

# Factors affecting bid/no bid decision in the Gaza Strip – contractors` perspectives

## Factores que influyen en la decisión de licitar o no licitar en la Franja de Gaza – perspectivas de los contratistas

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### Abstract

To bid or not to bid for a certain project is considered to be a crucial decision for contractors' survival. The objective of this paper is to identify and rank the factors that affect the bid/no bid decision according to their relative importance from the perspective of the local contractors operating in the Gaza Strip, Palestine. A total of seventy-eight factors were identified through a comprehensive literature review to evaluate the most important factors that affect the contractors' decisions to bid or not in the Gaza strip. A survey was conducted on a sample of seventy three contractors classified under the building category, and sixty five of them responded with response rate 89%. The results illustrate that, the financial capability of the contractors, the reputation of the clients, the financial capability of the clients, the financial values of the project, the availability of construction raw materials in the local markets, and the stability of the construction industry were the most critical factors affecting the contractors bid-no bid decisions. This study suggests that contractors and clients should improve their financial systems and capabilities in order to stay in business.

Keywords: Contractors, bid decision, construction, finance

### Resumen

La decisión de licitar o no licitar un determinado proyecto es crucial para la sobrevivencia de los contratistas. El objetivo de este artículo es identificar y clasificar los factores que determinan la decisión de licitar o no licitar, de acuerdo a su importancia relativa desde la perspectiva de contratistas locales que operan en la Franja de Gaza, Palestina. Se identificaron un total de setenta y ocho factores, por medio de una revisión exhaustiva de la literatura, para evaluar los factores más importantes que afectan las decisiones de los contratistas por licitar no licitar en la Franja de Gaza. Se desarrolló una medición dentro de una muestra compuesta por setenta y tres contratistas clasificados bajo la categoría construcción, y sesenta y cinco de ellos respondieron a una razón de 89%. Los resultados ilustran que la reputación de los clientes, la capacidad financiera de éstos, el potencial financiero del proyecto y la disponibilidad constructiva de materias primas en los mercados locales, así como la estabilidad de la industria de la construcción, fueron los principales factores críticos que influyen en las decisiones de licitar o no licitar. Este estudio sugiere que los contratistas y clientes debieran mejorar sus sistemas financieros y aptitudes para poder mantenerse dentro del negocio.

Palabras Clave: Contratistas, decisión de licitar, construcción, finanzas

## 1. Introduction

The construction industry is usually considered to be the back-bone of any economy as it absorbs a relatively high percentage of the national workforce. In the United Kingdom, the construction industry (the second largest industry in the European Union) contributes around 8.2% of Gross Value Added (GVA), and employs about 7.0 % of the local workforce providing some 2.2 million jobs (AGCAS, 2008). Similarly, in the United States of America,

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the construction industry is considered to be the largest in the world accounting for 25% of the total global construction industry (UK Trade & Investment Website, 2007). In emerging economies, such as India, the industry is worth around USD 25 billion annually and accounts for more than 6% of GDP, employing 18 million people (UK Trade & Investment Website, 2007). In Palestine (the geographical focus of this paper), the construction industry is considered as one of the main sectors that contribute strongly to the local economy. In year 2007, alone, this industry employed 11.6 % of the local workforce.

From the above, it is clear that a healthy economy is a function of the demand for construction work as reflected by the number and value of procured construction projects. Given that most projects get awarded to contractors via tenders (competitive bidding), contractors' survival is, therefore, strongly dependent on being able to successfully deal with different bidding situations. These situations (e.g. economic, social and/or political) could dictate the number of construction firms registered and the degree of competition for construction works (Akintoye and Skitmore 1990).

The contractor's decision whether to bid or not for a certain project is usually associated with uncertainty and may be influenced by a plethora of factors. While some of these factors are directly related to the contractor, other factors are related to the client, contract and project characteristics as well as the business environment. The objective of this paper is to identify and rank the factors affecting the bid/no bid decision according to their relative importance from the perspective of the local contractors operating in the Gaza Strip, Palestine. The next section provides a summary of the literature review undertaken to identify the relevant factors, while the rest of the paper presents the research methodology and study findings.

## 2. Background

### Relevant previous studies

Over the years, the bid/no bid decision has attracted the attention of many researchers.



A relatively large number of studies have focused on identifying the factors effecting this decision, whereas few studies have investigated and developed relevant bidding strategy models. Skitmore et al. (1993) argued that, the decision to bid needs a comprehensive and intensive process of data collection and investigation of the internal and external factors. The internal factors relates to the organizational capabilities and resources, while the external factors relates to both market and project conditions. From a cost perspective, Krasnokutskaya and Seim (2007) stated that, the contractors' decision to participate in the tender depends on two different costs: cost of entry and cost of completing the project. Focusing on the Middle East, Abdul-Hadi (1999) categorized factors affecting bidding and markup decisions in Saudi Arabia into five categories: project characteristics, project documents, contractor characteristics, the bidding situation and the economic situation. In the Gaza Strip, Palestine, Nirab (2007) identified a total of ninety four factors affecting bidding decision and classified them into three categories, firm- project- and market-related factors.

Critically reviewing many previous research studies undertaken in different countries (e.g. Odusote and Fellows 1992, Skitmore et al., 1993, Drew and Skitmore (1990, 1993), Eastham and Skitmore 1993, Sohail et al., 1999, Abdul-Hadi 1999, Stewart 2000, Drew et al., 2001, Wanous et al., 2003, Numba and Dingham 2005, Alexandersson and Hultén 2006, Krasnokutskaya and Seim 2007), has led this paper to categorize the identified several factors into four main groups, namely: 1) contractor's related factors, 2) client characteristics 3) contract and project characteristics and 4) business environmental factors such as political situation, governmental regulations, etc. The four groups of factors are briefly discussed below.

#### Contractor's related factors

At any point in time, within a contracting company there are contracts which are being undertaken and contracts which are being sought, usually in a competitive environment (Odusote and Fellows 1992). The contractor's bidding decision is influenced by several factors related to the contractors themselves. These include the contractor's experience, technical and financial capabilities, current and projected workload, etc.

From a behaviour perspective, Drew and Skitmore (1993) classified the factors that influence bidding behavior into three groups.

The first group is related to the behavior of contractors, the second group is related to the individual contractor behavior, while the third group is related to the contractor behavior toward the characteristics of the contract. Flanagan and Norman (1982) [cited in Drew et al. (2001)] stated that bidding behavior, in general terms, is likely to be affected by the following five major factors: the size and value of the project, and construction and managerial complexity required to complete it, the regional market conditions, the current and projected workload of the tenderer, the type of client, and the type of project. Skitmore (2002) explained that, there are a variety of reasons why tenderers may prefer not to bid for a particular contract. These include; number of bids in hand, the strength of the competition, projected profit levels, cost of bidding and time-period allowed for bid preparation. Drew and Skitmore (1992) observed that project profitability, number and value of bids in hand, the availability of contractor's staff and their technical capabilities are critical factors influencing the decision to participate in a new tender or not.

Stewart (2000) emphasized that, much of the work on strategic management is based on the assumption that companies seek to earn profit or maximize returns to shareholders. Dijk (1999) stated that, the bidders could be faced with the problem that preparing a bid involves costs, this means that, the estimation of the margin of profit may affect the bidding decision. Krasnokutskaya and Seim (2007) argued that, the probability to submit a bid increases significantly with the firms' capabilities. Large firms have strong trend to participate in the large size of the project. Sohail et al (1999) analyzed the factors effecting on the bidders participation, their survey revealed that 88% of the contractors' respondents believe that the technical competency, legal status of the contractors, experience with similar projects, competencies of the contractors' staff and managerial capabilities are important factors to consider prior to participating in the tenders.

#### Client characteristics

The clients' policies and characteristics such as selection system, awarding criteria, advertisement characteristics, tendering system, reputation of clients among others, are critical factors that do also affect the contractor's bid/no bid decision.



Drew and Skitmore (1997) emphasized that the character of construction markets is set by several factors including the nature of the client and the type of competition experienced by the construction firm. Drew et al. (2001) concluded also that, three important factors influencing contractor-bidding behavior, these factors are the type of client, type of construction work and the size of construction work. Krasnokutskaya and Seim (2007) went even further by illustrating the influence of the tenders' advertisement procedures on the contractor's behaviour. The client policy of inviting potential bidders, client reputation and experience, bid selection process transparency, credibility many other factors were studied by several researchers (Drew and Skitmore 1992, Hatush and Skitmore 1998, Jennings and Holt 1998, Mills and Skitmore (1999<sup>a</sup>, 1999<sup>b</sup>) Egemen and Mohamed 2005, Banaitiene and Banaitis 2006, El Sawalhi et al., 2007, Straub and Mossel 2007).

#### Contract and Project Characteristics

Eastham and Skitmore (1993) emphasized that, the project and contract characteristics are critical factors that affect the bidders' decision of participation. Drew and Skitmore (1992, 1997) concluded that, the contract conditions, site conditions, construction methods and Programme, market conditions and identity of other participated bidders are critical factors influencing the decision to participate or not. Krasnokutskaya and Seim (2007) identified a number of factors that have an impact on the bidding behaviors such as: working days, number of bidders participating in the tender, distance to project, current load and qualified small business. Nomba and Dingham (2005) revealed that, the efforts, resources and time spent to review and fill the bids will influence the bidders' strategy to contribute in future with similar projects or not. Krasnokutskaya and Seim (2007) showed that, the contract requirements have an influence on the bidding behaviors, and found that, the low bidders' categories prefer the small size projects and long duration. This suggests that small companies are primarily interested in smaller-scale projects that require limited resources and longer projects that provide steady business. Stone and Reiners (1954) cited in (Warsame 2006<sup>b</sup>) draw a connection between contract size and the size of contractors.

They state that only the largest firm normally undertakes the largest contracts, while both small and large firms undertake the small contracts.

#### External Business Environment

The contractors' bidding decision is also being affected by the external business environmental conditions such as number of competitors in the market, strength of the competitors, stability of the local construction industry, governmental regulations, weather conditions, etc. Newcombe et al. (1990) showed that, the business environment within which the construction contractors operate consists of general factors (e.g. politics and law, economics, sociology and technology) as well as competitive factors (e.g. finance, plant, labour, management, suppliers, subcontractors, consultants and clients). Hong and Shum (1999) stated that, an increase in the number of bidders has two counteracting effects on equilibrium bidding behaviors. First, the increased competition generally leads to more aggressive bidding, as each bidder attempts to maintain their chances of winning against more rivals: this action called competitive effect. Second, the winner curse becomes more severe as the number of bidders increases and rational bidders will bid less aggressively in response: this action called winners curse effect. If the winners curse effect is large enough, the possibility arises that prices could actually rise as the number of competitors increases. Hong and Shum (1999) found that, the costs of procurement auctions increased by 30% as the number of bidders increases from 3 to 6 bidders. Athey et al. (2004), observed that the competition with unknown bidders (sealed envelopes) attracts more bidders than the open auctions with generating higher revenue.

In sum, a total of seventy eight factors affecting the bidders' decisions and behaviors to bid or not to bid were identified and categorized by this paper into the above four groups.

### 3. Research methodology

In this research, the questionnaire approach was used to collect the factual, perceptive and attitudes of the respondents regarding the factors affecting bidders decisions to bid or not.



Fellows and Liu, (1997) and Naoum (1998) argued that, the questionnaire is widely used approach for descriptive and analytical surveys to find out the facts, opinions and views of the respondents. The populations that were targeted in this research were all local contractors who are classified by the Palestinian Contractors Union "PCU" under the following five building categories in Gaza Strip.. The financial ceiling (maximum project value they can bid for) for each category is as follows:

- 1<sup>st</sup> Category: [6.0-15.0 USD million]
- 2<sup>nd</sup> Category: [3.0-6.0 USD million]
- 3<sup>rd</sup> Category: [1.0-3.0 USD million]
- 4<sup>th</sup> Category: [0.5-1.0 USD million]
- 5<sup>th</sup> Category: [less than 0.5 USD million]

To determine the appropriate sample size from the theoretical population, the following Kish's (1965) equation was used:

$$n = n' / [1 + (n' / N)]$$

Where:

$n'$  is the sample size from infinite population, which can be calculated from this formula [ $n' = S^2/V^2$ ]. The definitions of all variable can be defined as the following:

$n$ : sample size from finite population.

$N$ : Total population (170 contractors)

$V$ : Standard error of sample population equal 0.05 for the confidence level 95 %,  $t = 1.96$ .

$S^2$ : Standard error variance of population elements,  $S^{22} = P(1-P)$ ; maximum at  $P = 0.5$

The sample size can be calculated from the previous equations as follows:

$$n' = S^2/V^2 = (0.5)^2/(0.05)^2 = 100$$

$$n_{\text{Contratistas/Contractors}} = \left[ \frac{100}{1 + \left( \frac{100}{170} \right)} \right] = 63 \text{ compañías/companies}$$

Although the calculated sample size for the contractors was (63 questionnaires), the distributed questionnaires were 73 instead of 63. This process was applied to overcome the low response rate that may disturb the consistency and the benefits of the study.

The response rate was 89.5%. The sample was selected randomly from the available lists of each category. The selection process was done with a non replacement selection process.

The respondents were asked to give their perceptions of group of statements using a five-point Likert scale (1, for strongly disagree to 5 for strongly agree), reflecting their assessment regarding the factors affecting the bidding process. The relative importance index was computed using the following equation (Naoum 1998, Assaf et al., 1999, 2001, Abdul-Hadi 1999, Wanous et al 2003):

$$\text{Índice de importancia relativa/Relative importance Index} = \frac{\sum w}{AN} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{5N}$$

Where  $W$  is the weighting given to each factor by the respondent, ranging from 1 to 5, ( $n_1$  = number of respondents for strongly disagree,  $n_2$  = number of respondents for disagree,  $n_3$  = number of respondents for neutral,  $n_4$  = number of respondents for agree,  $n_5$  = number of respondents for strongly agree).  $A$  is the highest weight (i.e. 5 in this study) and  $N$  is the total number of participants in the sample. The relative importance index ranges from 0 to 1.0.

## 4. Results and discussions

### 4.1 Factors related to the contractor (Group one)

Table 1 shows a total of 18 factors that are directly related to the contractors and affect their decision to bid or not. As indicated in Table 1, the contractor's financial capability was ranked in the first position by the respondents, with a relative importance index of (0.889). This result is in line with Krasnokutskaya and Seim (2007) and Abdul-Hadi (1999), Drew and Skitmore (1992), Jennings and Holt (1998) and Banaitis (2006) where their results reflect the importance of the contractor's financial capabilities to sustain their contracting business. 'The contractors' category according to the PCU' was ranked in the second position with a relative importance index of (0.837). This provides guidance to the PCU's committee, the Palestinian classifications committees, clients and consultants to look more closely at how the PCU's contractors categorization is perceived by contractors as crucial factor affecting their ability to bid for projects.

Therefore, having transparent and objective evaluation criteria to periodically review the contractors' categories would be of benefit to the construction industry.

'Experience and competence of the contractor's staff' was ranked in the third position with a relative importance index of (0.834). 'Experience in similar projects' was ranked in the fourth position with a relative importance index of (0.822). Experiences in similar projects will strengthen the managerial, technical and financial capabilities of the contracting organization to competitively bid with high level of success and satisfaction. These results were in agreement with those by Drew and Skitmore (1992) who emphasized that past projects strongly support the contractors' decision to bid for the similar projects.

Tabla 1. Índices de importancia relativa (IIR) y clasificaciones (R) para factores relacionados con contratistas  
Table 1. Relative importance indices (RII) and ranks (R) for contractors-related factors related

Factores relacionados con el contratista que afectan la decisión de licitar o no Factors related to the contractor that affect the decision to bid or not	IIR/R.I.I	Clasificación Rank
Capacidad financiera del contratista Financial capabilities of the contractor	0.889	1
Categoría del Contratista en SCP Contractor's category by PCU	0.837	2
Experiencia y competencia del personal del contratista Experience and competence of the contractor's staff	0.834	3
Experiencia en proyectos similares Experience in similar projects	0.822	4
Relación y Nivel de Comunicación previos con los clientes Previous relationship and communication level with the clients	0.809	5
Características específicas que otorgan ventajas competitivas como por ejemplo habilidad de generar integración vertical Specific features providing competitive advantage like (e.g. ability to make vertical integration)	0.806	6
Relación entre el contratista y bancos financieristas Relationship between the contractor and the lending banks	0.800	7
Disponibilidad de equipos adquiridos por el contratista Availability of equipment owned by contractors	0.797	8
Habilidades administrativas, técnicas y experiencia de los jefes de proyectos del contratista Administrative, technical skills and experience of the contractor's project managers	0.794	9
Rentabilidad esperada y planificada para el proyecto Expected and planned profits for the project	0.791	10
Cantidad de proyectos previos ejecutados por el contratista Number of previous executed projects by the contractor	0.775	11
Cultura organizacional del contratista (cómo, cuándo y por qué tratar con los clientes) Contractor's organisational culture (how, when, and why to deal with the clients)	0.772	12
Importancia del proyecto para el contratista Importance of the project to the contractor	0.769	13
Número de licitaciones en ejecución Number of Bids in hand	0.748	14
Estrategia competitiva del contratista Contractor's competitive strategy	0.745	15
Riesgos esperados y por tomar Risk to be taken and expected	0.717	16
Relación entre el contratista y sub-contratista Relationship between the contractor and subcontractors	0.692	17
Habilidad del contratista para establecer una empresa conjunta sustentable o temporal Contractor's ability to form sustainable or temporary joint venture	0.668	18
Total	0.781	

Looking at the bottom end of Table 1, 'the relationship between the contractor and subcontractors' was ranked in the seventeenth position with a relative importance index of (0.692) while the 'contractor's ability to form sustainable or temporary joint venture' was ranked in the last position with a relative important index of (0.668). The weak influence of these two factors on the contractor's bid/no-bid decision can be explained by the relatively large number of subcontractors, and the small size of projects in the Gaza strip that may not necessitate forming joint ventures. Besides, the clients' policies and regulations may not easily accommodate forming such joint ventures. This finding is not in agreement with those of Felsö et al. (2005) and Stehbens et al. (1999) who demonstrated in their respective studies the benefits of applying joint venture on construction projects.

#### 4.2 Factors related to the clients (Group 2)

Table 2 shows a total of 26 factors that are related to the clients and affect the contractor's decision to bid or not. From Table 2, it is observed that, 'The reputation of the client' was ranked in the first position with a relative importance index of (0.931). This result illustrates clearly the influence of client's reputation on the potential contractor-client business relationship. This finding is in agreement with those of Dijik (1999) and Skitmore and Picken (2000).

'The financial capability of the clients' was ranked in the second position with relative importance index of (0.917). Clients with strong financial capabilities will be able to meet their scheduled financial commitments (i.e. progress payments) on time. This findings are in line with those by Wanous et al (2003) and Abdul-Hadi (1999) reflecting the importance of the clients financial capabilities as a motivational factor to improve the bidding environment overall.

'Clients payment policy' was ranked in the third position with a relative importance index of (0.886). This is not surprising as contractors rely heavily on receiving timely payments in order to ensure their business continuity.

Tabla 2. Índices de importancia relativa (IIR) y Clasificaciones (R) para factores relacionados con los clientes  
 Table 2. Relative importance indices (RII) and ranks (R) for factors related to the clients

Factores relacionados con los clientes que afectan la decisión de los contratistas por licitar o no Factors related to the clients and affecting the contractors decision to bid or not	IIR/R.I.I	Clasificación Rank
Reputación del cliente Reputation of the client	0.931	1
Capacidad financiera del cliente Financial capabilities of the client	0.917	2
Políticas de Pagos del cliente Client's payment policy	0.886	3
Política del cliente para pago de compensaciones y principalmente para casos de fuerza mayor Client's policy for compensation, and mainly under force Majeure conditions	0.843	4
Política del cliente para adoptar pagos anticipados Clients policy to adopt the advanced payment	0.837	5
Experiencia y competencia del personal del cliente Experiences and competences of the client's staff	0.828	6
Relación previa y nivel de comunicación con el contratista previous relationship and communication level with the contractor	0.825	7
Requerimientos del cliente para los contratistas (financieras, técnicas y administrativas) The client's requirement from the contractors (financial, technical and administrative)	0.812	8
Política del cliente para resolución de conflictos y litigios Client's policy in resolving the disputes and litigations	0.782	9
Cantidad de proyectos previos publicitados por el cliente Number of previous advertised projects by the client	0.769	10
Nivel de supervisión, limitaciones, monitoreo y control del cliente sobre los contratistas The clients' level of supervision, restriction, monitoring and controlling over the contractors	0.766	11
Fuente de financiamiento para el proyecto Project source of funding	0.760	12
Utilización del sistema FIDIC en el acuerdo contractual Adopting FIDIC system in the contractual agreement	0.754	13
Moneda de pago empleada por el cliente (Dólar, Shéquel, Euro, Dinar Jordano u otra) Currency paid by client " dollars, Shequle, Euro, JD, or other)	0.751	14
Nivel de calidad exigido por el cliente Quality level that the clients asks for	0.751	14
Criterio de selección del contratista Criteria of contractors' selection	0.742	15
Tipo de sistema de licitación (abierta, restringida, pre-calificación u otros sistemas) Type of the tendering system ( open, restricted, pre-qualification or other systems)	0.742	15
Evaluación del cliente y política de adjudicación Client's evaluation and awarding policy	0.717	16
Categorías objetivo del cliente Targeted categories by the client	0.717	16
Requisitos de seguridad del cliente Client's safety requirements	0.680	17
Formas de publicación (Diarios, correo, sitio web de SCP, etc.) Way of advertisement ( Newspaper, post board, PCU web site, etc)	0.665	18
Duración de la publicidad para la licitación Advertisement duration for the tender	0.655	18
Cantidad anual de proyectos publicitados por los clientes Number of annual advertised projects by the clients	0.634	19
Tipos de proyectos publicitados anualmente por los clientes Types of annual advertised projects by the clients	0.628	20
Política de Utilización de e-licitación por parte del cliente Adopting the e-tendering policy by the client	0.628	20
Dirección de las oficinas del cliente, si las ofertas no son presentadas electrónicamente Address of the client offices " where tenderers submit bids if it is not electronically tendered"	0.560	21
Total	0.753	

'Client's policy for compensation and mainly under force Majeure conditions' was ranked in the fourth position with a relative importance index of (0.843). Such a high ranking is due to instability of the political and economical situations experienced in the Gaza strip.

This instability has continually forced several clients to suspend or prematurely terminate contracts thus resulting in severe financial losses for both contractors and clients alike. The responses indicate that clients with fair compensation and reimbursing policy will be more successful than others in attracting higher number of competitive bids. These results are in line with Klein (1999), and Noumba and Dinghem (2005) who explained that, the clients' policies to reimburse the bidders will contribute strongly towards enhancing the bidders' behaviors, 'The clients' policy to adopt advanced payment(s) for the contractors' was ranked in the fifth position with a relative importance index of (0.837).

"The annual common type of tenders advertised by the clients" (construction building works, repair, or maintenance) was ranked in the 20<sup>th</sup> position with a relative importance index of (0.628). This reflects contractors' readiness and flexibility to bid for different type of projects if the client has good reputation, strong financial capability, and clear payment policy.. 'Adopting e-tendering policy by clients' was equally ranked with the previous factor reflecting its weak influence on the contractors bidding decision. Finally, the 'client's base or address' was ranked in the last position (21st) with a relative importance index of (0.560).

#### 4.3 Factors related to contract and project characteristics (Group 3)

Table 3 shows the 19 factors that are related to the contract and project characteristics and affecting contractor's decision to bid or not. The results revealed that, 'The financial value of the project' was ranked in the first position as a critical factor affecting the contractors bidding decision, and with relative importance index of (0.863). This indicates that, participation in the tenders is affected strongly with the financial value of the project. The results revealed that (what is the evidence of this result?), the contract value that is within the financial capabilities of the contractors will be more attractive than other contracts. Moreover, the large bidders could participate competitively in the large size projects as they expect the higher margin of profits in these projects.

The obtained results are compatible with Krasnokutskaya and Seim (2007) who showed that, small companies are primarily interested in smaller-scale projects that require limited resources and longer projects that provide steady business. Stone and Reiners (1954) [cited in Warsame (2006<sup>b</sup>)] drew a connection between contract size and the size of contractors since the largest firm normally undertakes the largest contracts, while both small and large firms undertake the small contracts. Moreover, the results are also in line with Drew and Skitmore (1997) as they concluded that, the bidders are more competitive on larger contracts than smaller contracts. That's fine but where is the evidence in item 1, Table 3.

Table 3 shows also that, 'The due date of the payment' – as stipulated in the contract documents - was ranked in the second position with a relative importance index of (0.835). This reflects contractors preference towards contracts having shorter waiting periods following the submissions of their payment claims to enable them to cover their expenditures and meet financial obligations. The procedures and policies in issuing the interim or final payments may differ from one contractual system to another. For instance, the UNRWA's building contract (2008) in article 12, item (d/BC/10) shows that, the payments shall be made to the contractor or his representative within twenty (20) days after receipt by the director of works of correct amount. FIDIC (1999), however, shows in article 14.6 that, the payment will be within twenty eight (28) days after receiving a statement and supporting documents. Such difference reflect the reasons for giving this fact high importance.

'The clarity of the contract clauses' was ranked in the third position with a relative importance index of (0.828). Ranking this factor highly reflect that, the contractors are becoming more aware of the importance of the contract document and its different clause, and not focusing only bill of quantities part. This finding is in line with results obtained from Drew and Skitmore (1992 and 1997) who explained that, the contract conditions and project complexity are critical factors influencing the contractors' arrangements in the bidding stage.

Tabla 3. Índices de importancia relativa (IIR) y Clasificaciones (R) para factores relacionados con las características del contrato y proyecto  
 Table 3. Relative importance indices (RII) and ranks (R) for factors related to the contract and project characteristics

Factores relacionados con las características del contrato y el proyecto Factors related to contract and project characteristics	IIR/R.I.II	Clasificación Rank
Valor Total de inversión del proyecto Financial value of the project	0.863	1
Fecha de vencimiento de pagos (a un mes, dos meses, ...) Due date of the payments (after one month, two months,...)	0.835	2
Claridad en las cláusulas del contrato Clarity of the contract clauses	0.828	3
Claridad de los planos, especialmente de los planos detallados Clarity of the drawings, and specially, the detailed drawing	0.772	6
Duración del proyecto Duration of the project	0.778	5
Ubicación del proyecto Location of the project	0.744	7
Presencia de IVA – Impuesto al Valor Agregado Presence of the VAT " Value of additional taxes"	0.784	4
Complejidad del proyecto Complexity of the project	0.734	9
Tipo de proyecto (obras de construcción de edificios, mantenimientos, reparaciones) Type of project (construction building works, maintenance, repair works)	0.716	10
Boletas de garantía fija motiva la participación más que la boleta de garantía porcentual Fixed bid bond motivates the participation rather than being percentage bid bond	0.741	8
Tipo de contrato " costo+, pago único, precio unitario" Type of contract" cost+, Lump sum, unit price"	0.681	13
Boletas de garantía (depósito de seguridad para la licitación) Bid bonds (tender security deposit)	0.688	12
Daños liquidados Liquidated damages	0.703	11
Valores del seguro Values of insurance	0.663	14
Sistema de adquisición en la propuesta Looting system in the tender	0.628	15
Tarifas de licitación Tender fees	0.581	16
Idioma Inglés en el contrato English language of the contract	0.575	17
Idioma Árabe en el contrato Arabic language of the contract	0.547	19
Volumen de los documentos de la propuesta (cantidad de páginas, planos) Size of the tender documents "number of pages, drawing.)	0.563	18
Total	0.706	

The contractors ranked 'Tender fees', 'English language of the contract', 'Size of tender documents' and the 'Arabic language of the contract' in the bottom four positions (16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup>) with a low relative importance indices of (0.581), (0.575), (0.563) and (0.547) respectively. The weak influence of the tender fees (as requested by clients) could be traced back to its low values. Contract language (whether English or Arabic) appears to have little influence as the majority of contractors review and quote their prices with the help of their qualified engineers. Finally, the tender document size does not seem to play a role in the bid decision as the majority of clients tend to adopt a standard form of contract.

Besides, the majority of the projects in the Gaza Strip are of the medium or small size which may not need a large size contract documents.

#### 4.4 External Business environmental factors (Group 4)

Table 4 shows a total of 15 external environmental factors that affect the contractor's decision to bid or not. The results illustrated that, the stability of the construction industry' was ranked in the first position with a relative importance index of (0.914). The results can be justified on the grounds that the stability of the industry reflects stability of the political economic as well as financial situations for the clients. Moreover, the stability of the industry will in turn, translate into having a steady stream of future projects, stability of costs, and availability of raw materials. The recent NGO's Report (2008) shows the importance of the construction industry in accommodating and absorbing tens of thousands of local laborers. This could reflect why the contractors feel the importance and sensitivity of this factor.

"The availability of the required raw materials for the tender in local markets" was ranked in the second position with a relative importance index of (0.911). This is compatible with Skitmore et al (1993) and in line with the results of Eastham and Skitmore (1993) that showed the importance of the material availability for the bidding decision. Interestingly, this factor ranked was ranked at the 9<sup>th</sup> position in than Wanous et al's (2003) study. This difference in ranking could be explained by having different operational business conditions between the two geographical locations (i.e. Gaza strip and Syria).

"The stable political situation" was ranked in the third position with a relative importance index of (0.898). The instability of political situation will definitely lead to high risks in the design, procurement and implementation stages; while on the other hand, a more stable political situation will stabilize the industry and the economy as a whole. Newcombe et al. (1990) emphasized the influence of the political environment and governmental law within which contractors operate.

Tabla 4. Índices de importancia relativa (IIR) y Clasificaciones (R) para factores relacionados con entorno externo  
 Table 4. Relative importance indices (RII) and ranks (R) for factors related to the external environment

Factores relacionados con el ámbito externo Factors related to the external environment	IIR/R.I.III	Clasificación Rank
Disponibilidad de materia prima requerida en los mercados locales fortalece la probabilidad de licitar Availability of the required raw material in local markets strengthens the probability to bid	0.911	2
Estabilidad de la industria de la construcción Stability of the construction industry	0.914	1
La situación política estable fortalece la probabilidad de licitar The stable political situation strength the probability to bid	0.898	3
La estabilidad económica promueve la probabilidad de licitar The stable economical situation promotes the probability to bid	0.874	5
Estabilidad de la tasa de intercambio de moneda Stability of currency ex-change rate	0.895	4
Competencia y capacidad de los competidores Competences and capabilities of the competitors	0.822	7
Número de competidores en el mercado Number of competitors in the market	0.831	6
Conocimiento de la identidad de los competidores, que participarán en la licitación incrementará la probabilidad de ofertar y aumentará una fuerte competencia Awareness of the competitors' identity, who will participate in the tender will increases the probability to bid and compete strongly	0.818	8
Disponibilidad (abundancia) de proyectos de clientes, al mismo tiempo reduce el volumen de participación en licitaciones y aumenta el costo Availability (ampleness) of projects by the clients at the same time reduce the volume of participation in the tenders and increase the cost	0.772	11
Normativas y estatutos gubernamentales que son integrados a la industria de la construcción Governmental regulations and statutes that are integrated in the construction industry	0.791	9
Conocimiento de la cantidad de competidores en una licitación Awareness of the number of competitors in the tenders	0.775	10
Impuestos y otros requerimientos financieros en cada licitación The taxes and other financial requirements on each tender	0.742	13
Criterio de clasificación para contratistas por parte de la SCP Classification criteria for the contractors by the PCU	0.745	12
Las débiles barreras para la entrada en el mercado aumentan las probabilidades de los oferentes en participar Weak barriers to market entry increase the bidders' probability to bid	0.692	14
Clima local (la probabilidad de participar en licitaciones es mayor en los meses de primavera y verano que en invierno y otoño) Local climate (probability to participate in the tenders in the spring and summer seasons is higher than winter and Autumn.)	0.677	15
Total	0.810	

'[The stability of the currency exchange rate' was ranked in the fourth position as an important factor affecting the contractors decisions to bid or not with a relative importance index of (0.895). Currently, severe fluctuations in the currency exchange rates force many contractors to reduce their participations in tenders. In addition, huge inflation coupled with local currency devaluation lead to continually rising tender values. It is becoming clear that clients and consultants must adopt the same currency for their payments and tender practices to overcome the influence of this factor . The new Israeli shekel could be a preferred option to be generalized in all clients' payments and tenders.

'Weak barriers to market entry and the local climate conditions) were ranked in the last two positions with relatively low important indices of (0.692), (0.677) respectively.

These results were not completely matched with Wheelen and Hunger (1998) who showed that, the threat of new entrants' competitors is one of the most important factors affecting the contractors' competitiveness and bidding strategies. Moreover, the results are also not compatible with Drew and Skitmore (1992) results who indicated that weather conditions are one out of three main factors affecting the competitiveness level and the behaviors of the bidders tendency. The deviation between the two sets of findings is not surprising as the Gaza Strip enjoys the mildness of Mediterranean weather.

## 6. Summary of the four groups

Table 5 lists calculated a relative important index for each group factors. At the top, the external environmental factors group appears to be the most critical with a RII of (0.810). This could be traced to the sensitivity of the local construction industry to the political instability. This further illustrates the high level of risk that the contractors face and must consider during the bidding process. The contractors' related factors group was placed in the second position with a RII of (0.781). The clients' related factors group followed in the third position with a RII of (0.753) while the contract and project characteristic factors group were in the last position with the least RII value of (0.706).

Tabla 5. Índices de Importancia Relativa para los cuatro grupos que afectan la decisión de licitar  
Table 5. Relative important indices of the four groups that affecting bidding decision

Grupos/Groups	IIR/RII	Clasificación/Rank
Factores ámbito externo/External environmental factors	0.810	1 <sup>st</sup>
Factores relacionados con los contratistas/Contractors related factors	0.781	2 <sup>nd</sup>
Clients related factors/Factores relacionados con los clientes	0.753	3 <sup>rd</sup>
Contract and project characteristic factors/Factores relacionados con las características del contrato y proyecto	0.706	4 <sup>th</sup>

## 7. Conclusions and recommendations

The objective of this paper is to identify and rank the factors that affect the bid/no bid decision according to their relative importance from the perspective of the local contractors operating in the Gaza Strip, Palestine. The identified factors were categorized into four groups. With respect to the factors related to contractors group, the financial capabilities of the contractors appear to be the most important factor affecting their bid/no bid decision. This was followed by contractor's category according to the PCU, experience and competence of contractors' staff, and experience in similar projects were ranked in the top positions.

With respect to factors related to clients group, it was found that, the reputation of the clients, their financial capabilities, payment policies, advanced payments policy, and compensations policy especially in the force majeure situations are the most important factors affecting the contractors decision to whether participate in tenders or not. With respect to factors related to contract and project characteristics group, the financial values of the project, the due date of the payments, the clarity of the contract clauses, the clarity of the drawings and specially the detailed drawings were ranked as a key factors affecting contractors decisions to bid or not.

With respect to the external environmental factors group, it was found that, the stability of the industry, the availability of the required raw materials for the tender at the local markets, the stability of political and economic situations, and the stability of the currency exchange rate, are the most critical factors affecting contractors strategies, arrangements and decision to participate in tenders or not. The overall results revealed that this group of factors has the highest influence among other groups on the contractors bidding decision.

Based on the study findings, local contractors are recommended to continue to upgrade their staff competency level to enable them in improving their financial capabilities and thus increasing their chances to stay longer in the construction business. The Palestinian Contractors Union (PCU) is recommended to draw comprehensive, transparent and objective criteria in reviewing contractors' classification. These criteria should include: financial capabilities, the technical capabilities, past experiences and competencies and qualifications of their staff.

The clients are recommended to adopt the advanced payments policy for the contractors aiming to facilitate the contractor's participation in the construction tenders. The study recommends that both clients and consultants should endeavour to minimize the waiting period associated with regular progress payments to enable contractors meet their financial obligations and facilitate timely materials and service procurement. This in turn would strengthen the bidders' chances to bid and compete with relatively low levels of risk that may unnecessarily raise the tender value and/or reduce the level of quality.

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