appropriate recommendations. It is expected that the findings will improve the performance of the construction industry and may be useful to international engineering and construction companies seeking a share in the Palestine markets.

Common Causes of Construction Claims

Occurrence of claims is common in the construction industry. Most claims are legitimate and do not create disputes and confrontation between the owner and the

contractor. Generally, a claim is defined as a written demand or assertion by one of the contracting parties to seek payment of money, the adjustment, interpretation of contract terms, or other relief arising or related to a given contract (Mitchell, 1998). Most of the standard forms of contracts used in the building and civil engineering industry recognize the fact that when actions of the employer and his agents result in the contractor incurring additional costs, there must be an adequate contractual mechanism for reimbursing the contractor (Vidogah and Ndekugri, 1997).

A construction claim arises when a party to a construction contract believes that in some way, the other party has not fulfilled its part of the agreement. A claim arises when one party has suffered a detriment for which that party be compensated by the other party (Kartam, 1999). A claim is defined as the seeking of change by one of the parties involved in the construction process (Arditi and Patel, 1989). Also, claims are described as the assertion of the right to money, property or remedy (Powell and Stephenson, 1993). In Japan, the term "claim" is used in a narrow focused way, mainly in relation to disputes arising over defects following the completion of construction (Iwamatsu *et al.*, 2008). In Europe and North America, the meaning of the term is known to cover immediate issues for solution among the concerned parties in construction, such as proposals for design changes, requests for extension of construction time, etc. (Iwamatsu, *et al.* 2008).

Due to changes and variation orders during construction of projects, construction contracts lead to disputes and claims. It is very difficult to state expectations and requirements with precision in any construction contract. Potential problem areas include ambiguities, omissions, conflicts, adjustment clauses, multiple prim contracts, fast-track construction, and unrealistic performance time. There are a variety of different types of designers: architects, interior designers, geotechnical consultants, and engineers with diverse specialties. Any of these types play a crucial role in minimizing and resolving disputes. Tensions arise due to the quality of

their professional performance, professional obligation to the owner and their financial interests. Potential problem areas include design errors, lack of design coordination, inadequate design review, construction phase services, inadequate investigation, project cost estimates, performance specification (Bramble, 1990).

Incomplete information on drawings and design errors are the leading causes of claims. Failure of Architects and engineers (A/E) to perform in a timely manner including improperly reviewing of shop drawings, change order approval, clarification of drawing and specification, and correction of design errors are few examples. Additionally, a lack of design coordination and inadequate design review, manifested errors or omissions, schedule conflicts lead to construction claims (Ahuja, 1994). Hassanein and El-Nemr (2008) found that claims management in the Egyptian construction sector has been suffering from a variety of obstacles, including lack of proper notification procedures in public contracts and poor documentation management. It is reported that construction claims in the United Arab Emirates reached \$4 billion (Al-Bawaba, 2005).

There are many acts and omissions of contractors, which lead to construction claims. These acts and omissions occur at different stages in the preparation of the project estimates and bids, evaluation of the project costs and design reviews, failure to effectively manage the construction process, lack of experience in the nature of the project, poor quality construction, including labor issues and problems, equipment problems, financial problems (Bramble and Callahan, 1992). Because contractors often bear the financial burden of project's problems and at the same time they intend to seek relief through claims. A common cause of distress to contractors is unrealistic estimates of the cost of works. Low priced bid leads to a claim mentality when the contractor attempts to mitigate loss of the anticipated cost. Poor construction quality is also a common source of claims when remedial measures to defective works and workmanship increases cost and results in schedule delays (Ahuja, 1994).

Claims by owners to contractors usually concern the materials out of specification or the defective work. Contractors are responsible for the quality of their work as specified in the contract. Examples of owners' claims include property damage or damage to owner's installations, performing poor quality of work, contractor late completion when contracts call for a completion date on the assumption that the owner is in need of the facility in accordance to the contract date. A late finish by the contractor brings inconvenience and financial losses to the owner (Bu-Bshait and Manzanera, 1990). Contractors, sometimes, have to face claims because of failures to employ sufficient workforce for the project, failure to provide sufficient equipment, cash flow limitations, poor workmanship, poor planning and project management issues (Riad, *et. al.* 1991). Generally, subcontractors are subjected to the same problems; situations involving subcontractors for causes of construction claims are problems of coordination among the various trade contractors (Bramble, 1990). The lack of coordination of contractors and suppliers is often a problem which creates conflicts and claims (Ahuja, 1994).

Often, the nature of the project is a source of problems that leads to construction claims. This includes inherent difficulties in the type of the project or the construction site (Bramble, 1990). Projects that are complex, large, remotely located, in congested areas, and requiring technology at the cutting edge are subjected to construction claims. Examples are nuclear power plants, process plants, unique structures, underground construction, earthwork, and renovation projects (Ahuja, 1994). Sometimes, project problems are beyond the control of any party that impact construction progress and result in construction claims. The term used for such claims is called "Force Majeure". Force Majeure contract clauses refer to the occurrence of claims which is beyond the reasonable control of any party to a construction contract. Nonetheless, a claims for a time extension is usually permitted due to severe weather conditions, such as floods, fires, or even sabotage (Ahuja, 1994).

METHODOLOGY

This paper is based on a quantitative approach, where 120 designed questionnaires were distributed to all owners working on the construction projects located in the Gaza Strip. Out of these, 101 completed valid questionnaires were received. The owners consisted of all government agencies, ministries, municipalities, international agencies and public project owners. The research was carried out in the Gaza Strip, which consists of five governorates: north, Gaza, middle area, Khan-Yunis and Rafah governorates.

Forty one causes were identified through the literature review and consultation with owners, contracting companies and local consultants. These causes were distributed into four groups.

A scaled item questionnaire was used to facilitate an optimal response rate to questions. The participants were asked to rate their level of agreement in a five-point Likert type scale. To find out the ranking of the different causes of claims on construction projects, the "Relative Importance Index" (RII) was determined (Naoum, 1998). This method transforms the five-point Likert scale to determine the ranking of each factor using the following formula:

$$RII = \frac{\sum_{i=1}^5 a_i x_i}{5 \times N}$$

Where a_i is a constant expressing the weight of the i^{th} response; x_i is the frequency of the i^{th} response of the total responses for each clause; i is the response category index where $i = 1, 2, 3, 4$ and 5 , respectively, N is the total number of respondents. RII value is ranged from 0 to 1 (Tam *et al.*, 2000; Odeh. and Battaineh, 2002).

It is a customary practice that the survey instrument is to be pilot-tested to measure its validity and reliability. The pilot study was conducted by distributing the questionnaire to panels of experts having experience in the same field to get their constructive feedback about the questionnaire. Twenty two experts representing two panels were contacted to assess the questionnaire validity. The first panel, consisting of twenty experts, was asked to verify

the validity of the questionnaire contents and its relevance to the research objective. The second panel, consisting of two experts in statistics, was asked to confirm that the instrument used was valid statistically. Expert comments and suggestions were incorporated to ensure the validity and reliability of the questionnaire. The method utilized for this research is similar as used by other researchers (Tam, *et al.* 2000, Odeh. and Battaineh, 2002).

RESULTS

Collected data from questionnaires were analyzed to find causes of claims. Causes of claims were then categorized into four groups. The first group is related to claim factors caused by owners, the second group is related to the design and bill of quantities, the third group is related to the contractual relationship factor, and the fourth group is related to emergency

Table 1. Owners Views about Causes of Claims.

Causes of Claims on Construction Projects		RII	Group Rank	Overall Rank
Group 1. Claims factors caused by owners				
1	Residents' interferences during project implementation caused delay in the contractor's activities.	0.569	1	4
2	Unexpected increase in material prices	0.540	2	5
3	Site possession with obstacles (license, land occupation etc.)	0.507	3	7
4	Material rejection because of unacceptable quality and specifications	0.498	4	9
5	Changes in material type and specification during construction	0.475	5	11
6	Continuous verbal instructions to contractor	0.468	6	12
7	Cardinal changes in the quantity plus or minus	0.463	7	14
8	Owners financial difficulties because of delayed release of funds from the donors	0.453	8	16
9	Delay in progress payments of the contractor	0.443	9	18
10	Changes of currency value (Index value)	0.406	10	22
11	Lack of support of the owner to his supervision team	0.401	11	23
12	Owner's slow decisions	0.399	12	24
13	Owner's direct interfering in project without any coordination and ignoring his supervision team	0.384	13	26
14	Supervision team lacking in authority and showing weakness in decision making	0.379	14	27
15	The supervision team required the contractor to supply material of high standards than were specified in the contract	0.364	15	29
16	Poor controlling and monitoring of the owner to his supervision team	0.359	16	31
17	Adversarial relation between the contractor, the owner and the supervision team	0.356	17	32
18	Poor judgment of the supervision team in estimating time and resources	0.349	18	33
19	Low quality assurance and control in the project	0.342	19	34
20	Issue of change in site location or conditions	0.324	20	36
21	Uncooperative owner with the contractor regarding work activities and following up with the supervision team	0.292	21	38
22	Project termination or suspension of some main activities during project implementation.	0.290	22	39
23	Lack of experience of the supervision team in project supervision	0.290	22	39
Group Average of Relative Importance Index		0.406		

Cont., Table 1. Owners Views about Causes of Claims.

Causes of Claims on Construction Projects		RII	Group Rank	Overall Rank
Group 2. Design and bill of quantities				
24	Ambiguous and incomplete drawings and bill of quantities	0.517	1	6
25	Drawings and bill of quantities are not fitting the construction site	0.505	2	8
26	Cardinal changes or modifying the design during construction	0.465	3	13
27	Different description of the item in the bill of quantities than what was mentioned in the specifications	0.453	4	16
28	Using over quality specifications or international specifications, which are not available in the local market	0.364	5	29
29	Over design	0.290	6	39
Group Average of Relative Importance Index		0.432		
Group 3. Contractual relationship factor				
30	Awarding bid to the lower bidder	0.658	1	2
31	Payment requests are not entertained within the stipulated time period	0.493	2	10
32	Awarding process took longer period after the bid opening	0.436	3	20
33	Poor contract management and ambiguities	0.399	4	24
34	Different types of contracts	0.369	5	28
35	Changes in the legislation and processes (for example tax free commodities or changes in the tax rate)	0.327	6	35
36	Interpreting items in the contract with no reference to the Palestine law	0.302	7	37
Group Average of Relative Importance Index		0.426		
Group 4. Emergency cases				
37	Borders closures	0.698	1	1
38	Road blockage and difficulties to pass between cities and governorate	0.614	2	3
39	Natural conditions factors (bad weather, etc.)	0.460	3	15
40	Unforeseen issues arose on-site	0.443	4	18
41	Demonstrations and strikes	0.436	5	20
Group Average of Relative Importance Index		0.530		
Overall Average of the Relative Importance Index		0.429		

cases. Table 1 shows the owners' view about causes of claims on construction projects. It shows the relative importance index (RII) and the ranks of the causes of claims for all items in the four groups as well as for the group. Each group is discussed in the following sections:

Table 2 shows that the average relative importance index of group 1 is 0.406 with four position of the rank order among the four groups. The overall relative index of causes of construction claim is 0.429. The value of relative index for the causes of claims caused by owners is less than the average value of RII.

Table 2. The Relative Importance Index and Rank of All Four Groups.

Groups	Owners	
	RII	Rank
1. Claims factors caused by owners	0.406	4
2. Design and bill of quantities	0.432	2
3. Contractual relationship factor	0.426	3
4. Emergency cases	0.530	1
Overall average of Relative Importance Index	0.429	

This indicates that claims factor caused by owners can be considered as the lowest group which causes claims on construction projects. This also means that this group is relatively less important among the four groups regarding causes of claims.

Group 1: Causes of construction claim caused by owners

The owners were asked for their views about the causes of claims. Table 1 shows the statistical results including relative importance index (RII), sub-field rank and overall rank as perceived by the respondents.

As shown in Table 1, the owners ranked "the residents' interference during project implementation caused delays in the contractor activities" in the first position with RII value of 0.569. This factor was ranked at fourth position by all field ranks. This means that the residents' interferences during project implementation caused delays in the contractor activities, and this can be considered as the main source of claim factors in relation to owners. Most owners agreed that this issue affected contractors' activities and led to project delays. In some cases, residents' interference stopped the project implementation for a long period. The writers postulate that it is the owner's responsibility to assist the contractor by preventing residents' interference during project implementation. The owners are needed to be involved and help in removing obstacles faced by the contractor during the project implementation period.

The respondents ranked "unexpected increases in material prices" in the second position with RII value of 0.540. This factor was ranked at the fifth position under the overall claim causes (Overall Ranks). Thus, unexpected increases in material prices led to projects cost increases. In some cases, contractors requested for compensation but those requests were rejected because in Gaza the construction industry often suffers from a shortage of materials.

The respondents ranked "site possession obstacles (license, land occupation, etc.)" in the third position with RII value of 0.507. This factor was ranked at the seventh position under the overall claim causes (Overall Ranks). This means that site possession including obstacles

(license, land occupation, etc.) is a main source of claim factors caused by owners. Most owners agreed that this issue affected project activities and resulted in project delays. In some cases, the contractor was not able to start the site work due to these obstacles. This issue was raised with the owner at some public projects, where the land was occupied by residents. The owner was asked to take responsibility for removing the obstacles before starting the project implementation. In some cases, the owner failed to remove these obstacles. Nonetheless, these obstacles created difficulties in executing the project on site. Consequently, the contractor was not able to complete the project on time. The contractor presented claims to the owners asking for compensation for these delays.

The respondents ranked "material rejection because of unacceptable quality and specification" in the fourth position with RII value of 0.498. This factor was ranked at the ninth position under the overall claim causes (Overall Ranks). This means that material rejection because of unaccepted quality and specification caused delays to contractor activities. Most owners agree that this issue affected contractors' activities and resulted in delays in work progress.

The respondents ranked "changes in material types and specification during construction" in the fifth position with RII value of 0.475. This factor was ranked at the eleventh position under the overall claim causes (Overall Ranks). This means that changes in material types and specifications during construction were considered a main source of claim factors caused by owners. Most owners agree that this issue affected project activities and caused delays in work progress. In some cases, the contractor was not able to perform construction activities because of this problem. On projects, this issue resulted from lack of proper planning and design. During projects implementation, when changes in specifications and quality of materials occurred, the contractor loses time and consequently requested price change reimbursements for new materials.

The respondents ranked "un-cooperative owner with the contractor regarding work activities and following up with owner supervision team" at the twenty-one positions with RII value of 0.292. This factor was ranked at thirty-eight position

under the overall claim caused (Overall Ranks). This means that owners' respondents agreed that this factor was not contributing in serious claims. This indicates that owners and their representative cooperated with the contractor during project execution period. Nonetheless, any negative influence on their relationships resulted in low quality performance by the contractor, thereby delaying the project activities. In these cases, this issue led to claims between the two parties.

Owners' respondents ranked "project termination or suspension of some main activities during project implementation" in the twenty second position with RII value of 0.290. This factor was ranked at the thirty-nine position under the overall claim causes (Overall Ranks). This result proves that this factor was considered as the lowest factor in this field. The respondents indicated that in some cases the sequence of termination was explained enough in the contract provision. It is concluded that this factor is less effective in determining claim issues.

Owners' respondents ranked "lack of experience of the supervision team for supervising a project" in the twenty-second position with RII value of 0.290. This factor was ranked at the thirty-ninth position under the overall claim causes (Overall Ranks). The respondents agreed that this factor is not crucial. This was found to be the last factor for causes of claims caused by owners. Owner respondents agreed that most of their supervision teams have the capability to supervise projects.

Group 2: Design and bill of quantities

The result shows that the average RII for this group was 0.432 with second position of the rank order among the four groups (Tables 2). The average RII of the overall claim causes (Overall Ranks) was 0.429.

Owners' respondents ranked "ambiguous and incomplete drawings and bill of quantities" in the first position with RII value of 0.517 (Table 1). This factor was ranked at the sixth position under the overall claim causes (Overall Ranks). This means that ambiguous and incomplete drawings and bill of quantities were considered as the main source of claim factors in this field. Most owners agreed that these issues had affected project

activities and caused delays in work progress. In some cases, contactors requested owners for compensation when considerable items were found during clarifying drawings and bill of quantities.

The respondent ranked "drawings and bill of quantities are not fitting the construction site" as the second most important cause factor with RII 0.505. This factor was ranked at the eighth position under the overall claim causes (Overall Ranks). This means that the drawings and bill of quantities were not in compliance with the construction site and thus caused delays to the contractor's activities. Most owners agreed that these issues had affected contractors' activities and caused delays in work progress. Nonetheless, in most cases, owners were not able to compensate the contractor for extra costs resulting from changes in design and bill of quantities particularly because of the limitation of the project budget.

The respondents ranked "cardinal changes or modifying the design during construction" as the third most important cause factor with RII 0.465. This factor was ranked at the thirteenth positions under in the overall claim causes (Overall Ranks) in this group. This means that the cardinal changes or modification of the design during construction were considered a main source of claim factors in this field. Most owners agreed that this issue had affected project activities and caused delays in work performance. In some cases, the contractor executed activities in accordance to the revised design when instructed by the owner or his agent. This caused delays in project execution. The writers postulate that this issue created conflicts between the owners and the contractors.

The respondents ranked "different description for the item in the bill of quantities than what was mentioned in the specifications" as the fourth most important cause factor with RII of 0.453. This factor was ranked at the sixteenth positions under the overall claim causes (Overall Ranks). This means that different description for the item in the bill of quantities was considered as one of the main source of claim factors. Most owners agreed that these issues had affected contractor's activities and caused delays in work progress. Nevertheless, when the contractor supplied materials different from the specified materials particularly with low quality and that

were rejected by the owner's supervision team. Nonetheless, these issues created conflicts between the two parties.

The owners' respondents ranked "using over quality specifications or international specifications, which are not available in the local market" at the fifth position with RII value of 0.364. This factor was ranked at the twenty-ninth position in the overall claim causes (Overall Ranks). This indicates that owner respondents agreed that this factor was not serious in causing claims.

The owner respondents ranked "over-design" at the sixth position with RII of 0.290 under this group. This factor was ranked at the thirty-ninth positions in the overall claim causes (Overall Ranks). This result proved that this factor was considered at the lowest position in this field. The respondents perceived that over-design in public projects is not a big issue as it rarely occurs. Nonetheless, the owner has to bear costs of over design.

Group 3: Contractual relationship factor

The results show that the average relative importance index for this group was 0.426 with third position of the rank order among the four groups (Table 2). The average of relative index of the overall claim causes (Overall Ranks) was 0.429.

Owners' respondents ranked "awarding bid to the lower bidder" in the first position with RII of 0.658 under this group (Table 1). This factor was ranked at the second position in the overall claim causes (Overall Ranks). This indicates that awarding bid to the lowest bidder was considered as one of the main source of claim factors. The issue of awarding contract to the lowest bidder is the requirement of the Ministry of Local Government and donors or international fund agencies which affected greatly almost all contractors. Because of acceptance of low prices bid, contractors tried to neglect the specifications to reduce the work costs. In some cases, contractors were not able to perform activities and hired unskillful labors and were found using poor equipment. Because of the acceptance of low priced bid, these issues resulted in conflicts between owners and contractors.

The respondents ranked "payment requests are not entertained within the stipulated time period" at the second position with RII value of

0.493 under this group. This factor was ranked at the tenth position in the overall claim causes (Overall Ranks). This indicates that payment requests were not entertained timely. Most owners agreed that this issue affected project activities on-site and resulted in delays of work progress. Almost all local contractors depend on the progress payment to carry out their work. Payment delays resulted in financial difficulties to contractors. This difficulty led to slow down the project progress and in some cases stopped the project. As a result of payment delays, most owners' representative clarified that public projects were funded by donors and international agencies, which have different procurement and financial procedures. These payment delays issue led contractors to request compensation from owners.

The respondents' ranked "awarding process took longer period after bid opening" at the third position with RII of 0.436 under this group. This factor was ranked at the twentieth position in the overall claim causes (Overall Ranks). This indicates that the awarding process took longer period after the bid opening which caused difficulties in starting the project implementation on-site. These delays affected contractors estimated cost of material, particularly due to instability in prices the local market. The issue of scarcity of materials and unexpected material price increments forced contractors to request owners for prices compensation. Nonetheless, these requests were generally turned down by the owners.

The respondents' ranked "poor contract management and ambiguities" at the fourth position with RII value of 0.399. This factor was ranked at the twenty-fourth position in the overall claim causes (Overall Ranks). This indicates that poor contract management and ambiguities were considered as one of the main sources of claim factors in this field. The owners agreed that in some contracts, there were ambiguities in the provisions of the contract and that caused misunderstanding in contract management. All these issues led to conflicts between the two sides as well as generation of claims.

The respondents ranked "changes in the legislation and processes (for example, tax free

commodities or changes in the tax rate)" at the sixth position with RII value of 0.327 under this group. This factor was ranked at the thirty-fifth position in the overall claim causes (Overall Ranks). This result proves that this factor was considered as one of the lowest factor in the contractual relationship area. When changes in legislation and processes are rare, in general, this factor does not affect directly the construction processes.

The respondents' ranked "interpreting some items in the contract with no reference to the Palestinian law" at the seventh position with RII value of 0.302 under this group and in the overall claim causes (Overall Ranks). This factor was listed at the thirty-seventh position. Owners agreed that this factor was not important in creating claims when almost all public contracts were compatible with the Palestinian law.

Group 4: Emergency cases

The owners' respondents were asked to give their response about the causes of disputes occurring because of the emergency cases factors. The results show that the average RII for this group was 0.530 with the first position of the rank order among the four groups (Table 2), while the average of relative index of the overall claim causes (Overall Ranks) was 0.429.

The respondents' ranked "borders closures" in the first position with RII value of 0.698. In the overall claim causes (Overall Ranks), this factor was ranked at the first positions (Table 1). This indicates that the main borders closures were considered as the main source of claim factors. Most owners agreed that this issue affected contractors a lot in their project implementation. Borders closures caused slowing down and in some cases stopping projects activities. This issue affected all sectors of the Gaza construction industry. Respondents perceived that this issue also affected owners' plans and financial conditions which resulted in project delays. Because of borders closures there were delays in project progress and unexpected material price increases because all project activities were dependent on the availability of construction material. These matters were not considered in advance by owners and led to disputes between the parties.

"Road blockage and difficulties to pass through occupied cities and governorate" was ranked as the second most important cause factor with RII of 0.614 under this group and in the overall claim causes (Overall Ranks), this factor was listed at the third position. Most owners agreed that this issue affected project activities and resulted in delays in work performance. The owners perceived that the occupation forces, frequently divided the Gaza strip into three to four security zones by establishing lots of check posts preventing contractors and their materials from passing through. Additionally, these issues created difficulties to owners' representatives for arriving at project sites in order to supervise contractors' performance.

The respondents ranked "natural conditions factors (bad weather, etc.)" as the third most important cause factor with RII of 0.460 and in the overall claim causes (Overall Ranks), this factor was listed at the fifteenth position. This indicates that the natural condition factors (e.g. bad weather) forced owners and contractors to stop project activities. These issues resulted in increased contractors running expenses particularly when bad weather conditions caused damages to finished works and approved activities by the supervision team. The respondents revealed that contractor had submitted claims for compensation due to natural conditions factors.

Owners respondents ranked "unforeseen issues arose on-site" as the fourth most important cause factor with RII of 0.443 and in the overall claim causes (Overall Ranks). This factor was listed at the eighteenth positions. This indicates that unforeseen issues arising on-site were considered as a source of claim factors. Due to the unforeseen issues, contractors were used to submit claims for compensation but owners were not able to accommodate all claims mainly because of budget limitations.

The owners ranked "demonstrations and strikes" at the fifth position with RII of 0.436 under this group and in the overall claim causes (Overall Ranks), and this factor was listed at the twentieth positions. Respondents agreed that this factor is not serious in causing construction claims. The Gaza construction industry is not controlled by unions such as labor unions to be affected by strikes and demonstrations.

CONCLUSION

This research aimed to identify and rank causes of claims according to their relative importance in the construction industry from the perspective of local owners. The findings of the first group (causes of claims caused by owners) indicated that 'residents' interference during project implementation caused delays to the contractor activities'. 'Unexpected increase in material prices' was ranked as second most important factor in the first group. The finding of the second group (design and bill of quantities) indicated that the respondent ranked 'ambiguous and incomplete drawings and bill of quantities' in the first position, and 'drawings and bill of quantities are not fitting the construction site' in the second position.

The findings of the third group (contractual relationship factor) indicated that 'awarding bid to the lowest bidder' was ranked in the first position and 'payment requests are not entertained within the stipulated time period' was ranked as the second most important cause factor. The finding of the fourth group (emergency cases) indicated that 'border closures' was ranked at the first position and 'road blockage and difficulties to pass between cities, occupied cities and governorate' factor was ranked in the second position. These factors were the highest cases resulting in the four groups.

During project planning and design, owners might coordinate with residents of the project area and inform those about benefits of the project particularly to avoid interference from the local residents. Owners are needed to assist more effectively in removing obstacles so that projects are implemented without delays. Contractors are needed to recruit good project managers having good experience about construction projects implementation and must be well conversant about the knowledge of construction claim. Furthermore, owners and contractors are needed to hold training programs about construction claims management in order to increase their employees awareness on these issues.

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