

**An-Najah National University
Faculty of Graduates Studies**

Major Challenges Facing the Implementation of the FIDIC in Construction Projects in Palestine

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DEDICATION

I dedicate this work, with sincere gratitude, to all my family for their unlimited and generous support, and to all those who supported me to achieve it successfully.

Mohammad B. Tuffaha

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الإقرار

أنا الموقع أدناه، مقدم الرسالة التي تحمل العنوان:

Major Challenges Facing the Implementation of the FIDIC in Construction Projects in Palestine

التحديات الرئيسية التي تواجه تطبيق نظام الفيديك في المشاريع الإنشائية في فلسطين

أقر بأن ما اشتملت عليه هذه الرسالة إنما هو نتاج جهدي الخاص، باستثناء ما تمت الإشارة إليه حيثما ورد، وأن هذه الرسالة كاملة، أو أي جزء منها لم يقدم من قبل لنيل أي درجة أو لقب علمي أو بحثي لدى أي مؤسسة تعليمية أو بحثية أخرى.

Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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ABBREVIATIONS

The full meaning of the abbreviations appearing in this thesis is:

ANERA:	American Near East Refugee Aid
AFD:	Agence Française de Développement
BTC:	Belgian Development Agency
BOT:	Build-Operate-Transfer Contracts
CTD:	Central Tendering Department
DAB:	Dispute Adjudication Board
EPC Contracts:	Engineer-Plan-Construct Contracts
ENAA:	Engineering Advancement Association of Japan
FAR:	Federal Acquisition Regulation
FCEC:	Federation of Civil Engineering Contractors
FIDIC:	International Federation of Consulting Engineer
FIBTP:	Federation Internationale du Batiment et des Travaux Publics
IADC:	International Association of Dredging Companies
ICE:	Institution of Civil Engineers
JCT:	Joint Contracts Tribunal
JICA:	Japan International Cooperation Agency
KFW:	Kreditanstalt Für Wiederaufbau (German Development Bank)
MDB:	Multilateral Development Banks
MPWH:	Ministry of Public Works & Housing,
MEHE:	Ministry of Education and Higher Education
NEC:	The New Engineering Contract

NEC 3:	Third Edition of the New Engineering Contract
NGO:	Non-governmental organization
PNA:	Palestinian National Authority
PC:	Palestinian Cabinet
PCBS:	Palestinian Central Bureau of Statistics
PCU:	Palestinian Contractors Union
PWA:	Palestinian Water Authority
PECDAR:	Palestinian Economic Council for Development and Reconstruction
PNGO:	Palestinian Non-Governmental Organizations Network
RIBA:	Royal Institute of British Architects
SPSS:	Statistical Package for Social Science
UK:	United Kingdom
UNRWA:	United Nations Relief and Works Agency
UNDP:	United Nations Development Program

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**Major Challenges Facing the Implementation of the FIDIC in
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Abstract

One of the major parts for any Contract Documents is the General Conditions. The purpose of these documents is to define the relationship between the contractual parties, setting out the responsibilities, gives greater certainty in operation, and reduces the parties' exposure to risk. In Palestine, Conditions of Contract for Construction "FIDIC 1999" have been ratified by the Palestinian cabinet in 2006 to represent the Palestinian Unified General Conditions of Contract for Construction together with the Palestinian Particular Conditions.

The purpose of this study is to investigate the major obstacles and constrains that face the implementation of the FIDIC in construction projects in Palestine.

In order to achieve the research objectives, the methodology utilized in this study was mainly based on investigating the implementation of FIDIC in Palestine through analyzing the results of a questionnaire, which was designed to assess the obstacles that hinder the implementation of the FIDIC. Also, several interviews were held with experts and arbitrators.

Results from the study showed different obstacles and challenges that hinder a healthy implementation of FIDIC. Some of them are related to

the Contractor such as administrative weakness, inexperience in legal aspects, lack of attention, and difficulties in dealing with tenders in English language. Moreover, there is a need for reconsidering the current Contractors' classification procedures to be more precise and appropriate. A major challenge for implementation of the FIDIC is related to the different types of General Conditions due to multitude of donors and International NGO's.

The financial situation of the Palestinian National Authority is considered as a main obstacle. Due to that, bills for Contractors are delayed and therefore many of the FIDIC items are not being honored. The respondents thought that the concerned authorities in Palestine are not doing their duties in raising awareness and education in the contractual and legal aspects related to the application of the FIDIC. The political situation in Palestine is hindering the execution of the FIDIC on ground. All respondents agreed that there is a need for training for all parties including the Employers, the Engineers, and the Contractors in dealing with the FIDIC. Beside that, there are some obstacles related to the Engineering Firms such as the bad quality of tender documents.

In addition to the questionnaires and interviews analysis, a roadmap was derived to help a healthy implementation of FIDIC in Palestine, various procedures were identified, whether administrative or legal, based on the in-depth understanding of the obstacles and challenges that face the implementation of FIDIC. Examples of the roadmap identified procedures

include the adoption of Short Form of Contract and harmonization of the Unified Contract with current situation in Palestine. Finally, main recommendations are presented that help the contracting parties to overcome the related obstacles and to develop the implementation of the FIDIC in Palestine.

Chapter One

Introduction

Chapter One

Introduction

1.1 Overview

One of the major parts of any Contract Documents, whether local or international is the “Contract Conditions”. The purpose of these documents is to define the relationship between the contractual parties, setting out the responsibilities, gives greater certainty in operation, and reduce the parties’ exposure to risk (Hartwell, 2010).

Usually, the Contract Conditions include “General Conditions” forming a major part of “Tender Documents” that may not be amended, and “Special Conditions or Particular Conditions”, which are usually prepared for a particular project taking account of any changes or additional clauses to suit the local and project requirements (Owen, 2003).

One of the most important “General Conditions” in the world are produced by FIDIC. The acronym “FIDIC” stands for the International Federation of Consulting Engineers. FIDIC, also known in the contracting business as the General Conditions of Contract are most widely used for international contracts, which are intended to be used unchanged for every project. The federation was established in 1913 by a group of French and Swiss engineers. It was founded in an effort to create a uniform set of documentation for contractual agreements which can be applicable for the use in different types of construction projects, and also to simplify the bidding processes to become more user friendly (Jenkinson, 2011).

FIDIC was written in simple language, with clear and logical structure. FIDIC Forms (Contract forms, and sometime called Books) are identified by colors, in order to make it easy to specify their use. The major one is the Red Book which is related to Conditions of Contract for construction works. The aim of the FIDIC is to provide a basis for knowing the rights, obligations and responsibilities of the parties involved in contract execution.

Recently, in October 2011, Palestine was accepted to be the third Arab country (after Jordan and Lebanon) to gain the membership of the FIDIC, becoming member number 88, worldwide (Engineers Association, 2012).

1.2 General Problem Statement

In 2006, the FIDIC Red Book (FIDIC, 1999) was adopted by the concerned authorities in Palestine to form the backbone of the so called “Unified Contract in the Palestinian Territories”. Every official tender issued by Palestinian National Authority (PNA) ministries refers to the FIDIC (Red Book) as the contracts governing conditions. Moreover, a “Particular Conditions” book that contains certain clauses applicable to the Palestinian situation was issued by PNA to take into consideration special local conditions (Jaber, 2012).

Unfortunately, full implementation of the FIDIC and full compliance with all of its clauses has not been an easy task for one or more of the following reasons (Jaber, 2012):

- Donors and International NGO's in Palestine prefer to use their own country's contract conditions in bidding for projects that they fund.
- The financial situation of the PNA makes it hard for the Palestinian ministries to comply with many clauses in FIDIC, especially those related to payments, compensations to Contractors, etc.
- The highly unstable and uncertain political situation and its impact on causing delays both in project implementation and project handing over, and consequently losses for Owners (Employer) and Contractors.
- Most of the Contractors do not educate themselves by reading the Contract's General and Special Conditions; generally, the Contractor's main concern is to fill in the Bill of Quantity without paying much attention to other important details.
- Some Donors and NGO's who do refer to the FIDIC in their tenders use the English Version; many Contractors do not have enough language skills to read and understand the English Version of the FIDIC.

As stated above, the implementation of FIDIC contracts on the ground has not been achieved properly. Thus, the performance of the FIDIC is unsatisfactory for many contract parties.

1.3 Research Focus

Recently, the Engineers Association and the Palestinian Contracting Union had organized many workshops in all Palestinian Governorates to

educate both Engineers and Contractors more about the FIDIC. These workshops aim to clarify the rights, obligations and responsibilities of all parties.

This study will focus on the major obstacles that hinder the full implementation of the FIDIC on the ground. To accomplish that, the study will be based on intensive field work to evaluate and analyze the performance of FIDIC for Owners (Employers), Consultants (Engineers), and Contractors.

1.4 Research Objectives

The main objective of this research is to develop a roadmap which will make the FIDIC applicable to use in the construction projects in Palestine through:

- Assessing the implementation of the FIDIC and the Palestinian Special Conditions in tender documents.
- Studying the challenges and obstacles that make the FIDIC unfavorable to use in the construction projects in Palestine.
- Having comprehensive recommendations that will make the FIDIC more understandable and easy to use by all stakeholders.

1.5 Methodology

This study was accomplished through three main phases:

1) Review of literature to give an overview and theoretical background about FIDIC

- What is FIDIC? How was it developed? What are FIDIC publications? In addition to study of the General Conditions and its origin, and study of the structure of the FIDIC “Red Book”.
- An overview about the current implementation of FIDIC in Palestine. This includes the study of the General Conditions of the Donors and NGO’s in Palestine.

2) Study and analyze the current implementation of the FIDIC

- Study and analyze the FIDIC and the Palestinian Special Conditions, especially the most debated clauses among stakeholders.
- Design, test and distribute a questionnaire to Owners (Employers), Engineering Firms, and Contractors to find out their opinions about the existing implementation of the FIDIC.
- Conduct a series of interviews with experts and arbitrators including those having key positions in the relevant Palestinian ministries, especially the Central Tendering Department in Ministry of Public Works and Housing, Ministry of Education and Higher Education, the Engineers Association, the Palestinian Contractors Union, and other related institutions concerned in applying FIDIC in Palestine.
- Study and analyze the legal part of Bid Documents; focusing on the judicial role in Palestine.

- Review of the implementing of the FIDIC in neighboring countries.
- Conduct statistical analysis where all collected data and information will be analyzed, compared, and evaluated to assess the current situation regarding the implementation of Unified Contract. Statistical analysis will be performed using proper software (SPSS) to analyze the outcome of the collected data.

3) Identification of a roadmap towards a healthy implementation of FIDIC

- Identify the existing obstacles, constraints, and challenges that prevent an appropriate implementation of the Unified Contract.
- Derive a roadmap to overcome the identified obstacles and challenges, and to enable the concerned authorities of improving the Unified Contract implementation.
- Propose recommendations that will help to develop and support the implementation of the Unified Contract in construction projects Palestine.

1.6 Research Hypothesis

- **Hypothesis 1:** There is no relation between the general and personal information for the respondents and the general specifications for FIDIC contract.

- **Hypothesis 2:** There is no relation between the general and personal information for the respondents and the FIDIC most influential clauses in Palestine.

1.7 Outline of the Thesis

In addition to this chapter, this study has six other chapters. Chapter two provides a review on related literature on construction contracts, FIDIC and other related topic. Chapter three discusses the implementation of FIDIC in Palestine. Chapter four represents the methodology followed in the study. Chapter five analyzes and discusses the results of the questionnaire and the interviews. Chapter six provides a roadmap to a healthy implementation of FIDIC in Palestine. Finally, Chapter seven includes the summary and conclusions of this study and recommendations for further development.

Chapter Two
Literature Review

Chapter Two

Literature Review

2.1 Construction Contract

There are many definitions for the word Contract. One of the most common definitions is that “a contract is a document that spells out the rights and obligations of parties and the administration of this interaction while protecting the parties against the risks that emanate from various relationships, actions and production” (Verster, 2006).

Twort and Rees (2004) added that the contract legally binds the Contractor to construct the works through signing an agreement between the two parties with respect to the obligations and liabilities.

In the construction industry, a variety of factors make the construction contract different from most other types of contracts, such as the complex nature of the project, the period and size of the project, the price agreed and the amount of works that may be changed while works proceed.

The contract parties of any construction project are the Employer (who is also known as the Owner), the Engineer (who is also known as Consultant), and the Contractor. According to the FIDIC Red Book, the Employer is the procurer of the civil engineering works; he is generally initiates the project and pays for Contractor who builds the project according to what the contract says. FIDIC defines the Contractor as the person whose tender has been accepted by the Employer. The Engineer is

the person appointed by the Employer to act as the Engineer for the purposes of the contract. However, Employer, Contractor and Engineer are forming a three-party system and (Lina, 1997 and Niraula and Kusayanagi, 2011).

It is valuable to mention that FIDIC conditions describe the role of the contract's parties in details as will be illustrated next.

2.2 Construction Contracts Types

Before the start of any construction project, the Employer need to make many important decisions; one of them is to decide what kind of construction contract to become involved with the Contractor. This is also important because the Employer needs to decide the type of the “General Conditions” that must be used according to the type the construction contract.

The construction contracts are classified into two types; the first type is based on the “Contractual Arrangements”, while the second is based on the “Terms of Payment” (Tang et al., 2003). A brief description for both types is discussed hereafter.

2.2.1 Contractual Arrangements

- **Traditional contracts:** In these contracts the Employer has a direct contractual relationship with the Engineer and the Contractor. It starts when the Employer appoints the Engineer to carry out all the designs and prepare the contract documents, in addition to the supervision at the

project implementation. In this type of contracts, there is no contractual relationship between the Engineer and the Contractor. One of the main advantages is that it provides the best price for the Employer because it is open competition. On the other hand, this method takes longer time than other newer methods (Tang et al., 2003).

- **Design-Build, Turnkey, and Engineer-Procure-Construct (EPC) Contracts:** The idea here is to place the duty to design and construct on the Contractor as a package deal. The role of the Employer is essentially the contract administration. One of the important advantages in the method that there is saving in time by direct communication between the Employer and the Contractor. On the other hand, the Employer will not have independent advice on the construction and therefore a problem in cost and quality may occur (Huse, 2002).
- **Management Contracts:** These contracts were developed in the UK. In such contracts, the Employer appoints an external management Contractor to manage both design and construction phases of the projects. The management Contractor tenders out the work to sub-Contractors, usually named as package Contractors. A fee is received from the Employer to execute all work as packages in addition to the managing all works. One disadvantage here is that the Employer must pay a certain percentage fee as management fee, in addition to the absence of the overall tender price for project at the starting of the work (Tang et al., 2003).

- **Construction Management Contracts:** These contracts were developed in the USA. These are basically similar to management contracts, however, the difference is that the construction manager (usually a firm) does not have any contractual relation with the package Contractor, but it has contractual relationship with the Employer, thus, the construction manager acts as a an agent to the Employer (Tang et al., 2003).
- **Build-Operate-Transfer (BOT) Contracts:** These Contracts have become popular recently especially in developing countries. Since governments in the developing countries mostly have budgetary constrains to initialize large development projects, BOT Contracts offer a unique opportunity for both financier and Employer. BOT contracting is an option for financing the infrastructure and boost the economical growth of the country without direct utilization of government finances. In the private sector, and when the land is available but no finance is available to make the sufficient development on these lands, BOT can be a valuable alternative (Khan, Jamil and Sattar, 2008).

2.2.2 Terms of Payment Contracts

- **Fixed price (lump sum) contracts:** In these contracts, the Contractor receives an exact lump sum amount of money to complete all facilities described in the construction contract. Thus, the Contractor quotes a single guaranteed price to compensate for all the labour, material, equipment and services to complete all works. Pfeffer described this

contract as the most suitable for an Employer who has very tight budget constraints or lacks experience in the construction industry (Pfeffer, 2010). In addition, the Employer must have sufficiently detailed, complete drawings, specifications and construction document for effective lump sum contract. This is important for properly estimate the cost of labour and materials.

- **Unit price contracts:** Unit price is the basis in the agreement between the Employer and the Contractor, as the contract is structured on specified unit prices for the estimate quantities of the work. Thus, the contract will provide the Employer with specific price of particular items, and the Employer agrees to pay the Contractor only for actual units that the Contractor provides, installs, or constructs in the project. The main advantage to the Employer in this contract is that he can proceed with the work with less risk. In the other hand, the main disadvantage to the Employer is when inaccuracies in the approximate quantities occur. This will result in work of greater costs than what was originally anticipated (Ramaswamy, 2010).
- **Cost-reimbursable (or cost-plus) contracts:** These contracts are suitable for the Employer who has experience in the construction industry, and when the scope of work cannot be defined easily by the Employer. The idea of the cost-plus is that the Employer pays to Contractor the cost of actual work without any mark-ups, but he pays a specified fee to cover overhead and profits, where both Employer and

Contractor agree before the project begins, which is usually based on a percentage of the cost of the work. One of the main advantages of the cost-plus contracts that it allows for the Employer to have more flexibility to change designs and materials as the project proceeds. The main disadvantages is that costs can raise quickly and therefore the risk is high in the type of contracts (Pfeffer, 2010).

- **Target Cost Contract:** This type is relatively similar to the cost-reimbursable contracts, but the difference is that both Employer and the Contractor agree to an expected target cost before the start of the project. Any difference in profit or loss between the final and the targeted cost is shared between the Employer and the Contractor (Tang et al., 2003).

2.3 Contract Documents

As stated above, the contract controls the relation between the Employer and the Contractor. As construction works are often complex, the Contractor is involved in many hundreds of different operations using many different materials and manufactured items, including employment of a wide variety of specialists. Thus, these documents which define the contract are complex and comprehensive. The task of preparing them for tendering therefore warrants a close attention to detail and uniformity approach (Twort and Rees, 2004). Another reason to use contract documents is related to unexpected problems which may occur at any stage of the construction period, which usually cause delays and additional costs,

the contract documents declare what to do at any stage and the consequences (Totterdill, 2006).

Jaeger and Hök in their book “FIDIC-A Guide for Practitioners”, listed the contract documents according to FIDIC “Red Book” where these document can be summarized in order of importance as below (Jaeger and Hök, 2009).

2.3.1 The Contract Agreement

With reference to sub-clause 1.6 in FIDIC "Red Book", it is the main document used to signify and formalize the construction contract between the Employer and Contractor. It must be carefully prepared because it is a legally binding document, and both parties agree on all the terms in the tender (Waddell, 2012).

2.3.2 The Letter of Acceptance

With reference to sub-clause 1.1.1.3 in the Red Book, the letter of formal acceptance signed by the Employer in which the Employer accepts the Contractor's offer to carry out the work (FIDIC, 1999). Other references use the definition “Notice of Award” to describe the written notice by the Employer to the successful bidder stating that the Employer will sign the agreement (Waddell, 2012).

2.3.3 The Letter of Tender

With reference to Sub-clause 1.1.1.4, in the FIDIC Red Book; it means the signed offer which was prepared by the Contractor and

submitted to the Employer (Jaeger and Hök, 2009). It includes the sub-clause 1.1.1.9 "Appendix to Tender ". It covers important elements such as expected time for completion, access to site, language, etc.

2.3.4 Particular Conditions

These usually contain amendments or additions that the Employer wishes to make to the General Conditions. Particular Conditions (may be called also as the Supplementary Conditions) change or replace and may delete some clauses of the General Conditions.

2.3.5 General Conditions

Based on FIDIC, the Conditions of Contract for Building and Engineering Works Designed by the Employer is called "The Red Book 1999". There are other organizations who had prepared recommended standard General Conditions, such as ENAA (Engineering Advancement Association of Japan), ICE (Institute of Civil Engineers, UK), and JCT (Joint Contracts Tribunal, UK), etc.

In general, these conditions define the obligations and rights on how to execute the project. On the other hand, the legal aspects of the Contract Documents are outlined in the General Conditions (Waddell, 2012).

2.3.6 The Specifications

With reference to sub-clause 1.1.1.5 in the FIDIC Red Book, it is a document which specifies the work (Twort and Rees, 2004). It usually

starts with the description of the work required. The specifications describe many things, like the quality of materials, the method of testing to be adopted, etc.

2.3.7 The Drawings

With reference to sub-clause 1.1.1.6 in the FIDIC Red Book; the drawings specify the work details like location, scope and complexity, and show the full extent of what is required to be constructed. Drawings have cross-references to the specification because they can't represent quality (Jaeger and Hök, 2009).

The drawings should provide as clear picture as possible of all the works to be built. The more accurate the drawings are, the more easily for the Contractor to price the tender, and consequently less variations and extra payments exist (Twort and Rees, 2004).

2.3.8 The Schedules and any other documents forming part of the Contract

With reference to sub-clause 1.1.1.7 in the FIDIC Red Book, such document may include the bill of quantities, data, lists, and schedules of rates and/or prices (FIDIC, 1999). The bill of quantity can be described as the list of items covering the works to be constructed. The document typically includes a mix of material and labour needs and is most often used to help a Contractor to estimate the cost of a project in order to prepare an accurate bid for work.

The priority of the contract documents was demonstrated in sub-clause 1.5 in the FIDIC “Red Book” in accordance to the following sequence (Nardin, 2008):

- Contract Agreement,
- Letter of Acceptance,
- Letter of Tender,
- Particular Conditions,
- General Conditions,
- The Specification,
- The Drawings, and
- The Schedules and any other documents forming part of the Contract.

2.4 Standards Forms of Conditions

Within the construction industry there has been an increase of standard forms of conditions, both on the national and international levels. Currently, many books are available on specific forms of contract, most of them are originated from the common law jurisdiction and mainly influence by experience (Jaeger and Hök, 2009). In general, “standard form contracts provide a basic legal framework identifying the rights, obligations and duties of the parties” (Nayagam and Pathmavathy, 2005).

Large numbers of standard forms of conditions of contract were introduced during the past decades. Usually, conditions for general use are being developed by major engineering and building institutions, in addition to governmental and related organizations. Twort and Rees (2004) described the standard forms of contract as “The documents thus drawn up give a reasonable balance of risk between the parties. However, their clauses are often interdependent; hence any alteration of them must be done with care, and is generally inadvisable because it may introduce uncertainties of interpretation”.

2.4.1 Origin and Development of Standard Forms

The idea behind the standard forms had started in the 19th century. Most building projects were implemented by the public sector. The contracts at that time were prepared by lawyers and were recognized as unfair and biased to the Employer. The Royal Institution of British Architects (RIBA) had initiated the idea of publishing standard forms of contracts; the first RIBA form was published in 1870 (Broome, 1999).

By the early part of 20th century, it was obvious that the standard form is a necessity. In UK, the Federation of Civil Engineering Contractors (FCEC) and the Association of Consulting Engineers (ACE) published a form of contracts in 1930. In 1945, the Institution of Civil Engineers (ICE) together with the FCEC published subsequent edition to the ICE forms of contract. The birth of FIDIC conditions of contract happened in 1954

(Besaiso, 2012). Recently, many generations of standard forms had been issued and developed to fulfill the increasing requirements.

2.4.2 Advantages of the standard forms of contracts

There is always an important question; why shall we use standard forms of conditions? Shnookal and Charrett (2010) had discussed the advantages of using standard form of conditions, especially the FIDIC conditions. Many advantages could be gained by using a standard form of contract such as:

- More and wide understanding for the rights and obligations for the Contractors, Employers and Engineers.
- Contractors, Employers and Engineers who use a standard contract form become familiar with the rights and obligations that they have under that form of contracting.
- Improve communication and effectiveness in contract administration. This is important in the international contracting where communication is more difficult and misunderstandings are more likely to happen.
- Reduce the cost of tendering; Contractors who are familiar with standard forms know the risks in the detail of terms.
- Reduce the cost of negotiating. Using a trusted standard form reduces the potential area of disagreements, or at the very least, provides a fair starting point from which the parties can negotiate from.

- In FIDIC contract, the tendered price is likely to be less than for not standard contract.

On the other hand, there is a need to make amendments to the standard forms, like changing the risk allocation in the standard forms, thus illustrating why the special conditions are being developed (Shnookal, 2010).

2.4.3 Most Important International Standard Forms of Contracts

There are many different standard forms of contracts; some of them are considered as the most common forms currently used in the global and European construction industry. These forms are FIDIC, ICE, NEC and JCT (Twort and Rees, 2004 and Murdoch and Hughes, 2007 and Akram et al., 2012), a brief description of those forms can be summarized as:

2.4.3.1 FIDIC Forms

FIDIC standard forms of contracts are used throughout the world. FIDIC contracts are often referred to as the international standard contracts. Christopher Wade, the Chairman of FIDIC Contracts Committee said, "FIDIC is probably best known to the outside world as the organization which produces standard forms of contract for engineering construction projects" (Wade, 2006).

The idea behind FIDIC was born in the year 1913, when The World Fair Exhibitions was held in Lausanne, Switzerland, independent expert consultants met to discuss the formation of a global federation. The result

of the success meetings led to the formal constitution of FIDIC, Fédération Internationale des Ingénieurs Conseils, or later, the International Federation of Consulting Engineers (Koksal, 2011). According to FIDIC official website, the founding principles adopted were quality, integrity and sustainability (FIDIC, 2014).

Even though there were 59 participants in the 1913 conference, three countries decided to be the founders of the federation; Belgium, France and Switzerland. Other countries stayed in link during the first years.

During the World Wars, it was hard to make a real development in FIDIC. This situation continued until the 1950s, when the members from Europe increased constantly in addition to members from Australia, Canada, South Africa and USA. The newly industrialized countries started to become members in the 1970s, and it was only then that FIDIC could truly claim to be an international rather than a European organization. In 2014, there are 99 FIDIC Member Associations and Associates ratified at the FIDIC General Assembly, including Palestine (FIDIC, 2014).

2.4.3.2 The Institution of Civil Engineers (ICE) Forms

The ICE is an independent engineering institution that represents approximately 80,000 civil engineers worldwide. The ICE was founded in the UK in 1818. These conditions have been the most widely used conditions for UK civil engineering works (ICE, 2014). The first ICE condition was published in 1945, while the current 7th edition was

published in September 1999 and it has been amended several times since then. The 1999 form is known as the Measurement Version which is a part of ICE family of standard forms of contract for civil engineering works. Beside the 7th edition Measurement Version, CE Conditions of Contract are published in the following versions (Murdoch and Hughes, 2007 and ICE, 2014)

- Design and Construct 2nd Edition
- Term Version, 1st Edition
- Minor Works, 3rd Edition
- Partnering Addendum
- Tendering for Civil Engineering Contracts
- Agreement for Consultancy Work in Respect of Domestic or Small Works
- Archaeological Investigation, 1st Edition
- Target Cost, 1st Edition

2.4.3.3. New Engineering Contract (NEC)

Perhaps NEC is recognized as the largest competitor to the FIDIC contracts on the world stage is the NEC suite of contracts. The NEC was produced in London by the UK Institution of Civil Engineers as a response to discontent contractual procedures in early 1990s (Shnookal, 2010). The

ICE objectives to produce NEC are to generate forms applicable for all projects, and to contain all varieties of design responsibilities. In 1994, the First Edition of NEC was published, including the basic principles. The Second Edition was published in 1995. The Third Edition was published in 2005 and is commonly referred to as NEC3, It comprises of a suite of 23 contract documents and guidance books. The Third Edition re-issued after small amendments in 2006. Recently, the NEC3 forms have become increasingly popular (Dickson, 2013).

2.4.3.4 The Joint Contracts Tribunal (JCT)

The JCT has a long history of producing contracts in the construction industry since its formation in 1931 in London, UK. However, the origins of JCT dated back to 1870, when the first standard forms of contracts were produced by RIBA, the JCT standard forms are considered to be direct descendants of the original RIBA form (Murdoch and Hughes, 2007). JCT became a limited company in 1998. The current operational structure for JCT comprises 7 members who approve and authorize publications, they are, British Property Federation, the Contractors Legal Grp Limited, the Local Government Association, the National Specialist Contractors Council, the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors and the Scottish Building Contract Committee. JCT substantially revises and rewrites the family of forms every decade. The current contract families of JCT's suite were published in 2011 edition. They include the following contracts (JCT, 2015):

- Major Project Form (MP11)
- Standard Form of Building Contract (SBC11)
- Intermediate Form of Building Contract (IC11)
- Minor Works Agreement (MW11)
- Management Contract (MC11)
- Design and Build Contract (DB11)
- Construction Management Documentation
- JCT-CE Contract
- Measured Term Contract
- Prime Cost Building Contract
- Repair and Maintenance Contract
- Home Owner Contracts
- JCT 2011 Complete Works
- JCT Tracked Change

2.5 FIDIC Publications

The First edition of “the Conditions of Contract for Works of Civil Engineering Construction”, known as the Red Book, was published in 1957 by FIDIC and FIBTP (Federation Internationale du Batiment et des

Travaux Publics, France) (Glover and Hughes, 2011). Prior to that, there were no internationally recognized contract conditions for construction works.

The first edition of FIDIC conditions was inspired from the first edition of the standard Forms of Contracts published by Institute of Civil Engineers (ICE) which was published in 1945. The expert and writer in the construction law, Ian Wallace said “as a general comment, it is difficult to escape the conclusion that at least one primary object in preparing the present international contract was to depart as little as humanly possible from the English conditions” (Glover, 2008 and Hillig et al., 2010).

In July 1969, a subsequent edition was published, and the International Federation of Asian and West Pacific Contractors Associations were added as a sponsoring body. FIDIC Conditions were reprinted in 1973 following the approval and ratification by two new sponsoring bodies, the Associated General Contractors of America and the Inter-American Federation of the Construction Industry. This 1973’s edition followed the fourth edition of the ICE (Glover and Hughes, 2011).

Four years later, the third edition was published in March 1977, it’s consisted of 71 General Conditions. The changes introduced by FIDIC were regarded as minimal during the three editions since 1957, and all the three editions were referred as the Red Book of FIDIC.

It is important to mention that civil engineering works were the basis for the FIDIC Red Book conditions. These were derived from the

anticipated infrastructure projects of the nature of roads, bridges, dams, tunnels and water and sewage facilities. Therefore, the standard terms in that contracts were not satisfactory for contracts related to plants , manufacturing, mechanical and electrical works (Glover and Hughes, 2011).

According to that, the first edition of the Yellow Book produced by FIDIC for mechanical and electrical works was in 1963, which is suitable for the manufacture and installation of plants and emphasis on testing and commissioning. The second edition of the Yellow Book was produced in 1980 (Glover and Hughes, 2011).

Both the Red Book and Yellow Books were revised by FIDIC and new editions were published in 1987. The fourth edition of the red book is famous with the name “Old FIDIC Red Book”; it was intended for civil engineering works only (Hartwell, 2010). A supplement to the fourth edition of the Red Book was produced in November 1996 (Glover and Hughes, 2011).

On the other hand, there was a respond during 1990s to publish Contract Conditions suitable for projects being procured on a design and build or turnkey basis. Thus, in 1995 FIDIC published the first edition of the Orange Book, “Conditions of Contract for Design-Build and Turnkey”.

In 1994, and according to the accelerated development in the international construction industry, FIDIC established it is task group to

update both the Red and the Yellow Books, test editions were produced in 1998, comments were added; the final publications were achieved in 1999. FIDIC issued three contracts for major works and one for minor works. These four contracts are referred as the new suite of FIDIC, and according to each different book colour, sometimes it is referred as FIDIC Rainbow.

2.5.1 The new suite of FIDIC: FIDIC Rainbow

The new suits of FIDIC standards forms of contracts were produced in October 1999. These consist of four books as presented hereafter.

2.5.1.1 The Red Book 1999

According to Peter Booen, FIDIC's principal drafter of the 1999 forms of contract, the 1999 Red Book has been "developed in the direction of user-friendliness, where the users are the individuals who write and administer the contracts" (Bunni, 2005).

Red Book is suitable for conditions of contract for construction works where the main responsibility for design lies with the Employer or its representative, and the Engineer who also carries out the administration of contract. Although FIDIC is recommended to use the Red Book in the construction industry (FIDIC, 1999), Red Book is applicable to a much wider range of engineering works (Battrick and Duggan, 2011).

Nardin (2008) discussed some features of the FIDIC Red Book in his article "A Practical Approach to the FIDIC Principles", which are summarized as follows:

- FIDIC Red Book measured the work according to the Bill of Quantities (BOQ).
- There is a clear allocation of the risks and responsibilities between the parties.
- The design responsibility lies on the Employer or his representative.
- The Engineer is in charge of the administration and supervision of the contract.
- There is a clause related to “Unforeseeable Physical Conditions”, the consequences in terms of risk must be abided by the Employer.
- The procedure for solving and settling the disputes is clear, litigation clauses are structured in three successive steps.

There are significant differences between the 1999 Red Book and the Fourth Edition of the Red Book which was published in 1987. The new Red Book comprises of 20 clauses and 163 sub-clauses. A brief description of the structure of the Red Book will be discussed later.

2.5.1.2 Yellow Book

The “Yellow Book” is applicable to the provision of electrical and/or mechanical plant, and for the design and execution of building or engineering works. The Yellow book was introduced in 1963. Later, a second edition was published in 1980, and a third edition was revised by FIDIC in 1987. A Supplement to Yellow Books was published in 1996. In

1999, following a period of reviews and comments, FIDIC published the new edition of the Yellow Book. This 1999 version replaced both 1987 Yellow Book and Orange Book. The Orange Book was mainly used in projects procured on a design and build or turnkey basis, which was produced in 1995. The current edition drops the words “electrical and mechanical works” from the title (Townsend, 2012).

2.5.1.3 Green Book: Short Form of Contract

The first edition of the Green Book was published in 1999. This book is recommended to be used for relatively small projects with short durations and works with simple and repetitive nature. FIDIC has provided guidance that this would probably apply to contracts with a value of less than US \$500,000 or a construction time of less than six months (Townsend, 2012).

As explained above, it is obvious that the Green Book is very flexible. It has only fifteen clauses and a total of ten pages. The clauses are short and easy to understand (Townsend, 2012).

2.5.1.4 The Silver Book: EPC/Turnkey

The FIDIC Silver Book was produced in response to the high need for a form of contract when the final price and the completion date are of extreme importance. The Contractor must deliver the project according to the given time, the required performance level, and the fixed price

payments. Thus, it uses the terms Engineer, Procure and Construct (EPC) and turnkey interchangeably, meaning the same (Hosie, 2007).

Therefore, the risk for completion to time, cost, and quality are transferred to the Contractor and therefore the Silver Book is only suitable for use with experienced Contractors who are familiar with risk management techniques. In general, the Silver Book is a response to the need for a form of contract where certainly final price of contract are extremely important, and where Employers require certainty about the project final cost (Hosie, 2007).

The FIDIC Rainbow as illustrated in Figure (2.1) is the backbone for all FIDIC publications related to contract and agreement between the Employer and the Contractor. Table (2.1) illustrates the major differences between FIDIC Rainbow Books.



Figure (2.1): FIDIC Rainbow, the 1999 New Suite of FIDIC

Source: FIDIC, 2014

Table (2.1): Major Differences between FIDIC Rainbow Books

	Red Book	Yellow Book	Green Book	Silver Book
Applicable to use	Conditions of Contract for Construction for Building and Engineering.	Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant.	Short forms of contracts, suitable for projects with a relatively low contract price and short time duration.	Conditions of Contract for EPC/Turnkey Projects. It's a response to the need for a form where the final price of contract is extremely important.
Administration of Contract	The administration and supervision lie on the Engineer.	The administration and supervision lie on the Engineer.	Administration of Contract by Employer's Representative.	Administration of Contract by Employer's Representative.
Type of Contract	Measure the works according to the Bill of Quantities (BOQ).	Valuation and payment based on lump sum with payment plan, but re-measurement possible.	According to contract appendix, payment is at monthly intervals.	Lump sum Contract.
Risk	Risk sharing is balanced.	Risk sharing is balanced.	Balanced risk sharing - no engineer.	Risk is allocated to the Contractor.
No. of Clauses	20 Clauses.	20 Clauses.	15 Clauses.	20 Clauses.

Source: (Bunni, 2005 and Baker et al., 2013)

2.5.2 Other FIDIC Publications

In order to fulfil its FIDIC stated mission; “To improve the business climate and promote the interests of consulting engineering firms globally and locally consistent with the responsibility to provide quality services for the benefit of society and the environment” (Battrick and Duggan, 2011), FIDIC has noted that certain projects have fallen outside the scope of the existing Books. FIDIC has not only updated the standard forms, but has also expanded the range. Currently, FIDIC forms can be applied to a wide range of differing engineering and construction projects, from traditional civil engineering to hi-tech windmills and heavy-duty oil and gas process plants (Battrick., 2008). Below are some main FIDIC publications.

2.5.2.1 The MDB Harmonised Edition 2006

The Multilateral Development Banks (MDB) Harmonised Edition was issued according to the agreement between FIDIC and nine Multilateral Development Banks. The aim of that is to modify the FIDIC Conditions of Contract for Construction, Red Book 1999, to be suitable for the use of the MDB’s financed projects. Therefore, The MDB Harmonised Edition was released in May 2005 with significant changes related to the MDB’s, but it does not replace FIDIC’s standard 1999 Red Book. The MDB harmonised Edition second version was amended in March 2006 and a third amended version was published in 2010 (Smore, 2008).

The following participants MDBs are the banks which participated in preparation of the MDB Harmonized Edition (Smore, 2008).

- African Development Bank
- Asian Development Bank
- Black Sea Trade and Development Bank
- Caribbean Development Bank
- European Bank for Reconstruction and Development (EBRD)
- Inter-American Development Bank
- International Bank for Reconstruction and Development (The World Bank)
- Islamic Development Bank
- Nordic Development Fund.

The amendments which have been made to produce MDB Harmonised Edition are minor and came from the requirements of the nature of the banks works (Townsend, 2012).

2.5.2.2 The Gold Book: Conditions of Contract for Design, Build and Operate Projects (the Design-Build-Operate Contract)

Since the publication of Orange Book in 1995 and the Red, Yellow, Red and Green Books in 1999, a rising need was felt for a contract that combined a design-build obligation with a long-term operation commitment. Therefore, in September 2007 in Singapore, FIDIC launched

a new form of contract for Design Build and Operate “DBO” projects (Glover, 2008).

In this contract, the Employer is providing a fully descriptive document specifying precisely what is to be built and to what standards. He also provides preliminary drawings, site data, and technical requirements including specifications. The Employer’s requirements may also contain requirements for specified outputs from the completed facility. The DBO contract is not applicable to contracts which have a shorter operating duration than the 20 years adopted or which are not based on the typical DBO sequence (Robinson, 2011).

2.5.2.3 The Blue Book

The Blue Book (or Turquoise Book as it is sometimes called) is suitable for all types of reclamation and dredging works. The current version of this form is the fourth edition issued in 2006. It was drafted with collaboration of the International Association of Dredging Companies (IADC) with input from the Contractors. This made this type of form different from others FIDIC Forms. The Blue Book is abbreviated and flexible as being a smaller document, the general conditions are only 16 pages and fifteen clauses long (Battrick and Duggan, 2011).

2.5.2.4 The White Book

This form of contract refers to the relation between the Employer and the Engineer. Its fourth edition was issued in 2006. This form is also known

as Conditions of the Client “Consultant Model Services Agreement”. The White Book is recommended for the purposes of pre-investment and feasibility studies, designs and administration of construction and project management (Jaeger and Hök, 2009).

2.5.2.5 Other FIDIC Forms

Beside the main books, FIDIC publishes different types of forms such as business practices information for consulting Engineers on risk management, project sustainability management, environment, quality management, integrity management, dispute resolution techniques, insurance, capacity building, transfer of technology, law and other business issues, guides for quality based selection, procurement and tendering procedures, consultant selection, quality of construction and other documents about the use of consulting engineers (FIDIC, 2014).

As stated above, FIDIC is producing many different types of books. Figure (2.2) illustrates how to choose the suitable FIDIC contract.



Figure (2.2): How to Choose the Suitable FIDIC Contract

Source: FIDIC, 2014

2.6 Structure of the FIDIC 1999 (Red Book) Contracts

As mentioned before, the FIDIC conditions have been generally updated every ten years. The redrafting and consultation of each draft usually take about three years. The FIDIC (1999) edition of the Red Book consists of 20 main clauses and 163 Sub-clauses as illustrated in Figure

(2.3). Extended description of the Red Book' structure is attached in Appendix A.

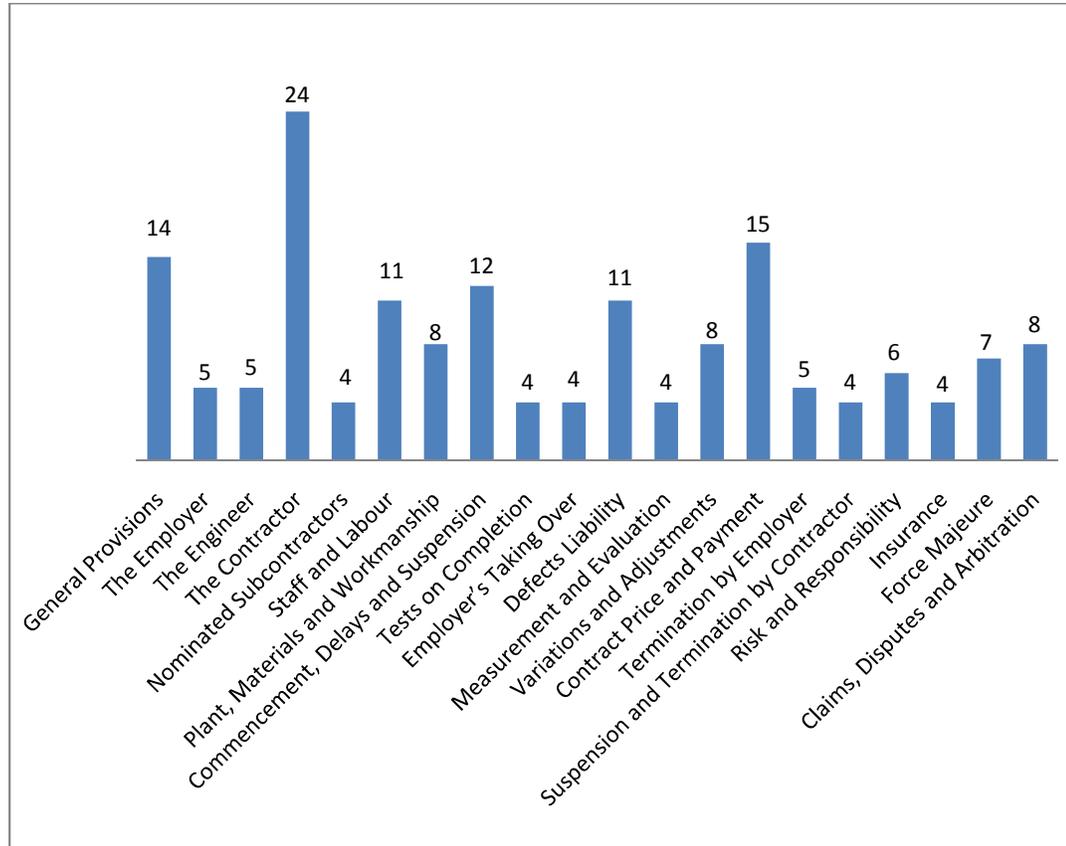


Figure (2.3): Clauses and Sub-clauses in the 1999 Red Book

Source: FIDIC Red Book, 1999

Chapter Three
Study and Analysis of the
“General Conditions”
used in Palestine

Chapter Three

Study and Analysis of the “General Conditions” used in Palestine

3.1 The Unified Contract

On October 16, 2006, the Palestinian Cabinet ratified the Conditions of Contracts for Construction, FIDIC Red Book (1999) to mainly represent the Palestinian Unified Conditions of Contract for Construction Projects (MPWH, 2006).

The actual beginning was in 2005; where a special technical national committee was formed for the preparation and drafting of the Unified Contract in accordance with FIDIC Red Book (1999), in addition to the preparing of all supplements that address the special conditions of the Palestinian situation. The committee consisted of representatives of the Department of the Central Tenders, the Ministry of Public Works and Housing, the Ministry of Education and Higher Education, Dar Al-Fatwa Wa Tashree' (in charge of drafting and reviewing legislations), Ministry of Justice, PECDAR, the Union of Palestinian Contractors, the Engineers Association, and the Palestinian Bar Association (Palestine Cabinet, 2005)

3.2 Palestinian Particular Conditions

As stated above, the Unified Contract comprises of the General Conditions (FIDIC 1999) and the particular conditions. In General, FIDIC does not allow any modification to the text of the General Conditions. Instead, any amendments are intended to be set out in the Particular Conditions of Contract or “Special Conditions” (Baker et al., 2013).

The particular conditions delete, amend, or add to the clauses in the General Conditions of Contract. It shall be read in conjunction with the General Conditions. According to sub-clause 1.5 of the FIDIC General Conditions, the higher priority is for the Particular Conditions. Therefore, in the event of any contradiction, Particular Conditions of Contract shall take precedence over the General Conditions of Contract (Baker et al., 2013).

After studying the Palestinian Particular Conditions, 16 clauses of FIDIC contract were amended. A further look at these amendments indicates that most of them are adding new paragraph to the original ones. Table (3.1) illustrates the amended clauses in the Palestinian Particular Conditions.

Eng. Jiries Atalla, the Palestinian Contractors Union Chairman said, the basis on which the Palestinian Particular Conditions were formulated is to make FIDIC more convenient to use in Palestine, especially with regard to the political situation, to provide balance in the relation between Employer and Contractor, and to make FIDIC suitable for local project¹.

The Unified Contract was modified in 2008 as per the decision of the Palestinian Cabinet. In this modification, sub-clause (13/8) which is related to the adjustment for changes in cost was amended. The decision contains clarification about the currencies in bids, and accordingly, if the currency for the bids is not in NIS, the total bid value will be converted into NIS

¹ Eng. Jiries Attala, Personal Interview, Ramallah, December 23, 2014

using the currency exchange rate on the bid submission date (Palestine Cabinet, 2008).

Table (3.1): Amendments on FIDIC Sub-clauses in the Palestinian Particular Conditions

FIDIC Clause	Amendments to FIDIC sub-clauses
1. General Provision	<p>Addition of a new paragraph to two definitions under sub-clauses 1.1.2 (Parties and Persons), which are 1.1.2.2 (Employer) and 1.1.2.5 (Contractor's Representative).</p> <p>Addition of two new paragraphs to sub-clause 1.1.4 (Money and Payments), which are 1.1.4.13 (Other Payments) and 1.1.4.14 (Prohibited Payments).</p> <p>Addition of a word to sub-clause 1.1.6.1 (Country) which is Palestine, and addition of a paragraph to sub-clause 1.1.6.5 (Law).</p> <p>Addition of a new paragraphs to sub-clause 1.2 (Interpretation), and sub-clause 1.8 (Care and Supply of Documents).</p> <p>Replacement of a paragraph in sub-clause 1.6 (Contract Agreement) with a new one.</p>
2. The Employer	<p>Addition of new paragraphs to sub-clauses 2.3 (Employer's Personnel) and 2.4 (Employer's Financial Arrangements).</p>
3. The Engineer	<p>Addition of clarification for sub-clause 3.1 (Engineers Duties and Authority).</p> <p>Deletion of the original sub-clause 3.4 (Replacement of the Engineer) and replace it with a new one.</p> <p>Addition of new paragraph to sub-clauses 3.6 (Administrative Meetings).</p>
4. The Contractor	<p>Addition of new paragraph to sub-clauses 4.1 (General Obligations of the Contractor).</p> <p>Deletion of the 2nd, 3rd and 4th Paragraphs from the original sub-clause (Performance Security) and replace them with new sub-clauses.</p> <p>Addition of new paragraph to sub-clauses 4.4 (Sub-Contractors).</p>

FIDIC Clause	Amendments to FIDIC sub-clauses
5. Nominated Sub-Contractors	No changes to any FIDIC sub-clause.
6. Staff and labour	<p>Addition of a new paragraph to sub-clause 6.1 (Engagement of Staff and Labour).</p> <p>Addition of a new paragraph to sub-clause 6.5 (Working Hours).</p> <p>Addition of a new paragraph to sub-clause 6.8 (Contractor's Superintendence).</p> <p>Addition of clarification for sub-clause 6.9 (Contractor's Personnel).</p> <p>Addition of a new sub-clause 6.12 which comprises of 4 parts (Pests and Rodents Control), (Drugs and Alcoholic Beverages), (Arms and Ammunition and Religious Rituals) and (Official Holidays).</p>
7. Plant, Materials and Workmanship	<p>Addition of a new paragraph to sub-clause 7.2 (Samples).</p> <p>Addition of clarification for sub-clause 7.4 (Testing).</p>
8. Commencement, Delays and Suspension	<p>Addition of a new paragraph to sub-clauses 8.3 (Program of Works).</p> <p>Addition of Clarification for sub-clause 8.7 (Liquidated Damages).</p>
9. Tests on Completion	Additions of new paragraphs to sub-clauses 9.1 (Contractor's Obligations).
10. Employer's Taking Over	Deletion of the 3rd paragraph from sub-clause 10.1 (Taking Over of the Works and Sections) and replace it with 6 new paragraphs.
11. Defects Liability	No changes to any FIDIC sub-clause.
12. Measurement and Evaluation	Deletion of paragraphs (a) and (b) from sub-clause 12.3 (Evaluation) and replace them by two new paragraphs.
13. Variation and Adjustments	Addition of clarification for sub-clause 13.8 (Adjustment for Changes in Cost).
14. Contract Price and Payment	<p>Addition of new paragraphs to sub-clause 14.2 (Advanced Payment).</p> <p>Addition of new paragraph was added to sub-clause 14.7 (Payment to Contractor)</p> <p>Replacement of the 2nd paragraph of sub-clause</p>

FIDIC Clause	Amendments to FIDIC sub-clauses
14. Contract Price and Payment	14.8 (Delayed Payments) with a new one. Deletion of the main text of sub-clause 14.9 (Payment of Retention Money) and replace it with the new one. Addition of clarification for sub-clause 14.10 (Statement at Completion upon Taking Over). Amendment to Paragraph (b) of sub-clause 14.11 (Application for Final Payment Certificate-Final Statement) Addition of clarification for sub-clause 14.12 (Discharge)
15. Termination by Employer	No changes to any FIDIC sub-clause.
16. Suspension and Termination By Contractor	Addition of a new paragraph to sub-clause 16.1 (Contractor's Entitlement to Suspend Work).
17. Risk and Responsibility	Addition of three new sub-clauses to clause 17, which are 17.7 (The Structural Insurance for the Project), 17.8 (Use of Explosive Materials) and 17.9 (Urgent Repairs).
18. Insurance	Addition of new paragraphs to sub-clauses 18.1 (General Requirements of Insurance) and 18.2 (Insurance for Works and Contractor's Equipment).
19. Force Majeure	No changes to any FIDIC sub-clause.
20. Claims, Disputes and Arbitration	Deletion of the first paragraph in sub-clause 20.6 (Arbitration) and replace it with a new one. Amendment of paragraph B on sub-clause 20.8 (Expiry of the Dispute Adjudication Board's Appointment).

Source: MPWH, 2006

After studying the Palestinian Particular Conditions, it is noted that the value amendments are few; some were found to be accepted socially and culturally, such as prohibiting the use of alcoholic beverages and weapons in the projects. Even so, the Palestinian Particular Conditions provided new procedures for some clauses, such as Project Taking Over. In

the researcher opinion, the Palestinian Particular Conditions didn't deal with the hard political and financial situation in Palestine as an exceptional one.

3.3 Donor and International NGO's Conditions in Palestine

The contribution by International Donors towards the development efforts of Palestinian civil society has always been vital. They play an active and essential role in the development process in Palestine. According to a research funded by the World Bank in 2006, the level of beneficiary satisfaction from NGO's services is much higher than services provided by the PNA (Bisan, 2006). In addition to that, many of the Donors and International NGO's are adopting General Conditions other rather than FIDIC. To investigate the type of General Conditions used, a questionnaire was distributed to the major Donors and International NGO's in Palestine as attached in Appendix B, and needed information were extracted from the institutions website and tender documents. Table (3.2) illustrates the results on the General Conditions used in Palestine by major Donors and International NGO's.

Table (3.2): General Conditions Used by Donors and International NGO's in Palestine

Institution	General Condition used
The United Nations Development Programme (UNDP ¹)	Civil Works General Conditions (FIDIC "Red Book 1999" with some modifications)
The United Nations Relief and Works Agency (UNRWA)	Blue Book of UNRWA
American Near East Refugee Aid (ANERA)	FIDIC "Red Book 1999"
Global Communities	A general contract condition consists of 7 divisions as a combination of FIDIC "Red Book 1999" and FAR General Conditions.
World Bank	World Bank Guidelines/ Bidding Document for Procurement 2010 consist of 3 Parts of 9 Sections
Belgian Development Agency (BTC)	World Bank Guidelines/ Bidding Document for Procurement 2010 consist of 3 Parts of 9 Sections
European Union (EU)	Tender Dossier consists of 5 Volumes of 10 Sections
Japan International Cooperation Agency (JICA ²)	FIDIC "Red Book 1999"
Kreditanstalt Für Wiederaufbau (KfW)	FIDIC "Red Book 1999"
Islamic Development Bank	FIDIC "Red Book 1999"
The United Nations Office for Project Services (UNOPS)	95% FIDIC "Red Book 1999", 3% World Bank Guidelines, 2% UNOPS
Agence Française de Développement (AFD ³)	FIDIC "Red Book 1999"

3.4 Related Studies on Contracts in Palestine

There are several researches that were carried out in Palestine. Researchers have studied FIDIC, contracts, and the legal part in the implementation of the contract.

¹ www.undp.org

² www.jica.go.jp

³ www.afd.fr

Murtaja (2007) investigated the impact of selected FIDIC 1987 contractual clauses on the construction project performance, especially the impact of those clauses on six measures of project performance which are cost, schedule, quality, safety, and Employer and Contractor satisfaction. In addition, he evaluated the most important clauses to develop a successful contracting relationship for Employers, Contractors and Engineers. The results found that most clauses which have significant impact on construction project performance are the Engineer and Engineer's representatives, contract documents, general obligations, suspension, commencement and delays, alterations, additions and omissions, procedure for claims, certificates and payment, special risks, release from performance, and settlement of disputes clauses. The research recommendations were mainly related to dealing with the previous clauses to avoid misunderstanding of these clauses, such as open and honest contracting parties prior to contract implementation. The study focused on the Engineer's role which must be neutral in every stage of the project life cycle.

Aljarosha (2008) analyzed the FIDIC 1999 contract especially those clauses that are related to responsibilities and risks. In his field survey, weaknesses in estimating and managing responsibilities and risks were revealed. The Palestinian Contractors do not use formalized techniques for estimation of cost implications of the responsibilities and risks when pricing a bid. He had developed a computer based system named FCIES (FIDIC 99 Cost Impact Estimating System) to help the Contractors in estimating the cost impact of FIDIC 1999 when pricing the bids. In his

recommendations, he suggested to provide more effort to estimate and manage the liabilities and risks.

Besaiso (2012) compared general conditions of the contract of FIDIC and NEC, especially in the effectiveness in reducing disputes, particularly in Gaza Strip. The main results of his research found that both FIDIC and NEC are successful in disputes resolution mechanism. In his findings, FIDIC is more familiar and widespread over the world, and it is used more by governments, development banks, etc. NEC has many advantages over FIDIC particularly in clarity, flexibility, explicit project management procedures, partnering and teamwork, risk management, objective measurements of weather and ground conditions risks, and variations. Therefore, he concluded that NEC is more capable than FIDIC in settling disputes.

Saqfelhait (2012) discussed the construction contracts in Palestine from engineering, legal, and Islamic law perspectives. One of the findings include that the Islamic law does not allow to take any compensation in case of the delays of the projects by the Contractor. The research findings showed that the majority of Contractors prefer contracting with unit price contract, while they don't prefer the lump-sum contracts. Moreover, the misinterpretation of contracts is a main reason for disputes between Contractors and Employers.

Fayyad (2013) discussed in his research "Small Construction and Contracting Contracts in Palestine between Deficiency in Theory and

Difficulties in Application” the legal regulation of construction and contracting agreements in Palestine. The study contains three main sections, the first examined the formation of construction agreements, the second discussed the effects of the contract agreement, and the last section discussed how disputes are settled up in Palestine. Below are some findings of Fayyad (2013):

- The existing legal system in Palestine is not appropriate to deal with construction and contracting agreements.
- The documentation for contracts is only in government projects, and engineering-supervised construction projects.
- Most of the Contractors have no kind of control over their works.
- There is a major problem in engineering supervision contracts, which may raise many conflicts during and after the execution of the works.
- Most of the disputes in construction agreements are due to the difference between normal measures and engineering measures and in the absence of any prior agreement by the two parties on the approved measure.
- Changes in works that may arise during the execution of the contract, eligibility for extending time and entitlement for additional financial payments are main reasons for conflicts in Palestine.
- According to FIDIC 1999, the role of the Engineer was replaced by the role of the DAB in settling up disputes. But on ground there is a role for the Engineer in solving disputes.

- Arbitration is very important in settle up the conflicts in Palestine.

Shweiki (2013) studied the construction contracting management obstacles in Palestine. She highlighted the sector problems and obstacles from the perspective of local contract parties; project Employers, Engineers, Contractors and donor countries institutions. Findings showed many the Palestinian a construction sector suffers from many important problems, such as the career ethics. In addition to the intense competition between Contractors, Employers' payments delay, currency exchange rate fluctuation, Employer deceleration in decision making, hard economic situation, etc. Based on the research findings, proposed solutions were presented in a framework to solve and avoid the negative impact of such problems which might improve the performance of construction sector in Palestine. In addition, the study included recommendations to all contract parties to overcome the previous problems.

3.5 Review of the Implementation of FIDIC in Neighboring Countries

The implementation of the FIDIC in two Arab neighbouring countries, Jordan and United Arab Emirates, is briefly presented here.

3.5.1 Jordan

“Jordan had a wide experience in dealing with FIDIC Conditions”¹, Eng. Mohammad Abu Affifa, the representative of FIDIC federation in Jordan said. According to him, Jordan experience with FIDIC is successful.

¹ Mohammad Abu Affifa, Personal Interview, Amman, March, 8, 2015

Therefore, FIDIC decided to hold its conference for the year 2015 in Amman.

Using of FIDIC in Jordan is extended to the year 1991, where the General Conditions for Public Works Contracts issued. It was based mainly on the FIDIC 1987 edition “Fourth Edition”. During the past years, the Ministry of Public Works and Housing in Jordan issued three types of conditions based on FIDIC, the first is the Unified Contract for Construction Projects; it was amended many times, where the last version was produced in 2010 and amended in 2013. The second is the Short Form of Contract, it was issued in 2007 and amended in 2010, which is recommended to use for buildings projects and engineering projects with relatively minor value and depending on the work and the circumstances surrounding it type. The third is Short Forms of Conditions for Private Projects (Al-Karaki, 2006).

The Short Form of Contract used consists of 15 clauses. The Contract conditions may be appropriate for relatively simple works or repetitive works or works of short duration. This model is flexible and can be used in different types of contracts, such as the contracts designed by the Contractor (JMPWH, 2007). The researcher believes that this type of contract can be helpful to use in Palestine, taking into consideration the nature of project.

3.5.2 United Arabs Emirates

The UAE does not produce its own standard form of contracts. FIDIC contracts are the most commonly used, particularly the FIDIC 1987 and the FIDIC Red Book 1999 conditions. Generally, FIDIC was adopted in UAE since 2007, especially in Abu Dhabi Emirate. Currently, it was used by all government departments there (Clive Lovatt and Smith, 2012). In Dubai, there are no conditions of contract which is used by all Dubai Government departments. However, many departments are using FIDIC in Dubai, such as Roads and Transport Authority and the Dubai Municipality. FIDIC Red Book was used in major projects in Dubai, such as the construction in Dubai metro (Kerr et al., 2013).

One of the important issues in the UAE that other FIDIC Books are used, such as the Yellow Book, White Book, etc. Moreover, other standard forms such NEC3 are used, but rarely (Clive Lovatt and Smith, 2012).

Chapter Four

Methodology

Chapter Four

Methodology

4.1 Introduction

This chapter presents an overview of the methodology that will be used to achieve the objective of the research. The main objective is to study the challenges and obstacles that face the implementation of FIDIC conditions in Palestine. This is to be accomplished by: (i) assessing the implementation of the FIDIC General Conditions and the Palestinian Particular Conditions of Contracts in tenders in Palestine, and (ii) studying the challenges and constrains that make the FIDIC General Conditions unfavorable to use in construction projects in Palestine.

This chapter discusses and describes the research strategy, data collection and research tools, research population and sample size determination, reliability of the study, research location, data analysis, and identifying directions for implementation and recommendation.

4.2 Research Strategy

According to Creswell (2009), research design is described as “Plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis”. He divided research strategies into three categories: quantitative, qualitative, and mixed research. The selection among those three strategies depends mainly on the purpose of the research; the description of each of these strategies is as follows:

Qualitative strategy: It focuses on the meanings, traits, and defining characteristics of events, people, interactions, and experience. In this kind of strategy, data analysis inductively, interpretations is made by researcher for the meaning of the data and final report is flexible in structure

Quantitative Strategy: It is a deductive process by testing objective theories by examining the relationship among variables. These variables can be measured; analysis of data collected in quantitative research is typically performed using statistical techniques to produce results.

Mixed Strategy: It combines or associates both qualitative and quantitative forms, mixing of both approaches in a study makes it more simply to collect and analyze both kinds of data, where this method can be considered as stronger than using qualitative or quantitative research.

By examining the strategies and their definitions, it is well observed that mixed strategy for collecting data is more appropriate to be used in order to meet the demands of the objectives of this research. Accordingly, structured questionnaire for Employers, Engineering Firms, and Contractors have been designed to exploit the information and data leading to determine the obstacles that face the implementation of FIDIC. The questionnaires are analyzed by using statistical techniques.

On the other hand, open-end questions are used in the interviews which have qualitative results. The use of qualitative method is important as individual experiences for FIDIC contracts experts and arbitrators are also required.

4.3 Data collection and research tools

In this research, the following methods are used in data collection including:

4.3.1 Questionnaire design

The questionnaire was designed as a tool to gather data from the targeted groups to achieve the aims of the research, and to obtain accurate results and high rate of return. The first part includes the introduction to the questionnaire; it contains different elements, like the objective of the study, the type of data, a paragraph for encouraging the respondents to answer objectively.

The questionnaire was designed to include five basic sections:

- **Section One:** It discussed the general and personal information for the respondents. Such data included the following information: respondents' nature of work, Employers' classification, respondents' geographical location, respondents' position, respondents' education level, respondents' years of experience, and Contractors' highest classification under PCU category and specialization.
- **Section Two:** It discussed the respondents' opinion about general information that are related to contracts/FIDIC and their implementation in Palestine.
- **Section Three:** It discussed some general specifications for FIDIC contract. The respondents were asked to choose if those specifications

are positive or negative, and what is the degree of importance of each specification.

- **Section Four:** The respondents were asked if they were aware of the 43 most influential FIDIC sub-clauses (were selected and examined with the assistance of the experts in FIDIC contract), in addition they were asked if these sub-clauses are being honored. Moreover, they were asked for opinion on the importance of each sub-clause.
- **Section Five:** Respondents were asked to identify the main obstacles that prevent the implementation and development of FIDIC in Palestine. In addition, respondents were asked to contribute with their recommendations for the development of the implementation of FIDIC in Palestine.

Almost all of the questionnaires were directed to all participants from the three groups; the Employer, the Engineering Firms and the Contractor. However, one questionnaire was directed only to the Employer and the Engineering Firms, two questionnaires were directed only to the Contractor.

Most of the questions are closed-ended questions that will require a short response. Closed questions are easy to ask and quick to answer, they require no writing by respondent, and their analysis is straightforward. A few open-ended questions were included in the questionnaire especially which related to the recommendation for development of FIDIC and comments.

The questionnaire is designed in Arabic language in order to be easily understood by Contractors especially that most of them are not familiar with English language, however, the questionnaire is translated into English language, and both are attached in Appendices C and D.

4.3.2 Pilot Study

In the process of preparing the questionnaire, and to verify the questionnaire feasibility and validity, a pilot study was performed after preparing initial draft that involves testing of the questions, and the technique used to collect the data will be conducted. The questionnaire was distributed to a number of experts and arbitrators who having experience in this field.

Experts and arbitrators were selected as follow: FIDIC arbitrator and trainer, expert from the MEHE, expert from An-Najah National University, manager of a Consulting Engineering Firm, owner of Contracting Firm, expert and arbitrator from an International NGO, in addition to a statistician specialist to examine the questionnaire statistically. The experts and arbitrators had reviewed the questionnaire and provided valuable comments. Upon ending this step, and taking the experts feedback into consideration, the questionnaire was modified and was then ready for distribution. The list of the experts and arbitrators is attached in Appendix E.

4.3.3 Interviews

A group of unstructured interviews, open conversations were held with experts and arbitrators to discuss different issues related to FIDIC and its implementation in Palestine, such as their opinion of the Unified Contract, the assessment of FIDIC implementation during the past years, the importance of General Conditions, the obstacles that hinder the implementation of FIDIC, and finally their recommendations as experts for a healthy implementation of FIDIC in Palestine. Lists of the mentioned interviewees and interview questions are attached in Appendix F and G.

4.4 Research Population and sample size determination

There are three parties involved in the construction process, the Employer, the Engineering Firm, and the Contractor. FIDIC discusses the obligations and duties for all the three parties precisely. All of the three parties are targeted in this research.

4.4.1 The Employer

Unfortunately, there are no official reports that declare the number of project Employers in the West Bank who use FIDIC conditions. There are different types of Employers in Palestine. The questionnaire was distributed to different types of Employers as follows:

- Palestinian ministries and main governorate municipalities: 18 questionnaires were distributed. The respondents were 11; one of them was not valid, so it was dropped.

- Donors and NGO's: As no record is available for Donor's and NGO's who use FIDIC, a sample of 20 questionnaires was distributed to the major Donors and NGO's. The respondents were just 6; one of them was not valid, so it was dropped.
- Universities: The questionnaire was distributed to 5 universities in the West Bank, the respondents were 3.
- Private Sector: Most of the private sector estate developers do not have a unified tender; they rely on Engineering Firms to prepare tenders when they need engineering services. Even so, a sample of 5 questionnaires was distributed to major estate developers in Palestine. There was one respondent only.

4.4.2 Engineering Firms

In West Bank there are 477 Engineering Firms with different categories, of which 166 offices are representing the Consultant Firms. The research will focus on Consultant Firms since it is the only firms that deal with projects in large scale. Figure (4.1) illustrates distribution of the Consultant Firms in West Bank (Engineers Association, 2014).

The sample size consisted of 35 Consultant Firms that represented 25% of the whole population according to the location of the Consultant Firms. The respondents were 25. Figure (4.2) illustrates the distribution of respondents according to location.

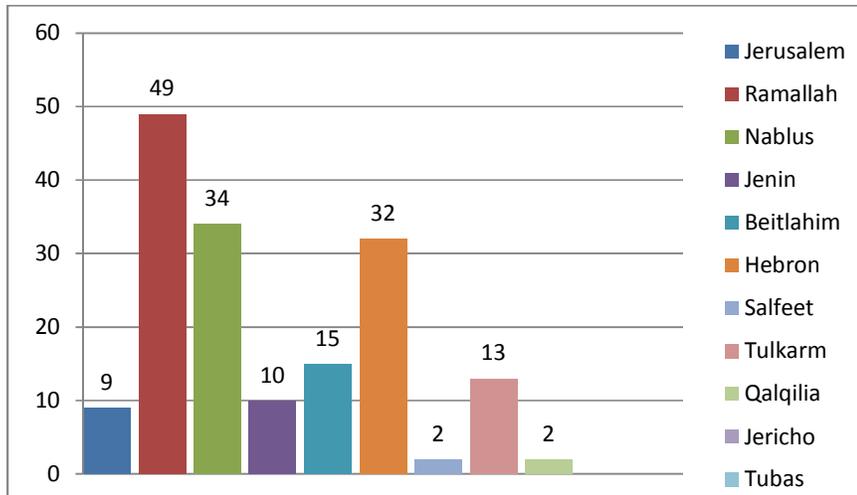


Figure (4.1): Distribution of the Consultant Engineering Firms in West Bank
Source: Engineers Association, 2014

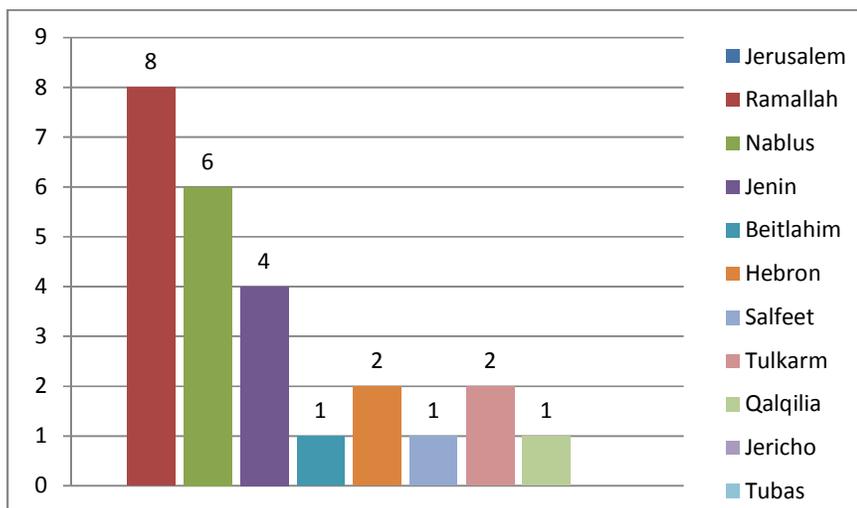


Figure (4.2): Distribution of the Responding Consultant Engineering Firms by Governorate

4.4.3 Contractors Companies

The third population is represented by the Contractors companies, who have a valid registration according to the Palestinian Contracting Union records. This was based on the PCU's latest classification of 31 March, 2014 for the following fields: buildings, water and wastewater, and roads. The PCU records classify the Contractors into 5 grades. This study

targets all five categories because contracts are the core of the research, and in order to help to improve contracts practices.

According to PCU, the number of classified companies in the West Bank for all fields and classifications from the first to fifth grades are 356 companies. Figure (4.3) illustrates the distribution of the Contractors in the West Bank (PCU, 2014).

The sample size consisted of 85 Contractors that represented 25% of the whole population according to the location of the Contractors. The respondents were 70; two of them were not valid so they were dropped. Figure (4.4) illustrates the distribution of respondents according to their location.

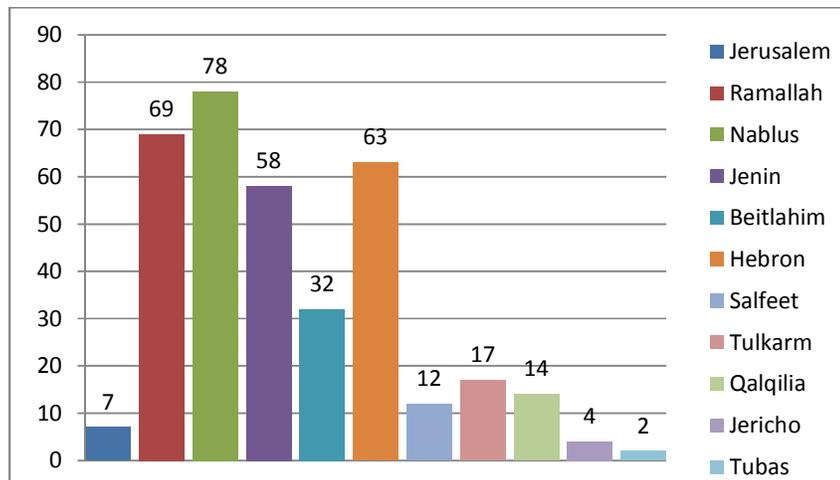


Figure (4.3): Distribution of the Contractors Companies in West Bank

Source: PCU, 2014

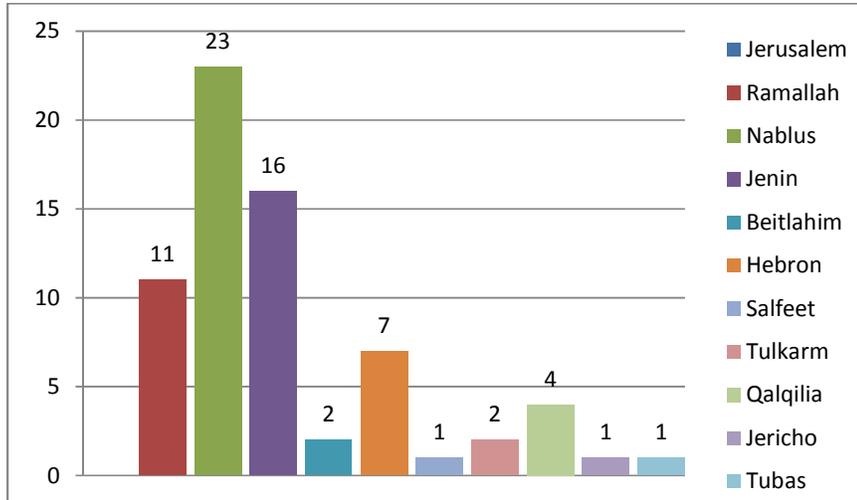


Figure (4.4): Distribution of the Responding Contractors by Governorate

4.5 Reliability of the Questionnaire

Reliability refers to the extent to which the results are repeatable and consistent. Cronbach Alpha test is a method used for testing internal consistency. It can range from 0.00 (if no variance is consistent) to 1.00 (if all variance is consistent), but all values between 0.0 and 1.00 are possible to happen. According to Royal (2011), the interpretation of the reliability is presented as Table (4.1).

Table (4.1): Interpretation of Reliability Based on Cronbach's Alpha Test

Cronbach's Alpha	Internal Consistency
$0.9 \leq \alpha$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: Royal, 2011

The questionnaire reliability was tested by using Cronbach Alpha test. The result was 0.81 on all of the questionnaire sections. Therefore, the

internal consistency is good, and the questionnaire is suitable for statistical analysis and study purposes.

4.6 Research location

This research is carried out in different parts of the West Bank. Gaza Strip is not included in this research due to access difficulties.

The eleven governorates of the West Bank are Jerusalem, Ramallah and Al-Beiereh, Hebron, Nablus, Salfeet, Qalqilia, Tulkarm, Tubas, Jenin, Bethlehem and Jericho (PCBS, 2011). All governorates are considered to ensure coverage of the whole West Bank. Figure (4.5) illustrates the West Bank map including surveyed governorates.



Figure (4.5): West Bank Governorates Included in the Survey

Source: PCBS, 2011

4.7 Data Analysis

To identify the conclusions and recommendations, the methodology for data analysis is presented below.

4.7.1 Questionnaire Analysis

Different statistical tools following descriptive statistical analysis tests are used to analyze the data, considering the Statistical Package for the Social Sciences (SPSS), which is a computer program are used for statistical analysis. These include:

- Frequencies, Means, Standard deviations, and percentages to represent the collected data in a meaningful way.
- One-Way ANOVA to indicate the significance difference between more than two levels of independent variables and to test the hypotheses.
- Least Significant Differences (LSD) when required for more in-depth analysis than ANOVA test.

The researcher had used Likert scale to determine the opinion or attitude of a respondent and contains a number of declarative statements with a scale after each statement. This scale is the most commonly used of the scaling technique.

The importance scale is divided into five points. “1” Very low, “2” Low, “3” Moderate, “4” High, “5” Very high. The interval length was

calculated by dividing the response range (5 which is considered as very high minus 1 which is considered as very low) by the number of intervals which is 5, Table (4.2) illustrates the Likert scaling degrees.

Table (4.2): Scaling Degrees

Interval	Degree
1.00-1.80	Very low
>1.80-2.60	Low
>2.60-3.40	Moderate
>3.40-4.20	High
>4.20-5.00	Very high

4.7.2 Interview Analysis

To analyze the data collected from the interviews, the following procedures are conducted:

- Questions results are collected from the interviews, notes, and observations were taking into consideration by the researcher.
- The results are examined and arranged according to the question number, then similar results were gathered together.
- Results are studied and analyzed, then questions results are compared with each others.
- Formulating the theme statement.

4.8 Identifying Directions for Implementation and Recommendations

Based on the results of the study and analysis, a roadmap to implement FIDIC in a proper way in Palestine is produced. In addition, main recommendations that will help the contracting parties to overcome the obstacles and challenges are then identified.

Chapter Five

Results and Discussion

Chapter Five

Results and Discussion

This chapter presents the data collected from the respondents and the findings. This includes the questionnaires which were distributed to Employers (Ministries, Municipalities, Donors and the Private Sector), Engineering Firms and Contracting Companies, in addition to direct interviews which were conducted with a number of experts in FIDIC contracts.

5.1 Questionnaire Descriptive Analysis

5.1.1 General Information

The data of the respondents according to their general information were analyzed. The following tables and figures describe the respondents' general information.

5.1.1.1 Respondents' Nature of Work

Table (5.1) illustrates the classification of the respondents based on their nature of work.

Table (5.1): Distribution of the Respondents' Classification Based on Nature of Work

Nature of Work	Frequency	Percentage
Employer	19	17.0
Engineering Firm	25	22.3
Contractor	68	60.7
Total	112	100

5.1.1.2 Employers' Classification

According to the methodology, the Employers were divided into four categories (Ministries and Municipalities, Donors and NGO's, University, and Private Sector). Table (5.2) illustrates the percentage for each category participated in the questionnaire. It is to be indicated that despite the continuous follow-up with the largest five Private Sector Employers to fill the questionnaire, only one of these firms responded.

Table (5.2): Distribution of the Employers' Classification

Employers' Category	Frequency	Percentage
Ministries and Municipalities	10	52.6
Donors and NGO's	5	26.3
University	3	15.8
Private Sector	1	5.3
Total	19	100

5.1.1.3 Respondents' Geographical Distribution

Table (5.3) illustrates the respondents' geographical location based on governorate. Nablus, Ramallah and Al-Beiereh, and Jenin governorates were ranked as those with the highest respondents' governorates where most of the respondents existed.

Table (5.3): Respondents' Geographical Distribution

Governorate	Frequency	Percentage
Jerusalem	2	1.8
Ramallah and Al-Beiereh	26	23.2
Nablus	31	27.7
Jenin	23	20.5
Hebron	9	8.0
Qalqilia	6	5.4
Beit Lahim	4	3.6
Tubas	2	1.8
Tulkarm	5	4.5
Salfeet	2	1.8
Jericho	2	1.8
Total	112	100

5.1.1.4 Respondents' Position

Table (5.4) illustrates that company managers rank first with 46.4%, project managers rank second with 25% and the Engineers rank third with 23.2%; others rank fourth with 5.4%.

Table (5.4): Distribution of the Respondents' Position

Respondents' Position	Frequency	Percentage
Company managers	52	46.4
Project managers	28	25.0
Engineers	26	23.2
Others	6	5.4
Total	112	100

5.1.1.5 Respondents' Education Level

Table (5.5) illustrates the respondents' education level. Bachelor degree ranks first with 63.4%, high graduate degree ranks second with 27.7%, high school certificate ranks third with 8.0%, while others rank fourth with 0.9%.

Table (5.5): Distribution of the Respondents' Education Level

Education Level	Frequency	Percentage
High Graduate Degree	31	27.7
Bachelor Degree	71	63.4
High School Certificate	9	8.0
Others	1	0.9
Total	112	100

5.1.1.6 Respondents' Years of Experience

Table (5.6) illustrates that respondents who have 10 to 20 years of experience rank first with 39.3%, respondents who above 20 years of experience rank second with 37.5%, respondents whom between 5 to 10 years rank third with 11.6%, while respondents whom less than 5 years of experience rank fourth with 2.7%. 8.9% of the respondents are unknown (not answered).

Table (5.6): Distribution of the Respondents' Years of Experience

Years of Experience	Frequency	Percentage
Less than 5 years	3	2.7
5 to 10 years	13	11.6
10 to 20 years	44	39.3
Above 20 years	42	37.5
Unknown (not answered)	10	8.9
Total	112	100

5.1.1.7 The Contractor's Classification under PCU Category and Specialization

Table (5.7) illustrates that respondents who are classified as 1st category rank first with 50%, 2nd category rank second with 27.9%, 4th category rank third with 8.8%, 3rd category rank fourth with 7.4% and finally 5th category rank fifth with 5.9%.

In addition, the analysis illustrates in Table (5.8) that 82.3% of the contracting companies in the sample are classified as building companies as their highest specialization, 11.8% are classified as water and sanitation companies, 5.9% of them are classified as road companies.

Table (5.7): Distribution of the Contractors' Classification under PCU Category Specialization

Classification	Frequency	Percentage
1 st Category	34	50.0
2 nd Category	19	27.9
3 rd Category	5	7.4
4 th Category	6	8.8
5 th Category	4	5.9
Total	68	100

Table (5.8): Distribution of the Contractors' Specialization

Specialization	Frequency	Percentage	
Buildings	56	82.3	
Water and Sanitation	8	11.8	
Roads	4	5.9	
Total	68	100	

5.1.2 General Information on Contracts and FIDIC and its Implementation in Palestine

This section consists of 17 questions related to contracts and FIDIC. The answers for the respondents were as follows:

Q1. Respondents were asked if they know that Palestinian Unified Contract is the main reference for tenders in the Palestinian ministries and municipalities; 96.4% answered with Yes, 2.7% answered with No, and 0.9% unknown (not answered).

Q2. Respondents from Donors and International NGO's were asked if they use FIDIC Conditions in their Firms; 60% answered with Yes while 40% answered with No.

Q3. Respondents were asked if they had viewed the Unified Contract; 89.9% answered with Yes while 11.1% answered with No.

Q4. Respondents who answered the previous question with Yes were asked to present the extent of their knowledge of the Unified Contract. The answers reflect a good knowledge for most of the respondents to FIDIC Conditions as shown in Table (5.9), where less than half (about 46.5%) of them indicated their knowledge as good or very good.

Table (5.9): Respondents' Extent of Knowledge to Unified Contract

Answer	Frequency	Percentage
Very Little	2	1.8
Little	7	6.3
Medium	43	38.3
Good	31	27.7
Very Good	21	18.8
Unknown (not answered)	8	7.1
Total	112	100

Q5. Respondents were asked if they keep a copy of Unified Contract in the company as a reference to any construction work; 83.9% answered with Yes, 15.2% answered with No, and 0.9% unknown (not answered).

Q6. Respondents were asked about the their opinion of the Unified Palestinian Particular Conditions Contract, 73.2% of the respondents thought that these conditions provide balance between Employers and Contractors, while 24.1% thought that these were developed for the

benefit of the Employer, and just 0.9% of the respondents thought that these were developed for the benefit of the Contractor. The results are presented in Table (5.10).

Table (5.10): Respondents' Opinion about Unified Palestinian Particular Conditions Contract

Answer	Frequency	Percentage
Developed for the benefit of the Employer	27	24.1
Developed for the benefit of Contractor	1	0.9
Provide balance between Employer and Contractor	82	73.2
Others	2	1.8
Total	112	100

Q7. Respondents were asked if they think that the Contractors read all the documents, including the General and Particular Conditions, upon delivery of tender documents; 82.9% of the respondents thought that Contractors do not read the tender documents, while 17.1% answered that they read them.

Q8. Respondents who answered the previous question with yes were asked to answer the question on main reasons which prevent the Contractors of reading tender documents. Administrative weakness, lack of attention and inexperience of legal aspects combined are the reasons for not reading the tender documents for most of the Contractors as presented in Table (5.11).

Table (5.11): Respondents' Opinion about the Reason for not Reading the Tender Documents by Contractors

Answer	Frequency	Percentage
Lack of attention	8	7.1
Administrative weakness	12	10.7
Inexperience of legal aspects	10	8.9
All of the previous	68	60.7
Other reasons	8	7.2
Unknown (not answered)	6	5.4
Total	112	100

Q9. Respondents were asked if the English language is an obstacle to understand contract documents including Unified Contract; 78.6% answered with Yes while 21.4% answered with No. Some of the respondents added that just few in the Contracting industry who has the practise of English language.

Q10. Contractors were asked if they had previously implemented project that used General Conditions other than FIDIC; 54.4% answered with No, while 45.6% answered with Yes. Some respondents who answered the question with Yes had mentioned some the types of the General Conditions that they use such as: General Conditions of UNRWA, FAR, World Bank, PALTEL, UNDP, and European Union.

Q11. Contractors were asked to choose the most preferred Employer to work with. The results show that 65.4% of the Contractors prefer to work with Donors, Private Sector ranks second with 20.0%, Municipalities rank third with 10.7%, while Governmental Ministries rank last with 3.9%. The results are presented in Table (5.12).

When respondents were asked why they chose Donors, the answers were that bills paying mechanism (which allow paying fast bills in just few

days), Donors comply with the terms of contract more than any other Employer, the advanced payment, professionalism, respect in dealing with the Contractor and flexibility.

Table (5.12): Contractors' Most Preferable Employer to Work with

Answer	Frequency	Percentage
Ministries	3	3.9
Municipalities	7	10.7
Donors	44	65.4
Private Sector	14	20.0
Total	68	100

Q12. Respondents were asked on their opinion about the entity who most comply with the terms of the tender. Table (5.13) illustrates that Donors rank first with 44.6%, Ministries rank second with 30.4%, Private sector ranks third with 10.7%, Engineering Firms rank fourth with 9.4% while Contractors ranks last with 4.3%. When respondents were asked why they chose Donors, the answers were the good financial arrangement, existing of internal auditing, qualified employees with high experience and full detailed tender documents presented.

Table (5.13): Employer who Most Comply with Terms of Tender Documents

Answer	Frequency	Percentage
Ministries	34	30.4
Private Sector	12	10.7
Donors	50	44.6
Engineering Firms	11	9.8
Contractors	5	4.5
Total	112	100

Q13. Respondents were asked about the most entity that causes disputes in the construction projects. Table (5.14) illustrates that Contractors are the

main reason for disputes with 42.0%, Engineering Firms rank second with 26.8%, Ministries rank third with 23.2%, and Private Sector ranks fourth with 7.1%. All agreed that Donors rarely cause disputes in Palestine.

Table (5.14): Entity who Most Causes Disputes in the Construction Projects

Answer	Frequency	Percentage
Ministries	26	23.2
Private Sector	8	7.1
Donors	1	0.9
Engineering Firms	30	26.8
Contractors	47	42.0
Total	112	100

Table (5.14) indicates the following notes:

- The reasons for respondents who choose Contractors are limited knowledge on contracts and FIDIC, in addition that the main aim for Contractors is to gain profit without taking into consideration to study the tender documents properly.
- The reasons for respondents who choose Ministries are the financial situation for the PNA was the main reason for such disputes, the mood in dealing with Contractors and bureaucracy.
- The reasons for respondents who choose Engineering Firms are the low quality of the tender documents which was the main reason and the contradiction in the terms of tender documents. In addition, no detailed drawings are available in many cases. Finally, most of the Engineering firms are trying to satisfy the Employer of the project.

Q14. When respondents were asked if they know the procedures for settling disputes by FIDIC system; 69.6% answered with Yes while 30.4% answered with No.

Q15. For respondents who answered the previous question with Yes (78 respondents), they were asked about their opinion of the idea of Dispute Adjudication Board (DAB) which is proposed by FIDIC. Table (5.15) illustrates that 29.5% thought DAB is good, 65.4% thought it is excellent, while just 5.1% of the respondents thought DAB is bad.

Table (5.15): Respondents' Opinion on the Idea of DAB

Answer	Frequency	Percentage
Excellent	23	29.5
Good	51	65.4
Bad	4	5.1
Total	78	100

Q16. Respondents were asked if there was a dispute in one of the projects that they have implemented/funded/supervised, and how the dispute was settled. Table (5.16) illustrates that 50% of the disputes were settled up amicably, no disputed occurred with 22.3% of the respondents, 17.9% of the disputes were settled up by arbitration, while just 2.7% of the disputes were settled up by DAB.

Table (5.16): How Disputes were Settled up in Construction Projects

Answer	Frequency	Percentage
Amicably	56	50.0
DAB	3	2.7
Arbitration	20	17.9
No dispute Occurred	25	22.3
Others	8	7.1
Total	112	100

Q17. Respondents were asked if they know that there is a Palestinian International Arbitration Chamber that was set up in 2013; 49.6% answered with Yes while 50.4% answered with No.

5.1.3 General Specifications of FIDIC contract

The respondents were asked to give their opinion about certain key specifications related to FIDIC Contract, and whether they consider these specifications as positive or negative. The answers are presented in Table (5.17).

Table (5.17): The Respondents' Answers whether General Specifications of FIDIC Contract are Positive or Negative

No.	Item	Results	
		Positive %	Negative %
1	Limit temperamental expansion in dealings, both for Employer and Engineer.	96.4	3.6
2	Place trust in parties in carrying out assigned duties and responsibilities, and not presumes disloyalty and lack of integrity of any party.	97.3	2.7
3	A high level of management is required of Employer, Engineer or Contractor.	66.1	33.9
4	Has a distinctive approach to resolving conflicts from the on-set.	92.9	7.1
5	Requires a stable political situation to be implemented.	48.2	51.8
6	Be attentive to possible risks and calculate affect beforehand, evading risks when necessary.	96.4	3.6
7	Contractor's rights shall be clearly stated to evade resorting to law; Dispute Adjudication Board will review demands as they arise.	95.5	4.5
8	Parties' responsibilities are unambiguous and meticulously specified.	95.5	4.5
9	Equitable sharing of risk and responsibilities amongst contracted parties.	92.0	8.0
10	Making amendments/alterations to items according to the current status of the Employer is possible; however, amendments must be included as special supplementary terms.	67.0	33.0
11	Assuming that the project is well-defined and detailed.	52.7	47.3
12	Knowledge of regulations, systems and work principles is fundamental.	58.0	42.0

Table (5.17) indicates that the opinion of the respondents towards the FIDIC general contract specifications is generally positive, except for one

aspect, which is related to the need for a stable political situation to have the FIDIC contract applied.

This can be justified by the desire of the respondents to implement FIDIC contracts in general, although the political situation in Palestine is hard, as according to the opinion of slightly more than half of the respondents (51.8%), such situation negatively affects the application of the FIDIC contract.

To test the importance of FIDIC contract general specifications, the averages and the standard deviations were calculated as presented in Table (5.18).

Table (5.18): Mean and Standard Deviation Results that are related to the Importance of General Specifications of FIDIC Contract

No.	Item	Mean	S.D	Importance
1	Limit temperamental expansion in dealings, both for Employer and Engineer.	4.05	0.85	High
2	Place trust in parties in carrying out assigned duties and responsibilities, and not presumes disloyalty and lack of integrity of any party.	4.02	0.85	High
3	A high level of management is required of Employer, Engineer or Contractor.	3.91	0.81	High
4	Has a distinctive approach to resolving conflicts from the on-set.	4.02	0.83	High
5	Requires a stable political situation to be implemented.	3.82	1.01	High
6	Be attentive to possible risks and calculate affect beforehand, evading risks when necessary.	3.82	0.82	High
7	Contractor's rights shall be clearly stated to evade resorting to law; Dispute Adjudication Board will review demands as they arise.	4.05	0.83	High
8	Parties' responsibilities are unambiguous and meticulously specified.	4.18	0.82	High
9	Equitable sharing of risk and responsibilities amongst contracted parties.	3.94	0.88	High
10	Making amendments/alterations to items according to the current status of the Employer is possible; however, amendments must be included as special supplementary terms.	3.90	0.89	High
11	Assuming that the project is well-defined and detailed.	3.94	0.88	High
12	Knowledge of regulations, systems and work principles is fundamental.	3.93	0.84	High
	Total	3.99	0.72	High

Table (5.18) indicates that total scores of the FIDIC contract general specifications achieved a mean of 3.99 which indicates a high level of importance.

5.1.4 FIDIC Most Influential Sub-clauses in Palestine

The respondents were asked to give their opinion about 43 sub-clauses in FIDIC that are related to the Employer, the Engineer, and the Contractor. These sub-clauses were selected as the most influential sub-clauses in Palestine by many experts. Among all of the sub-clauses, 10 sub-clauses are related to the Employer, 10 sub-clauses are related to Engineer, and 23 sub-clauses are related to the Contractor. The opinions of the respondents were about three questions: whether they are aware of these specific sub-clauses, and whether these sub-clauses are being honored, and finally the importance of these sub-clauses.

5.1.4.1 Awareness of the Most Influential FIDIC Contract Sub-clauses

Table (5.19) illustrates the results of the analysis of the questionnaire awareness of the respondents towards the most influential FIDIC contract sub-clauses.

Table (5.19): Responses of the Respondents on the Awareness towards the Most Influential FIDIC Contract Sub-clauses

Are you aware of this sub-clause?	Yes (%)	No (%)	No Opinion (%)
First: Sub-clauses related to Employer			
1. The Employer shall submit reasonable evidence that financial arrangements have been made and are being maintained within 28 days after receiving any request from the Contractor which will enable the Employer to pay the Contract Price.	62.4	31.6	6.0
2. If the Contractor fails to comply with remedial works according to sub-clause 7.6, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to sub-clause 2.5 pay to the Employer all costs arising from this failure.	82.1	12.0	5.9
3. The Employer shall be entitled to terminate the Contract if the Contractor without reasonable excuse fails to comply with a notice issued under sub-clause, within 28 days after receiving it.	76.1	17.9	6.0
4. If it turns out that the delay caused by Contractor is resulting incur additional costs to the Employer, the Contractor shall pay these costs to the Employer.	79.5	14.5	6.0
5. The Employer shall be entitled to terminate the Contract if the Contractor if becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, etc.	83.8	8.5	7.7
6. The Employer shall be entitled to terminate the Contract fails to comply with sub-clause 4.2 Performance Security.	86.3	6.0	7.7
7. The Employer shall be entitled to terminate the Contract if the Contractor subcontracts the whole of the works or assigns the Contract without the required agreement.	78.6	14.5	6.9
8. The Employer shall be entitled to terminate the Contract gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward.	86.3	5.1	8.6
9. The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security.	48.7	41.9	9.4

Are you aware of this sub-clause?	Yes (%)	No (%)	No Opinion (%)
10. The Employer shall make an advance payment, as an interest-free loan for mobilization, when the Contractor submits a guarantee in accordance with this sub-clause. Or if the total advance payment is not stated in the Appendix to Tender, this sub-clause shall not apply.	88.9	3.4	7.7
Second: Sub-clauses related to Engineer			
11. The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the works and the remedying of any defects.	84.6	6.8	8.6
12. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated.	89.7	1.7	8.6
13. If the Employer intends to replace the Engineer, the Employer shall, not less than 42 days before the intended date of replacement, and the Contractor can raise a reasonable objection (or 28 days according to Palestinian Particular Conditions).	62.4	29.6	8.0
14. The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation.	81.2	10.3	8.5
15. The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A payment certificate shall not be deemed to indicate the Engineer's acceptance or approval.	70.9	19.7	9.4
16. Whenever the Engineer requires any part of the works to be measured, reasonable notice shall be given to the Contractor's Representative.	85.5	5.1	9.4
17. Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the works, either by an instruction or by a request for the Contractor to submit a proposal.	70.1	16.2	13.7
18. Within 28 days after receiving the Final Statement and written discharge in accordance with sub-clause 14.11 "Application for Final Payment Certificate" and sub-clause 14.12 "Discharge", the Engineer shall issue, to the Employer, the Final Payment Certificate.	78.6	12.8	8.6
19. The Contractor shall give notice to the Engineer whenever the works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, If the Contractor suffers delay and/or incurs Cost due to that then he is entitled to compensate for the time/cost.	83.8	7.7	8.5

Are you aware of this sub-clause?	Yes (%)	No (%)	No Opinion (%)
20. If any error occurred in setting out the works in relation to the original points as a result of the wrong positioning of the employer, then the Contractor shall give notice to the Engineer and shall be entitled to compensate for the time/cost.	82.1	10.3	7.6
Third: Sub-clauses related to Contractor			
21. The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.	87.2	7.7	5.1
22. Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the “as-built” documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail.	93.3	1.7	5.0
23. The Contractor shall comply with all applicable safety regulations, take care for the safety of all persons entitled to be on the Site, provide fencing, lighting, guarding, etc.	92.3	2.6	5.1
24. The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract.	87.2	5.1	7.7
25. The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.	91.5	3.5	5.0
26. Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer.	93.2	1.7	5.1
27. The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out.	83.8	8.5	7.7
28. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor’s Personnel. The Contractor shall appoint an accident prevention officer at the Site and shall send, to the Engineer, details of any accident as soon as practicable after its occurrence.	93.2	1.7	5.1

Are you aware of this sub-clause?	Yes (%)	No (%)	No Opinion (%)
29. The Contractor may, at any time, submit to the Engineer a written proposal which that will accelerate completion, reduce the cost to the Employer of executing, maintaining or operating the works, improve the efficiency or value to the Employer of the completed works, or and otherwise be of benefit to the Employer. Or what is called by value engineering.	69.2	24.8	6.0
30. If the Contractor does not receive the reasonable evidence within 42 days after giving notice in respect of a failure to comply with Financial Arrangements, then the Contractor shall be entitled to terminate the Contract.	65.0	29.9	5.1
31. IF the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate, then the Contractor shall be entitled to terminate the Contract.	59.0	35.9	5.1
32. The Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules.	66.7	26.5	6.8
33. If the Contractor does not receive payment in accordance with sub-clause 14.7, the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during delay period.	70.9	23.9	5.2
34. The Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in sub-clause 14.7 within which payment is to be made (except for deductions in accordance with sub-clause 2.5), then Contractor shall be entitled to terminate the Contract.	70.9	23.1	6.0
35. The Contractor shall be entitled to terminate the Contract if the Employer substantially fails to perform his obligations under the Contract.	82.9	10.3	6.8
36. The Contractor shall be entitled to terminate the Contract if a prolonged suspension affects the whole of the works as described in sub-clause 8.11.	79.5	11.1	9.4
37. The Contractor shall be entitled to terminate the Contract if the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, etc.	80.3	13.7	6.0
38. The Contractor shall be entitled to terminate the Contract if the Employer fails to comply with sub-clause 1.6 which related to Contract Agreement.	89.7	5.1	5.2

Are you aware of this sub-clause?	Yes (%)	No (%)	No Opinion (%)
39. The Contractor should insure each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance.	92.3	1.7	6.0
40. The Contractor should When each premium is paid, shall submit evidence of payment to the other Party. Shall also give notice to the Engineer.	63.2	28.2	8.6
41. If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure such as natural catastrophes, wars. Etc. And a notice was given to Employer within 14 days after the Contractor became aware, so he has certain rights depends on the Force Majeure circumstances such as extension of time and/or additional cost.	79.5	13.7	6.8
42. If the execution of substantially all the works in progress is prevented for a continuous period of 84 days or for multiple periods which total more than 140 days by reason of Force Majeure, then either Party may give to the other Party a notice of termination of the Contract.	53.8	39.3	6.9
43. If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.	77.8	15.4	6.8

The previous table indicates the following:

- There is an awareness of the sub-clauses that are related to the Employer. In spite of that, there is one sub-clause, where 41.9% of the respondents were not aware of is related to the right of the Employer to terminate the Contract at any time for the Employer's convenience. This can be justified knowing that this sub-clause is rarely implemented in Palestine.

- There is an awareness of the sub-clauses that are related to the Engineer. The sub-clause which the respondents have the least awareness 62.4% is related to the procedures for the Employer to replace the Engineer. This can be justified knowing that this sub-clause is rarely implemented in Palestine.

- There is an awareness of the sub-clauses that are related to the Contractor. In spite of that, there are few sub-clauses that 25-40% of the respondents were not aware of, which are mainly related to the cases where the Contractor is entitled to terminate the contract, the proposed breakdown for each lump sum price, and the evidence that shall be submitted by the Contractor when insurance premium is paid. This can be justified knowing that these sub-clauses are also rarely implemented in Palestine.

5.1.4.2 Adherence to the Most Influential FIDIC Contract Sub-clauses

Table (5.20) illustrates the results of the analysis of the questionnaire related to the adherence of the respondents towards the most influential FIDIC contract sub-clauses.

Table (5.20): Responses of the Respondents on Honoring the Most Influential FIDIC Contract Sub-clauses

Is this sub-clause being honored?	Yes (%)	No (%)	No Opinion (%)
First: Sub-clauses related to Employer			
1. The Employer shall submit reasonable evidence that financial arrangements have been made and are being maintained within 28 days after receiving any request from the Contractor which will enable the Employer to pay the Contract Price.	15.4	72.6	12.0
2. If the Contractor fails to comply with remedial works according to sub-clause 7.6, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to sub-clause 2.5 pay to the Employer all costs arising from this failure.	41.9	49.6	8.5
3. The Employer shall be entitled to terminate the Contract if the Contractor without reasonable excuse fails to comply with a notice issued under sub-clause, within 28 days after receiving it.	34.2	58.1	7.7
4. If it turns out that the delay caused by Contractor is resulting incur additional costs to the Employer, the Contractor shall pay these costs to the Employer.	66.7	25.6	7.7
5. The Employer shall be entitled to terminate the Contract if the Contractor if becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, etc.	66.7	25.6	7.7
6. The Employer shall be entitled to terminate the Contract fails to comply with sub-clause 4.2 Performance Security.	79.5	12.8	7.7
7. The Employer shall be entitled to terminate the Contract if the Contractor subcontracts the whole of the works or assigns the Contract without the required agreement.	35	57.3	7.7
8. The Employer shall be entitled to terminate the Contract gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward.	54.7	37.6	7.7
9. The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security.	24.8	61.5	13.7

Is this sub-clause being honored?	Yes (%)	No (%)	No Opinion (%)
10. The Employer shall make an advance payment, as an interest-free loan for mobilization, when the Contractor submits a guarantee in accordance with this sub-clause. or if the total advance payment is not stated in the Appendix to Tender, this sub-clause shall not apply.	83.8	9.5	6.7
Second: Sub-clauses related to Engineer			
11. The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the works and the remedying of any defects.	78.6	12.0	9.4
12. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated.	63.2	27.4	9.4
13. If the Employer intends to replace the Engineer, the Employer shall, not less than 42 days before the intended date of replacement, and the Contractor can raise a reasonable objection (or 28 days according to Palestinian Particular Conditions).	27.4	59.8	12.8
14. The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation.	65.0	24.8	10.2
15. The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance or approval.	63.2	23.1	13.7
16. Whenever the Engineer requires any part of the works to be measured, reasonable notice shall be given to the Contractor's Representative.	71.8	19.7	8.5
17. Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the works, either by an instruction or by a request for the Contractor to submit a proposal.	53.0	29.9	17.1
18. Within 28 days after receiving the Final Statement and written discharge in accordance with sub-clause 14.11 [Application for Final Payment Certificate] and sub-clause 14.12 [Discharge], the Engineer shall issue, to the Employer, the Final Payment Certificate. Cost due to that then he is entitled to compensate for the time/cost.	46.2	46.2	7.6
19. The Contractor shall give notice to the Engineer whenever the works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, If the Contractor suffers delay and/or incurs Cost due to that then he is entitled to compensate for the time/cost.	45.3	47.0	7.7

Is this sub-clause being honored?	Yes (%)	No (%)	No Opinion (%)
20. If any error occurred in setting out the works in relation to the original points as a result of the wrong positioning of the employer, then the Contractor shall give notice to the Engineer and shall be entitled to compensate for the time/cost.	50.4	38.5	11.1
Third: Sub-clauses related to Contractor			
21. The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.	64.1	30.8	5.1
22. Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the “as-built” documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail.	85.5	8.5	6.0
23. The Contractor shall comply with all applicable safety regulations, take care for the safety of all persons entitled to be on the Site, provide fencing, lighting, guarding, etc.	50.4	44.4	5.2
24. The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract.	46.2	47.0	6.8
25. The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.	38.5	54.7	6.8
26. Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer.	82.9	12.0	5.1
27. The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out.	39.3	53.8	6.9
28. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor’s Personnel. The Contractor shall appoint an accident prevention officer at the Site and shall send, to the Engineer, details of any accident as soon as practicable after its occurrence.	37.6	56.4	6.0

Is this sub-clause being honored?	Yes (%)	No (%)	No Opinion (%)
29. The Contractor may, at any time, submit to the Engineer a written proposal which that will accelerate completion, reduce the cost to the Employer of executing, maintaining or operating the works, improve the efficiency or value to the Employer of the completed works, or and otherwise be of benefit to the Employer. Or what is called by value engineering.	32.5	62.4	5.1
30. If the Contractor does not receive the reasonable evidence within 42 days after giving notice in respect of a failure to comply with Financial Arrangements, then the Contractor shall be entitled to terminate the Contract.	21.4	70.9	7.7
31. If the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate, then the Contractor shall be entitled to terminate the Contract.	17.1	75.2	7.7
32. The Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules.	33.3	59.0	7.7
33. If the Contractor does not receive payment in accordance with sub-clause 14.7, the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during delay period.	24.8	65.8	9.4
34. The Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in sub-clause 14.7 within which payment is to be made (except for deductions in accordance with sub-clause 2.5), then Contractor shall be entitled to terminate the Contract.	21.4	72.9	5.7
35. The Contractor shall be entitled to terminate the Contract if the Employer substantially fails to perform his obligations under the Contract.	36.8	56.4	6.8
36. The Contractor shall be entitled to terminate the Contract if a prolonged suspension affects the whole of the works as described in sub-clause 8.11.	41.0	51.3	7.7
37. The Contractor shall be entitled to terminate the Contract if the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, etc.	47.9	45.3	6.8
38. The Contractor shall be entitled to terminate the Contract if the Employer fails to comply with sub-clause 1.6 which related to Contract Agreement.	46.2	47.9	5.9

Is this sub-clause being honored?	Yes (%)	No (%)	No Opinion (%)
39. The Contractor should insure each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance.	86.3	6.8	6.9
40. The Contractor should When each premium is paid, shall submit evidence of payment to the other Party. Shall also give notice to the Engineer.	31.6	59.8	8.6
41. If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure such as natural catastrophes, wars.etc. And a notice was given to Employer within 14 days after the Contractor became aware, so he has certain rights depends on the Force Majeure circumstances such as extension of time and/or additional cost.	53.0	39.3	7.7
42. If the execution of substantially all the works in progress is prevented for a continuous period of 84 days or for multiple periods which total more than 140 days by reason of Force Majeure, then either Party may give to the other Party a notice of termination of the Contract.	30.8	59.0	10.2
43. If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.	53.0	39.3	7.7

The previous table indicates that 53% of FIDIC most influential sub-clauses that affect construction industry in Palestine are not being honored.

A further look at these sub-clauses indicates the followings:

- Most of the respondents (72.6%) thought that the sub-clause that is related to the financial arrangements that must be prepared by the Employer after receiving request from the Contractor is not being

honored. This can be justified due to the hard financial situation in Palestine.

- Respondents thought that among the sub-clauses that allow the Employer to terminate or replace the Contractor, four sub-clauses are considered as not being honored. This can be justified knowing that these sub-clauses are rarely implemented in Palestine.
- More than half of the respondents (59.8%) thought that the sub-clause that is related to the right of the Employer to replace the Engineer, and the procedure to achieve that is not being honored. This can be justified knowing that this sub-clause is rarely implemented in Palestine.
- Slightly less than half of the respondents (47.0%) thought that the sub-clause that is related to the notice which must be issued by the Contractor to the Engineer, whenever the works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time is not being honored. This can be justified knowing that this sub-clause is also rarely implemented in Palestine.
- Slightly less than half of the respondents (47.0%) thought that the sub-clause that is related to Quality Assurance System in the construction projects it is not being honored. This can be justified due to the weakness of contracting sector in Palestine.
- More than half of the respondents (54.7%) thought that the sub-clause that is related to protect the environment in the construction projects is

not being honored. This can be justified due to the weakness of the implementation of the laws and regulations that prevent environmental pollution.

- More than half of the respondents (53.8%) thought that the sub-clause that is related to paying the rates of wages, and observe conditions of labour is not being honored. This can be justified due to the weakness of the Palestinian wage laws and regulations.
- More than half of the respondents (56.4%) thought that the sub-clause that is related to maintain the health and safety of the Contractor's personnel is not being honored. This can be justified due to the weakness in the safety and health management system existed in Palestine.
- Respondents thought that among the sub-clauses which are related to right of the Contractor to terminate the Contract, seven sub-clauses are considered as not being honored. This can be justified due to the weakness in the regulations and laws that guarantees and adopts Contractors' rights and protects them.
- Most of the respondents (62.4%) thought that the sub-clause that is related the proposal that may be submitted by the Contractor at any time to accelerate completion, reduce the cost, etc. is not being honored. This can be justified knowing that this sub-clause is rarely implemented in Palestine.

- More than half of the respondents (59.0%) thought that the sub-clause that is related to the proposed breakdown for each lump sum price in the schedules that must be submitted by the Contractor is not being honored. This can be justified knowing that this sub-clause is also rarely implemented in Palestine.
- Most of the respondents (65.8%) thought that the sub-clause that is related to right of the Contractor to receive financing charges compounded monthly, if the Contractor does not receive payment in accordance with Sub-clause 14.7 is not being honored. This can be justified knowing that this sub-clause is rarely implemented in Palestine.
- More than half of the respondents (59.8%) thought that the sub-clause that is related to the evidence that shall be submitted by the Contractor when insurance premium is paid is not being honored. This can be justified knowing that this sub-clause is also rarely implemented in Palestine.

5.1.4.3 Level of Relevance of the Most Influential FIDIC Contract Sub-clause

To study the importance of the FIDIC most influential sub-clauses in Palestine, the averages and the standard deviation of the responses in the questionnaire were calculated. The results are presented in Table (5.21).

Table (5.21): Means and Standard Deviations of the Respondents' Results on the Level of Relevance of the FIDIC Most Influential Sub-clauses

Level of relevance	Mean	S.D	Importance
First: Sub-clauses related to Employer			
1. The Employer shall submit reasonable evidence that financial arrangements have been made and are being maintained within 28 days after receiving any request from the Contractor which will enable the Employer to pay the Contract Price.	4.01	0.77	High
2. If the Contractor fails to comply with remedial works according to sub-clause 7.6, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to sub-clause 2.5 pay to the Employer all costs arising from this failure.	4.15	0.85	High
3. The Employer shall be entitled to terminate the Contract if the Contractor without reasonable excuse fails to comply with a notice issued under sub-clause, within 28 days after receiving it.	3.89	1.03	High
4. If it turns out that the delay caused by Contractor is resulting incur additional costs to the Employer, the Contractor shall pay these costs to the Employer.	3.62	0.96	High
5. The Employer shall be entitled to terminate the Contract if the Contractor if becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, etc.	3.75	0.91	High
6. The Employer shall be entitled to terminate the Contract fails to comply with sub-clause 4.2 Performance Security.	3.62	1.00	High
7. The Employer shall be entitled to terminate the Contract if the Contractor subcontracts the whole of the works or assigns the Contract without the required agreement.	3.69	0.88	High
8. The Employer shall be entitled to terminate the Contract gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward.	4.02	0.96	High

Level of relevance	Mean	S.D	Importance
9. The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security.	4.25	0.75	Very High
10. The Employer shall make an advance payment, as an interest-free loan for mobilization, when the Contractor submits a guarantee in accordance with this sub-clause. or if the total advance payment is not stated in the Appendix to Tender, this sub-clause shall not apply.	4.16	0.84	High
Second: Sub-clauses related to Engineer			
11. The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the works and the remedying of any defects.	4.01	0.77	High
12. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated.	4.15	0.85	High
13. If the Employer intends to replace the Engineer, the Employer shall, not less than 42 days before the intended date of replacement, and the Contractor can raise a reasonable objection (or 28 days according to Palestinian Particular Conditions).	3.89	1.03	High
14. The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation.	3.62	0.96	High
15. The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance or approval.	3.75	0.91	High
16. Whenever the Engineer requires any part of the works to be measured, reasonable notice shall be given to the Contractor's representative.	3.62	1.00	High

Level of relevance	Mean	S.D	Importance
17. Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the works, either by an instruction or by a request for the Contractor to submit a proposal.	3.69	0.88	High
18. Within 28 days after receiving the Final Statement and written discharge in accordance with sub-clause 14.11 [Application for Final Payment Certificate] and sub-clause 14.12 [Discharge], the Engineer shall issue, to the Employer, the Final Payment Certificate.	4.02	0.96	High
19. The Contractor shall give notice to the Engineer whenever the works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, If the Contractor suffers delay and/or incurs Cost due to that then he is entitled to compensate for the time/cost.	4.25	0.75	Very High
20. If any error occurred in setting out the works in relation to the original points as a result of the wrong positioning of the employer, then the Contractor shall give notice to the Engineer and shall be entitled to compensate for the time/cost.	4.16	0.84	High
Third: Sub-clauses related to Contractor			
21. The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.	3.93	0.93	High
22. Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the “as-built” documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail.	4.15	0.80	High
23. The Contractor shall comply with all applicable safety regulations, take care for the safety of all persons entitled to be on the Site, provide fencing, lighting, guarding, etc.	4.43	0.74	Very High
24. The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract.	4.10	0.90	High

Level of relevance	Mean	S.D	Importance
25. The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.	4.03	0.99	High
26. Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer.	3.79	0.75	High
27. The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out.	4.07	0.84	High
28. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. The Contractor shall appoint an accident prevention officer at the Site and shall send, to the Engineer, details of any accident as soon as practicable after its occurrence.	4.20	0.86	Very High
29. The Contractor may, at any time, submit to the Engineer a written proposal which that will accelerate completion, reduce the cost to the Employer of executing, maintaining or operating the works, improve the efficiency or value to the Employer of the completed works, or /and otherwise be of benefit to the Employer. Or what is called by value engineering.	3.81	0.91	High
30. If the Contractor does not receive the reasonable evidence within 42 days after giving notice in respect of a failure to comply with Financial Arrangements, then the Contractor shall be entitled to terminate the Contract.	4.10	0.82	High
31. If the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate, then the Contractor shall be entitled to terminate the Contract.	4.17	0.81	High
32. The Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules.	3.59	1.08	High

Level of relevance	Mean	S.D	Importance
33. If the Contractor does not receive payment in accordance with sub-clause 14.7, the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during delay period.	4.08	0.90	High
34. The Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in sub-clause 14.7 within which payment is to be made (except for deductions in accordance with sub-clause 2.5), then Contractor shall be entitled to terminate the Contract.	4.06	0.89	High
35. The Contractor shall be entitled to terminate the Contract if the Employer substantially fails to perform his obligations under the Contract.	4.18	0.70	High
36. The Contractor shall be entitled to terminate the Contract if a prolonged suspension affects the whole of the works as described in sub-clause 8.11.	4.10	0.81	High
37. The Contractor shall be entitled to terminate the Contract if the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, etc.	4.31	0.68	Very High
38. The Contractor shall be entitled to terminate the Contract if the Employer fails to comply with sub-clause 1.6 which related to Contract Agreement.	4.18	0.69	High
39. The Contractor should insure each insurance shall be affected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance.	4.34	0.76	Very High
40. The Contractor should When each premium is paid, shall submit evidence of payment to the other Party. Shall also give notice to the Engineer.	3.49	1.10	High
41. If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure such as natural catastrophes, wars...Etc. And a notice was given to Employer within 14 days after the Contractor became aware, so he has certain rights depends on the Force Majeure circumstances such as extension of time and/or additional cost.	4.21	0.73	Very High

Level of relevance	Mean	S.D	Importance
42. If the execution of substantially all the works in progress is prevented for a continuous period of 84 days or for multiple periods which total more than 140 days by reason of Force Majeure, then either Party may give to the other Party a notice of termination of the Contract.	4.03	0.80	High
43. If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.	4.11	0.77	High

Table (5.21) indicates the following:

- Most of the FIDIC most influential sub-clauses in Palestine are considered by the respondents to be highly important.
- About 17% of these sub-clauses are considered to be very highly important. It is noticed here that most of these sub-clauses are considered not being honored in Palestine. These sub-clauses are related to:
 - The right of the Employer to terminate the Contract at any time for the Employer's convenience, with the mean value of 4.25 of 5.00.
 - The notice which shall be given by the Contractor to the Engineer whenever the works are likely to be delayed or disrupted in different cases, with the mean value of 4.25 of 5.00.

- The safety regulations which must be complied by the Contractor, with the mean value of 4.43 of 5.00.
 - The precautions to maintain health and safety of the Contractor's Personnel, with the mean value of 4.20 of 5.00.
 - The right of the Contractor to terminate the Contract if the Employer becomes bankrupt or insolvent or goes into liquidation, with the mean value of 4.31 of 5.00.
 - The insurance of the project, with the mean value of 4.34 of 5.00.
 - The right of the Contractor to be compensated due to any Force Majeure, with the mean value of 4.21 of 5.00.
- The overall score of the FIDIC most influential sub-clauses achieved a mean of 3.98 of 5.00 which indicates a high level of importance as illustrating in Table (5.22). The table also presents results for the sub-clauses related to the Employer, Engineer and Contractor, with mean ranging between 3.95 and 4.07.

Table (5.22): Total Means and Standard Deviations of the Respondents' Results that related to the FIDIC Most Influential Sub-clauses

No.	Item	Mean	S.D
1	Items related to Employer	3.95	0.54
2	Items related to Engineer	3.93	0.58
3	Items related to Contractor	4.07	0.49
	Total	3.98	0.47

5.1.5 General Recommendations for Development of Implementation of FIDIC in Palestine

When the respondents were asked to select the main obstacles that prevent the implementation and development of FIDIC in Palestine. The percentages of the results are presented in Table (5.23). The respondents were able to select more than one option.

Table (5.23): Percentage of the Main Obstacles that Prevent the Implementation and Development of FIDIC

No.	Item	Frequency	Percentage
1	Financial difficulties of the PNA.	79	70.1
2	The current political situation in Palestine.	67	59.8
3	Administrative problems and lack of maturity of the construction sector in Palestine.	84	75.2
4	Giving low importance of the contract or the lack of attention to contract preparing.	56	49.6
5	Multitude of Donors for PNA, with possibility of multiple different General Conditions.	66	58.5

Table (5.23) illustrates that 75.2% of the respondents thought that administrative problems and lack of maturity of the construction sector in Palestine is the main obstacle that face the implementation of FIDIC, while 70.1% of the respondents thought that financial difficulties of the PNA is the second main obstacle.

The current political situation in Palestine and multitude of Donors for PNA have approximately same percentage (about 60%), where slightly less than half of the respondents thought that giving low importance of the contract is an obstacle that prevent the implementation and development of FIDIC.

The respondents were asked if they want to add more obstacles. This was presented as an open question to the respondents. Various opinions were identified by the respondents, as additional obstacles that face the implementation of FIDIC, which include:

1. Unqualified Contractors in Palestine.
2. The current classification system for Contractors in Palestine.
3. The Contractors are not aware of their rights and duties due to the lack of knowledge in contracts.
4. Dealing with several currencies in tendering (JD, Dollars, Euros, NIS).
5. Weakness of the Palestinian judiciary system, forcing parties to settle up disputes amicably.
6. Hard financial situation for Contractors in Palestine.
7. Ministries and Municipalities are dealing Contractors in a moody way.

The respondents were asked if they think training is needed for Employers, Engineers and Contractors in dealing with FIDIC. The results show that 99% of the respondents thought that there is a need for training for all the parties.

The respondents were asked if they think that concerned authorities (relevant Ministries, Engineering Association, Palestinian Contractors Union, etc.) are doing their duties in raising awareness and education in the

contractual and legal aspects. The results were 83.8% of the respondents thought that the concerned authorities are not doing what they are supposed to do in raising awareness and education to all parties, 14.5% of the respondents answered with Yes, while 1.7% is unknown (not answered).

The respondents were asked if they had any other recommendations to develop the implementation of FIDIC in Palestine. This was presented as an open question to the respondents. Various opinions were identified by the respondents, as additional recommendations to develop the implementation of FIDIC in Palestine, which include:

1. Organize specialized workshops and sessions for raising awareness for all related parties.
2. Formulate a new General Conditions in Palestine that are more suitable to the current situation.
3. Declare the role of the Engineer (Consultant) as a neutral party, through understandings between the Engineering Association and Palestinian Contractor Union.
4. Re-evaluation of the Palestinian Particular Conditions, especially the clauses that are related to adjustments on prices due to the current political situation.
5. Re-evaluation of the Contractor classification according to a new criteria. Two problems were addressed in the current classification system; the first is the rare visits to the Contractors' offices to make

sure that they are complying of PCU rules and regulations, while the second is lack of follow-up to the Contractors when they apply to develop their grade.

6. Prepare new General Conditions which are more suitable to small size projects.
7. Forcing donors and private sector to use FIDIC conditions.
8. Forming committees to control and follow up the implementation of the contract by all parties.
9. Forming committees with independent legal status to settle up disputes and conflicts in short periods.
10. Study FIDIC and tendering procedures in engineering colleges.
11. Print brochures and circulate them to raise awareness.
12. Development of FIDIC contract conditions to cope with the current situation in Palestine.
13. Making agreements with the neighbouring countries that use FIDIC to exchange experience.

5. 2 Hypotheses Testing

The study contains two sets of hypotheses that are related to the opinion of the respondents to Sections III and IV of the questionnaire, the general specifications for FIDIC contract, and FIDIC most influential sub-

clauses in Palestine. Three methods are used to analyze the hypotheses; Frequencies, Means, Standard deviations, and percentages to represent the collected data, One-Way ANOVA to indicate the significance difference between more than two levels of independent variables and to test the hypotheses, and Least Significant Differences (LSD) when the ANOVA indicates a significant difference, where LSD is used in order to specify the differences which require more analyses than the ANOVA test.

5.2.1 Set One: Hypotheses related to Section III (General Specifications for FIDIC Contract)

5.2.1.1 First Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of FIDIC contract according to the nature of work of the respondents. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.24).

Table (5.24): Mean score and Standard Deviation for Opinion on FIDIC General Specifications according to Respondents' Nature of Work

Item	Nature of Work	No.	Mean	S.D.
General Specifications of FIDIC contract	Employer	19	3.99	0.52
	Engineering Firm	25	3.92	0.45
	Contractor	68	4.00	0.84

Table (5.24) illustrates that there are differences in the averages in the opinion on the general specifications for FIDIC contract according to the nature of work for the respondents. To test whether these differences

are statistically significant, ANOVA test was used. The result is presented in Table (5.25).

Table (5.25): ANOVA Test for Opinion on FIDIC General Specifications according to Respondents' Nature of Work

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of FIDIC contract	Between Groups	2	0.12	0.06	0.11	0.89
	Within Groups	109	57.56	0.52		
	Total	111	57.68			

The results in Table (5.25) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the nature of work, where the level of significance (p-value = 0.89) is higher than the specified level of significance hypothesis ($\alpha = 0.05$). Therefore, there is absence of difference in points of view of the respondents according to their nature of work.

5.2.1.2 Second Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the Employers' classification. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.26).

Table 5.26: Mean Score and Standard Deviation for Opinion on FIDIC General Specifications according to Employers' Classification

Item	Employers' Classification	No.	Mean	S.D.
General Specifications of the FIDIC contract	Ministries & Municipalities	10	4.01	0.56
	Donors	5	3.83	0.55
	Universities and Private Sector	4	4.08	0.56

Table (5.26) illustrates that there are differences in the averages in the opinion on the general specifications for FIDIC contract according to the Employers' classification. To test whether these differences are significant statistically, ANOVA test was used. The result is presented in Table (5.27).

Table (5.27): ANOVA Test for Opinion on FIDIC General Specifications according to Employers' Classification

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	2	0.37	0.17	0.60	0.55
	Within Groups	16	8.94	0.31		
	Total	18	9.31			

The results in Table (5.27) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the Employers' classification, where the level of significance (p-value = 0.55) is higher than the specified level of significance hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in points of view of the respondents according to the Employers' classification.

5.2.1.3 Third Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the governorate where the respondents are located. In order to test this hypothesis, the averages and standard deviations were calculated as presented in Table (5.28).

Table (5.28): Mean Score and Standard Deviation for Opinion on FIDIC General Specifications according to Respondents' Governorate

Item	Governorate	No.	Mean	S.D.
General Specifications of the FIDIC contract	Jenin	23	4.18	1.26
	Ramallah and Al-Beiereh	26	3.90	0.35
	Nablus	31	4.07	0.59
	Qalqilia	6	3.57	0.87
	Jericho	2	4.50	0.71
	Hebron	9	3.79	0.55
	Tubas	2	3.88	0.06
	Tulkarem	5	3.97	0.28
	Beit Lahim	4	3.72	0.39
	Salfeet	2	3.95	0.31
	Jerusalem	2	3.46	0.30

Table (5.28) illustrates that there are differences in the averages in the opinion on general specifications for FIDIC contract according to the governorate where the respondent is located. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.29).

Table (5.29): ANOVA Test for Opinion on FIDIC General Specifications according to Respondents' Governorate

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	10	3.81	0.38	0.68	0.74
	Within Groups	101	53.41	0.56		
	Total	111	57.22			

The results in Table (5.29) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on general specifications of the FIDIC contract according to the governorate in which the respondent is located, where the level of significance (p-value = 0.74) is higher than the specified level of significance in the hypothesis. Therefore, there is

absence of differences in points of view of the respondents according to the governorate in which they are located.

5.2.1.4 Fourth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on general specifications of the FIDIC contract according to the respondents' position. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.30).

Table (5.30): Mean Score and Standard Deviation for Opinion on FIDIC General Specifications according to Respondents' Position

Item	Respondents' Position	No.	Mean	S.D.
General Specifications of the FIDIC contract	Company managers	52	4.01	0.91
	Project managers	28	4.08	0.48
	Engineers	26	3.84	0.50
	Others	6	3.85	0.44

Table (5.30) illustrates that there are differences in the averages in the opinion on the general specifications for FIDIC contract according to respondents' position. To test whether these differences are significant statistically, ANOVA test was used. The result is presented in Table (5.31).

Table (5.31): ANOVA Test for Opinion on FIDIC General Specifications according to Respondents' Position

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	3	0.93	0.31	0.59	0.62
	Within Groups	108	56.80	0.52		
	Total	111	57.73			

The results in Table (5.31) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on the general

specifications of the FIDIC contract according to the respondents' position, where the level of significance (p -value = 0.62) is higher than the specified level of significance hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in points of view of the respondents according to respondents' position.

5.2.1.5 Fifth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the respondents' education level. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.32).

Table (5.32): Mean Score and Standard Deviation for Opinion on FIDIC General Specifications according to Respondents' Education Level

Item	Education Level	No.	Mean	S.D.
General Specifications of the FIDIC contract	High Graduate Degree	31	4.12	0.52
	Bachelor Degree	71	3.99	0.80
	High School Certificate	9	3.76	0.76
	Others	1	3.60	0.22

Table (5.32) illustrates that there are differences in the averages in the opinion on the general specifications for FIDIC contract according to the respondents' education level. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.33).

Table (5.33): ANOVA Test for Opinion on FIDIC General Specifications according to Respondents' Education Level

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	3	1.29	0.43	0.82	0.49
	Within Groups	108	57.14	0.523		
	Total	111	58.43			

The results in Table (5.33) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the respondents' education level, where the level of significance (p-value = 0.49) is higher than the specified level of significance hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in point of views of the respondents according to their education level.

5.2.1.6 Sixth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the years of experience for the respondents. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.34).

Table (5.34): Mean Score and Standard Deviation for Opinion on FIDIC General Specifications according to the Respondents' Years of Experience

Item	Years of Experience	No.	Mean	S.D.
General Specifications of the FIDIC contract	Less than 5 years	3	3.81	0.46
	From 5 to 10 years	13	3.87	0.41
	From 11 to 20 years	43	4.07	1.10
	Above 20 years	41	3.95	0.47

Table (5.34) illustrates that there are differences in the averages in the opinion on the general specifications for the contract FIDIC according to the years of experience for the respondents. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.35).

Table (5.35): ANOVA Test for Opinion on FIDIC General Specifications according to Respondents' Years of Experience

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	3	0.56	0.19	0.30	0.83
	Within Groups	98	60.88	0.62		
	Total	101	61.44			

The results in Table (5.35) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the respondents' years of experience, where the level of significance (p-value =0.83) is higher than the specified level of significance hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in points of views of the respondents according to their years of experience.

5.2.1.7 Seventh Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the Contractors' classification under PCU Category specialization. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.36).

Table (5.36): Mean Score and Standard Deviation for Opinion on FIDIC General Specifications according to the Contractors' Classification under PCU Category Specialization

Item	PCU category	No.	Mean	S.D.
General Specifications of the FIDIC contract	1st Category	34	3.98	0.47
	2nd Category	19	3.92	0.69
	3rd Category	5	4.96	1.91
	4th Category	6	3.62	0.77
	5th Category	4	3.54	0.43

Table (5.36) illustrates that there are differences in the averages in the opinion on the general specifications for the contract FIDIC according to the Contractors' classification under PCU Category specialization. To test whether these differences are significant statistically, ANOVA test was used. The result is presented in Table (5.37).

Table (5.37): ANOVA Test for Opinion on FIDIC General Specifications according to the Contractors Classification under PCU Category Specialization

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	4	8.35	2.09	3.37	0.01
	Within Groups	63	39.02	0.62		
	Total	67	47.36			

The results in Table (5.37) show that there are statistically significant differences (at $\alpha = 0.05$) in the opinion on the general specifications according to the Contractors' classification under PCU category specialization, where the level of significance (p-value = 0.01) is lower than the specified level of significance in the hypothesis ($\alpha = 0.05$). Therefore, there exist differences in the views between to the Contractors classification under PCU category specialization.

In order to determine these differences, LSD test used in order to determine the differences as presented in Table (5.38).

Table (5.38): LSD Test for Opinion on FIDIC General Specifications according to the Contractors' Classification under PCU Category Specialization

Contractor's Classification under PCU Category Specialization (I)	Contractor's Classification under PCU Category Specialization (J)	Mean Difference (I-J)	Sig.
1 st Category	2 nd Category	0.06	0.78
	3 rd Category	-0.99	0.003
	4 th Category	0.36	0.31
	5 th Category	0.44	0.30
2 nd Category	1 st Category	-0.06	0.78
	3 rd Category	-1.05	0.004
	4 th Category	0.29	0.43
	5 th Category	0.38	0.39
3 rd Category	1 st Category	0.99	0.003
	2 nd Category	1.05	0.004
	4 th Category	1.34	0.003
	5 th Category	1.42	0.005
4 th Category	1 st Category	-0.36	0.31
	2 nd Category	-0.29	0.43
	3 rd Category	-1.34	0.003
	5 th Category	0.08	0.87
5 th Category	1 st Category	-0.44	0.30
	2 nd Category	-0.38	0.39
	3 rd Category	-1.42	0.005
	4 th Category	-0.08	0.87

The results of the LSD test for PCU Category specialization illustrates that a statistical significance difference appears between the first category and the third category with mean difference = -0.99. These differences are in favor of the third category classification. As p-value = 0.003 which is less than 0.05, the results show that there is a statistically significance difference which appear between the third category and the

second, the fourth and the fifth categories in favour of third category where all mean differences are positive, and where the p-value in all indicated cases are less than 0.05.

5.2.1.8 Eighth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the Contractors' specialization. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.39).

Table (5.39): Mean Score and Standard Deviation for Opinion on FIDIC General Specification according to Contractor's Specialization

Item	Contractor Specialization	No.	Mean	S.D.
General Specifications of the FIDIC contract	Buildings	56	4.00	0.94
	Water & Sanitation	8	3.76	0.29
	Roads	4	3.90	0.38

Table (5.39) illustrates that there are differences in the averages in the opinion on the general specifications for the contract FIDIC according to Contractor's specialization. To test whether these differences are significant statistically, ANOVA test was used. The result is presented in Table (5.40).

Table (5.40): ANOVA Test for Opinion on FIDIC General Specification according to Contractor's Specialization

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
General Specifications of the FIDIC contract	Between Groups	2	0.12	0.06	0.11	0.11
	Within Groups	65	34.32	0.53		
	Total	67	34.44			

The results in Table (5.40) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on the general specifications of the FIDIC contract according to the Contractor's specialization, where the level of significance (p-value= 0.11) is higher than the specified level of significance in the hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in points of views of the Contactors according to their specialization.

5.2.2 Set Two: Hypotheses related to Section IV (FIDIC Most Influential Sub-clauses in Palestine)

5.2.2.1 First Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the nature of work for the respondents. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.41).

Table (5.41): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Nature of Work

Item	Nature of Work	No.	Mean	S.D.
Items related to Employer	Employer	19	4.10	0.41
	Engineering Firm	25	3.84	0.43
	Contractor	68	3.95	0.61
Items related to Engineer	Employer	19	3.86	0.54
	Engineering Firm	25	3.89	0.54
	Contractor	68	3.96	0.62
Items related to Contractor	Employer	19	4.01	0.44
	Engineering Firm	25	4.02	0.48
	Contractor	68	4.10	0.51
Total	Employer	19	3.99	0.40
	Engineering Firm	25	3.91	0.46
	Contractor	68	4.00	0.49

Table (5.41) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the nature of work for the respondents. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.42).

Table (5.42): ANOVA Test for the Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Nature of Work

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	2	0.72	0.36	1.23	0.30
	Within Groups	109	31.86	0.29		
	Total	111	32.57			
Items related to Engineer	Between Groups	2	0.19	0.09	0.27	0.77
	Within Groups	109	37.88	0.35		
	Total	111	38.06			
Items related to Contractor	Between Groups	2	0.18	0.09	0.38	0.68
	Within Groups	109	26.36	0.24		
	Total	111	26.55			
Total	Between Groups	2	0.19	0.10	0.44	0.65
	Within Groups	109	24.09	0.22		
	Total	111	24.29			

The results of Table (5.42) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the nature of the work, where the level of significance p-values for all cases are higher than the specified level of significance hypothesis. Therefore, there is absence of difference in points of view of the respondents according to their nature of work.

5.2.2.2 Second Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the Employers' classification. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.43).

Table (5.43): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Employers' Classification

Item	Employer Type	No.	Mean	S.D.
Items related to Employer	Ministries & Municipalities	10	4.08	0.49
	Donors	5	4.21	0.47
	Universities & Private Sector	4	3.93	0.57
Items related to Engineer	Ministries & Municipalities	9	3.83	0.60
	Donors	4	3.74	0.52
	Universities & Private Sector	4	3.96	0.69
Items related to Contractor	Ministries & Municipalities	10	3.88	0.56
	Donors	4	4.03	0.29
	Universities & Private Sector	4	4.14	0.40
Total	Ministries & Municipalities	10	3.93	0.50
	Donors	5	3.85	0.41
	Universities & Private Sector	3	4.10	0.34

Table (5.43) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the Employers' classification. To test whether these differences are significant statistically, ANOVA test was used. The result is presented in Table (5.44).

Table (5.44): ANOVA Test for Opinion on FIDIC Most Influential Sub-clauses according to Employers' Classification

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	2	0.40	0.20	0.75	0.48
	Within Groups	16	7.94	0.27		
	Total	18	8.34			
Items related to Engineer	Between Groups	2	0.24	0.12	0.32	0.73
	Within Groups	14	9.49	0.38		
	Total	16	9.73			
Items related to Contractor	Between Groups	2	0.34	0.17	0.93	0.41
	Within Groups	14	4.14	0.187		
	Total	16	4.47			
Total	Between Groups	2	0.35	0.18	1.01	0.38
	Within Groups	14	4.25	0.17		
	Total	16	5.60			

The result of Table (5.44) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential contract according to the according to the Employers' classification, where the level of significance p-values for all cases are higher than the specified level of significance in the hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in points of view of the respondents according to the Employers' classification.

5.2.2.3 Third Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the governorate where the respondents are located. In order to test this

hypothesis, the averages and the standard deviations were calculated as presented in Table (5.45).

Table (5.45): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Governorate

Item	City	No.	Mean	S.D.
Items related to Employer	Jenin	23	4.00	0.69
	Ramallah and Al-Beireh	26	4.01	0.49
	Nablus	31	3.95	0.61
	Qalqilia	6	4.12	0.72
	Jericho	2	4.05	0.64
	Hebron	9	3.76	0.44
	Tubas	2	3.80	0.42
	Tulkarem	5	3.72	0.36
	Beit Lahim	4	4.13	0.32
	Salfeet	2	3.70	0.43
	Jerusalem	2	4.05	0.21
Items related to Engineer	Jenin	23	3.81	0.72
	Ramallah and Al-Beireh	26	3.85	0.50
	Nablus	31	4.12	0.62
	Qalqilia	6	4.34	0.50
	Jericho	2	4.10	0.57
	Hebron	9	3.60	0.45
	Tubas	2	3.78	0.42
	Tulkarem	5	3.80	0.45
	Beit Lahim	4	3.93	0.49
	Salfeet	2	4.00	0.46
	Jerusalem	2	3.40	0.71
Items related to Contractor	Jenin	23	4.06	0.55
	Ramallah and Al-Beireh	26	3.95	0.43
	Nablus	31	4.23	0.53
	Qalqilia	6	4.10	0.65
	jericho	2	4.11	0.83
	Hebron	9	3.99	0.37
	Tubas	2	3.52	0.06
	Tulkarem	5	3.88	0.34
	Beit Lahim	4	4.32	0.13
	Salfeet	2	3.84	0.62
	Jerusalem	2	4.28	0.09

Item	City	No.	Mean	S.D.
Total	Jenin	23	3.98	0.54
	Ramallah and Al-Beireh	26	3.93	0.41
	Nablus	31	4.07	0.55
	Qalqilia	6	4.18	0.59
	Jericho	2	4.09	0.68
	Hebron	9	3.79	0.30
	Tubas	2	3.63	0.09
	Tulkarem	5	3.80	0.31
	Beit Lahim	4	4.13	0.21
	Salfeet	2	3.85	0.41
	Jerusalem	2	3.91	0.28

Table (5.45) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the city where the respondent is located. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.46).

Table (5.46): ANOVA Test for FIDIC Most Influential Sub-clauses according to Respondents' Geographical Distribution

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	10	1.26	0.13	0.39	0.95
	Within Groups	100	32.50	0.33		
	Total	110	33.76			
Items related to Engineer	Between Groups	10	3.78	0.38	1.10	0.37
	Within Groups	100	34.31	0.34		
	Total	110	38.09			
Items related to Contractor	Between Groups	10	2.19	0.22	0.90	0.54
	Within Groups	101	24.70	0.25		
	Total	111	26.89			
Total	Between Groups	10	1.44	0.14	0.62	0.79
	Within Groups	101	23.39	0.23		
	Total	111	24.83			

Table (5.46) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most

influential according to the governorate in which the respondent is located, where the level of significance (p-values) in all cases are higher than the specified level of significance in the hypothesis ($\alpha=0.05$). Therefore, there is absence of a difference in points of view of the respondents according to the governorate in which they are located.

5.2.2.4 Fourth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in opinion on FIDIC sub-clauses that are the most influential contract according to the respondents' position. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.47).

Table (5.47): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Position

Item	Respondents' Position	No.	Mean	S.D.
Items related to Employer	Company managers	52	3.94	0.61
	Project managers	28	3.95	0.50
	Engineers	26	3.90	0.52
	Others	6	4.11	0.31
Items related to Engineer	Company managers	52	3.96	0.59
	Project managers	28	3.90	0.56
	Engineers	26	3.80	0.65
	Others	6	4.07	0.30
Items related to Contractor	Company managers	52	4.02	0.50
	Project managers	28	4.10	0.53
	Engineers	26	4.08	0.44
	Others	6	4.11	0.31
Total	Company managers	52	3.97	0.48
	Project managers	28	3.99	0.46
	Engineers	26	3.90	0.48
	Others	6	4.10	0.22

Table (5.47) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the respondents' position. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.48).

Table (5.48): ANOVA Test for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Position

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	3	0.24	0.08	0.268	0.85
	Within Groups	108	32.39	0.30		
	Total	111	32.63			
Items related to Engineer	Between Groups	3	0.58	0.19	0.57	0.63
	Within Groups	108	36.47	0.34		
	Total	111	37.05			
Items related to Contractor	Between Groups	3	0.16	0.05	0.226	0.89
	Within Groups	108	25.65	0.24		
	Total	111	25.81			
Total	Between Groups	3	0.25	0.08	0.38	0.77
	Within Groups	108	23.20	0.22		
	Total	111	23.44			

The results in Table (5.48) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the respondents' position, where the level of significance p-values for all cases are higher than the specified level of significance in the hypothesis. Therefore, there is absence of a difference in points of view of the respondents according to their respondents' position.

5.2.2.5 Fifth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the respondents' education level. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.49).

Table (5.49): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Education Level

Item	Education level	No.	Mean	S.D.
Items related to Employer	High Graduate Degree	31	3.87	0.51
	Bachelor Degree	71	3.99	0.55
	High School Certificate	9	3.89	0.57
	Others	1	3.55	0.64
Items related to Engineer	High Graduate Degree	31	3.91	0.58
	Bachelor Degree	71	3.92	0.58
	High School Certificate	9	3.97	0.72
	Others	1	4.00	0.14
Items related to Contractor	High Graduate Degree	31	4.00	0.51
	Bachelor Degree	71	4.08	0.47
	High School Certificate	9	4.16	0.62
	Others	1	3.76	0.34
Total	High Graduate Degree	31	3.93	0.66
	Bachelor Degree	71	3.98	0.57
	High School Certificate	9	4.08	0.55
	Others	1	3.77	0.54

Table (5.49) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the respondents' education level. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.50).

Table (5.50): ANOVA Test for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Education Level

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	3	0.65	0.22	0.74	0.53
	Within Groups	108	31.81	0.30		
	Total	111	32.46			
Items related to Engineer	Between Groups	3	0.037	0.01	0.04	0.99
	Within Groups	108	37.74	0.35		
	Total	111	37.78			
Items related to Contractor	Between Groups	3	0.419	0.14	0.57	0.64
	Within Groups	108	26.39	0.24		
	Total	111	26.81			
Total	Between Groups	3	0.28	0.09	0.42	0.74
	Within Groups	108	23.94	0.22		
	Total	111	24.22			

The result of Table (5.50) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according of the respondents' education level, where the level of significance p-values for all cases are higher than the specified level of significance in the hypothesis ($\alpha = 0.05$). Therefore, there is absence of a difference in point of views of the respondents according to their respondents' education level.

5.2.2.6 Sixth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the years of experience for the respondents. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.51).

Table (5.51): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Years of Experience

Item	Years of experience	No.	Mean	S.D.
Items related to Employer	Less than 5 years	3	3.70	0.46
	From 5 to 10 years	13	3.92	0.47
	From 11 to 20 years	43	4.03	0.57
	Above 20 years	41	3.84	0.50
Items related to Engineer	Less than 5 years	3	3.60	0.66
	From 5 to 10 years	13	3.86	0.49
	From 11 to 20 years	43	3.84	0.62
	Above 20 years	41	3.92	0.59
Items related to Contractor	Less than 5 years	3	4.13	0.45
	From 5 to 10 years	13	4.08	0.28
	From 11 to 20 years	43	4.07	0.50
	Above 20 years	41	3.97	0.49
Total	Less than 5 years	3	3.81	0.50
	From 5 to 10 years	13	3.95	0.33
	From 11 to 20 years	43	4.00	0.46
	Above 20 years	41	3.92	0.47

Table (5.51) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the variable of years of experience for the respondents. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.52).

Table (5.52): ANOVA Test for Opinion on FIDIC Most Influential Sub-clauses according to Respondents' Years of Experience

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	3	0.72	0.24	0.87	0.46
	Within Groups	98	29.72	0.28		
	Total	101	30.44			
Items related to Engineer	Between Groups	3	0.34	0.11	0.33	0.81
	Within Groups	98	37.35	0.35		
	Total	101	37.69			
Items related to Contractor	Between Groups	3	0.24	0.08	0.36	0.78
	Within Groups	98	23.24	0.22		
	Total	101	23.48			
Total	Between Groups	3	0.15	0.05	0.25	0.86
	Within Groups	98	21.51	0.20		
	Total	101	21.66			

Results in Table (5.52) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC clauses that are the most influential according to the respondents years of experience, where the level of significance p-values in all cases are higher than the specified level of significance in the hypothesis. Therefore, there is absence of a difference in points of views of the respondents according to their years of experience.

5.2.2.7 Seventh Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the Contractors' classification under PCU Category specialization. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.53).

Table (5.53): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Contractor's Classification under PCU Category Specialization

Item	PCU category	No.	Mean	S.D.
Items related to Employer	1 st Category	34	3.94	0.61
	2 nd Category	19	3.99	0.63
	3 rd Category	5	4.08	0.67
	4 th Category	6	3.72	0.41
	5 th Category	4	3.65	0.72
Items related to Engineer	1 st Category	34	4.01	0.55
	2 nd Category	19	4.04	0.72
	3 rd Category	5	3.62	0.74
	4 th Category	6	4.05	0.69
	5 th Category	4	3.70	0.36
Items related to Contractor	1 st Category	34	4.14	0.47
	2 nd Category	19	4.14	11.56
	3 rd Category	5	3.95	0.46
	4 th Category	6	4.20	0.51
	5 th Category	4	3.73	0.60
Total	1 st Category	34	4.01	0.46
	2 nd Category	19	4.05	0.54
	3 rd Category	5	3.95	0.51
	4 th Category	6	3.94	0.63
	5 th Category	4	3.69	0.51

Table (5.53) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the Contractors' classification under PCU Category specialization. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.54).

Table (5.54): ANOVA Test for Opinion on FIDIC Most Influential Sub-clauses according to Contractors' Classification under PCU Category Specialization

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	4	0.76	0.190	0.50	0.74
	Within Groups	63	23.84	0.38		
	Total	67	24.60			
Items related to Engineer	Between Groups	4	1.18	0.30	0.76	0.55
	Within Groups	63	24.30	0.39		
	Total	67	25.48			
Items related to Contractor	Between Groups	4	0.84	0.21	0.82	0.52
	Within Groups	62	16.15	0.26		
	Total	66	16.74			
Total	Between Groups	4	0.47	0.12	0.46	0.74
	Within Groups	63	15.91	0.25		
	Total	67	16.37			

Table (5.54) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the Contractors' classification under PCU Category specialization, where the level of significance p-values for all cases are higher than the specified level of significance in the hypothesis($\alpha = 0.05$). Therefore, there is absence of a difference in points of views of the Contractors according to their classification under PCU Category specialization

5.2.2.8 Eighth Hypothesis

There is no statistically significant difference (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the Contractors' specialization. In order to test this hypothesis, the averages and the standard deviations were calculated as presented in Table (5.55).

Table (5.55): Mean Score and Standard Deviation for Opinion on FIDIC Most Influential Sub-clauses according to Contractor's Specialization

Item	Contractor's Specialization	No.	Mean	S.D.
Items related to Employer	Buildings	56	3.99	0.63
	Water & Sanitation	8	3.60	0.49
	Roads	4	3.76	0.53
Items related to Engineer	Buildings	56	3.97	0.63
	Water & Sanitation	8	3.70	0.67
	Roads	4	3.88	0.40
Items related to Contractor	Buildings	56	4.12	0.52
	Water & Sanitation	8	3.90	0.36
	Roads	4	3.77	0.35
Total	Buildings	56	4.01	0.51
	Water & Sanitation	8	3.73	0.43
	Roads	4	3.80	0.25

Table (5.55) illustrates that there are differences in the averages in the opinion on FIDIC sub-clauses that are the most influential according to the Contractors' specialization. To test whether these differences are statistically significant, ANOVA test was used. The result is presented in Table (5.56).

Table (5.56): ANOVA Test for Opinion on FIDIC Most Influential Sub-clauses according to the Contractors' Specialization

Item	Source	Df	Sum of Squares	Mean Square	F-value	Sig.
Items related to Employer	Between Groups	2	0.96	0.48	1.29	0.28
	Within Groups	65	24.17	0.37		
	Total	67	25.13			
Items related to Engineer	Between Groups	2	0.39	0.20	0.50	0.61
	Within Groups	65	25.39	0.39		
	Total	67	25.78			
Items related to Contractor	Between Groups	2	0.66	0.33	1.33	0.27
	Within Groups	65	16.06	0.25		
	Total	67	16.72			
Total	Between Groups	2	0.61	0.307	1.28	0.29
	Within Groups	65	15.65	0.24		
	Total	67	16.26			

The results of Table (5.56) show that there is no statistically significant differences (at $\alpha = 0.05$) in the opinion on FIDIC sub-clauses that are the most influential according to the Contractors' specialization, where the level of significance p-values for all cases are higher than the specified level of significance in the hypothesis. Therefore, there is absence of a difference in points of views of the Contractors according to their specialization.

5.3 Interview Results and Discussions

Based on the literature review and on the methodology presented in the previous chapters, a number of interviews were conducted as a supplementary tool to the questionnaire. More information were obtained from the interviews that reflect the obstacles and challenges that face the implementation of FIDIC in Palestine.

The interview is divided into five specific questions that was conducted face-to face by the researcher. The interview questions were structured to get answers by experts in the contracts and with people who establish policies in Palestine. A list of the interviewees and the questions are presented in Appendices F and G.

5.3.1 Contract Conditions used in Palestine

- The experts were asked about their opinion of the General Conditions used in Palestine “FIDIC 1999” and the Palestinian Particular Conditions. There was a contradiction between the interviewee’s opinions. Four of the six interviewees thought that FIDIC Red Book 1999 implementation is satisfactory, since it has been used in Palestine eight years ago without the occurrence of major conflicts occurred. Adoption of FIDIC was a great success for the construction industry and therefore it is applicable to use in Palestine.
- The other two interviewees thought that FIDIC is not applicable for use in Palestine. According to them, FIDIC is designed for large scale and international projects, while most of the projects in Palestine are small to medium in scale. In addition, they indicated that the FIDIC General Conditions are of international type and therefore not suitable to use for small local projects.
- On the other hand, all interviewees though that Palestinian Particular Conditions are generally good and achieved the desired aims. However,

they indicated that there are still some gaps, where the Palestinian Particular Conditions need to be amended in relation to issues such as the profit, adjustments on prices, and taking over procedures.

5.3.2 Importance to use Standard General Conditions in Palestine

- The Palestinian Particular Conditions define the relations between the contract parties and clarify the rights and duties. The interviewees indicated that these conditions are important to avoid failures and problems in the construction process. These help to reduce the delay in the completion and delivery of the projects. Finally, they help to overcome and avoid disputes between contract parties.

5.3.3 Implementation of the FIDIC in Palestine

- There were differences between the interviewees about the assessment of FIDIC implementation. Four of the interviewees thought that it was relatively good. All comments had confirmed that there were many obstacles that prevented a healthy implementation of FIDIC. The main obstacles are highlighted below.

5.3.4 Obstacles that prevent adopting FIDIC in Palestine

- The obstacles that were highlighted by the interviewees are similar to those obtained through the respondents as illustrated before. The political and financial situations that exist in Palestine, the multitude of the Donors, the low level of awareness among all contract parties, and weakness in contracting industry. Therefore, it is obvious that the above

indicated obstacles are considered as the main ones which prevent a healthy implementation of FIDIC in Palestine.

5.3.5 Recommendations that would make FIDIC more understandable and easy to use in Palestine

- All interviewees agreed that developing/amending FIDIC conditions is the main recommendation to cope with the difficult situation in Palestine in the construction industry.
- Raising the level of awareness through training courses and workshops for all parties.
- Building a contract principle course to be taught in the colleges of engineering in the Palestinian universities.
- Adoption of the Palestinian Unified Contract must be mandatory for all contract parties in Palestine.

Chapter Six

**A Roadmap towards a
Healthy Implementation of
FIDIC in Palestine**

Chapter Six

A Roadmap towards a Healthy Implementation of FIDIC in Palestine

6.1 Introduction

As stated above, many obstacles are facing the implementation of FIDIC conditions in Palestine. In this chapter, a roadmap is presented, which is designed to overcome the obstacles which were highlighted in Chapter 5.

The Ministry of Public Works and Housing (MPWH) is mainly responsible for the development and implementation of FIDIC in Palestine, as a representative of the Palestine National Authority. The Central Tendering Department is mainly responsible for tendering the projects in the MPWH, PWA, MEHE, etc. In spite of that, all related parties have same degree of responsibility, such as the Palestinian Contract Union as a representative for all Contractors in Palestine, and the Engineers Association as a representative for all the Engineering Firms, Municipalities, Donors, Universities, and the Private Sector are also partners who must be part in the development of FIDIC in Palestine.

6.2 Proposed Roadmap towards a healthy implementation of FIDIC in Palestine

Table (6.1) illustrates a proposed roadmap to implement FIDIC in Palestine in a proper way. The roadmap is identified based on the in-depth understanding of the obstacles and challenges that face the implementation

of FIDIC, in addition to the analysis of the questionnaires and interviews analysis. The roadmap is divided into different stages according to the project life cycle in Palestine. This included the Planning Phase, Design and Preparing Documents Phase, Tendering Phase, Construction Phase, Post Construction Phase, and Sustainability Management for FIDIC projects.

Table (6.1): Roadmap towards a Healthy Implementation of FIDIC in Palestine

Measure	Type of instruments	Responsibility
Planning Phase		
<p>1. Adopt a Short Form of Contract</p> <ul style="list-style-type: none"> The Central Tendering Department must initiate adopting a short form of contract that is suitable to small projects in size and duration. This type of contracts is important due to the nature of the projects in Palestine. The short form of contract should solve many issues and obstacles that face the implementation of the FIDIC "Red Book". 	Administrative	CTD
<p>2. Better Financial Arrangements for the PNA</p> <ul style="list-style-type: none"> The PNA needs to make better financial arrangements before starting the tendering process, it must be based on the availability of budget. Since most of the PNA projects are funded by Donors and Multilateral Development Banks who pay on time stages, Particular Conditions must be added to cope with the financial flow with payments to the Contractors. Moreover, in case the funding is allocated, it is recommended to ensure that the funding is fully secured before starting the tendering process. 	Administrative	CTD, Ministry of Finance
<p>3. Harmonizing the Unified Contract with the Political and Legal Situation</p> <p>The Palestinian Particular Conditions in the Unified Contract need to be amended to be convenient with the current situation in Palestine, the following are some items that are proposed to be modified:</p> <ul style="list-style-type: none"> Dealing with one currency in tenders, especially for the Donors and NGO's who usually use US dollar and Euro. Suitable durations for projects in specific areas (such as area (C)) to avoid delay that could be caused by Israeli siege and closures. 	Administrative Administrative	TCD, Donors, Private Sector TCD, Donors, Private Sector

Measure	Type of instruments	Responsibility
<ul style="list-style-type: none"> ▪ State to use local materials as much as possible. ▪ State to activate Arbitration and DAB Laws legally and mandatory, which are to be adopted by all parties, such as Donors, Private Sector, etc. 	<p>Legal</p> <p>Legal</p>	<p>TCD, Donors, Private Sector</p> <p>TCD, EA, PCU</p>
<p>4. New Contractor’s Classification Procedures and Mechanisms Find new criteria for classification of the Contractors. The following are recommendations to achieve that:</p> <ul style="list-style-type: none"> ▪ Visiting of the Contractors’ offices before and during the classification period ▪ The Contractor must procure a contract Engineer. ▪ Evaluation Contractors’ performance during execution, the form must be filled up by the Employer and the Engineer, according to the evaluation the Contractor can be reclassified. ▪ Strengthening the authority of the PCU as the main representative for the Contractors. ▪ Improving the PCU website. 	<p>Administrative</p> <p>Administrative</p> <p>Administrative</p> <p>Administrative</p> <p>Administrative</p> <p>Administrative</p>	<p>PCU</p> <p>PCU</p> <p>PCU</p> <p>PNA</p> <p>PCU</p>
<p>5. Scheduled Training Programs</p> <ul style="list-style-type: none"> ▪ Raising awareness for the parties by continuous training, workshops, or lectures that help them to be familiar with all issues related to the construction industry. These must include the following fields: <ul style="list-style-type: none"> ➢ Tender pricing ➢ Project Management ➢ Contract administration and FIDIC forms of contracts ➢ Contractor and Employer rights and obligations ➢ English Language 	<p>Administrative</p>	<p>PNA, EA, PCU, Private Sector, Donors</p>

Measure	Type of instruments	Responsibility
<p>6. Unified Donors' Contract</p> <ul style="list-style-type: none"> ▪ All parties in the construction sector in Palestine must adopt the Unified Contract, especially the Donors, International NGO's and the Private Sector. Additional particular conditions can be added to their tenders to cope with their rules and regulations. 	Administrative	PNGO, Private Sector
Design and Preparing Documents Phase		
<p>1. Enhance the consulting engineering quality to provide a clear and honest Tender Documents</p> <ul style="list-style-type: none"> ▪ Raising awareness for the Engineering firms to provide high quality of tender documents ▪ The EA must review the tender conditions as part of the tender documents. ▪ Avoid contradiction in tender documents, which will lead to achieving a clearer contract document ▪ Scheduled meeting between the Employer and the Engineer for discussion to avoid misunderstanding of the tender conditions. 	Administrative Administrative Administrative Administrative	EA EA CTD, EA CTD, EA, Private Sector, Donors
Tendering Phase		
<ul style="list-style-type: none"> ▪ Invitations to tenders should be on hold until sufficient projects budget is available. ▪ Tender documents which include General Conditions, drawings, BOQ, etc., must be studied carefully before tendering by the Contractors. ▪ Experts to be hired by the PCU to help the Contractors in dealing with contracts 	Administrative Administrative Administrative	MPWH, CTD, Ministry of Finance PCU PCU

Measure	Type of instruments	Responsibility
Construction Phase		
<p>1. Enhance the Engineer role in the Construction site</p> <ul style="list-style-type: none"> ▪ The Engineer role should be neutral; he should follow the specified duties according to the contract. ▪ A contract Engineer must be a part of the Contractor office team, who has enough experience in tendering and contracts. 	Administrative	EA
<p>'2. Development of the construction's site procedures</p> <ul style="list-style-type: none"> ▪ Quality assurance system must exist in all construction projects in Palestine. ▪ The Contractors must take all the procedures to protect the environment in their projects. ▪ The Contractors in Palestine must pay the accepted rate of wages, and observe better conditions for their laborers. ▪ The Contractors in Palestine must adopt all safety precautions, take care for the safety of all persons entitled to be on the site, provide fencing, lighting, guarding, etc. 	Administrative legal legal Administrative	PNA, EA, Donors, PCU PCU PCU PCU
Post-Construction Phase		
Monitoring and Evaluation		
<ul style="list-style-type: none"> ▪ Monitoring and evaluation for the Contractor and the Engineer performance. The report must be submitted to CTD, PCU, and EA for re-classification. 	Administrative	CTD, PCU, EA
FIDIC Projects sustainability Management		
<p>1. Promote and enhance the position of FIDIC's contract</p> <ul style="list-style-type: none"> ▪ Participation in global conferences and workshops, which will lead to a wider knowledge of FIDIC conditions and the way to develop the FIDIC implementation in Palestine. 	Administrative	EA, MPWH, PCU

Measure	Type of instruments	Responsibility
<p>2. Continuous assessment for the implementation of FIDIC</p> <ul style="list-style-type: none"> ▪ A committee should be established to assist the implementation of FIDIC periodically. Feedback should be submitted to the concerned authorities for corrective actions. 	Administrative	MPWH, EA, PCU
<p>3. Enhance and develop of the Palestinian International Arbitration Chamber</p> <ul style="list-style-type: none"> ▪ Adapting that the Palestinian International Arbitration Chamber to be the umbrella of settling all disputes by ensuring resolution of such disputes through arbitration, and to be presented in accordance with the law relating to commercial contracts, financial and engineering works. 	Administrative	EA, PIAC, PCU

Chapter Seven
Conclusions and
Recommendations

Chapter Seven

Conclusions and Recommendations

From all previous chapters, it can be concluded that the implementation of FIDIC in Palestine is facing major problems and obstacles which affect negatively the construction sector in Palestine and would hinder this sector from being influential and effective in the local economy.

Thus, through this chapter, research summary and conclusions will be reviewed, and recommendations will be presented to help in enhancing the performance of the Palestinian construction sector and solving its indicated problems. In addition, some further studies will be proposed for completing and strengthening the outcome of this research.

6.1 Summary and Conclusions

6.1.1 General Conclusions

This section summarizes the outcome of the research including those related to the analysis of the response of a sample of Employers, Engineers, and Contractors.

- ❖ It is obvious that FIDIC contracts are well-known in Palestine, but there is varying degrees of knowledge of FIDIC and its clauses. This applies on some clauses which are related to FIDIC and Contracts, such as arbitration.
- ❖ There is a general acceptance of the FIDIC Conditions in Palestine; even so, few respondents thought that FIDIC “Red Book” is not

suitable for Palestine. This is mainly because FIDIC “Red Book” is designed for large scale and international projects, while most of the projects in Palestine are small to medium in scale.

- ❖ The Palestinian Particular Conditions met satisfaction by the contracting parties in general. Nevertheless, there is a need for amending some clauses especially which are related to profit, adjustments of prices, etc.
- ❖ Most of the respondents thought that Contractors don't read well tender documents which include the General Conditions due to many reasons such as lack of attention, administrative weakness and inexperience of legal aspects. The respondents thought that English language is an obstacle for understanding the tender documents for Contractors.
- ❖ All respondents agreed that Donors are the Employers with the highest degree of compliance with tender documents; the reasons are related to the mechanism of payment, professionalism, respect, flexibility, internal auditing, well defined tender documents, and highly experience staff.
- ❖ Donors and International NGO's in Palestine are using different types of General Conditions for their projects. This negatively affects the implementation of FIDIC in Palestine.
- ❖ For Ministries and Municipalities, There is bureaucracy and limit temperamental expansion in dealings with the Contractors.

- ❖ Most of the respondents had chosen administrative problems and lack of maturity of the construction sector in Palestine as the main obstacles for the implementation of FIDIC.
- ❖ Respondents thought that most of the disputes in Palestine are solvable amicably; even so they thought that DAB idea for settling disputes is good.
- ❖ Respondents thought that stable political situation is a negative specification in FIDIC contract, and it is one of the main obstacles in the implementation of FIDIC. This includes many issues related to the political situation, such as the multiplicity of currencies in Palestine, and multitude of donors and the weakness of the Palestinian Judiciary System.
- ❖ The low quality of the tender documents and the contradiction in the terms of tender documents, are reasons for disputes, which are caused by the Engineering Firms.
- ❖ Some of the Engineering Firms are not neutral in dealing between the Employer and the Contractor.
- ❖ The respondents were aware of most of the clauses which had presented to them in the questionnaire. On the other hand, the respondents thought that 54% of the presented sub-clauses are not honored by the contracting parties. A further look at those clauses reveal that most of them are related to financial issues, while other issues are related to

complying of the Contractor to safety, environment rules, quality control, wages rates, and other contractual clauses.

- ❖ The problem of the financial situation of the Palestinian National Authority is considered also as one of the main obstacles. As stated before, the PNA is not complying with many of the FIDIC clauses due to its financial situation.
- ❖ There is a need for reconsidering the current Contractors' classification procedures to be more precise and appropriate. Respondents thought that many Contractors are unqualified even though they have a good classification under PCU category specialization.
- ❖ The respondents thought that concerned authorities in Palestine are not doing their duties in raising awareness and education in the contractual and legal aspects related to application of FIDIC. Therefore, they thought that there is a need for training for all parties including Employers, Engineers and Contractors in dealing with FIDIC.

6.1.2 Conclusions derived from the Hypothesis Testing

- ❖ There are no statistically significant differences in the general specifications of the FIDIC contract according to the following variables: nature of work, Employers' classification, respondent' geographical distribution, respondents' position, respondents' education level, respondents' years of experience, and Contractors' specialization.

- ❖ There are statistically significant differences in the general specifications of the FIDIC contract appeared according to Contractors' classification under PCU Category specialization.
- ❖ There are no statistically significant differences in FIDIC most influential sub-clauses according to the following variables: nature of work, Employers' classification, respondent' geographical distribution, respondents' position, respondents' education level, respondents' years of experience, Contractors' classification under PCU Category specialization, and Contractors' specialization.

6.2 Recommendations

Based on the research findings, a roadmap has been devised to facilitate the proper implementation of the FIDIC General Conditions in Palestine. The recommendations are identified and classified according to the concerned party to whom they are addressed to.

The following are practical recommendations to the Employer (including the Palestinian Government, Donors and Private Sector), Engineering Association and Engineering Firms, and PCU and Contractors, which could lead to better contracting practices in Palestine.

- Palestinian Government should adopt a short form of contract to be used in the small projects in Palestine.
- Palestinian Government should comply with term of the Unified Contract, paying Contractors owed payments on time and paying fines when payments are delayed.

- Donors and International NGO's are advised to ratify the Unified Contract that is ratified by the Palestinian National Authority, with adding some particular conditions that are relating to them.
- Palestinian Government is advised to deal with the construction sector as a fundamental partner, focus on contracts laws and regulations. This is in addition to dealing with Contractors neutrally, and without favouritism.
- The Engineer, as an Employer agent, must be a neutral party. In addition, the Engineering Association must develop the consultancy works in order to provide a good set of tender documents.
- Raising the awareness for the Engineering firms to provide higher quality tender documents and to avoid contradictions in tender documents.
- Raising the awareness for the Contractor is highly recommended through continuous education, training courses and workshops included those in all related fields, such as, contracts, construction management, arbitration, etc, that help them to be familiar with all issues related to construction industry. Therefore, more understanding and realization will be obtained.
- Reconsidering of the current PCU Contractor's classification procedures, where new criteria must be devised. After adopting the Contractor's classification, continuous evaluation for the Contractors must take place by visiting the Contractors offices and work sites.

- Contractors are advised before signing the contract with the Employer to review and study all tender documents precisely and not only the BOQ. In case of any ambiguous item or unclear condition, they should take advice, support, and assistance from experts.

6.3 Proposed Further Studies

The following further researches related to the advancement of the construction industry are suggested to include:

- Developing of Unified Contract in Palestine through an extensive study of all of clauses and sub-clauses in the Unified Contract, and then try to extract a Palestinian Particular Conditions that are harmonized with the current situation in Palestine.
- Identification of the positive and negative aspects of the Donors and the International NGO's strategies in Palestine, by studying the actual role of the Donors, and extracting the challenges that face their strategies.
- Identification of the reasons for technical weakness of the Contractors in Palestine. The study should be based on extensive investigation of the construction sector and provide recommendations to develop the Palestinian Contractors technically.

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Appendices

Appendix (A): Structure of the Red Book

1. The General Provisions

Clause one comprises of 14 sub-clauses, sub-clause 1.1 discusses a complete set of definitions for words and expressions such as:

- The contract itself, documents and specifications.
- Parties and Persons.
- Dates, Tests, Periods and Completion
- Works and Goods
- Money and Payments
- Other Definitions
- Laws

In addition to the definition, sub-clauses 1.2-1.4 deal with Interpretation, Communications, and Priority of Documents. Sub-clause 1.5 discusses the priority of documents which was discussed previously, while sub-clause 1.6 deals with Contract Agreement which is a part of the contract documents. Other general provisions in clause one related to assignment, care and supply of documents, delayed drawing or instructions, Employer's use of Contractor's documents, Contractor's use of Employer's documents, confidential details, compliance with laws and finally joint and several liability.

2. The Employer

Under clause 2, the obligations and responsibilities of the Employer are set out in clear term. Sub-clause 2.1 discusses the right of access and possession of the site which must be given by the Employer to the

Contractor. Sub-clause 2.2 discusses the permits, licences where the Employer shall, upon request, provide assistance to the Contractor in respect of obtaining permits, licences and approvals.

Sub-clause 2.3 states the Employer's responsibility to ensure that Employer's personnel and the Employer other Contractors are co-operating with the Contractor on the site, and comply with the safety and environment precautions.

Sub-clauses 2.4 discusses the Employer's financial arrangements, within this sub-clause, the Employer shall submit within 28 days after receiving any request from the Contractor, a reasonable evidence that the financial arrangement has been made. Sub-clause 2.5 discusses the Employer's claims, especially when the Employer considers himself to be entitled to any payment or time according to these conditions.

3. The Engineer

In Clause three of the Red Book, and in sub-clause 3.1, the duties and the authorities of the Engineer are being discussed. Generally, this sub-clause declares the role of the engineer as an agent to the Employer, when the Engineer carry out his duties or exercise his authority, he shall be deemed to act for the Employer.

Sub-clause 3.2 discusses procedures of the delegation by the Engineer when it is needed to assign duties and delegate authority to assistants. Under Sub-clause 3.3 the Instructions of the Engineer that issue to the Contractor are being discussed, while sub-clause 3.4 deals with the case when the Employer needs to replace the Engineer. The final sub-clause 3.5 deals with the determinations when the Engineer needs to agree

or determine any matter to reach agreement and what to do if the agreement is not achieved.

4. The Contractor

Clause 4 comprises of 24 sub-clauses; it is expanded because the Contractor's responsibilities are set out here. Sub-clause 4.1 lays down the Contractor's general obligations to execute and complete the works in accordance with the contract and with the Engineer's instructions. These obligations are wide and varied; as an example, the Contractor shall be responsible for adequacy, stability and safety of the site operations and of all method of construction. Under sub-clause 4.2, the Contractor has an obligation to issue the Employer with a performance security in the amount stated within the Appendix to Tender. Sub-clause 4.2 declares that the performance security shall be delivered within 28 days after receiving the letter of acceptance.

Under sub-clause 4.3, the role of the Contractor's representative is presented. The Contractor's representative is the person who is responsible for ensuring that all the Contractor's obligations under the contract are carried out. Sub-clause 4.4 sets out the criteria, which must be followed in when the Contractor need sub-Contractor's services in the project. Sub-clause 4.5 discusses the assignment of benefit of subcontract. Sub-clause 4.6 deals with the co-operation with the Employer's personnel, other Contractors employed by the Employer and the personnel of any legally constituted public authorities. Sub-clause 4.7 deals with the setting out the works in relation to original points. Sub-clauses 4.8 - 4.9 deal with the safety procedures and quality assurance with all the detailed related regulations.

Sub-clause 4.10 relates to site data where Employer is required to made available to the Contractor at tender stage all relevant information/data in his possession in relation to sub-surface and hydrological conditions on the site, including any environmental aspects. Sub-clause 4.11 deals with the sufficiency of the accepted contract amount for the Contractor, while sub-clause 4.12 discusses the unforeseeable physical conditions like natural physical conditions and mandate and other physical obstructions and pollutants which the contractor encounters at the site when executing the works. Sub-clause 4.13 deals with the right of way and facilities where the Contractor shall bear all charges and costs for ways which may be require accessing the site.

Sub-clause 4.14 deals with the avoidance of interference and the where the Contractor shall not interfere unnecessary with connivance of the public and the access to the use of all roads. Sub-clause 4.15 deals with the access routes to the site that must be suitable and available, while sub-clause 4.16 deals with transport of goods that will be delivered to the site.

Sub-clause 4.17 deals with the Contract's equipment which is here the responsibility of the Contractor. Sub-clause 4.18 deals with protection of the environment and all need procedure for that. Under sub-clauses 4.19 and 4.20, the Contractor is entitled to basic provisions; for example, water and power, that may already be available on the site. Sub-clause 4.20 sets out two categories of items that may be made available to the Contractor by the Employer. The first is Employer's equipment and the second is free-issue materials.

Sub-clause 4.21 states that the Contractor should issue monthly progress reports to the engineer from the beginning of the works up to and

including the actual completion date for the works. Sub-clause 4.22 deals with the security of the site, while sub-clause 4.23 deals with Contractor's operations on site that shall confine the site and any additional areas which may be obtained by the Contractor and agreed by the Engineer as working area. The last sub-clause 4.24 deals with fossils that may be found at the site like coins, articles of value or antiquity and structures and other remains or items of geological or archaeological interest found on site.

5. Nominated Sub Contractors

Clause 5 addresses all topics related to the nominated sub-Contractors. Sub-clause 5.1 discusses the definition of nominated sub-Contractors whom the Engineer instructs the contractor to employ. Sub-clause 5.2 deals with the objection to nomination by the Contractors. Sub-clauses 5.3 and 5.4 deal with the payment to nominated sub-Contractors and the evidence of payments. The Contractor here needs to submit evidence that the nominated sub-Contractor has received all amounts due to payment certificate.

6. Staff and Labour

Clause 6 deals with responsibility of the Contractor of employing staff and labour to carry out the works in the project. Sub-clause 6.1 ensures that the Contractor shall make arrangements for the engagement of all staff and labour to carry out the works. Sub-clause 6.2 discusses paying rates of wages to the staff. Sub-clause 6.3 compels the Contractor not to recruit staff and labour related to Employer's personnel. Sub-clause 6.4 discusses the complying the Contractor with the labour laws that are applicable.

Sub-clause 6.5 ensuring that no work is carried out outside normal working hours and on days of rest. Sub-clause 6.6 ensuring that the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel, Sub-clause 6.7 discusses the maintenance of all health and safety standards of his staff, such as ensure that medical staff and appoint an accident prevention officer at the Site.

Sub-clause 6.8 discusses Contractor's superintendence, to provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work. Sub-clause 6.9 ensuring that the Contractor's personnel are appropriately skilled qualified and experienced for the job that they were hired to do. Sub-clause 6.10 discusses the records of Contractor's personnel and equipment, thus the Contractor shall provide details showing the number of each class of Contractor's personnel, while the last sub-clause 6.11 discusses the disorderly conduct amongst the Contractor's personnel.

7. Plant, Materials, and Workmanship

In General, clause 7 covers the Contractor's obligations concerning the quality of his works on plant (which means apparatus, machinery and vehicles), materials and workmanship. Sub-clause 7.1 discusses the manner of execution, this means that the works must be carried in accordance with the contract, and in a proper workmanlike and careful manner, with properly equipped facilities and non-hazardous materials. Sub-clause 7.2 discusses the samples that shall be submitted by the Contractor. Sub-clauses 7.3 discusses the inspection of the works. Sub-clauses 7.4, 7.5 and 7.6 discusses the testing, rejection and remedial work for the Plant, Materials and Workmanship. Sub-clause 7.7 discusses the Ownership of

plant and materials. While the last sub-clause 7.8 discusses the royalties and how the Contractor shall pay all royalties, rents, etc.

8. Commencement, Delays and Suspension

Clause 8 covers three important subjects, all are related to the period during which the Contractor will construct the work. Sub-clause 8.1 discusses the commencement of works for the Contractor. Sub-clause 8.2 discusses the time for completion the project, and clarifies that the Contractor shall complete the whole of the work within that time. Sub-clause 8.3 discusses the “Programme” which must be submitted by the Contractor within 28 days after receiving the notice under Sub-Clause 8.1.

Sub-clause 8.4 discusses the cases when the Contractor shall be entitled for extension of time for completion. Sub-clause 8.5 discusses the delays which are caused by authority. Sub-clause 8.6 discusses the cases when the rate of progress is too slow. Sub-clause 8.7 deals with an important issue which is related to the delay damages, which occurs if the Contractor fails to comply with the exact time of completion.

Sub-clauses 8.8-8.11 discuss the suspension of work and what are the consequences of that suspension, the payment for plant and material in event of suspension, and the case of the prolonged suspension. The last sub-clause 8.12 deals when instruction from the Engineer is given to resumption of works in the project.

9. Tests on Completion

Clause 9 deals with the Contractor’s duty to carry out tests on completion of the works. Sub-clause 9.1 discusses the Contractor’s obligations that shall carry out tests on completion in accordance with sub-clause 7.4 “Testing”. Sub-clauses 9.2 discusses the delayed testing if the

tests on completion are being delayed by the Employer. Sub-clause 9.3 deals with retesting case when if the work or a section fail to pass the test on completion. Sub-clause 9.4 discusses the failure to pass tests on completion, when the fails to pass the test repeated and what the Engineer shall do in such case.

10. Employer's Taking Over

Clause 10 deals with taking over the works in the project. Sub-clauses 10.1 and 10.2 discuss the procedures for the taking over process, whether the taking over is for the whole or for parts of the works. Sub-clause 10.3 discusses interference with tests on completion, when the Contractor is prevented for more than 14 days, from carrying out the tests on completion by a cause for which the Employer is responsible. The last sub-clause 4.10 deals with surfaces requiring reinstatement, meaning that the certificate can't be issued of any ground or other surfaces requiring reinstatement.

11. Defects Liability

Clause 11 deals with the procedures during the defects notification period at once after the taking over certificate is being issued by the Employer. Therefore, during the defects liability period (maintenance period), the Contractor is responsible for correcting any defects related to the works accomplished by him.

Sub-clause 11.1 deals with the completion of outstanding works and remedying defects give the overall requirement and procedure for the defects notification period. Sub-clause 11.2 declares that the cost of remedying defects is the responsibility of the Contractor. Sub-clause 11.3 discusses the case when it need to extent the defects notification period.

Under sub-clause 11.4 discusses the failure to remedy defects, and what the Employer may do, such as carry out the work himself or by others, reasonable reduction, or terminate the Contract. Sub-clause 11.5 deals with removal of defective work when the Contractor defect or damage cannot be remedied expeditiously on the site.

Sub-clause 11.6 deals with further tests required by the Engineer, if the work of remedying of any defect or damage may affect the performance of the Works. Sub-clauses 11.7 and 11.8 discuss the right of access and Contractor to search by the Contractor to the site during the defects liability period. Sub-clause 11.9 deals with an important issue, the Performance Certificate which by its start date, the Contractor can be considered that he had completed his obligations under the Contract. Sub-clauses 11.10 and 11.11 deal with the unfulfilled obligations and clearance of Site after the Performance Certificate is being issued.

12. Measurement and Evaluation

Under clause 12 how to measure the works, and the method of measurement which refers to the contract bill of quantities or other applicable schedules of rates. Sub-clauses 12.1 and 12.2 discuss the works to be measured and method of measurement. Sub-clause 12.3 deals with the evaluation which discuss the appropriate rate or price for the item. The final sub-clause 12.4 discusses the omissions when the case of omission any work (or all) of the variation order.

13. Variations and adjustments

Clause 13 deals with the possibility that variations and adjustments that may be made to the original scope of the works under the contract. Sub-clause 13.1 discusses the variation that may be ordered by the

Engineer at any time prior to issuing the Taking-Over Certificate for the Works. Sub-clause 13.2 deals with the value engineering, when the Contractor may submit a written proposal to the Engineer to accelerate the completion time, reduce the cost of executing, to the maintaining or operating the Works, improve the efficiency, or otherwise be of benefit to the Employer.

Sub-clause 13.3 deals with the variations procedures which both the Engineer and the Contractor must follow. Sub-clause 13.4 discusses the applicable currencies when more than one currency is provided by the Contractor. Sub-clause 13.5 deals with provisional sums of the contract. Sub-clause 13.6 deals with the daywork topic, for works of a minor or incidental nature.

The last two sub-clauses 13.7 and 13.8 are important to the Contractors; because they discuss the adjustment for changes in legislation and the adjustment for changes in cost. Therefore, if any change in the laws of the country, or any change at the cost of labour, goods and other inputs to the works occurred; the contract price must be adjusted.

14. Contract Price and Payment

Clause 14 deals with the monetary value of the contract. Sub-clause 14.1 contains four items all related to the contract price. Sub-clause 14.2 deals with the advance payment which can be paid by the Employer to the Contractor and its condition. Sub-clause 14.3 deals with the application for interim payment certificate, while Sub-clause 14.4 discusses the schedule of payments to the Contractor.

Sub-clause 14.5 deals with the plant and materials intended for the works. Under sub-clause 14.6 the issue of interim payment certificates is

discussed, in this sub-clause; no amount will be paid to the Contractor until the Employer has received and approved the Performance Security. Sub-clause 14.7 discusses the payments to the Contractor, while sub-clause 14.8 deals with delayed payment if the Contractor does not receive payment in accordance with Sub-Clause 14.7. Under sub-clause 14.9 payment of retention money is discussed. Sub-clauses 14.10 and 4.11 discuss the statement at completion and the application for final payment certificate. Sub-clause 14.12 deals with the discharge which the Contractor shall submit a full and final settlement of all money between Employer and Contractor. Sub-clause 14.13 deals with the final payment certificate, where the Engineer shall issue that certificate within 28 days after receiving the final statement and written discharge in accordance with Sub-Clause 14.11. Sub-clause 14.14 deals with the cessation of Employer's liability, while the final sub-clause 14.15 deals with the currencies of payment.

15. Termination by Employer

Clause 15 starts with "Notice to correct" in sub-clause 15.1, which occur if the Contractor fails to carry out any obligation under the Contract, thus the notice require the Contractor to remedy the failure in a specific time. Sub-clause 15.2 discusses these conditions under which the Employer can terminate the contract; these are:

- The Contractor fails to comply with sub-clause 4.2 "Performance Security", or with a notice under sub-clause 15.1 "Notice to Correct"
- The Contractor abandons the Works or otherwise clearly demonstrates the intention not to continue performance of his obligations under the Contract,

- If the Contractor fails to proceed with the works in accordance with clause 8 “Commencement, Delays and Suspension”, or to comply with a notice issued under sub-clause 7.5 “Rejection” or sub-clause 7.6 “Remedial Work”, within 28 days after receiving it,
- If the Contractor subcontracts the whole of the Works or assigns the Contract without the required agreement,
- The Contractor becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
- The Contractor gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward, for doing or forbearing to do any action in relation to the Contract, or for showing or forbearing to show favour or disfavour to any person in relation to the Contract.

Sub-clause 15.3 deals with valuation at date of termination. This occurs after the notice of termination has taken effect. The engineer shall agree the value of the works executed. Sub-clause 15.4 deals with the payment after termination, while the final sub-clause 15.5 deals with Employer’s entitlement to termination where the Employer can terminate the contract at any time for the Employer’s convenience.

16. Suspension and Termination by Contractor

Clause 16 deals with the right for the Contractor to suspend the work. Sub-clause 16.1 discusses Contractor’s entitlement to suspend the

work if the engineer fails to issue interim payment certificates in accordance with sub-clause 14.6, or if the Employer fails to comply with sub-clause 2.4 “Employer’s Financial Arrangements”, or sub-clause 14.7 “Payments”. In that case, the Contractor may suspend the works until he has received the payment certificate or reasonable evidence of the Employer’s financial arrangements or payment. Sub-clause 16.2 discusses the cases where the Contractor can terminate the contract, which is as follow:

- If the Contractor does not receive the reasonable evidence within 42 days after giving notice under sub-clause 16.1 “Contractor’s Entitlement to Suspend Work” in respect of a failure to comply with sub-clause 2.4 “Employer’s Financial Arrangements”.
- If the Engineer fails, within 56 days after receiving a statement and supporting documents, to issue the relevant payment certificate.
- If the Contractor does not receive the amount due under an interim payment certificate within 42 days after the expiry of the time stated in sub-clause 14.7 “Payment” within which payment is to be made.
- If the Employer substantially fails to perform his obligations under the contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract.
- If the Employer fails to comply with sub-clause 1.6 “Contract Agreement” or sub-clause 1.7 “Assignment”.
- If a prolonged suspension affects the whole of the works.
- If the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds

with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.

Sub-clause 16.3 deals with the cessation of works and removal of Contractor's equipment, so if the termination occurred the Contractor shall do the following: cease all further work, hand over Contractor's documents, plant, materials and other work, for which the Contractor has received payment, and remove all other goods from the Site, except as necessary for safety, and leave the Site. The final sub-clause 16.4 deals with the Payment on Termination and what the Employer shall do if the termination is occurred.

17. Risk and Responsibilities

Clause 17 seeks to allocate risk and responsibility appropriately. The theory of risk has developed increasingly in the past 20 years for any project to be implanted in a successful manner.

Clause 17 starts with indemnities in sub-clause 17.1 and its conditions for both the Employer and the Contractor. Sub-clause 17.2 deals the Contractor's care of the work. Sub-clauses 17.3 and 17.4 discuss the Employer's risk and the consequences of Employer risk. Some examples of the risks are: war, hostilities, invasion, act of foreign enemies, rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, use or occupation by the Employer of any part of the permanent works, except as may be specified in the contract. Sub-clause 17.5 discusses the intellectual and industrial property rights, while the final sub-clause 17.6 discusses the limitation of the liability of the parties one to another.

18. Insurance

Under clause 18, all topics related to Insurance are examined. Under sub-clauses 18.1 the general requirements of Insurance are discussed. Sub-clauses 18.2, 18.3 and 18.4 specify the insurance types at any project such as Insurance for works and Contractor's equipment, Insurance against injury to persons and damage to property and Insurance for Contractor's personnel.

19. Force Majeure

In Clause 19 of the Red Book, and under sub-clause 19.1, the definition of the Force Majeure is described as an exceptional event or circumstance. There are some examples of those events or circumstances, like the war, hostilities, invasion, act of foreign enemies, rebellion, terrorism, revolution, insurrection, military or usurped power, civil war, riot, commotion, disorder, strike, munitions of war, explosive materials, ionising radiation or contamination by radio-activity, explosives, radiation or radio-activity, natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

Sub-clauses 19.2 to 19.7 discuss topics related to Force Majeure like notice of force majeure, consequences of force majeure, force majeure affecting sub-Contractor, optional termination, payments and release and finally release from performance under the law.

20. Claims, Disputes, and Arbitration

In Clause 20 of the Red Book, sub-clause 20.1 deals with the Contractor's Claims, if the Contractor considers himself to be entitled to any extension of the time and/or any considers himself to be entitled to any extension of the time and/or any additional payment. It provides the

Contractor the procedure when he needs to make a claim. Sub-clauses 20.2 to 20.4 discuss topics related to the Dispute Adjudication Board (DAB), such as how to appoint the DAB, the failure to agree on DAB and how to obtain DAB's decision.

Sub-clause 20.5 discusses the amicable settlement where conflict parties attempt to settle their dispute amicably before going to Arbitration which is discussed in sub-clause 20.6. The last two sub-clauses 20.7 and 20.8 are discussing the failure to comply with DAB's decision and the expiry of the DAB's appointment.

Appendix (B): General Conditions Question, For Donors and International NGO's

Dear Sir/Madam,

This question is a part of the supplementary research to achieve my master's degree in the Engineering Management /An-Najah National University-Nablus.

The title of the Thesis is "Major Challenges Facing the Implementation of the FIDIC in Construction Projects in Palestine".

Supervisor: Prof. Sameer A. Abu-Eisheh

The response and information for this question will be used only for this research purposes.

Thanks for your assistant and cooperation,

Mohammad Tuffaha

Q) What kind of "General Conditions" are used in your tenders:

(FIDIC)

Other types, please explain:

**Appendix (C): Questionnaire for Major Challenges Facing the
Implementation of the FIDIC in Construction Projects in
Palestine**



Gentlemen,

I would like to express my deep appreciation to you for the time and effort spent in filling up this questionnaire.

In 2006, the General Conditions (FIDIC 1999 for Construction Projects) and the Palestinian Particular Conditions were adopted by the PNA to compose the Unified Contract, the basic reference for construction projects in Palestine.

The aim of this questionnaire is to study and analyze the challenges and obstacles that face the implementation of FIDIC in Palestine, to study the extent of its implementation and general recommendations for its development.

This questionnaire is conducted in partial fulfillment of the requirement for my master's degree in Engineering Management /An-Najah National University-Nablus. I am kindly asking that you fill the attached questionnaire to your best knowledge. All information will be confidential and will be used for academic research only; your contribution in filling this questionnaire will help in improving academic research and contracting section in Palestine.

Best regards,

Eng. Mohammad B. Tuffaha

Supervisor: Prof. Sameer A. Abu-Eisheh

Questionnaire Content

This questionnaire consists of five sections as follows :

Section I: General Information about the questionnaire respondent .

Section II: General information about Contracts/FIDIC and its implementation in Palestine .

Section III: General specifications for FIDIC contract

Section IV: Study of the most influential sub-clauses of FIDIC contract.

Section V: General Recommendations for the development the implementation of FIDIC in Palestine

Section One: General Information

1. Work type: Employer Engineer Contractor

City:

2. If your answer of the previous question is Employer, please explain?

Governmental Ministries Municipalities Donors Private Sector

3. Respondent position:

Firm manager Project manager Engineer Others

4. Respondents Qualifications:

Advanced Studies Bachelor High School Others

Less than 5 years 5-10 years 11-20 years More than 20 year

5. For Contractors only: Classification under PCU Category Specialization.

1st Category 2nd Category 3rd Category 4th Category 5th Category

Buildings Water & Sanitation Roads

Section II: General information about contracts / FIDIC and its implementation in Palestine

1. Do you know that Palestinian Unified Contract (FIDIC + Palestinian Particular Conditions) which is adopted by the Ministry of Public Works and Housing in 2006, is the main reference for tenders in the Palestinian ministries and Municipalities?

Yes

No.

2. For Donors / International NGO's: Do you use FIDIC in your firms?
- Yes No, please specify it:.....
3. Are you familiar with the Unified Contract (FIDIC + Palestinian Particular Conditions)?
- Yes No.
4. If the answer of the previous question (No.3) is Yes, what is the extent of your Knowledge of the Unified Contract?
- Very Little Little Medium Good Very good
5. Do you keep a copy of the unified contract in your company as a reference to any construction work?
- Yes No.
6. In your opinion, the Palestinian Particular Conditions in the Unified Contract:
- Developed for the benefit of the Employer.
- Developed for the benefit of Contractor.
- Provide balance between Employer and Contractor.
- Others (please mention):
7. Do you think that the Contractor reads all the documents, including the General and Particular Conditions upon delivery of tender documents for the Employer / Engineer?
- Yes No.
8. If the answer of the previous question (No. 7) is no, In your opinion, the main reason for which the Contractor signs the tender documents including General and Particular Conditions without reading them is?
- Lack of attention Administrative weakness
- Inexperience of legal aspects All of the previous
- Other reasons (please specify).....

9. When tender documents are in English, including General and Particular Conditions, do you think that English language is an obstacle to understand those documents for Contractor?
 Yes No.
10. For Contractors only: Have you previously implemented projects that use General Conditions other than FIDIC?
 Yes, (please specify)..... No.(just FIDIC)
11. For Contractors only: Among of the following Employers, which one do you prefer to work with? Please select all that apply.
 Governmental Ministries Municipalities Donors Private Sector
 Why?
12. In your opinion, which entity is better compliance to the terms of the tender? Please select all that apply.
 Governmental Ministries Private Sector Donors
 Engineering Firms Contractors. Why?
13. Most of the disputes in construction projects often occur with:
 Governmental Ministries Private Sector Donors
 Engineering Firms Contractors. Why?
14. Are you aware of the procedures for settling disputes by FIDIC system?
 Yes No.
15. If the answer of the previous question (No. 14) is Yes, what is your opinion of the idea of Dispute Adjudication Board (DAB), posed by FIDIC
 Good
16. If a dispute had occurred in one of the projects that you have implemented/ funded / supervised, how was the dispute settled?
 Amicably Disputes board Arbitration
 Others.....

17. Do you know that there is a Palestinian International Arbitration Chamber that was set up in 2013?

Yes

No.

Section III: General specifications for FIDIC contract

The following table represents general specifications for FIDIC contract, do you see that specifications positive or negative? How important is each specification? Please answer by ticking (X) in the appropriate space.

Item	Positive	Negative	Importance				
			Very low	Low	Moderate	High	Very High
1. Limit temperamental expansion in dealings, both for Employer and Engineer.							
2. Place trust in parties in carrying out assigned duties and responsibilities, and not presumes disloyalty and lack of integrity of any party.							
3. A high level of management is required of Employer, Engineer or Contractor.							
4. Has a distinctive approach to resolving conflicts from the on-set.							
5. Requires a stable political situation to be implemented.							
6. Be attentive to possible risks and calculate affect beforehand, evading risks when necessary.							
7. Contractor's rights shall be clearly stated to evade resorting to law; Dispute Adjudication Board will review demands as they arise.							
8. Parties' responsibilities are unambiguous and meticulously specified.							
9. Equitable sharing of risk and responsibilities amongst contracted parties.							
10. Making amendments/alterations to items according to the current status of the Employer is possible; however, amendments must be included as special supplementary terms.							
11. Assuming that the project is well-defined and detailed.							
12. Knowledge of regulations, systems and work principles is fundamental.							

Part IV: A study of the terms of FIDIC that are the most influential in Palestine:

The following table shows a range of sub-clauses from the Unified Contract, please answer yes or no to see how your knowledge of these items? And the extent of compliance with it? And then determine the degree of importance through the development of signal (X) in the appropriate place. NOTE: Please answer all items, whether the Employer or Engineer or Contractor

Sub-clause	Are you aware of this sub-clause	Are this sub-clause being honored	Importance				
			Very low	Low	Moderate	High	Very High
First: Sub-clauses related to Employer							
1. The Employer shall submit reasonable evidence that financial arrangements have been made and are being maintained within 28 days after receiving any request from the Contractor which will enable the Employer to pay the Contract Price.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
2. If the Contractor fails to comply with remedial works according to sub-clause 7.6, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall subject to Sub-Clause 2.5 pay to the Employer all costs arising from this failure.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
3. The Employer shall be entitled to terminate the Contract if the Contractor without reasonable excuse fails to comply with a notice issued under Sub-clause, within 28 days after receiving it.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
4. If it turns out that the delay caused by Contractor is resulting incur additional costs to the Employer, the Contractor shall pay these costs to the Employer.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

5. The Employer shall be entitled to terminate the Contract if the Contractor becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, etc	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
6. The Employer shall be entitled to terminate the Contract fails to comply with Sub-Clause 4.2 Performance Security.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
7. The Employer shall be entitled to terminate the Contract if the Contractor subcontracts the whole of the works or assigns the Contract without the required agreement.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
8. The Employer shall be entitled to terminate the Contract gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
9. The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
10. The Employer shall make an advance payment, as an interest-free loan for mobilization, when the Contractor submits a guarantee in accordance with this Sub-Clause or if the total advance payment is not stated in the Appendix to Tender, this Sub-Clause shall not apply.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
Second: Sub-clauses related to Engineer							
11. The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the works and the remedying of any defects.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
12. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

13. If the Employer intends to replace the Engineer, the Employer shall, not less than 42 days before the intended date of replacement, and the Contractor can raise a reasonable objection (or 28 days according to Palestinian Particular Conditions).	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
14. The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
15. The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate Engineer's acceptance or approval.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
16. Whenever the Engineer requires any part of the works to be measured, reasonable notice shall be given to the Contractor's Representative.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
17. Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the works, either by an instruction or by a request for the Contractor to submit a proposal.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
18. Within 28 days after receiving the Final Statement and written discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall issue, to the Employer, the Final Payment Certificate.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
19. The Contractor shall give notice to the Engineer whenever the works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a particular time, If the Contractor suffers delay and/or incurs Cost due to that then he is entitled to compensate for the time/cost.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

20. If any error occurred in setting out the works in relation to the original points as a result of the wrong positioning of the employer, then the Contractor shall give notice to the Engineer and shall be entitled to compensate for the time/cost.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
Third: Sub-clauses related to Contractor							
21. The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
22. Prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the “as-built” documents and operation and maintenance manuals in accordance with the Specification and in sufficient detail.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
23. the Contractor shall comply with all applicable safety regulations, take care for the safety of all persons entitled to be on the Site, provide fencing, lighting, guarding, etc.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
24. The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
25. The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
26. Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
27. The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

28. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. The Contractor shall appoint an accident prevention officer at the Site and shall send, to the Engineer, details of any accident as soon as practicable after its occurrence.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
29. The Contractor may, at any time, submit to the Engineer a written proposal which that will accelerate completion, reduce the cost to the Employer of executing, maintaining or operating the works, improve the efficiency or value to the Employer of the completed works, or and otherwise be of benefit to the Employer. Or what is called by value engineering.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
30. If the Contractor does not receive the reasonable evidence within 42 days after giving notice in respect of a failure to comply with Financial Arrangements, then the Contractor shall be entitled to terminate the Contract.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
31. IF the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate, then the Contractor shall be entitled to terminate the Contract.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
32. The Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
33. If the Contractor does not receive payment in accordance with Sub-Clause 14.7, the Contractor shall be entitled to receive financing charges compounded monthly on the amount unpaid during delay period.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

34. If the Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in Sub-Clause 14.7 within which payment is to be made (except for deductions in accordance with sub-clause 2.5), then Contractor shall be entitled to terminate the Contract.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
35. The Contractor shall be entitled to terminate the Contract if the Employer substantially fails to perform his obligations under the Contract.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
36. The Contractor shall be entitled to terminate the Contract if a prolonged suspension affects the whole of the works as described in Sub- Clause 8.11.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
37. The Contractor shall be entitled to terminate the Contract if the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, etc.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
38. The Contractor shall be entitled to terminate the Contract if the Employer fails to comply with Sub-Clause 1.6 which related to Contract Agreement.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
39. The Contractor should insure each insurance shall be effected with insurers and in terms approved by the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
40. The Contractor should When each premium is paid, shall submit evidence of payment to the other Party. Shall also give notice to the Engineer.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

41. If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure such as natural catastrophes, wars, etc. And a notice was given to Employer within 14 days after the Contractor became aware, so he has certain rights depends on the Force Majeure circumstances such as extension of time and/or additional cost.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
42. If the execution of substantially all the works in progress is prevented for a continuous period of 84 days or for multiple periods which total more than 140 days by reason of Force Majeure, then either Party may give to the other Party a notice of termination of the Contract.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					
43. If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No					

Part V: General Recommendations for development of implementation of FIDIC in Palestine

1. What are the main obstacles that prevent the implementation and development of FIDIC in Palestine? (You can select more than one answer).

- 1. Financial situation of the PNA.
- 2. The current political situation in Palestine.
- 3. Administrative problems and lack of maturity of the construction sector in Palestine.
- 4. Giving low importance of the contract or the lack of attention to contract preparing.
- 5. Multitude of Donors for PNA, with possibility of multiple different General Conditions.
- 6. Others (please mention):

2. Do you think training is needed for Employers, Engineer and Contractors in dealing with FIDIC?

- Yes No

3. Do you think that concerned authorities (MPWH, Engineering Association, etc) are doing their duties in raising awareness and education in the contractual and legal aspects related to application of FIDIC?

- Yes No

4. What are your recommendations to develop the implementation of FIDIC in Palestine?

.....
.....
.....

Appendix (D): Questionnaire in Arabic Language



استبيان حول

التحديات امام تطبيق الفيدك FIDIC

(الشروط العامة للمشاريع الانشائية) في فلسطين

السادة المحترمين،

بداية أتقدم لكم بجزيل الشكر والتقدير للمساهمة بجزء من وقتكم وجهدكم في تعبئة هذا الاستبيان.

في عام 2006 تم اعتماد الشروط العامة العالمية (FIDIC 1999 للمشاريع الانشائية)، بالإضافة الى الشروط الخاصة الفلسطينية، لتكوين عقد المقاوله الموحد، المرجع الاساسي للمشاريع الانشائية في فلسطين.

يهدف هذا الاستبيان الى دراسة و تحليل التحديات والمعيقات امام تطبيق FIDIC (الشروط العامة للعطاءات الانشائية) في فلسطين، ودراسة مدى انتشاره والاقتراحات العامة لتطويره.

يعتبر هذا الاستبيان جزءا من البحث التكميلي لنيل درجة الماجستير في تخصص الادارة الهندسية/جامعة النجاح الوطنية- نابلس. أرجو من حضرتكم تعبئة هذا الاستبيان بالحقائق المناسبة والدقيقة قدر الإمكان. ونود أن نفيدكم علما انه سيتم الاحتفاظ بسرية البيانات ولن يتم استخدامها إلا لأغراض البحث العلمي. إن المعلومات التي ستساهمون بها ستساعد في إثراء البحث العلمي وتطوير قطاع الإنشاءات في فلسطين، شاكرين لكم حسن تعاونكم.

مع الاحترام،

م. محمد بهيج تفاحه

اشراف: أ.د. سمير ابو عيشة

مكونات الاستبيان:

يتكون هذا الاستبيان من خمسة اقسام كالتالي:

القسم الاول: يشمل معلومات عامة لمعبي الاستبيان.

القسم الثاني: معلومات عامة عن العقود/FIDIC وتطبيقه في فلسطين.

القسم الثالث: مواصفات عامة لعقد FIDIC.

القسم الرابع: دراسة لبنود FIDIC الأكثر تأثيرا في فلسطين.

القسم الخامس: اقتراحات عامة لتطوير تطبيق FIDIC في فلسطين

القسم الأول: معلومات عامة:

1. طبيعة العمل: جهة مالكة جهة إشراف (استشاري) جهة منفذة (مقاول) (المدينة:

2. اذا كانت الاجابة جهة مالكة، يرجى التوضيح؟

وزارة حكومية بلدية مؤسسة مانحه قطاع خاص

3. الموقع الوظيفي لمعبي الاستبيان:

مدير شركة مدير مشروع مهندس أخرى.....

4. المؤهل العلمي لمعبي الاستبيان، عدد سنوات الخبرة لمعبي الاستبيان:

دراسات عليا بكالوريوس ثانوية أخرى.....
 أقل من خمس سنوات 5-10 سنوات 11-20 سنة أكثر من 20 سنة

5. (للمقاولين فقط) أعلى تصنيف للشركة حسب تصنيف اتحاد المقاولين الفلسطينيين:

درجة أولى درجة ثانية درجة ثالثة درجة رابعة درجة خامسة
 أبنية مياه ومجاري طرق

القسم الثاني: معلومات عامة عن عقد FIDIC وتطبيقه في فلسطين:

1. هل تعلم ان دفتر عقد المقاوله الموحد المكون من (FIDIC + الشروط الفلسطينية) المعتمد من

وزارة الاشغال العامة والسكان عام 2006م، هو المرجع الرئيس للعطاءات في وزارات

وبلديات دولة فلسطين؟

نعم لا

2. للمؤسسات المانحة/الدولية و للمكاتب الاستشارية: هل تستخدم نظام FIDIC كشروط عامة في

مؤسساتكم؟

نعم لا، ما هي الشروط العامة المستخدمة.....

3. هل سبق ان أطلعت على عقد المقاولة الموحد بشقية FIDIC والشروط الخاصة الفلسطينية؟
 نعم لا

4. اذا كان جواب السؤال السابق رقم (3) نعم، ما مدى معرفتك بعقد المقاولة الموحد؟
 معرفة قليلة جدا معرفة قليلة معرفة متوسطة معرفة جيدة
 معرفة جيدة جدا الى ممتازة

5. هل تحتفظ بنسخة من عقد المقاولة الموحد/ FIDIC في مكتبك، كمرجع مهم للرجوع اليه حيثما استدعى الامر ذلك؟
 نعم لا

6. الشروط الخاصة الفلسطينية في عقد المقاولة الموحد؟
 وضعت لصالح صاحب العمل وضعت لصالح المقاول
 اعطت توازنا ما بين المالك والمقاول أخرى، يرجى التحديد

7. برأيك، هل يقوم المقاول بقراءة كافة الوثائق بما فيها الشروط العامة والخاصة عند تسليم وثائق العطاء للمالك/المهندس؟
 نعم لا

8. اذا كان جواب السؤال السابق لا (رقم 7)، لماذا يقوم المقاول برأيك بتوقيع/تسليم وثائق العطاء بما فيها الشروط العام والخاصة دون قراءتها؟
 عدم الاهتمام ضعف اداري عدم الخبرة بالنواحي القانونية
 جميع ما ذكر اسباب اخرى (يرجى التحديد)

9. عندما تكون وثائق العطاء باللغة الانجليزية، بما فيها الشروط العامة والخاصة، هل تعتقد ان اللغة الانجليزية تشكل عائقا امام فهم المقاول بهذه الوثائق؟
 نعم لا

10. للمقاوليين فقط: هل سبق ان نفذت مشاريع في فلسطين تستخدم شروطا عامة للمشاريع غير شروط FIDIC؟
 نعم ، ما هي لا (فقط FIDIC)

11. للمقاوليين فقط: من هو اكثر صاحب عمل تفضل العمل معه؟ "يرجى اختيار كل ما ينطبق".
 المؤسسات الحكومية البلديات المؤسسات المانحة
 المؤسسات الخاصة لماذا،

12. برأيك، ما هي اكثر الجهات تطبيقا لبنود شروط العطاء؟ "يرجى اختيار كل ما ينطبق".
 المؤسسات الحكومية المؤسسات الخاصة المؤسسات المانحة
 المكاتب الهندسية المقاول لماذا،

13. معظم الخلافات في المشاريع الانشائية تكون غالبا من طرف:

- المؤسسات الحكومية المؤسسات الخاصة المؤسسات المانحة
 المكاتب الهندسية المقاول لماذا،

14. هل تعلم اجراءات فض الخلافات حسب نظام الفيديك ؟

- نعم لا

15. اذا كان جواب السؤال السابق رقم (14) نعم، ما رايك في فكرة مجلس فض الخلافات التي

ي طرحها FIDIC؟

- ممتازة جيدة سيئة

16. اذا سبق أن وقع خلاف في أحد المشاريع التي قتمت بتنفيذها/تمويلها/الاشراف عليها، كيف تم

حل الخلاف؟

- بطريقة ودية مجلس فض الخلافات التحكيم يحدث خلاف

غير ذلك

17. هل تعلم انه يوجد غرفة تحكيم فلسطيني دولية تم افتتاحها عام 2013؟

- نعم لا

القسم الثالث: مواصفات عامة لعقد الفيديك:

الجدول التالي يعرض صفات لعقد FIDIC، هل ترى ان هذه الصفات ايجابية ام سلبية؟ وما مدى اهمية كل صفة؟ يرجى الأجابة من خلال وضع اشارة (X) في المكان المناسب.

درجة الأهمية					سلبية	اجابية	البند
مهم جدا	عالي الأهمية	متوسط الأهمية	قليل الأهمية	عديم الأهمية			
							1. يقلل مساحة المزاجية في التعامل للمالك والاستشاري.
							2. يعطي ثقة للأطراف في الواجبات والمسؤوليات وعدم افتراض الخيانة وقلة الأمانة في أي طرف.
							3. يتطلب مستوى إداري عالي من المالك أو الاستشاري أو المقاول.
							4. فيه أسلوب مميز لحل النزاعات في المشاريع من بداية ظهورها.
							5. يحتاج الى وضع سياسي مستقر لتطبيقه.
							6. معرفة المخاطر المحتملة وزيادة قدرته على حساب آثارها وتلافيتها.

							7. حقوق المقاول ستكون واضحة دون الحاجة للجوء إلى القضاء وذلك لوجود مجلس فض الخلافات الذي ينظر في المطالبات أولاً بأول.
							8. مسؤوليات أطراف العقد واضحة ومحددة بدقة.
							9. التوزيع العادل للمخاطر والمسؤوليات بين أطراف العقد.
							10. هناك امكانية تعديل البنود حسب الوضع الحالي لصاحب العمل ووضعها كشرط خاصة ملحقة.
							11. يفترض ان المشروع موصف جيدا وبشكل دقيق.
							12. يفترض المعرفة بالقوانين والانظمة ومبادئ العمل.

القسم الرابع: دراسة لبنود FIDIC الاكثر تاثيرا في فلسطين:

الجدول التالي يوضح مجموعة من البنود من قانون عقد المقاوله الموحد، يرجى الاجابة بنعم أو لا لمعرفة مدى معرفتك بهذه البنود؟ ومدى الألتزام بها؟ ومن ثم تحديد درجة اهميتها من خلال وضع اشارة (X) في المكان المناسب. ملاحظة: الرجاء إجابة جميع البنود سواء للمالك أو الإستشاري أو المقاول.

درجة الأهمية					هل يتم الألتزام بها	هل تعلم البند	من قبل	البند
مهم جدا	عالي الأهمية	متوسط الأهمية	قليل الأهمية	عديم الأهمية				
								أولاً: بنود ذات صلة بالمالك (صاحب العمل)
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا		1. يتعين على صاحب العمل تسليم المقاول دليلاً معقولاً على أنه قد قام بعمل الترتيبات اللازمة خلال 28 يوماً من طلب المقاول لتوفير اتسيابية الدفعات حسب العقد، اذا طلب المقاول ذلك.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا		2. إذا أخفق المقاول في اعمال الاصلاحات حسب البند (6/7)، فإن صاحب العمل مخول باستخدام أي شخص آخر لتنفيذ مثل هذا العمل والدفع له مقابل عمله، ويتعين على المقاول أعمالاً للمادة (5/2) أن يدفع لصاحب العمل كل النفقات المترتبة على مثل هذا الاخفاق.

					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>3. يحق لصاحب العمل انتهاء العقد اذا لم يلتزم المقاول بأي إشعار صادر بموجب المادة (6/7) المتعلقة باعمال الاصلاحات، خلال (28) يوما من تاريخ تسلمه للاشعار .</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>4. اذا تبين ان تاخير المقاول للاعمال في الموقع يترتب عليه ان يتحمل صاحب العمل كلفة اضافية، فانه ينبغي للمقاول ان يدفع هذه الكلفة.</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>5. يحق لصاحب العمل انتهاء العقد اذا تبين أن المقاول قد أصبح مفلسا او معسرا، أو تعرض لتصفية موجوداته، أو صدر امر اداري ضده، أو اجرى تسوية مع دائنيه،.. الخ.</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>6. يحق لصاحب العمل انتهاء العقد اذا اخفق المقاول في تقديم ضمان الأداء للمشروع .Performance Guarantee</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>7. يحق لصاحب العمل انتهاء العقد اذا تبين أن المقاول قام بتلزييم الاشغال بكاملها لمقاول فرعي، أو بالتنازل عن العقد دون الحصول على الموافقة المطلوبة (لا يحق للمقاول أن يلزم الاشغال بكاملها الى مقاولين فرعيين).</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>8. يحق لصاحب العمل انتهاء العقد اذا تبين ان المقاول قدم أو عرض رشوة أو هدية أو منحة أو عمولة أو هبة مالية كترغيب أو مكافأة مقابل أن يعمل أو يمتنع عن عمل او تصرف يتعلق بالعقد.</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>9. يحق لصاحب العمل أن ينهي العقد في أي وقت لما يخدم مصلحته، بحيث يصدر اشعارا بذلك الى المقاول، ويعتبر الإنهاء نافذا بعد مرور (28) يوما من بعد تاريخ تسلم المقاول للاشعار المذكور، أو من تاريخ أرجاع ضمان الاداء اليه من قبل صاحب العمل.</p>
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>10. يدفع صاحب العمل الى المقاول دفعة مقدمة، كقرض بدون فائدة لاغراض التجهيز، عندما يقدم المقاول الكفالة المطلوبة منه (تطبق هذه المادة عندما ينص ذلك في ملحق عرض المناقصة حسب الشروط الفلسطينية).</p>

ثانياً: بنود ذات صلة بالمهندس (الاستشاري)						
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	11. للمهندس أن يصدر الى المقاول في أي وقت، تعليمات ومخططات إضافية أو معدلة، اذا كانت لازمة لتنفيذ الاشغال أو اصلاح أية عيوب فيها.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	12. المقاول لا يتلقى التعليمات الا من المهندس، أو من أي من مساعديه المفوضين رسمياً.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	13. اذا اعترم صاحب العمل تغيير المهندس، فأن عليه أن يشعر المقاول بذلك قبل مهلة لا تقل عن 42 يوماً، ويحق للمقاول الاعتراض (أو مدة 28 يوم حسب الشروط الخاصة الفلسطينية).
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	14. للمهندس- من وقت لآخر- أن يسند الى اي من مساعديه القيام بأي من الواجبات أو يفوضه بأي من الصلاحيات المنوطة به، كما يجوز له أن يلغي مثل هذا الاسناد أو التفويض.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	15. يجوز للمهندس، في أي شهادة دفع، ان يقوم بعمل أي تصحيح أو تعديل كان يجب اجراؤه بشكل مناسب على قيمة أي شهادة دفع سابقة، كما ان أي شهادة دفع لا يمكن اعتبارها مؤشراً على رضا المهندس أو موافقته.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	16. عندما يطلب المهندس كيل أي جزء من الأشغال فإن عليه أن يرسل اشعاراً معقولاً الى ممثل المقاول.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	17. بإمكان المهندس، في أي وقت قبل صدور شهادة تسلم الاشغال، أن يبادر بإحداث تغييرات في الاشغال، سواء من خلال تعليمات يصدرها، أو بالطلب الى المقاول أن يقدم اقتراحاً للنظر فيه.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	18. ينبغي على المهندس خلال (28) يوماً من تاريخ تسلمه "المستخلص النهائي" بموجب المادة (11/14) وقرار المخالصة بموجب المادة (12/14)، ان يصدر الى صاحب العمل شهادة الدفعة الختامية.
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	19. يتعين على المقاول أن يقدم الى المهندس اشعاراً خطياً حينما يتعرض تنفيذ الأشغال الى التأخير أو الاعاقة اذا لم يقم المهندس بتزويده

						بمخططات أو تعليمات خلال فترة محددة، وإذا تكبد المقاول أي تأخير و/أو أي كلفة بسبب ذلك فإنه يحق له تعويض في الوقت/ الكلفة.	
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	20. ان حصل خطأ في تثبيت الابعاد للمشروع نتيجة النقاط المرجعية الخاطئة من قبل صاحب العمل، فانه يتعين على المقاول ان يرسل اشعارا للمهندس لتقدير استحقاقاته بشأنها (تمديد و/أو كلفة).
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	21. يتعين على المقاول كلما طلب منه المهندس ذلك أن يقدم للمهندس تفاصيل ترتيبات واساليب تنفيذ الأشغال التي يقترح المقاول اتباعها لتنفيذ الأشغال، ولا يجوز للمقاول أن يحدث تغييرا جذريا في هذه الترتيبات أو الاساليب بدون اعلام المهندس مسبقاً عن اجراءاته.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	22. يتعين على المقاول أن يقدم الى المهندس مخططات المنشأ "كما تم تنفيذه"، وأدلة الصيانة والتشغيل المطلوبة بموجب العقد، وبشكل مفصل.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	23. يتعين على المقاول أن يتقيد بجميع تعليمات السلامة المطلوب تطبيقها، والعناية بسلامة جميع الاشخاص الذين يحق لهم التواجد في الموقع، وتوفير التسييج والانارة والحراسة..الخ.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	24. يتعين على المقاول أن يضع نظاما لتوكيد الجودة لإثبات التقيد بمتطلبات العقد، على أن يكون هذا النظام متوافقا مع تفاصيل العقد.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	25. يتعين على المقاول اتخاذ جميع الخطوات المعقولة لحماية البيئة (داخل الموقع وخارجه)، وأن يحدّ من احداث الازعاج أو الضرر للأفراد أو للممتلكات نتيجة للتلوث أو الضجيج أو غيره مما قد ينتج عن عمليات التنفيذ.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	26. ما لم ينص على غير ذلك في الشروط الخاصة، فإنه يتعين على المقاول أن يعد تقارير تقدم العمل الشهرية ويسلمها الى المهندس.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	27. يتعين على المقاول أن يدفع معدلات الاجور وأن يراعي شروط العمالة بحيث لا تقل في مستواها عما هو متبع من قبل اصحاب حرف التجارة والصناعة في المنطقة التي تنفذ فيها الاشغال.

				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>28. يتعين على المقاول أن يتخذ التدابير المعقولة في كل الاوقات للمحافظة على صحة وسلامة مستخدميه، وأن يعين ضابطاً للوقاية من الحوادث في الموقع، كما يتعين على المقاول أن يرسل الى المهندس تفاصيل أي حادث يقع حال حصوله.</p>
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>29. يمكن للمقاول في اي وقت ان يقدم الى المهندس اقتراحاً خطياً بحيث يحسن ويسرع في انجاز العمل، يخفض قيمة الاشغال، يحسن من فاعلية أو قيمة الاشغال المنجزة ويحقق منفعة أخرى لصاحب العمل، أو ما يسمى بهندسة القيمة Value Engineering.</p>
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>30. اذا لم يتلق المقاول اثباتاً معقولاً خلال (42) يوماً من بعد تاريخ ارساله الاشعار الى صاحب العمل بخصوص اخفاق صاحب العمل في الالتزام بعمل الترتيبات المالية للمشروع، فان للمقاول الحق في انهاء العقد.</p>
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>31. اذا اخفق المهندس في اصدار شهادة دفع مرحلية خلال (56) يوماً من بعد تاريخ تسلمه لكشف تلك الدفعة مع البيانات المدعمة، فإنه يحق للمقاول انهاء العقد.</p>
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>32. يتعين على المقاول أن يقدم الى المهندس، خلال (28) يوماً من تاريخ المباشرة، اقتراحه المتعلق بتحليل السعر لكل بند تم تسعيره في الجداول كمبلغ مقطوع.</p>
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>33. اذا لم يتسلم المقاول أي دفعة مستحقة له بموجب المادة (7/14)، فإنه يحق له ان يتقاضى نفقات التمويل عن اية مبالغ يتأخر دفعها له، بحساب مركب شهرياً عن مدة التأخير.</p>
				<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	<p>34. اذا لم يتسلم المقاول أي مبلغ استحق دفعه له بموجب شهادة دفع مرحلية خلال (42) يوماً من انقضاء المهلة التي يتعين على صاحب العمل الدفع خلالها بموجب احكام المادة (7/14) (باستثناء الخصميات التي يتحقق اقتطاعها بخصوص مطالبات صاحب العمل بموجب المادة - 5/2)، فإنه يحق للمقاول إنهاء العقد.</p>

					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	35. يحق للمقاول إنهاء العقد اذا اخل صاحب العمل بصورة جوهرية في أداء التزاماته بموجب العقد.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	36. يحق للمقاول إنهاء العقد اذا حدث تعليق مطول للعمل، مما يؤثر على تنفيذ الاشغال بكاملها، حسبما هو منصوص عليه في المادة 11/8
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	37. يحق للمقاول إنهاء العقد اذا تبين بأن صاحب العمل قد اصبح مفلسا أو وقع تحت التصفية، أو فقد السيولة، أو صدر امر اداري ضده، أو انه قد اجرى تسوية مالية مع دائنيه، أو قد حدث أية واقعة لها نفس التأثير لأي من هذه الافعال أو الحوادث.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	38. يحق للمقاول إنهاء العقد اذا اخل صاحب العمل في الالتزام بالاحكام المتعلقة باتفاقية العقد.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	39. يتعين على المقاول أن يقوم بالتأمين لدى جهات تأمينية وبشروط تأمين مقبولة لدى صاحب العمل، وبحيث تكون هذه الشروط متوائمة مع أي شروط عامة أتفق عليها قبل تاريخ "كتاب القبول".
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	40. يتعين على المقاول عند سداد كل قسط من اقساط التأمين، ان يقدم نسخاً عن ايصالات السداد الى الفريق الآخر، واعلام المهندس بذلك.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	41. اذا منع المقاول من أداء أي من التزاماته بموجب العقد نتيجة لقوة قاهرة مثل الكوارث الطبيعية، الحرب،..الخ، وتم إرسال أشعار بشأنها الى صاحب العمل خلال 14 يوما من دراية المقاول بها، فان له حقوقا معينة تتعلق بظروف القوة القاهرة مثل التمديد و/أو الكلفة.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	42. اذا تعذر الأداء في تنفيذ كل الاشغال بصورة جوهرية لمدة 84 يوما باستمرار أو لفترات متتابعة تتجاوز بمجموعها اكثر من 140 يوماً بسبب القوة القاهرة، عندها يمكن لأي فريق ان يرسل الى الفريق الاخر إشعارا بانتهاء العقد.
					<input type="radio"/> نعم <input type="radio"/> لا	<input type="radio"/> نعم <input type="radio"/> لا	43. اذا كان المقاول يعتبر نفسه مستحقاً بمطالبة للحصول على تمديد في "مدة الانجاز" و/أو اية دفعة اضافية، فإنه يتعين عليه أن يرسل إلى

							المهندس إشعاراً مبيناً فيه الواقعة أو الظرف خلال مدة لا تتجاوز (28) يوماً من تاريخ دراية المقاول بتلك الواقعة أو الظرف.
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القسم الخامس: اقتراحات عامة لتطوير تطبيق FIDIC في فلسطين :

1. ما الذي يعيق تطبيق وتطوير FIDIC في فلسطين؟ يمكن اختيار أكثر من إجابة،
- الصعوبات المالية للسلطة الفلسطينية.
- الوضع السياسي الحالي في فلسطين.
- المشاكل الادارية و عدم نضج قطاع الانشاءات في فلسطين
- عدم الشعور باهمية العقد أو عدم الاهتمام بصياغة العقود.
- تعدد المانحين للسلطة الفلسطينية، مع امكانية تعدد واختلاف الشروط العامة.
- مشاكل أخرى (أذكر):

.....

2. هل تعتقد ان هناك حاجة الى تأهيل/تدريب صاحب العمل/الاستشاري/المقاول في كيفية التعامل مع عقود FIDIC؟

نعم لا

3. هل تقوم الجهات المختصة (وزارة الاشغال العامة والإسكان، نقابة المهندسين،...الخ) بدورها في التوعية والتنقيف في النواحي التعاقدية والقانونية؟

نعم لا

4. ما هي اقتراحاتكم من أجل تطوير تطبيق FIDIC في فلسطين؟

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**Appendix (E): List of experts and arbitrators for examination of
the questionnaire**

- Eng. Jamal Al-Aref, Arbitrator, COP/Country Director Deputy, ANERA.
- Eng. Fakhri Al- Safdi, Director of Buildings Department, MEHE.
- Eng. Mohammad Abo Ne'meh, An-Najah National University.
- Eng. Samer Salem, Consultant Engineer, ARAEBESC.
- Eng. Majdi Al-Saleh, Al-Tayma' Contracting Company.
- Eng. Sa'ed Al-Johari, MOEHE.
- Mr. Nasouh Al-Sous, Statistician.

**Appendix (F): List of experts and arbitrators for personal
interviews**

- Eng. Ahmed Edaily, The Palestinian Engineers Association Chairman, President of the Palestinian International Arbitration Chamber.
- Eng. Jiries Atalla, The Palestinian Contractors Union Chairman.
- Eng. Bassam Jaber, General Manager, Central Tendering Department, Ministry of Public Works and Housing.
- Eng. Fakhri Al-Safadi- Director of Buildings Department, MEHE.
- Eng. Marwan Juma'a, Arbitrator. The Palestinian Contractors Union.
- Eng. Hatem Juma, Arbitrator, Madar Consulting Engineers.

Appendix (G): Interview questions

Dear Sir/Madam,

This Interview is a part of the supplementary research to achieve my master's degree in the Engineering Management /An-Najah National University-Nablus.

The title of the Thesis is "Major Challenges Facing the Implementation of the FIDIC in Construction Projects in Palestine".

Supervisor: Prof. Sameer A. Abu-Eisheh

The response and information for this question will be used only for this research purposes.

Thanks for your assistant and cooperation.

Name: Position:

1. What is your opinion of the Contract Conditions used in Palestine (FIDIC 1999) and the Palestinian Particular Conditions?
2. Why it is important to use Standard General Conditions in Palestine?
3. How do you assess the implementation of the FIDIC and the Palestinian Special Conditions in Tenders Documents?
4. What are the main obstacles that prevent adopting FIDIC in Palestine?
5. What are your recommendations that would make FIDIC more understandable and easy to use in Palestine?

جامعة النجاح الوطنية
كلية الدراسات العليا

التحديات الرئيسية التي تواجه تطبيق نظام الفيديك في المشاريع الإنشائية في فلسطين

إعداد

محمد بهيج محمد تفاحه

إشراف

أ. د. سمير أبو عيشة

قدمت هذه الأطروحة استكمالاً لمتطلبات الحصول على درجة الماجستير في برنامج الإدارة الهندسية بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين.

2015م

ب

التحديات الرئيسية التي تواجه تطبيق نظام الفيديو في المشاريع الإنشائية في فلسطين

إعداد

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إشراف

أ.د. سمير أبو عيشة

الملخص

الشروط العامة للعطاءات هي جزء أساسي من أي وثائق تتعلق بالعقد. إن الهدف من الشروط العامة هو تحديد العلاقة بين الأطراف المتعاقدة، تحديد المسؤوليات، إعطاء قدر أكبر من الموثوقية، وتقليل التعرض للمخاطر للأطراف المتعاقدة. وقد تم اعتماد الشروط العالمية "الفيديك" من قبل مجلس الوزراء الفلسطيني عام 2006 لتكون الجزء الأساس في عقد المقاول الفلسطيني الموحد بالإضافة الى الشروط الفلسطينية الخاصة.

إن الغرض من هذه الدراسة هو بحث العقبات والتحديات الرئيسية التي تواجه تطبيق الفيديو في المشاريع الإنشائية في فلسطين. ومن أجل تحقيق هذا الهدف تم القيام بدراسة مكثفة لموضوع الفيديو والعقود، ومن ثم تمت دراسة مدى تطبيقه في فلسطين والعقبات التي تواجهه تطبيقه. كما تم تصميم إستبانه وتم توزيعها على عدد من مالكي المشاريع، المهندسين، وعلى عدد من المقاولين، لفحص تحليل آرائهم بالخصوص، كما تم إجراء مقابلات مع عدد من الخبراء والمحكمين في مجال العقود والفيديك.

وقد أظهرت نتائج الدراسة العديد من العقبات والتحديات التي تواجه تطبيق الفيديو على الوجه المطلوب في فلسطين. بعض هذه العقبات متعلق بالمقاولين، حيث أظهرت الدراسة أن المقاولين يعانون من الضعف الإداري وقلة الخبرة في الجوانب القانونية، وعدم الإهتمام بالأمور التعاقدية، بالإضافة الى صعوبة التعامل مع العقود المكتوبة باللغة الإنجليزية. وعلاوة على ذلك، فإن هناك حاجة لإعادة النظر في إجراءات تصنيف المقاولين الحالية لتكون أكثر دقة وملاءمة للوضع الراهن في فلسطين. وقد أكد من شملهم البحث أن تعدد الجهات المانحة، وبالتالي تعدد الشروط العامة لديها، هو أحد التحديات لتطبيق الفيديو. وبالإضافة الى ذلك، أكد من شملهم

البحث أن الوضع المالي للسلطة الوطنية الفلسطينية هو عقبة رئيسية لتطبيق الفيديو، وذلك نظرا لتأخر صرف فواتير المقاولين، وبالتالي عدم الإلتزام بالعديد من بنود الفيديو. كما نوه المستطلع أراؤهم إلى أن الوضع السياسي الحالي هو يشكل إعاقة حقيقية لتطبيق عقد الفيديو. ويعتقد من شملهم البحث أن السلطات المختصة في فلسطين لا تقوم بواجبها في التوعية والتثقيف بالجوانب التعاقدية والقانونية المتعلقة بتطبيق عقد الفيديو. وقد إتفق من شملهم البحث على أن هناك حاجة إلى التدريب لجميع الأطراف بما في ذلك مالكي المشاريع، المهندسين، والمقاولين، في التعامل مع عقد الفيديو. وإلى جانب ما سبق، هناك بعض العقبات المتصلة بالمكاتب الهندسية العاملة في فلسطين، مثل عدم جودة وثائق العطاء.

وقد تم تقديم خارطة طريق للمساعدة في التنفيذ السليم لعقد الفيديو في فلسطين، من خلال عرض إجراءات محددة مقترحة، سواء كانت إدارية أو قانونية، حيث تم إشتقاقها من الفهم الدقيق للعقبات والتحديات ومن خلال تحليل الإستبانات والمقابلات. وتشمل المقترحات إعداد عقد المقاول الموزع، ووضع التعديلات لمواءمة عقد المقاول الموحد للوضع الحالي في فلسطين، وغيرها. كما تم تقديم توصيات لمالكي المشاريع، ونقابة المهندسين والمكاتب الهندسية، وإتحاد المقاولين الفلسطينيين والمقاولين، وذلك لمساعدتهم في التغلب على العقبات المتعددة وتطوير تطبيق الفيديو في فلسطين.