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The American University in Cairo

School of Sciences and Engineering

LEGAL CHARACTERIZATION OF THE CHALLENGES FACED BY THE CONSTRUCTION INDUSTRY DURING COVID-19 AND DEVALUATION OF THE EGYPTIAN POUND

A Thesis submitted to the

Construction Engineering Department

In partial fulfilment of the requirements for

the degree of Masters of Science

By

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Spring 2022

Acknowledgement

Firstly, I would like to acknowledge and give my warmest gratitude to my supervisors – Dr. Samer Ezeldin and Dr. Engy Serag – their guidance and support were the main reason I was able complete my thesis as they imparted their knowledge and expertise in this study.

I would also like to thank all experts and professionals in the Construction field that took part in my research – whether responding to my survey or during one-on-one interviews – without their input my thesis wouldn't be complete.

Lastly, I would like to express my deepest gratitude to my family and friends for their support through my graduate studies and their continuous encouragement, love, and patience.

Abstract

With all the challenges this past decade has inflicted on the economy on a global scale, Egypt had its share with two major events, starting with the Egyptian pound devaluation against the U.S dollar in 2016 and currently the emergence of the COVID-19 pandemic. These major events instigated the interference of the legal/contractual sectors in the construction market to find solutions that range from agreeable to stringent to protect the assets of their beneficiaries.

Both events are impactful and require extensive analysis to determine and classify each situation. This thesis addresses the implementation of standard internationally acknowledged legislative acts used in Construction Contracts but are yet to experience practically for the first time in decades, whether under Hardship “Théorie de l'imprévision”, Force Majeure or Change in Legislation.

The purpose of this thesis is to explore and analyse the various categories which these two events are under to enable them to survive during the countries' sudden events. A detailed research is conducted to study the impact of the devaluation of the Egyptian pound and COVID-19 in the Construction projects in Egypt to categorize each event from a legal and Contractual perspective. Data is gathered based on a survey questionnaire to explore the opinions of 75 professionals working in the construction field. In addition, one-to-one interviews are conducted with selective members of the Construction/ Law industry followed by interviews with three different Construction Companies (Employer, Consultant and Contractor) to get their professional opinion on how COVID-19 and Devaluation of the Egyptian Pound are categorised from a legal perspective. Combining the findings from the survey and interviews along with the literature, the decision flowchart model is created.

To validate the results obtained, the research findings along with the decision flowchart are used. The findings showed that the event of the devaluation of the Egyptian Pound is considered a Change in Legislation while the COVID-19 is considered a Hardship. The formulated Flowchart will be used as a guidance to enable users to categorize future similar events.

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List of Abbreviations

CAPMAS - Central Agency for Public Mobilization & Statistics

CBE – Central Bank of Egypt

ECC - Egyptian Civil Code

EGP – Egyptian Pound

FIDIC - Fédération Internationale Des Ingénieurs-Conseils

GDP – Gross Domestic Product

IMF - International Monetary Fund

NAC - New Administrative Capital

RII - Relative Importance index

USD - United States Dollar

VAT – Value added Tax

WHO - World Health Organization

YoY – Year on Year

Chapter 1: Introduction

1.1 Background Information

1.1.1 Devaluation of the Egyptian Pound

There are numerous challenges and problems facing the construction industry in Egypt as a result of several economic influences, it is widely believed that exchange rate fluctuations and their direct and indirect effects play an important role in determining macroeconomic performance. This made dealing with exchange rate problems one of the crucial issues that face policy makers in developing countries.

On March 14th 2016, the Central Bank of Egypt announced the floatation of the Egyptian pound and increased the value of the US dollar against the Egyptian pound in the official market to reach USD/EGP 8.85. Then on September 8th, 2016, Egypt's parliament approved the value added tax (VAT). Later, on November 3rd 2016, and based on the recommendations of the International Monetary Fund (IMF), the Central Bank of Egypt announced the floatation of the Egyptian pound. In result, the exchange rate of the Egyptian Pound to US dollar suddenly changed from 8 EGP to \$1 to being 18 EGP. Such decision resulted in unprecedented increase in prices, consequently affecting the Construction Industry.

According to the Chairman of the Egyptian Federation for Construction & Building Contractors - Hassan Abdel Aziz - as of 2016 many construction companies in Egypt ended shutting down their business as they were unable to deal with such sudden rise in prices of fuel, construction materials and Value Added Tax. Many of these companies failed to complete the projects due to shortages in financial resources.

The three-month delay in Parliament's acceptance of reparations proposed by the Ministry and the Committee of Housing caused construction collapse. In addition, it resulted in the withdrawal of more enterprises in 2017, particularly because the companies were unable to complete projects owing to a lack of financial resources as a result of unexpected cost hikes and compensation disbursement.

To further portray how the Construction industry was affected, it is necessary to understand that Construction costs are volatile and change regularly due to many reasons, making inflation one of its high risks. Inflation is a quantitative measure therefore; affects the project's estimated budget leading to project cost overrun including material, labour and equipment prices. As shown in Figure 1 below, there are several aspects that affect the prices in the Construction Industry; as the Inflation rate increases, prices increase.

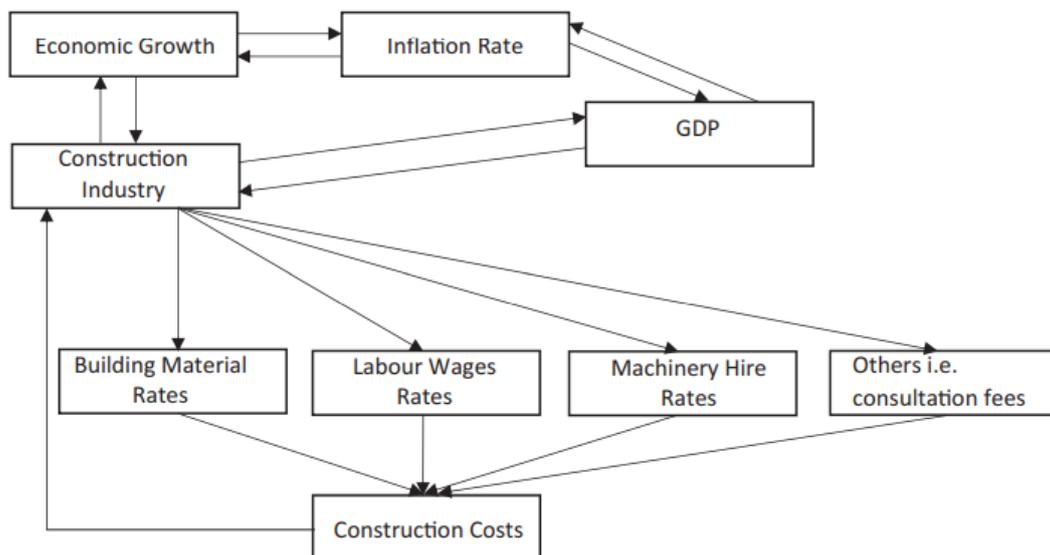


Figure 1: Relation between the economic growth and the Construction industry (Musarat et al., 2021)

One of the aspects of construction that was negatively affected was material cost. There are many factors that contribute to this increase such as supply and demand, transport cost, fuel, raw materials, etc. This is shown in detail in Figure 2 below.

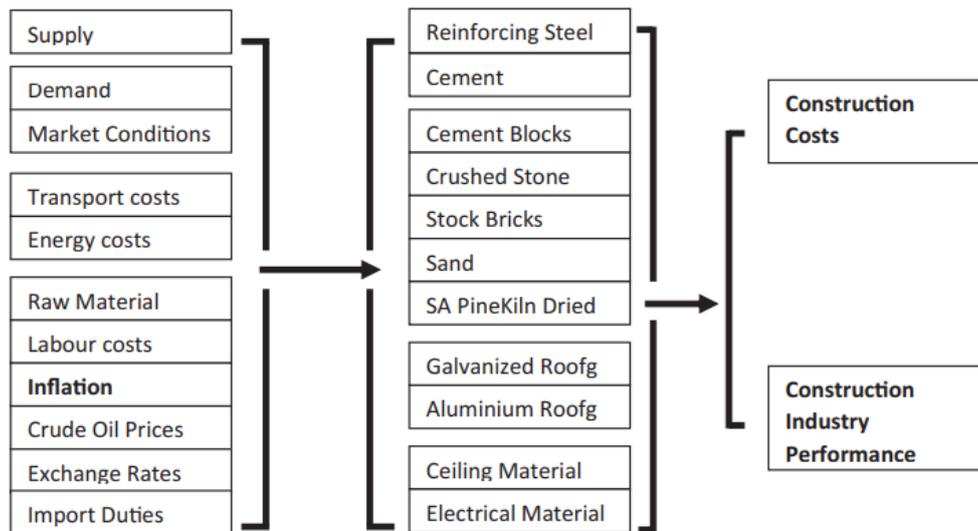


Figure 2: Factors Affecting building material prices (Musarat et al., 2021)

Material costs contribute to a large percentage of the total project price. Therefore, any threat to these essential materials can negatively affect any project. Two main items that affect the construction project significantly are steel and Fuel.

Steel is one of the common materials used extensively in Construction Projects. Due to the devaluation of the Egyptian Pound, the Egyptian construction market suffered a rise in steel prices.

In terms of production, Egypt is the second largest market in the Middle East and North Africa, and the third largest in terms of consumption. (Salman, Kamal & Basyoni, 2021). Steel production in Egypt averaged 398.53 thousand tons from 1991 until 2019. The market is an Oligopoly market, which means that there are only a few steel providers in the market (Ezz Group, Beshay Group, Suez Steel, Garhy Steel). Ezz Group is considered a dominant in the market given the market share exceeding 50% while the other companies are considered followers. Figure 3 illustrates market prices of Ezz steel from 2006 till 2020.

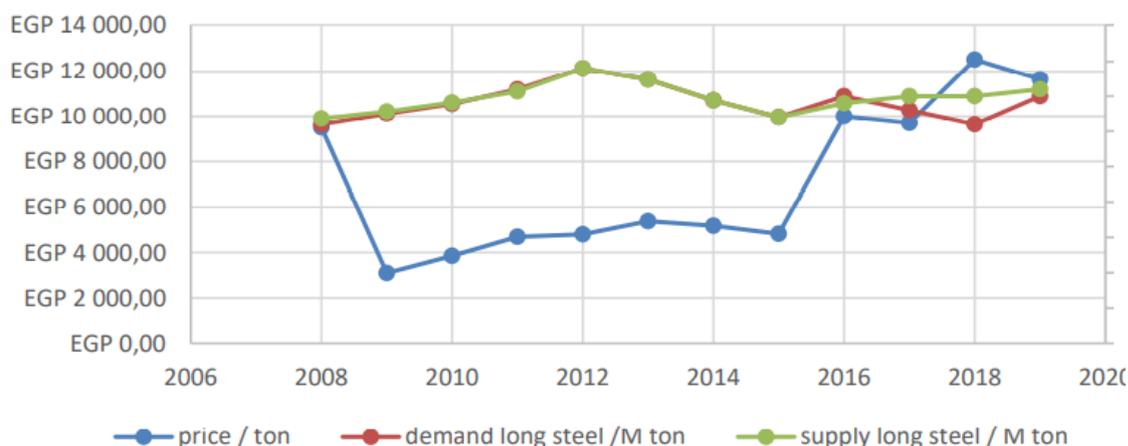


Figure 3: Market forces for the steel sector during the period 2011-2020 (Ezz Steel, 2020)

From 2011 through 2020, there are two significant periods for steel supply and demand. The first period covered the years 2011 to 2015, when the market stagnated due to a drop in demand. Between 2016 and 2018, prices rose due to the devaluation of the Egyptian Pound, which resulted in higher gas prices. (Salman et al., 2021)

The second resource that impact material cost drastically is Fuel. The devaluation of the Egyptian Pound caused gasoline prices to sky-rocket as shown in Table 1.

Fuel Type	Before Floatation (EGP)	4/11/2016 (EGP)	% increase	29/6/2017 (EGP)	% increase
Gasoline 80	1.6	2.35	47%	3.65	55%
Gasoline 92	2.6	3.5	35%	5	43%
Gasoline 95	6.25	6.25	0%	6.6	6%
Diesel	1.8	2.35	31%	3.65	55%
Natural gas 25 KG (domestic use)	16	30	88%	60	100%
Natural gas cubic meter (for cars)	1.1	1.6	45%	2	25%

Table 1: Fuel Prices during the period 2016-2017 (Infomineo, 2021)

According to the Ministry of Petroleum, the prices for 80 octane gasoline increased from EGP 1.6 to EGP 2.35 per litre. Prices for 92 octane gasoline have increased from EGP 2.6/litre to EGP 3.5/litre, while diesel prices increased from EGP 1.8/ to EGP 2.35/litre in 2016. (Egyptian Streets, 2016). This increase consequently affects different aspects of construction such as the indirect cost as fuel constitutes 3-5% of the cost due to the regular need for Equipment and transportation of materials, labour works and machinery (Infomineo, 2021).

In result of the increase in prices as explained above, there are many cases where Construction Companies ended up negatively impacted by the devaluation of the Egyptian Pound. They were not able to bear the severe decline in their cash flow which resulted in regression in the performance of small/medium size companies. This includes private and public companies as showcased bellow:

1. Medium sized Contractor A:

This Company stated that it faced a huge deterioration since the devaluation of the Egyptian Pound was announced by the Central Bank of Egypt. The Contractor mentioned that the floatation of the local currency resulted in a lack of liquidity due to increased prices' where prices of some resources increase to a 100%. This affected the progress of the Contractor and decreased the cash spent to avoid a negative cash flow. Contractor A mentioned that in three of their projects, the client refused to compensate the Contractor for the material increase in prices. Only one Employer compensated Contractor A for the increase in prices (the Employer was a Public Authority) while the other two Clients refused, where their argument was that both the Client and Contractor suffered losses and should both carry these losses.

2. Medium sized Contractor B:

Contractor B has suffered tremendous losses as well and claimed that steel and cement prices increased. The Employer refused to compensate Contractor B for such increase which resulted in the Contractor being unable to complete the project due to unbearable costs that were unprepared for. In result the Contract was terminated as the Contractor was unable to fulfil his Contractual obligations and deliver the Project on time.

These two cases are selected from many more with similar conditions, since many Companies were suffering; Contractors in particular. To relief parties from the unprecedented losses they were facing, the Housing Committee in the House of Representatives has prepared a draft law that oblige the governmental sectors to compensate the construction companies, suppliers, and the parties who are performing public services contracts for the increase of prices resulted from the local currency floatation. (Salib, 2018).

After nearly a year of announcing the devaluation of the Egyptian Pound, the Compensation Law No. 84 of year 2017 was issued on Sunday 1st of October 2017. The purpose of enacting this law was to recompense disgruntled and distressed Contractors for losses incurred as a result of the economic decisions. This law will be discussed in detail in the next Chapter.

1.1.2 COVID-19 Pandemic

The second event that will be studied in this paper is COVID-19. The sudden appearance of Coronavirus disease in 2019 was firstly reported in Wuhan city in China. This disease spread quickly worldwide and has been classified/labelled as a pandemic by the World Health Organization (WHO). COVID-19 pandemic had severe consequences on the whole world since its spread. Economies are facing tremendous impact as many countries have undergone recession and economic down turn (Gamil & Alhagar, 2020). During the pandemic, businesses were shut down excluding essential supplies and medical facilities. This forced most companies to resort to working from home to be able to run their businesses. Nevertheless, such adopted methods of remote working were impossible to implement in the Construction industry, since all workers and engineers need to be present on site for execution or monitoring of works. Several studies have attempted to investigate the impact of COVID-19 on the economy and industrial sectors. The reviews are not yet adequate due to the

uncertainty of the current situation. A study by Fernandes, N. in 2020 addressed the economic impact of the pandemic outbreak on the economy of 30 countries and the study found that the gross domestic product (GDP) is likely to be hit by 3-6% or might fall to 15% in some countries. Today, several months have passed since COVID-19 has emerged as not only a threat to people's lives, but also as a complicating influence affecting performance of obligations pursuant to Construction Contracts. There are numerous ways in which COVID-19 may impact employers and contractors involved in construction projects, its impact may result in delays to the completion of projects; and/or an increase in the cost of completing these projects. (Lloyd & Al-Ali, 2020).

Moreover, COVID-19 resulted in a change in construction material prices in terms of supply and demand. Referring again to Figure 3 which illustrates Ezz steel's market force from 2011-2020; looking at the period from 2019 to 2020, it shows a decrease in prices. This is due to two reasons; 1) to stabilize the exchange rate and 2) the decrease in gas prices. Then, in the first quarter of 2020 when COVID-19 was at its peak. This caused the quantity supplied to decrease due to slowdown of construction in Egypt. (Salman et al., 2021)

Moreover, Figure 4 illustrates the steel prices according to CAPMAS (Central Agency for Public Mobilization & Statistics), the steel prices remained stable till November 2020 as a result of the six-month ban of new construction licences for private buildings in major cities. The ban was raised by November 20th 2020, construction increased and therefore prices increase to meet the demand. Steel prices kept on increasing, until they reached EGP 15,000/ ton in June 2021 and remained the same till the end of the year.

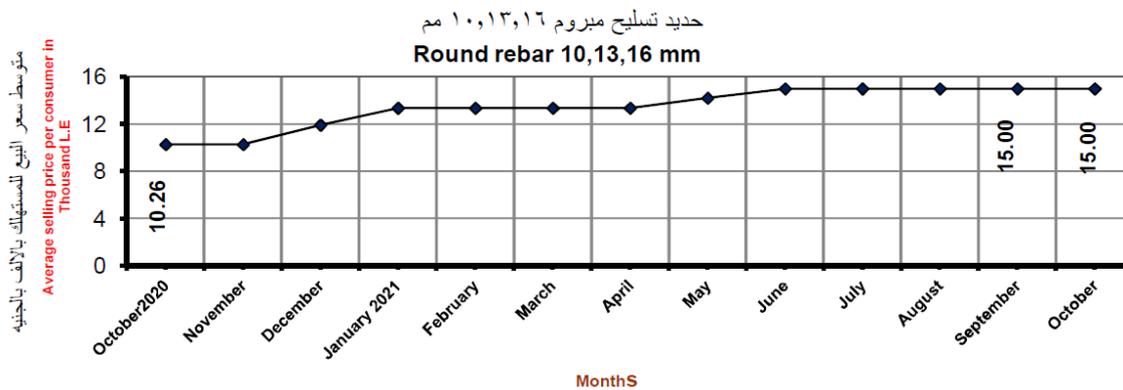


Figure 4: Steel rebar prices from October 2020 – October 2021 (CAPMAS)

The second resource that increased in price during COVID-19 is fuel. Table 2 below illustrates the change of fuel prices over the past months.

Fuel Type	Price (EGP/litre)									
	Jul-19	Jan-20	Apr-20	Jul-20	Jan-21	Apr-21	Jul-21	Oct-21	Jan-22	Apr-22
Gasoline 80	6.5	6.5	6.25	6.25	6.25	6.5	6.75	7	7.25	7.5
Gasoline 92	7.75	7.75	7.5	7.5	7.5	7.75	8	8.25	8.5	8.75
Gasoline 95	8.75	8.75	8.5	8.5	8.5	8.75	9	9.25	9.5	9.75
Diesel	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75

Table 2: Fuel Prices from July 2019 – April 2022 (CAPMAS)

According to the Ministry of Petroleum, the prices remained constant from July 2019 to March 2020. The price for 80 octane gasoline was EGP 6.5/litre, for 92 octane gasoline was EGP 7.75/litre, and for 95 was EGP 8.75/litre. In April 2020, due to COVID 19 Fuel were decreased by EGP 0.25/litre and remained constant until April 2021.

In the eighth meeting of the committee in July 2021, they decided to increase prices for the second time by an additional EGP 0.25/litre. Gasoline 80 costs EGP 6.75/litre, gasoline 92 costs EGP 8/litre, gasoline 95 costs EGP 9/litre.

The Petroleum Products Pricing Committee decided to increase prices for the third time, by EGP 0.25/litre in October 2022. Gasoline 80 costs EGP 7/litre, gasoline 92 costs EGP

8.25/litre, gasoline 95 costs EGP 9.25/litre. During this whole COVID-19 duration, diesel price remained constant to be EGP 6.75/litre.

The Pricing Committee decided, in a statement on February 4, 2022, to increase the prices of all types of gasoline for the fourth time, during the three months (January - March 2022) by 25 piasters, with the continued fixation of diesel to be EGP 6.75/litre, and the prices of gasoline became Gasoline 80 costs EGP 7.25/litre, gasoline 92 costs EGP 8.5/litre, gasoline 95 costs EGP 9.5/litre. This increase was due to the sudden devaluation of the Egyptian Pound that was announced by the Central Bank of Egypt on 21st of March 2022 that was related to the Russian War with Ukraine, that the exchange rate of the US dollar increased to LE 17.5, compared to LE 15.74 on 20th March 2022 trading. The exchange rate continued to increase during the same day until it reached at LE 18.22. This increase was related to the sudden war between Russia and Ukraine that started on 24th February 2022.

Later on April 15, 2022, the fuel prices increased again by EGP 0.25/litre making the new prices to be for Gasoline 80 costs EGP 7.5/litre, gasoline 92 costs EGP 8.75/litre, gasoline 95 costs EGP 9.75/litre. Diesel price was constant to EGP 6.75/litre.

This drastic increase of fuel prices effects many aspects of the Construction industry and consequently increases prices of many things whether for the need for Equipment and transportation of materials, labour works or machinery.

1.1.2.1 Legislations in relation to COVID-19

To minimize the spread of the COVID-19 the Egyptian government has taken precautionary and protective measures. The Prime Minister – Mostafa Madbouly - declared that a high

commission would be established to oversee Egypt's reaction to COVID-19. Members included Ministers of health and population, supplies and domestic trade, education, higher education, finance, local development, interior, and state minister of media, health and prevention adviser to the president and the head of the Egyptian Authority for Drugs and the Procurement of Medical Supplies and Technology (Hamzawy & Brown, 2020).

1. The First action taken by the Prime Minister was in Decree No. 606 of 2020, issued on 9 March 2020 where all social gatherings were prohibited.
2. Later on March 24th 2020 Decree No.768 of 2020 was issued to force a curfew from 7pm to 6am. Later this decree was amended following Prime Minister's Decree No. 852 of 2020 whereas the national curfew was reduced one hour and for a period of two weeks.
3. As per the Prime Minister's Decree No. 923, dated 16 April 2020, the Government's restrictions were elevated to prevent any social gatherings. A 24-hour curfew is declared on Monday 20 March 2020 which suspended all public transportation.
4. In preparation for the holy month of Ramadan, the Prime Minister issued Decree No. 939 of 2020, dated 23 April 2020 reducing the daily national curfew by one hour to be from 9 pm to 6 am, and amending all previous provisions accordingly.
5. Following the Decree No. 939 of 2020, the President of the State renewed the state of emergency in the Country for 3 months starting 28 of April 2020.
6. On 19 May 2020, the Prime Minister held a press conference announcing stricter measures to be imposed starting Sunday 24 May until Friday 29 May 2020 as per Decree No. 1068 of 2020, this decree included:

- Curfew hours increased to be from 5 pm till 6 am (instead of 9 pm in the holy month of Ramadan).
 - Suspension of all public transportations during the said period.
 - Total shutdown of all beaches, restaurants, parks, malls, cafes and retail shops.
 - Total shutdown of all mosques and churches.
7. Regarding the air travel, all flights were suspended in or out of the country starting March 19 2020 and this suspension has been renewed until further notice by the Prime Minister's Decree No. 852 of 2020, dated 8 April 2020.
8. Later on 31 May 2020, the Prime minister amended the curfew hours to start from 8pm to 5am as per Decree No. 1121 of 2020.
9. In addition, regarding Decree No. 1068 of 2020, the Prime Minister decided to extend the same restrictions that were implemented but in a less restrictive manner, this was imposed in Decree No. 1196 of 2020, dated 11 June 2020, this included:
- Curfew hours reduced to start from 8 PM to 4 AM, instead of 5 AM.
 - Shops and malls to be operated until 6 pm. Food delivery to be served all day.
 - Suspension of air flights until further notice.
 - Sporting clubs and youths' centres to undertake the necessary maintenance to resume their activity, and to allow all members to renew their memberships early July 2020.
 - Suspension of schools and all educational institutions (except for the exams to be determined by the concerned authority).

- Public transportations to work in light of the new curfew hours.
- Resuming the cut down of governmental employees with the same conditions applied in previous decrees.
- Face masks are still mandatory during the presence in public transportations and institutions.

10. According to the PM, each ministry, governorate, and authority must continue to serve the public while adhering to the limitations imposed by each competent organisation. Later Decree No. 1246 of 2020, dated 24 June 2020 was issued stating that:

- Beaches and gardens, as well as other projects that require the presence of large crowds, such as weddings, festivals, exhibitions, and concerts, have been suspended until further notice by the PM.
- Furthermore, public and private transportation will be unavailable from 12 a.m. to 4 a.m.

11. On 22 July 2020, the PM held a press conference and announced the new plan for the next phase to fight COVID-19 in the Country with the COVID-19 Crisis Management Higher Committee, in light of the adopted co-existing plan, which were later included in a decree, providing for the precautionary measures adopted for the next Phase. The PM Decree No. 1469 of 2020 dated 25 July 2020 provided for:

- Cafés and restaurants to extend their capacity from 25% to 50%.
- Working hours of cafes and restaurants to extend to 12 am instead of 10 pm

- Malls and commercial facilities' working hours to be till 10 pm instead of 9 pm.
- Conferences and meeting shall be allowed given the maximum capacity shall not exceed 50 persons in a place that its capacity endures 100 persons, considering all the precautionary measures of keeping the social distance and wearing masks as long as people are inside the hall.
- Preparing for holding big fairs and exhibition in October 2020 with keeping the precautionary measures as it is.
- The remaining measures included in PM Decree No. 1246 of 2020 are still enforceable.

After reviewing all the decrees that were issued, such decisions affected the Construction industry. For example, Decree No. 852 of 2020, dated 8 April 2020 which suspended all flights to and from Egypt prevented Construction Projects from receiving their material shipments. The slowdown of the importing process, closure of some ports and decrease in the availability of materials due to the fact that some factories shut down resulted in reducing the working hours as well. In addition, the prime minister imposed curfews for several months as well as shutting of transportation means. These two decisions affected the Construction sites as there were less working hours per day which affected the work progress. Also, the unavailability of transportation meant that labour workers were unable to reach construction sites meaning that the work will be delayed.

It is noteworthy to mention that when the Prime Minister issued on March 24th 2020 Decree No.768 of 2020 where many organizations were shut down, several Contractor's decided to suspend their works for two weeks according to this Decree without it being mentioned

clearly in Articles. Later the Prime Minister's announced in decree No. 939 dated 23 April 2020 which amended the national curfew to be from 9 pm to 6 am prohibiting by which, citizens all over Egypt from transportation on all roads, until 08/05/2020 with an exception of all licensed construction sites as per Article 4. This means that it was clearly stated by the government that Construction sites were no longer hindered by the curfews and were allowed to proceed works normally while maintaining all safety precautions against COVID-19.

Another factor that hindered the works of Contractors was the decision of the Central bank of limiting and decreasing cash withdrawal limits which affected Contractor's cash flow and accordingly any payments or transfer to Sub-Contractor's renting equipment, transportation or accommodation. Due to all these events and their impact on the Construction Projects is crucial to study them in details to measure the impact and categorise them from a Contractual perspective.

1.2 Problem Statement

With all the challenges this past decade has inflicted on the economy on a global scale, Egypt had its share with two major events, starting with the Egyptian pound devaluation against the U.S dollar in 2016 and currently the emergence of the COVID-19 pandemic. These major events have instigated the interference of the legal/contractual sectors in the construction market to find solutions that range from agreeable to stringent to protect the assets of their beneficiaries.

Both events are impactful and required extensive analysis to determine and classify each situation. The main problem that the Construction industry faced is the ability to categorize these two events from a legal/contractual perspective - whether under Force Majeure,

Hardship or Change in Legislation - to compensate affected parties. To do so, this thesis addresses the implementation of standard internationally acknowledged legislative acts used in Construction Contracts and formulate a decision flowchart to be used as guidance in future similar unexpected events for project parties to use as guidance for compensation.

1.3 Thesis Objective

To obtain the thesis goal, the research objective is to 1) categorize the two events – devaluation of the Egyptian Pound and COVID-19 from a Legal/Contractual perspective. 2) Develop a decision flowchart model based on the research finding that is used to verify the results obtained and to be used as a guidance in future to categorise similar unexpected events whether under Force Majeure, Hardship or Change in Legislation as a guidance for compensation.

1.4 Thesis organization

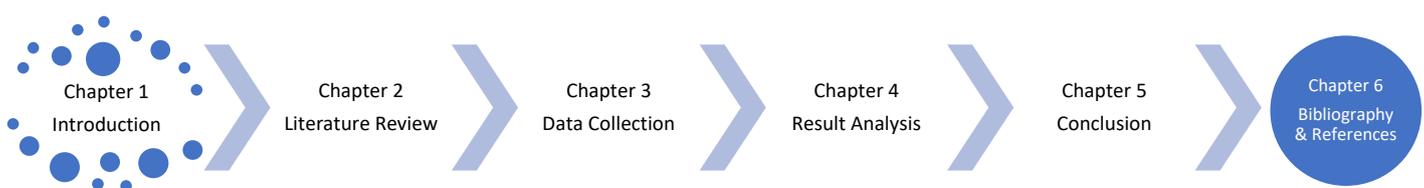


Figure 5: Thesis organization flowchart

As shown in the flowchart above, this thesis is divided into six chapters.:

- The first chapter is the Introduction, which covers an overview of the thesis topic, background information, problem statement, scope and objectives of the research and finally the thesis organization. This chapter focuses on identifying the topic, this

is done through extensive research in journals, books and conference papers, etc. to obtain enough background about the topic to highlight the gaps that need to be covered throughout this paper.

- Chapter 2 focuses on the literature review; where data is collected from previous researches conducted on similar topics to figure out which aspects to consider while writing this research. Literature focuses mainly on the three legal principles that will be studied in this paper; Force Majeure, Hardship and Change in Legislation and how are they defined in different Construction Contracts.
- Chapter 3 is data collection, this part discusses the sample criteria and the questionnaire formulation where a detailed questionnaire will be sent out to different personnel in Construction field in Egypt, to get their insights on the questions tackled in this paper. For the purpose of achieving the goals of this thesis, one-to-one interviews will be conducted with selective members of the Construction/ Law industry followed by interviews with CEOs of three different Construction Companies (Employer, Consultant and Contractor) to get their professional opinion on how COVID-19 and devaluation of the Egyptian Pound are categorised from a legal perspective and whether they are considered Force Majeure, “Imprevision” or Change in Legislation.
- Chapter 4 concludes all results that have been collected from the literature review, questionnaire, expert interviews and case studies. Then based on the findings, strategic ranking is conducted to figure out what were the top categorization to both events that are studied. Afterwards, the data gathered from the survey is statistically analysed to categorise the Devaluation of the Egyptian Pound and COVID-19. Based on the method of categorization a decision flowchart is formulated to enable different

project parties to use the flowchart model as guidance to categorise similar unexpected event whether under Force Majeure, Hardship or Change in Legislation.

- Chapter 5 summarizes the research findings, limitations to this research are discussed and recommendations for further studies are mentioned.
- Chapter 6 contains all references.

Chapter 2: Literature Review

To determine whether the Devaluation of the Egyptian Pound and COVID-19 outbreak are characterized as Force Majeure, Hardship or Change in Legislation, several aspects are to be considered. It is crucial to first define each Legal principle to understand the necessary conditions that need to be met to qualify as one of the three. In Egypt there are several types of Construction Contracts, including but not limited to FIDIC Contracts versions 1987 and 1999 and 2017, Administrative Contracts and Adhoc Contracts. The Governing laws for the different types of Contracts varies; in Egypt it is according to Law No. 89 and Law No. 182. Any condition that is not mentioned in law 89 is governed by the Egyptian Civil Code (ECC) promulgated by law no. 131 of 1848 which is used in most Egyptian Contracts.

FIDIC Contracts are commonly used in Egypt and therefore it is crucial to study the clauses related to Force Majeure, Hardship or Change in Legislation to analyse the devaluation of the Egyptian Pound and COVID-19. Some FIDIC Contracts can also be following the ECC; therefore, the first step for analysis is to define the three phenomenon according to FIDIC and ECC.

2.1 Force Majeure

Force Majeure is a French term, meaning irresistible force. If an unforeseen event arises that is out of the parties' control and preventing them from performing their obligation, then this party may be freed from liability. Force Majeure events include but are not limited to natural disasters of all kinds, fire, traffic accidents, wars, riots, revolution, terrorism, sabotage, strike, etc. (Hargrave, 2022)

2.1.1 Force Majeure according to FIDIC

Force Majeure is defined in FIDIC 1999 (Red Book) Sub-Clause 19.1 "as an exceptional event or circumstance: (a) which is beyond a Party's control, (b) which such Party could not reasonably have provided against before entering into the Contract, (c) which, having arisen, such Party could not reasonably have avoided or overcome, and (d) which is not substantially attributable to the other Party." It is noteworthy to mention that these events are same as the one's mentioned in FIDIC 1987 Redbook in Sub-Clause 20.4 – Employer's risk. An event is considered to be Force Majeure when impossibility of fulfilling obligation occurs.

In FIDIC 2017 Red book, Clause 19 [Force Majeure] has been replaced by Clause 18 [exceptional events]. Which has the same definition as in FIDIC 1999.

Where a Force Majeure event has been identified, Sub-Clauses 19.2 [Notice of Force Majeure] and 19.4 [Consequences of Force Majeure] stipulate that the party invoking these provisions must have been prevented, despite the adoption of mitigation measures, from performing its contractual obligations (by, for example, being unable to complete works due to the country/region being locked down) and, if applicable, must issue to the other party a notice of Force Majeure, detailing the event or circumstance that has arisen and the obligations that have or will be prevented as a result.

However, it is important to note that Force Majeure under FIDIC would generally not extend to an employer's payment obligations, which must continue to be met, notwithstanding the Force Majeure event. As mentioned in Sub-Clause 19.4 [Consequences of Force Majeure]. If the Contractor is affected due to a Force Majeure event, its relief may comply with provisions in Sub-Clauses 8.4 [Extension of Time for Completion] and 20.1 [Contractor's Claims] including an extension of time for delay where completion of the works is or will be delayed, but the contractor would not per se be entitled to additional costs. On the other hand, Sub-Clause 19.4 entitles contractors to only claim costs (which, notably, do not include reasonable profits) if the circumstances listed in (ii) - (iv) of Sub-Clause 19.1 occur.

2.1.1.1 Contractual Remedies for Force Majeure according to FIDIC

2.1.1.1.1 Optional Termination

In case of termination, in FIDIC 1999, Sub-Clause 19.6 [Optional Termination, Payment and Release], any party has the right to terminate the contract if a Force Majeure event prevents progress for more than 84 days continuously or for consecutive periods totalling 140 days. In this scenario, either party may give notice of termination due to force majeure; the termination will take effect seven days after the notification date.

This Clause is mentioned in FIDIC 2017 Redbook as well, Sub-Clause 18.5 [Optional termination], which states that "If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of an Exceptional Event of which Notice has been given under Sub-Clause 18.2 [Notice to an Exceptional Event], or for multiple periods which total more than 140 due to the same Exceptional Event, then either Party may give to the other Party a Notice of termination of the Contract". This was not the case in FIDIC

1987, where only the Employer was entitled to terminate the Contract in the event of any special risk.

2.1.1.1.2 Release from Performance

FIDIC 1987 Sub-Clause 66.1 and FIDIC 1999 Sub-Clause 19.7 define the terms of its termination. Both FIDIC Contracts provide that the parties will be released from their performance if an event beyond their control makes it impossible or unlawful for either or both parties to fulfil their obligations, or if the law governing the contract prohibits either or both parties from doing so (FIDIC 1999 added that force majeure events may be included). The parties are released from further performance in this circumstance, although this does not affect each party's rights in the event of a prior breach of the contract. (Shafik et al., 2016)

In FIDIC 2017 Redbook Sub-Clause 18.6 [Release from Performance under the Law] allows a party to be released from its performance if “any event arises outside the control of the Parties (including, but not limited to, an Exceptional Event) which: (a) makes it impossible or unlawful for either Party or both Parties to fulfil their contractual obligations; or (b) under the law governing the Contract, entitles the Parties to be released from further performance of the Contract”. (FIDIC Redbook 2017)

2.1.2 Force Majeure according to ECC

The concept of Force Majeure is well recognized and established under the laws of Egypt. In article 215 which states “*When specific performance by the debtor is impossible, he will be condemned to pay damages for non-performance of his obligation, unless he establishes that the impossibility of performance arose from a cause beyond his control. The same principle will apply, if the debtor is late in the performance of his obligation*”.

Under the ECC, proving an event to be a force majeure could lead to the termination or the suspension of a contract (Shafik et al., 2016). Article 159 provides, *“In contracts binding to the two parties, if an obligation is terminated because of impossibility of its implementation, counter obligations shall also be terminated, and the contract shall be rescinded by itself.”* The temporal effect of the force majeure event controls the contract; thus, if the execution of the contract becomes inevitable, the obligations of the parties extinguish, in case the presence of such event leads to temporary termination, then the said event suspends the contract until it disappears.

As per Article 165 of the Egyptian Civil Code which states that *“In the absence of a provision of the law or an agreement to the contrary, a person is not liable to make reparation, if he proves that the damage resulted from a cause beyond his control, such as unforeseen circumstances, force majeure, the fault of the injured or a third party.”* This article showcases how the decision of suspending or amending the contract resides in the hands of the judge who is authorized to determine, in its own discretion, the necessary measures to restore the economic equilibrium and overcome the effects of the Force Majeure events. It was established by the court of cassation, the event shall be unpredictable and cannot be prevented to be considered as a force majeure or unforeseen circumstances (Sadany & Khalifa Law Firm, 2020). Making it a reason to relieve the party from the compensation if he didn't meet his contractual obligations, provided that the damage was out of his control.

Moreover, ECC entitles a Contract to be terminated according to Article 373 which states *“An obligation shall be terminated if the debtor established that fulfilment has become impossible for an alien reason in which he has no hand.”*

As shown in the above articles, it is clear that if the event is Force Majeure, the Employer would be liable to compensate the Contractor for the lesser of (a) the costs of any works already completed by the said Contractor and (b) the benefits received by the Employer arising from such completed works (Art. 667 of the Egyptian Civil Code).

ECC has a provision that is absent from the FIDIC contract, which grants right to terminate or suspend a project in the case of an unforeseeable economic imbalance. Because this will be a right that the contracting parties will be able to exercise by making reference to its relevant articles in the ECC, then this provision has to be stated in more detail in the FIDIC to avoid any possibility of dispute. Thus, the writers recommend that this provision should be added to the particular conditions of the FIDIC contract, and it should give a clear definition, procedure, and effect in the same way the force majeure clause is drafted.

These suggestions would eventually create a clear method of implementing this right to minimize related future disputes by settling issues at the project execution stage, to avoid escalating the issue to a judge to decide on its effect. (Shafik et al., 2016)

2.2 Hardship

Hardship is defined as a change in circumstances, which was unforeseeable by the parties when the contract was entered into, and which renders performance of obligations under the contract excessively onerous for a party who did not accept the risk of such change at the time the contract was entered into. Hardship requires performance to be excessively onerous or economically unfeasible.

Hardship clauses typically recognize that parties must perform their contractual obligations even if events will render performance more difficult than one would reasonably have anticipated at the time of the conclusion of the contract.

2.2.1 Hardship according to FIDIC

Hardship is not recognized in the FIDIC as it is more of a legal concept rather than a Contractual; therefore, it is not present in Contracts.

2.2.2 Hardship according to Egyptian Civil Code

To define what the hardship doctrine is, this is shown in article 147/2 which states that *“if general extraordinary events crop up and it has not been possible to anticipate them, and their incidence resulted in the fact that the implementation of the contractual obligation, even though it has not become impossible, has become so exhausting to the debtor that it threatens him with exorbitant loss, the judge, as conditions warrant, may in balancing the interests of the two parties, restore the exhausting obligation to plausible limits, and any other contradictory agreement shall thus become invalid.”*

To apply the hardship doctrine, four points must be met; The contract must exist, the exceptional public events must have occurred after the contract was concluded, the event must be unforeseen and must make the performance of the contractual obligation difficult, but not impossible to perform.

In certain situations, the hardship doctrine can be applied to terminate an agreement entirely, in case the economic balance between the parties collapses, article 658/4 states that *“if the economic balance between the obligations of each of the business owner and the contractor collapses, owing to extraordinary general accidents that were not taken into account at the time the contract was concluded, and thus the basis on which the financial assessment of the contract deed falters, the judge may order the remunerations be increased, or the contract annulled”* applies.

Therefore, when articles 147-2 (Obligation becomes onerous) and 658-4 (Causes contractor financial losses) are both present, Hardship is present. In this circumstance, the judge would apply an objective standard to the case, determining how much the obligor's estimated loss would be regardless of the impacted party's total financial situation. Such party would be eligible to use the Exceptional Circumstances Theory if it would suffer a significant loss due to a specific event. As a result, if the event's impact makes the responsibilities onerous, the Judge/Arbitral Tribunal has the authority to change the articles of the parties' agreement to make it more economically feasible. This does not imply that losses will be awarded to one party over the other; rather, the excessive loss will be divided between the two parties. It should be highlighted that because this clause relates to Egyptian public policy, the parties cannot avoid it in advance.

2.3 Comparison Between Force Majeure and Hardship

In El Sanhoury guide for the ECC, there was a comparison between Force Majeure and Hardship. They are both similar principles but they are different in their preconditions and legal circumstances (Hargrave, 2022).

Hardship is a condition that causes difficulty to perform. It is defined as any event that occurs after the Contract is signed, whether legal, political, or financial. Hardship, as defined by the ECC in Articles 147/2 and 658/4, shows that the presence of 'exceptional event' is insufficient to establish hardship. As a result, the contract (obligation) becomes onerous to execute, and the Contractor suffers financial losses.

On the other hand, Force Majeure is defined as an unforeseeable event that arises out of the party's control and without anticipating it. These may include catastrophic events such as wars, revolution, terrorism. In general, it requires an unexpected occurrence of these events.

According to the ECC, for Force Majeure to be present, the obligation must be impossible and the affected party has no control over the event that happened which is stated in Article 373 of the ECC *“An obligation is extinguished if the debtor proves that its performance by him has become impossible due to an independent cause in which he played no party.”*

Force Majeure and Hardship both suffer extra ordinary events out of the parties’ control. In both cases, the affected party may be excused temporarily/ permanently depending on the case. In the case of Hardship, the decision of amending/ suspending the Contract is depending on a judge or arbitral tribunal. Pursuant to Article 147(2) the judge/arbitral tribunal is to determine the measure(s) required to restore the economic equilibrium of the contract and mitigate the effects of the exceptional circumstances. The judge may also deem necessary to alter the Contract conditions to reduce the onerous obligation and relief affected parties.

Article 159 Civil Code states, *“When an obligation arising out of a bilateral contract extinguishes due to impossibility of performance, the reciprocal obligations also extinguish and the contract is ipso facto terminated.”* Furthermore, although the hardship provision is necessary and applies in all instances (i.e., it can be triggered even if a force majeure clause exists), Force Majeure requires that the execution be permanently hampered. The regulations only apply if the project or contract's completion is permanently unattainable. Moreover, although Force Majeure necessitates the impossibility in performance, Hardship only exists when it is onerous or burdensome. Therefore, in the event of Force Majeure, if one party is unable to perform its contractual duties owing to impossibility, he is released from such obligations during the force majeure period.

2.4 Change in legislation

2.4.1 Change in Legislation according to FIDIC

Construction parties refer to the changes in legislation provision to seek financial compensation in a situation that would otherwise potentially only attract an extension of time. According to Sub-Clause 70.1 in FIDIC Redbook 1987 [Change in Cost and Legislation] and FIDIC 1999 Redbook Sub-Clause 13.7 [Adjustments for changes in Legislation], which states “The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract”. Similarly, Sub-Clause 13.6 in FIDIC Redbook 2017 [Adjustments for Changes in Law] states that “Subject to the following provisions of this Sub-Clause, the Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in: (a) the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws); (b) the judicial or official governmental interpretation or implementation of the Laws referred to in sub-paragraph (a) above....”

For example, if a country introduced a new law, the Contractor should claim for the increased Cost and/or somehow caused delay to the Works. This could be a new tax or restriction on transportation. The Contractor would have priced the work based on the laws as they were before to the Base Date, and the FIDIC forms assign the risk of price increases due to changes in legislation to the Employer.

2.4.1.1 Contractual Remedies for Change in Legislation according to FIDIC

The Contract Price will be amended to account for cost increases or decreases resulting from changes in the law in the country where the work is being performed. Where changes occur after the Base Date and have an impact on the Contractor's performance of the Contract, adjustments will be made. When a change in law affects the Contractor, he must notify the Engineer and may be entitled to a time and/or cost extension. In either scenario, the Engineer decides the compensation in accordance with Sub-Clause 3.5 [Determinations].

Although the Contractor may be entitled to Extension of Time and Cost, the time extension will only be granted if the Contractor can demonstrate that his costs have increased. Below is a flow chart illustrating Contractual remedies in case of Change in Legislation in a Country.

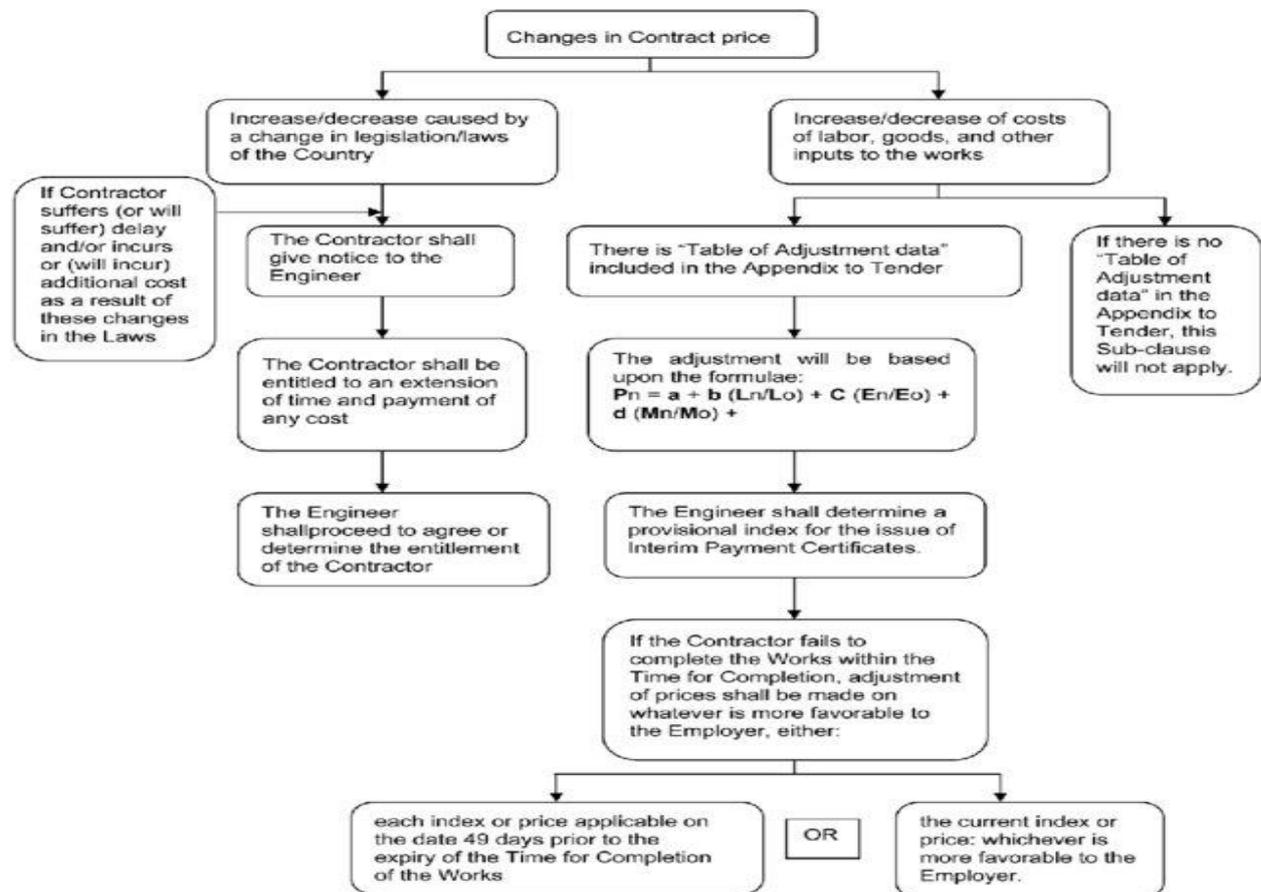


Figure 6: Change in Legislation Remedies (KOTB et al.)

2.5 Fait du Prince in Administrative Contracts

The legal practice usually applies two main legal principles; Force Majeure and Hardship. Another principle that constitutes as an event being Force Majeure is “Fait du prince”. Several legal principles may come into play, especially in the context of maintaining the economic equilibrium of the contract. It is in this specific situation that the administrative theory of “*fait du prince*” gain importance.

Fait du Prince is defined as an act or measure taken by a public authority that increases the misalignment of the contracting parties' positions in an administrative contract without fault or breach on its side. In this instance, the contractual authority is obligated to reimburse the other party for any losses incurred. (Brekoulakis & Thomas, 2019)

The Egyptian Supreme Administrative Court upheld this doctrine, in its judgment of 11 May 1968, and ruled that ‘the interference of the Administrative Court to achieve the financial equilibrium of the administrative contract for the application of the doctrine of “*fait du prince*” presupposes/requires the satisfaction of its conditions’. (El Tamawy, 2017)

The scope of application of this principle in the Egyptian legal system is limited to administrative contracts, not civil or commercial Contracts. Since the administration has the ability to take measures and issue decisions that may harm the contracting party, leading to breach of the financial balance of the contract, it is necessary to achieve the public interest and achieve justice between the administration with its unusual capabilities within the scope of civil Contracts and the rights of the Contractor with it and his legitimate expectations of profit from the Contract; that there be a way to fix the financial imbalance of the administrative contract that arises from the administration’s use of power, without a mistake

on its part, by compensating the Contractor for the damage he incurs as a result. (Brekoulakis & Thomas, 2019).

The Egyptian Administrative court ruled that “whenever the matter between the company and the government is outside the scope of the contractual bond, the request for compensation for damages resulting from the new legislation based on the theory of *Fait du Prince* shall be on an improper basis of the law, as it is decided that the responsibility arranges compensation within the scope of *Fait du Princes’* actions is not based except in the event that the injured party, due to the new legislation, has a contractual bond with the state in which it has affected if this increase in financial leads to a breach of the financial balance of the contract.”

To implement the Provisions of the phenomenon, the conditions should be as follows;

1. The existence of an administrative Contract.
2. the act is issued from the contracting authority, and it is presumed that the contracting authority is not in default or breach by undertaking such act; on this condition, it was possible that if the contracting authority was the one who caused the harm by its action to the one who contracted with it, and since the contracting party bears the responsibility for concluding the contract and bears the obligations stated therein to bring profit to himself and not to harm, for this reason; And from the point of view of achieving justice, the harm that resulted from the act of the administration contracting with it itself - without error on its part - of damage that requires reparation, with which it is necessary to implement the provisions of “*Fait du Prince*” doctrine to restore the financial balance of the contract to its rightful place.
3. the act is unforeseen; and

4. the damage suffered by the contracting party is specific so that others (third parties) are not affected. (El Tamawy, 2017)

2.6 Summary of the Contractual/ Legal Principles

Table 3 below summarizes the three different principles – Force Majeure, Hardship and Change in Legislation - as explained in details in the above sections. The Clauses supporting the three principals were mentioned below.

	FIDIC Redbook 1987	FIDIC Redbook 1999	FIDIC Redbook 2017	ECC	Condition
Force Majeure	Sub-Clause 20.4 "Employer's Risk"	Sub-Clause 19.1 "Force Majeure" 19.2 "Notice of Force Majeure"	Sub-Clause 18.1 "Exceptional Events" 18.2 "Notice of Exceptional Events"	Article 165 Article 215	Impossibility to perform obligation
Hardship	N/A	N/A	N/A	Article 147/2 Article 658/4	Obligation becomes Onerous Causes Contractor financial losses
Change in Legislation	Sub-Clause 70.1 "Change in Cost and Legislation"	Sub-Clause 19.1 "Change in Legislation"	Sub-Clause 13.6 "Adjustments for Changes in Law"	N/A	Changes in the law of the country in which the construction site is located is a compensation event if occurred after the date of the contract.

Table 3: Summary Table of Contractual Clauses for Force Majeure, Hardship and Change in Legislation

In addition, Table 4 below summarizes the Contractual remedies for each principal.

	FIDIC Redbook 1987	FIDIC Redbook 1999	FIDIC Redbook 2017	ECC	
Force Majeure	Sub-Clause 44.1e "Consequences of Force Majeure" Sub-Clause 66.1 "Release from Performance"	Sub-Clause 19.4 "Consequences of Force Majeure" Sub-Clause 19.6 "Optional Termination" Sub-Clause 19.7 "Release from Performance"	Sub-Clause 18.4 "Consequences of Force Majeure" Sub-Clause 18.5 "Optional Termination" Sub-Clause 18.6 "Release from Performance"	Article 373	Extension of time Optional Termination Release from performance
Hardship	N/A	N/A	N/A	Article 658/4	The judge determines the estimated loss to restore economic equilibrium.
Change in Legislation	Sub-Clause 70.2 "Subsequent Legislation"	Sub-Clause 13.8 "Adjustments in Change in Legislation"	Sub-Clause 13.6 "Adjustments for Changes in Law"	N/A	Extension of time and/or additional cost

Table 4: Summary Table for Contractual remedies for Force Majeure, Hardship and Change in Legislation

2.7 Compensation Law No. 84 of year 2017

Law No. 84 of year 2017 was issued on Sunday 1st of October 2017. The purpose of enacting this law was to recompense disgruntled and distressed Contractors for losses incurred as a result of the economic decisions.

Compensation for the damages arising from the devaluation of the Egyptian Pound were issued during the period from 1/3/2016 to 31/12/2016. This law introduced some preliminary conditions to be applicable for use:

- Compensations will be paid exclusively for damages caused by economic decrees issued between March 1 and December 31, 2016, as these economic decisions caused a financial imbalance in the construction. If the contractor is to blame for the delay in implementation and the contracting authority has not extended the contract's implementation period, the contractor should not be entitled to such remuneration.
- Compensations will be awarded to contractors, suppliers and public service providers who signed contracts with the state, or any of its owned companies.
- Each company owned by a public person individually or sharing with some other public persons or with companies or public-sector banks.
- Each company in which one public sector or more has a share in or owns part of its capital by at least (51%) with a private sector. This percentage includes the shares of the public-sector companies or banks in the capital.

- The subsidiary companies in which one of the holding companies has at least (51%) of its capital even if more than one of the holding companies or public legal persons or public-sector banks contributed in that percentage.
- Financial damage occurs to aggrieved party during the executed works of the contract from 1 March 2016 until the end of the contract.
- The damages do not result from the contractor's acts of omission leading to delays in implementation.

2.8 Reaction of the Egyptian Construction Industry During COVID-19

The COVID-19 outbreak is still ongoing and it has been impacting the world since March 2020. While the COVID-19 has had minimal impact on some industries in Egypt, this was not the case for the Construction industry. Construction has slowed, that the sector's growth over the next few years will be weaker than previously anticipated.

Over the next four years, the government aims to invest EGP512 billion in the Cairo metro expansion, as well as EGP325.5 billion in the implementation of 11 major petrochemical projects through 2035. These projects are projected to spur growth across the building value chain by supporting infrastructure and petrochemical investments. (Business wire, 2022)

Egypt's construction industry grew by 3% in 2020, which was a significant slowdown compared to previous years, reflecting the disruption caused by the COVID-19 epidemic and the six-month ban of new construction licences for private buildings in major cities. (Yahoo Finance, 2021)

Large labor-intensive infrastructure projects, such as the New Administrative Capital (NAC), New Alamein, and New Galala, ensured that construction resumed in work to avoid the delays experienced by other sectors of the economy and continued on schedule; the slowdown would have been much worse without this ongoing work on public megaprojects. The administration is focusing its efforts on increasing public spending so that new projects may be developed and services can be improved. (Business wire, 2022)

Chapter 3: Research Methodology

3.1 Introduction

To meet the goals of this thesis, research will be conducted as per the following steps; the flowchart below demonstrates the process adopted to conduct the research.

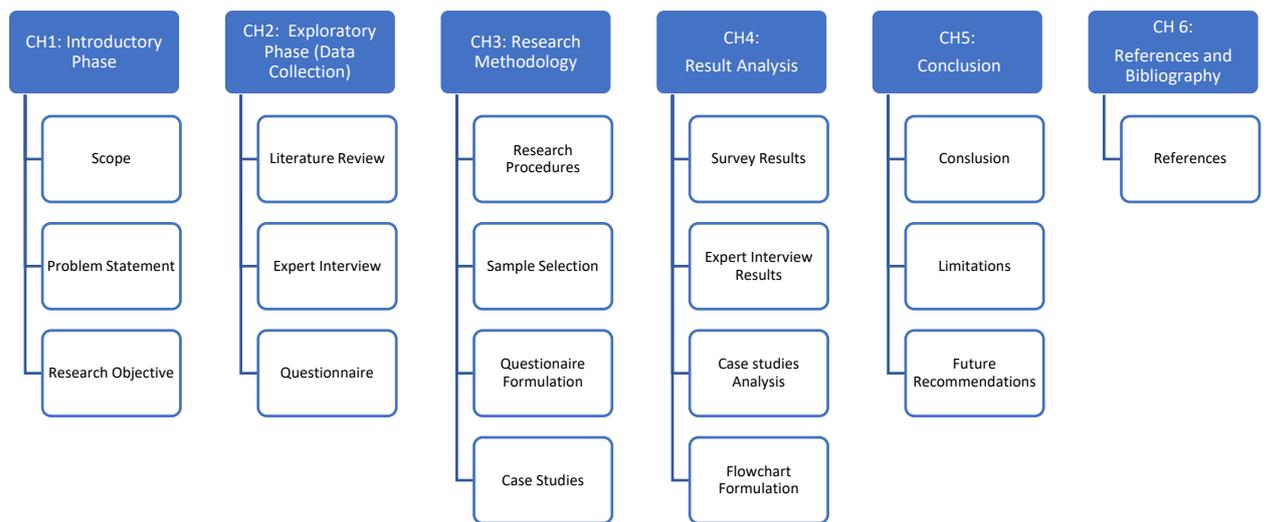


Figure 7: Thesis Methodology and Procedure

Chapter 1 was the introductory phase, which focused on the research methods and techniques used. In addition, it identifies the scope, problem statement, objectives of the research and the thesis organization.

Chapter 2 focused on the data collection; first by writing the literature review where data was collected from previous researches conducted on similar topics to figure out which aspects to consider while writing this research. Then a survey was conducted with 75 professionals in the Construction field followed by expert interviews to gather all necessary data.

Chapter 3 explains the research methodology thoroughly. This chapter is divided into 4 parts; the first part is the research procedures, the second part explains the sample criteria and the method of calculating the sample size. The third part explains how the research questionnaire

and expert interviews were formulated. Finally, the fourth part is data analysis and formulation, providing framework for chapter 4.

Chapter 4 concludes all results that have been collected from the literature review, questionnaire, expert interviews and case studies. Then based on the findings, strategic ranking is conducted to figure out what were the top categorization to both events that are studied. Afterwards, the data gathered from the survey is statistically analysed then a conclusion of these results is developed according to the questionnaire's outcomes. The data gathered is used to answer the following points:

1. To study the impact of the devaluation of the Egyptian pound and COVID-19 in the Construction projects in Egypt.
2. Knowing the impact will give a more conclusive idea on how such events are categorized. This research explores and analyses the various categories under which these two events are under to enabled them to survive during their countries' sudden events.
3. A detailed study of these categories shall be done to analyse and assess the reasons or the criteria of their selection.
4. Categorize each event from a legal and Contractual perspective
5. Study the Construction market in Egypt and its survival during COVID-19.
6. After gathering all the data above, a decision flowchart will be formulated to be used as guidance in future similar events

Chapter 5 concludes where the research findings are summarized, limitations to this research are discussed and recommendations for further studies are mentioned.

Chapter 6 contains all references.

3.2 Research Procedures

3.2.1 Procedure Outline

3.2.1.1 *Formulate Research Objective*

To formulate the thesis objective, an extensive literature review was conducted to study the topic thoroughly. After observing where the research gap was formulated and discovered how the legal characterization of two events such as the Devaluation of the Egyptian Pound and the COVID-19 were unclear and very controversial in terms of how to deal with them from a legal/contractual perspective, it was crucial to conduct further research to be able to answer these questions.

In order to reach the thesis goal, the first objective of this research is to study the impact of the devaluation of the Egyptian pound and COVID-19 in the Construction projects in Egypt. The second objective is to formulate a decision flowchart based on the research findings, which will be used as a mean of guidance to future similar events.

3.2.1.2 *Construct Research Questionnaire*

After formulating the research objective and identifying the key points of research, the data collection phase was initiated. This study adopted three methods to collect the data.

The first method is a survey questionnaire focusing on the Construction industry in Egypt. The main objective of this questionnaire is to characterize the challenges faced by the Construction market during COVID-19 and devaluation of the Egyptian pound from a legal/Contractual perspective.

Followed by the first data collection method, and to further verify the findings, an exploratory interview with selected experts from the construction industry were conducted to share and express their insights and opinions on the current state as well as the impacts of the pandemic and devaluation of the Egyptian Pound.

The data collected categorizes the events under the three contractual principles that were previously mentioned. These were explained thoroughly in the literature review where it incorporated clauses from FIDIC and ECC that focused on (Hardship, Force Majeure and Change in Legislation) and which of them is applicable to the Devaluation of the Egyptian Pound and COVID-19.

3.2.1.3 Conduct Expert Interviews

In order to acquire accurate data and meet the purpose of this research, interviews were done with professionals in the Contracts/Legal industry. To have an unbiased conclusion, interviews were conducted with parties from the Employer, Contractor and Engineers point of view to obtain a wider range of opinion.

The interview questions were divided into four main sections as follows:

- Section 1: is structured to investigate the interviewer's background. This section is mainly collects generic data about the respondent such as, the position/title, company name, years of experience in the Contracts/Legal field.
- Section 2: is structured to identify the different type of Construction Contracts the respondent has worked with and if these Contracts included Clauses related to Force Majeure, Hardship or Change in Legislation.

- Section 3: focuses on the devaluation of the Egyptian Pound and how it was dealt with from a Contractual/Legal perspective in the Construction industry. This included insights on the consequences of such event and how do these consequences categorize the devaluation of the Egyptian Pound whether it is treated as Hardship, Force Majeure or Change in Legislation.
- Section 4: focuses on the COVID-19 outbreak and how it was dealt with from a Contractual/Legal perspective in the Construction industry. This included insights on the consequences of such event and how these consequences categorize the COVID-19 outbreak whether treated as Hardship, Force Majeure or Change in Legislation.

3.2.2 Pilot testing for the questionnaire

To maximize benefits and eliminate inefficiencies in the survey questionnaire, the questions were pilot-tested with industry experts. Five industry specialists with more than 15 years of construction expertise participated in the pilot test. The experts were requested to comment on the questions that needed to be changed, clarified, added, or removed. Then the questions were edited to accommodate these comments. The final questionnaire is shown in the Appendix.

3.2.3 Sampling Procedure

3.2.3.1 Sample Criteria

Upon completing the pilot test and preparing all questions, the next step is to decide on the sample criteria and number. A total of 75 surveys were conducted with specialists in the Egyptian construction industry. This research used a purposive sample to pick respondents, in which potential professionals who are known to be area experts were chosen. Understanding the influence of the two events that were being researched is a complicated

problem, thus it's critical that specialists with specific experience and knowledge participate in the interviews.

3.2.3.2 Survey Development

The survey was developed to assess the consequences of the devaluation of the Egyptian Pound in 2016 and the COVID-19 outbreak. It required respondents to rate the level of influence and significance for each factor. In addition, it was created for the respondents to categorize whether these do events lie under Force Majeure, Hardship or Change in Legislation.

3.2.3.3 Survey Distribution

The survey was then distributed to a number of construction specialists in the Egyptian Construction industry. Experts represented various Construction parties, that had significant experience in the Contracts field. The survey was submitted and a total of 75 respondents were recorded.

3.2.3.4 Survey Reliability

Since this survey contains significant number of questions, it was crucial to insure that the results obtained were reliable. There are many methods used to check for survey reliability, but the one that was adopted in this research was the Cronbach's Alpha test.

Cronbach's Alpha is a measure for determining the internal consistency, or reliability, of a set of scale or test items. In other words, a measurement's reliability refers to how constant it is in measuring a notion. Cronbach's alpha is calculated by comparing the variance of all individual item scores to the total score for each observation (typically individual survey respondents or test participants).

The scale below illustrates the interpretation of alpha in terms of internal consistency.

Cronbach's α	Internal Consistency
≥ 0.9	Excellent
0.8 – 0.89	Good
0.7 – 0.79	Acceptable
0.6 – 0.69	Questionable
0.5 – 0.59	Poor
< 0.5	Unacceptable

Table 5: Interpreting Alpha for Likert scale question (Christmann and Van Aelst, 2006)

To calculate Cronbach's Alpha:

$$\alpha = \frac{K}{K - 1} \left[\frac{1 - \sum s_y^2}{s_x^2} \right]$$

Where,

K = Number of test items

$\sum s_y^2$ = sum of the item variance

s_x^2 = variance of total score

Therefore, to calculate alpha for this survey:

$$K = 16$$

$$\sum s_y^2 = 12.878$$

$$s_x^2 = 43.122$$

$$\alpha = \frac{16}{16 - 1} \left[\frac{1 - 12.878}{43.122} \right]$$

$\alpha = 0.755$ Therefore under the category "acceptable"

3.2.4 Expert Interviews

To obtain accurate results as much as possible, interviews were conducted with 8 experts.

The experts were Categorised as follows:

No.	Field of Work	Job Title	Years of Experience
2	Employer	Contracts Manager	+15 years
2	Consultant	Contracts Manager	+15 years
2	Contractor	Contracts Manager	10-15+ years
2	Legal Practitioner	Lawyer	+15 years

Table 6: Experts Categorization

To have an unbiased opinion and a more conclusive result, the interviews were conducted with different project parties. The interviews took around 45 minutes to an hour and it focused on the interviewees point of view on the Devaluation of the Egyptian Pound and COVID-19 and how did it affect his/her project.

Chapter 4: Results and Analysis

4.1 Introduction

The purpose of this chapter is to examine and analyse the responses to the research questionnaires and expert interview. Each must be addressed independently, and the relevant results must be provided and thoroughly assessed. This chapter will give the detailed analysis of the data acquired.

4.2 Data Analysis

4.2.1 Survey Questionnaire

4.2.1.1 Respondents role

This survey was distributed to several Construction Engineering parties as well as Legal practitioners. Since the characterization of both events are not definite and depend significantly on which party you are with, this survey had to accommodate all opinions in order to have an accurate conclusion.

The different Project parties are stated along with the range of years of experience in the below table:

No. of Respondents	Construction role	Years of experience in Contracts Field
11	Employer	10 – 20+
21	Consultant	5 – 20+
36	Contractor	0 – 20+

4	Project Management	10 – 20+
3	Legal Practitioner	15 – 20+

Table 7: Respondents' Construction roles and years of experience in Contracts field

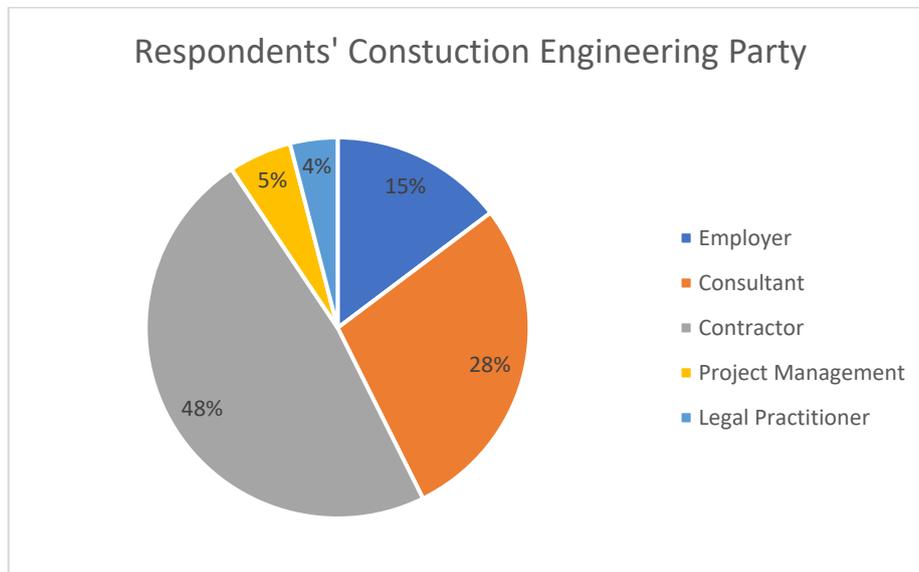


Figure 8: Respondents' Construction roles

Figure 8 shows that 48% of the interviewees were Contractors, 28% were Consultants and 15% were Employers. Also there were 5% from different Project management firms and 4% were legal practitioners. The ratio between the Employers and Contractors make sense since there is a huge amount of Contractors in Egypt compared to Employers/Developers.

4.2.1.2 Respondents Level of education and years of experience

Table 8 showcases the years of experience of each respondent and the highest level of education they carry. This information helps to develop a better understanding of the type of respondent and how are they well acquainted with the questions and the field of study.

Even though the majority of the respondents were Bachelor holders, results showed that 14 respondents had a Master's degree and 4 respondents had a Ph.D. This diversity in education

levels helped in developing a well-rounded conclusion with the impact of different educational background and levels.

No. of Respondents	Years of Experience	Education Level		
		Bachelor's	Master's	Ph.D.
19	0-5	18	1	0
14	5-10	16	6	0
25	10-20	9	3	1
17	20+	14	4	3

Table 8: Respondents' years of experience in Construction industry and education levels

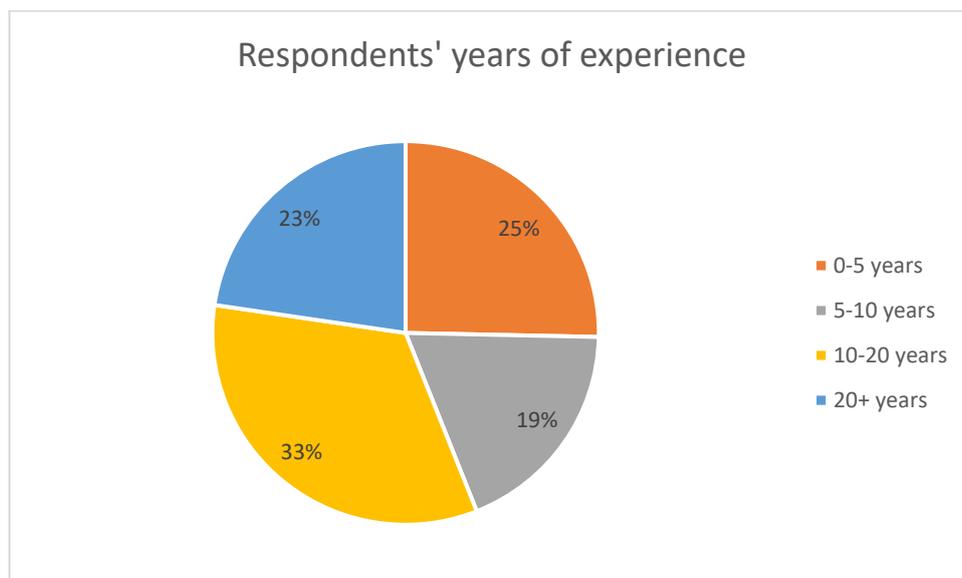


Figure 9: Respondents' years of experience

The interviewees experience varies from 0-5 years to +20 years of experience. Based on the results, the percentage distribution of the different ranges of years of experience is quiet similar. The 10-20 years of experience were the highest category with 33%.

4.2.1.3 Respondents Job Titles

Table 9 illustrates the different job titles of the respondents along with their range of years of experience. It is shown that respondents are either Contracts Directors, Managers or Engineers, in addition there were a couple of commercial Managers and Legal practitioners which were to the advantage of this survey as they have an insight from a different area of expertise.

No. of Respondents	Construction role	Years of experience in Contracts Field
13	Contracts Director	20+
27	Contracts Manager	10 – 20+
4	Commercial Manager	10 – 20+
18	Sr. Contracts Engineer	5 - 10
7	Contracts Engineer	0 - 10
3	Lawyer	15 – 20+
3	Others	0 – 20+

Table 9: Respondents' job titles

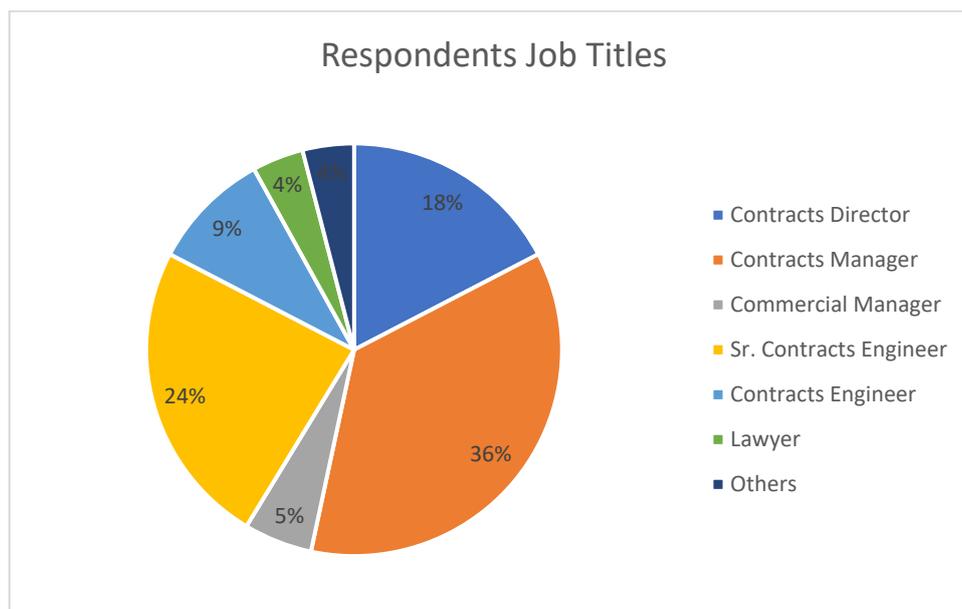


Figure 10: Respondents' Job titles

4.2.1.4 Types of Contracts used by Respondent

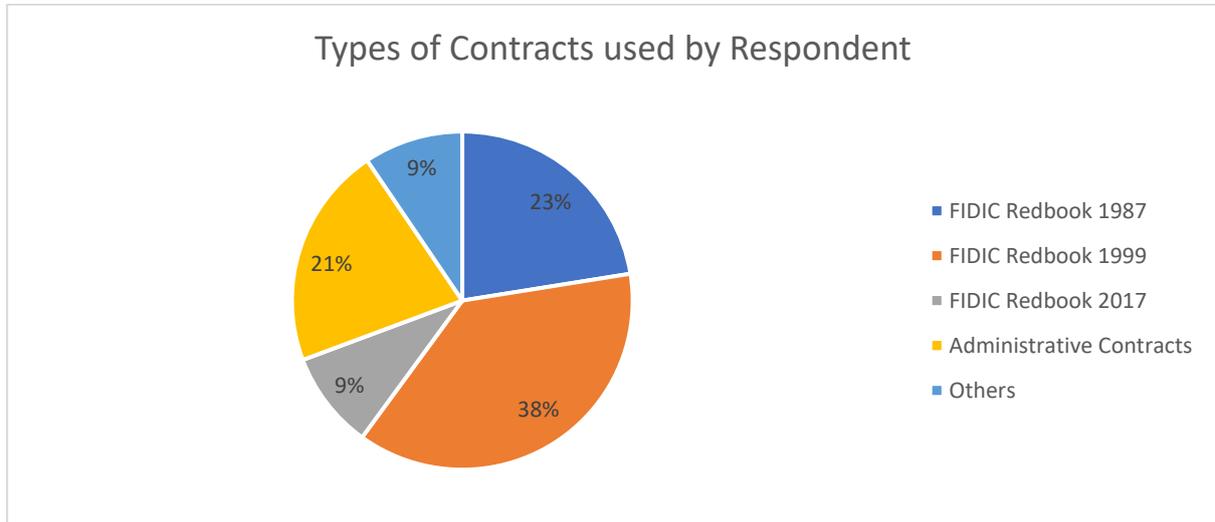


Figure 11: Types of Contracts used by Respondents

Figure 11 illustrates the different types of Contracts that were used by the respondents. It depicts many Contract types, including FIDIC-based standard contracts, Administrative Contracts, and Ad-hoc Contracts. 38% of the respondents chose FIDIC Redbook 1999 as it is one of the most used forms in Construction Projects in Egypt. FIDIC Redbook 1987 and 2017 were picked as well with 23% and 9% respectively. 21% of the users have worked with Administrative Contracts.

This diversity of types of Contracts were to the advantage of this survey as the literature review focused on analysing the Clauses related to Force Majeure, Hardship and Change in Legislation in all three editions of the FIDIC Redbook. The results of this survey helped to verify what was previously discussed in the literature review.

4.2.1.5 Force Majeure, Hardship and Change in Legislation Clauses in different Contract forms

Respondents were asked to mention whether Force Majeure, Hardship and Change in Legislations Clauses were mentioned in the Contracts and the results were as follows:

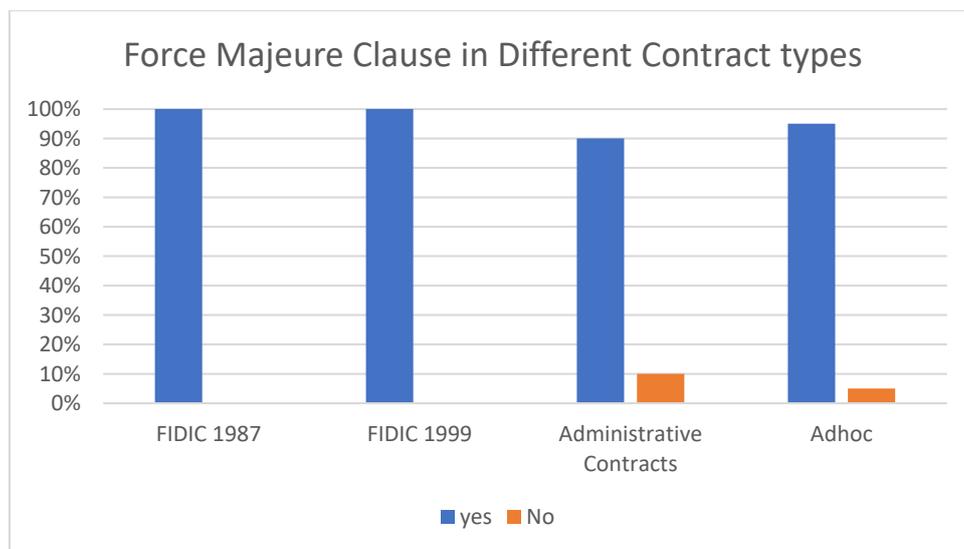


Figure 12: Force Majeure Clause in different Contract forms

Figure 12 shows that Force Majeure Clauses were present in FIDIC Redbook versions 1987 and 1999. 10% of the respondents mentioned that they had Administrative Contracts containing a Force Majeure Clause and 5% of the respondents mentioned that it was present in some Adhoc Contracts.

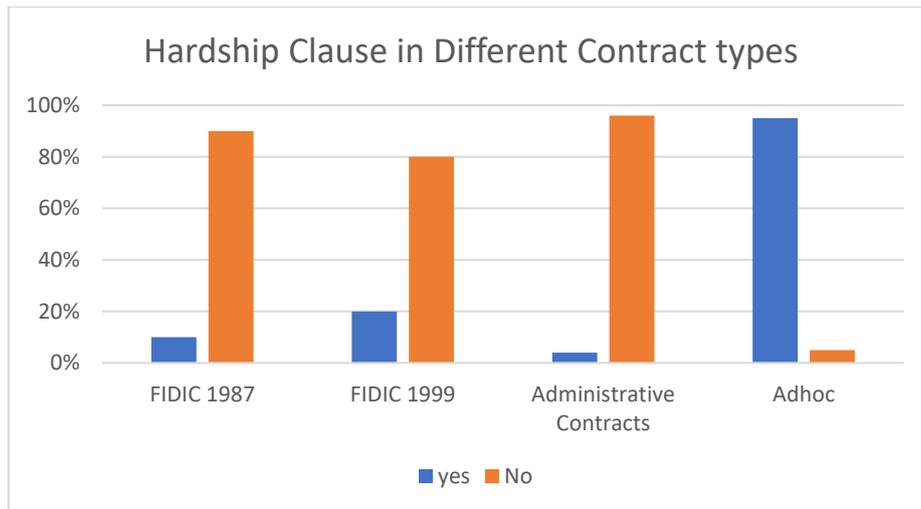


Figure 13: Hardship Clause in different Contract forms

Regarding the Hardship Clause, respondents mentioned that 10%-20% of them witnessed Hardship Clause or something close to the concept in FIDIC 1987 and 1999 respectively and only 4% witnessed this Clause in Administrative Contracts and 95% of the respondents had such Clause in their Contracts.

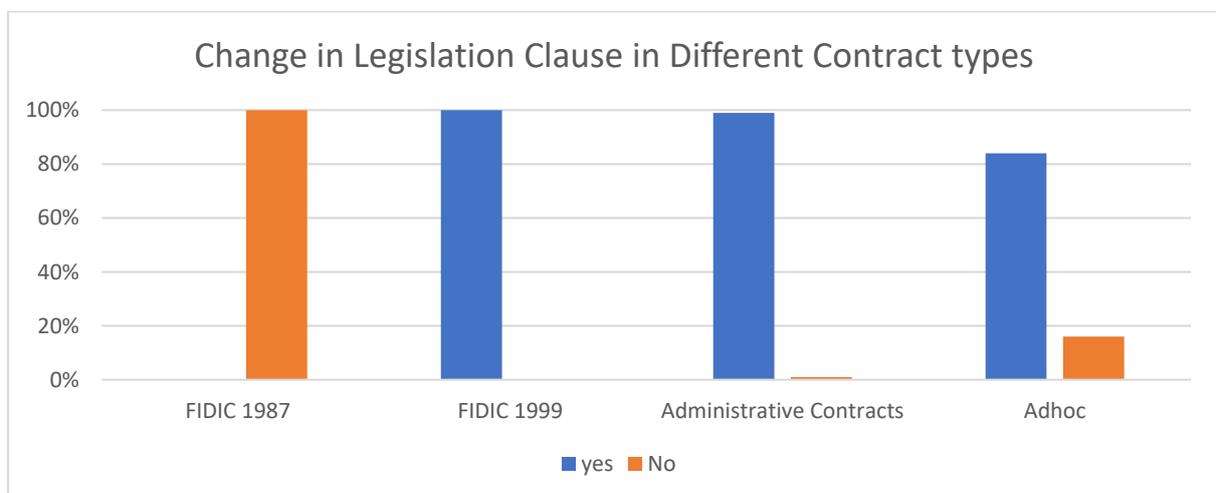


Figure 14: Change in Legislation Clause in different Contract forms

Lastly, regarding the Change in Legislation Clause, in Figure 14 it was not found at all in FIDIC Redbook 1987. It was mentioned by all respondents that it was present in FIDIC 1999, in the case of Administrative and Ad hoc Contracts, it was found that 99% and 84% witnessed this

Clause in their Contract respectively. These results are accurate, since this Clause is present in FIDIC Redbook 1987 in Sub-Clause 70.1 “Change in Cost and Legislation”.

These findings are not conclusive since these results are based on respondent’s understanding of the Contracts they worked with, but they give a more general idea of the availability of these Clauses and how well aware the respondents are of such Clauses.

4.2.1.6 Event Categorization according to the three Doctrines

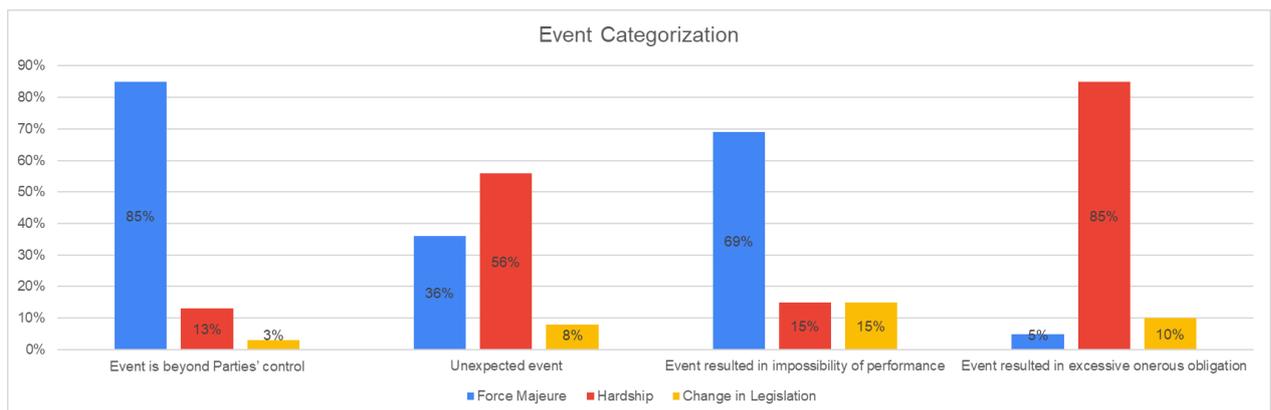


Figure 15: Event Categorization according to Force Majeure, Hardship, Change in Legislation

The purpose of the findings in Figure 15 is to try to break down different events that may have arisen due to the Devaluation of the Egyptian Pound or the COVID-19 outbreak to try introducing a set of questions to break down the analysis needed by the respondents towards the end of the survey.

The events included the following:

1. Event is beyond Parties’ control

Respondents categorised the event as Force Majeure, Hardship or Change in Legislation; 85%, 13% and 3% respectively.

2. Unexpected event

Respondents categorised the event as Force Majeure, Hardship or Change in Legislation; 36%, 56% and 8% respectively.

3. Event resulted in impossibility of performance

Respondents categorised the event as Force Majeure, Hardship or Change in Legislation; 69%, 15% and 15% respectively.

4. Event resulted in excessive onerous obligation

Respondents categorised the event as Force Majeure, Hardship or Change in Legislation; 5%, 85% and 10% respectively.

Many respondents clearly miss understood some of the concepts, for example in point number 3 – event caused impossibility of performance – 15% of the respondents mentioned this is true for Hardship and 15% mentioned that its true for Change in Legislation which is incorrect. This may be due to the option that some respondents lack experience in the Contractual field which hindered the survey results.

4.2.1.7 Consequences of Devaluation of the Egyptian Pound

In the figures below, the respondents were asked whether they agree/disagree if the below events were consequences due to the sudden devaluation of the Egyptian Pound.

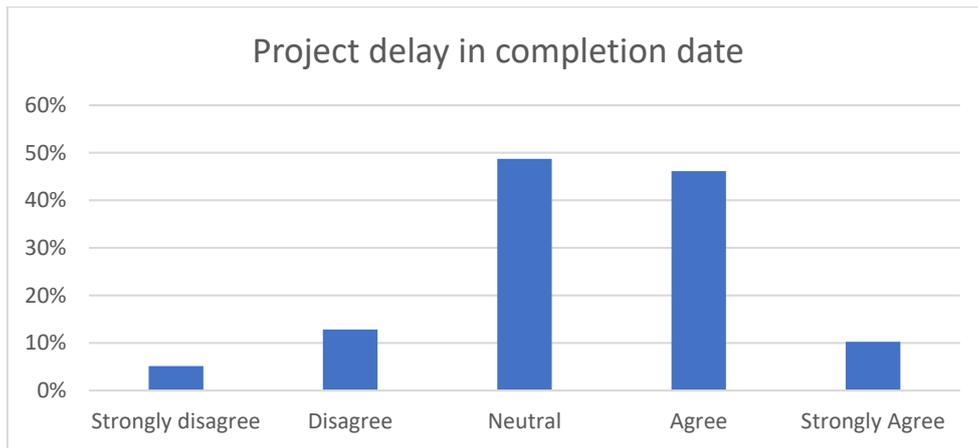


Figure 16: Project delay in completion date

The results above showcase the opinions of the respondents; in Figure 16 that illustrates whether such event resulted in Project delay in completion date, there was no clear answer. 49% of the respondents stated that they were neutral while 56% of the respondents either agreed or disagreed. This left 18% of the respondents who disagree.

This variation in results makes sense, since not all projects are the same and the devaluation of the Egyptian Pound did not hit all projects at their exact same phases. For example, if a project was still in its initial phase when it faced the devaluation the impact would be totally different than a project that is being delivered and has completed most of its obligations.

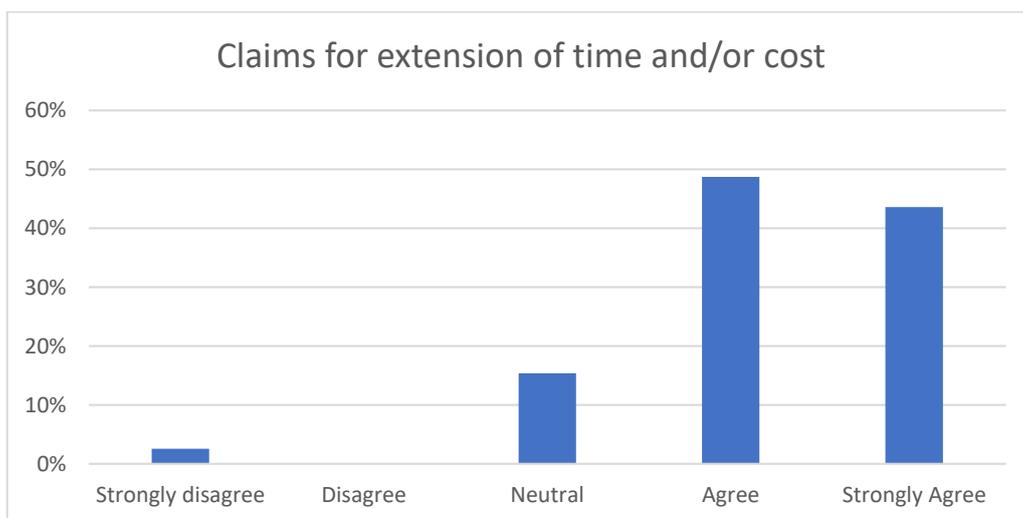


Figure 17: Claims for extension of time and/or cost

Figure 17 illustrates whether Claims were sent out for extension of time and/ or cost, 49% of the respondents agreed and 44% strongly agreed with this statement. The results make sense since the devaluation of the Egyptian Pound has for fact affected the prices of materials and fuel which had a direct impact on the Construction industry.

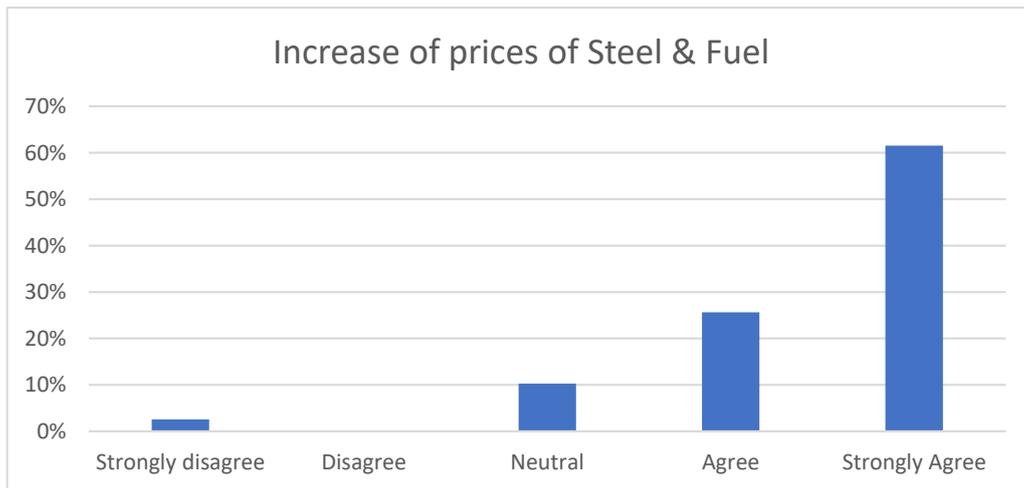


Figure 18: Increase of prices of raw materials (imported)

Figure 18 showcases respondent's opinion on the increase in prices of steel and fuel. 88% of the respondents either agreed or strongly agreed with this statement, 10% were neutral and 3% strongly disagreed.

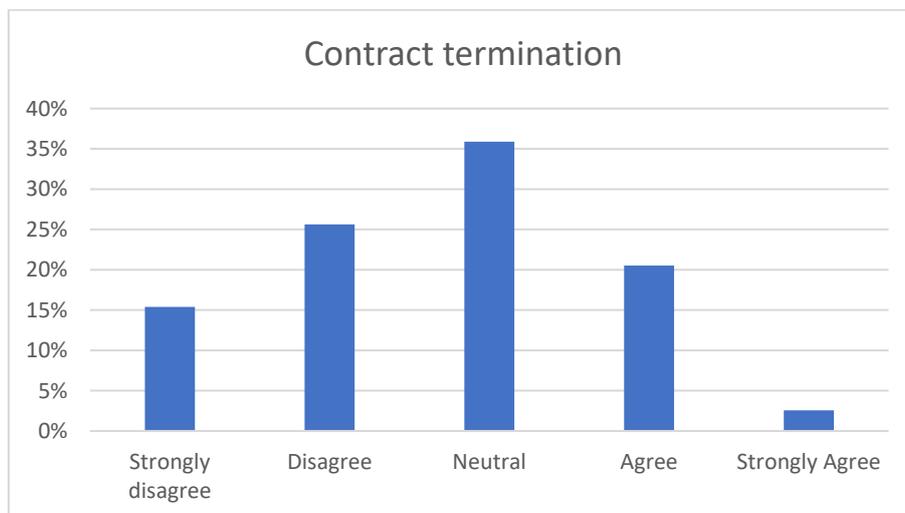


Figure 19: Contract Termination

Figure 19 showcases whether this event resulted in Contract termination, 41% of the respondents disagreed while 24% agreed, leaving 36% of the respondents with a neutral opinion.

The purpose of this question was to accurately measure some of the impacts that Construction projects in Egypt faced during the devaluation of the Egyptian Pound. To be able to rank these impacts accurately, the Relative Importance index (RII) was calculated. The relative index technique has been more used in construction research studies to measure attitudes regarding questionnaires factors and items under the research study. Table 10 below shows the different ranges for the RII index ranging from 0 to 1.

RII Scale	Impact
0.00–0.20	Not critical (NC)
0.21–0.40	Fairly critical (FC)
0.41–0.60	Average critical (AC)
0.61–0.80	Very critical (VC)
0.81–1.00	Extremely critical (EC)

Table 10: RII Scale (Bhirud & Vasant, 2015)

The RII is calculated as follows:

$$\text{Relative Importance Index} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{A * N}$$

n_5 = Number of Respondents for strongly agree

n_4 = Number of Respondents for agree

n_3 = Number of Respondents for neutral

n_2 = Number of Respondents for disagree

n_1 = Number of Respondents for strongly disagree

$$A \text{ (Highest weight)} = 5$$

$$N \text{ (Total Number of respondents)} = 75$$

RII Result

Impact No.		RII	Rank
1	Increase of prices of raw material (imported)	0.887	1
2	Claims for extension of time and/or cost	0.855	2
3	Project delay in completion date	0.653	3
4	Contract termination	0.538	4

Table 11: RII Scale for Devaluation of the Egyptian Pound

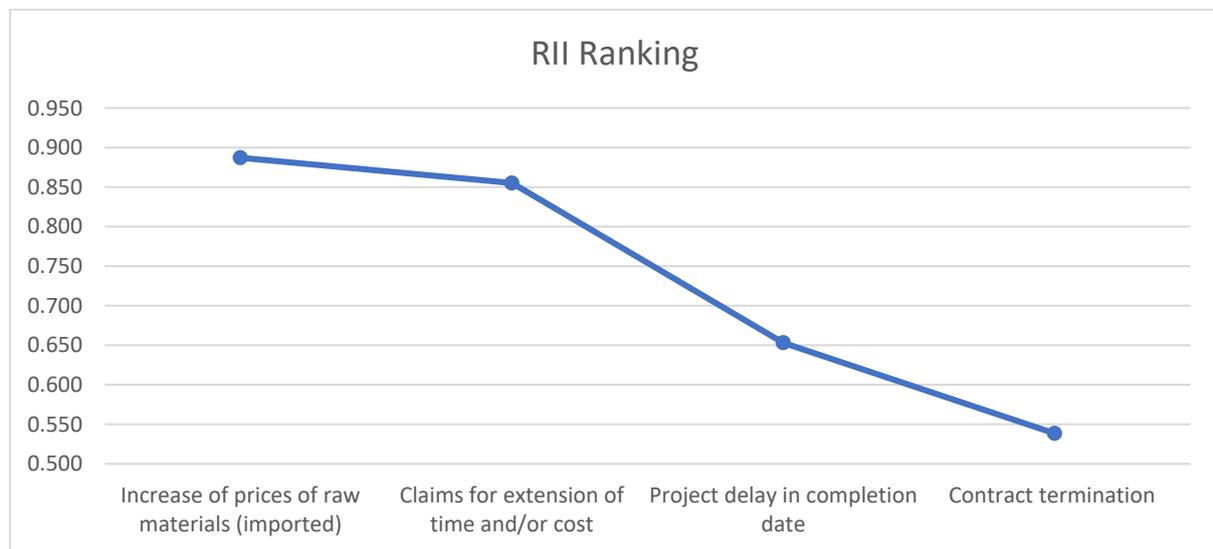


Figure 20: RII Scale (Bhirud & Vasant, 2015)

The Relative Importance Index ranked the impact of the devaluation of the Egyptian Pound as shown in Table 11. From Figure 20, it can be deduced that impacts no. 1 and 2; the increase in prices of raw materials and the No. of claims for extension of time and/or cost are

categorised as Extremely Critical (EC), events 2 and 3 are Critical (E) and impact no. 4 was Average Critical (AC).

4.2.1.8 Legal Characterization of the Devaluation of the Egyptian Pound

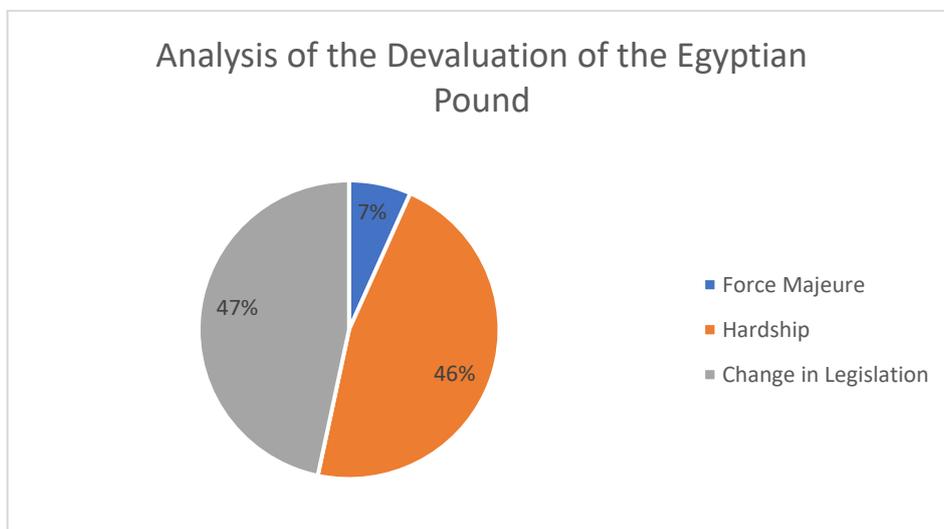


Figure 21: Characterisation of the devaluation of the Egyptian Pound

When the respondents were asked whether the Devaluation of the Egyptian Pound was considered a Force Majeure, Hardship or Change in legislation the responds were as follows; 47% believed it was a change in legislation, 46% believed it was a Hardship and only 7% stated it was a Force Majeure Event.

To further analyse Figure 21 it is important to dissect the results to obtain a more accurate conclusion.

Employer Consultant Contractor

Force Majeure	0%	0.5%	6.5%
Hardship	13%	13%	20%
Change in Legislation	23%	10%	14%

Table 12: Analysis of Respondents feedback on Devaluation of the Egyptian Pound

From Table 12 it can be deduced that the analysis of this survey depends mostly on which party the respondent belongs to. For instance, the Contractor will always aim for the most relief in obligation. Even though the devaluation of the Egyptian pound is not a Force Majeure at all, yet 6.5% of the respondents stated it was.

The majority stated that this event was a change in legislation which is true, due to the fact that it was a governmental decision that affected all sectors of the country. Later on the Contractors working with public authority were compensated according to law No. 84 of 2017.

4.2.1.9 Consequences of COVID-19 outbreak

In the case of the COVID-19 outbreak, similar questions were asked to study the impacts of such event as well. In the figures below, the respondents were asked whether they agree/disagree if the below events were consequences due to the sudden COVID-19 outbreak.

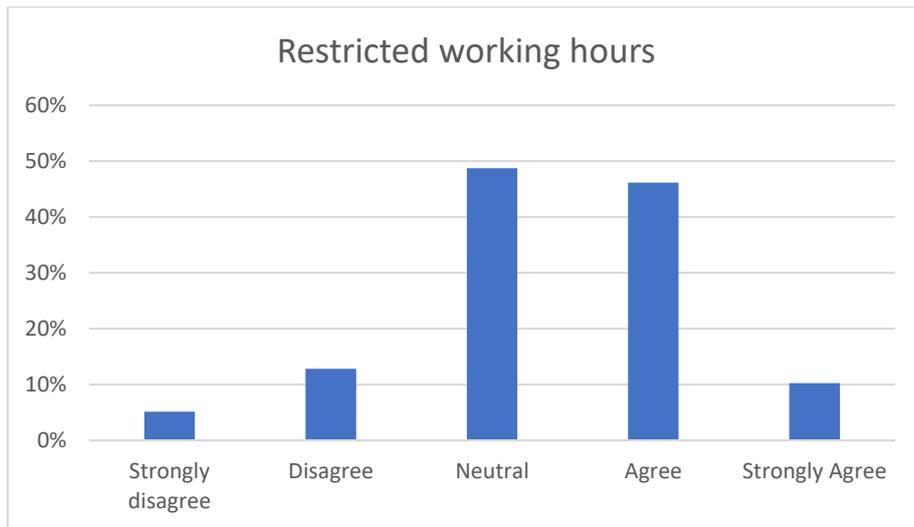


Figure 22: Restricted working hours

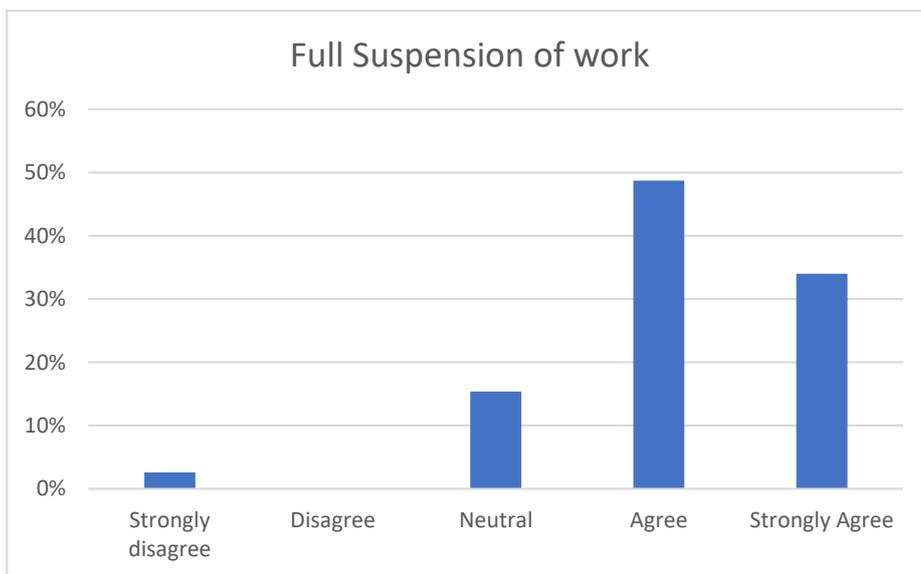


Figure 23: Full suspension of work

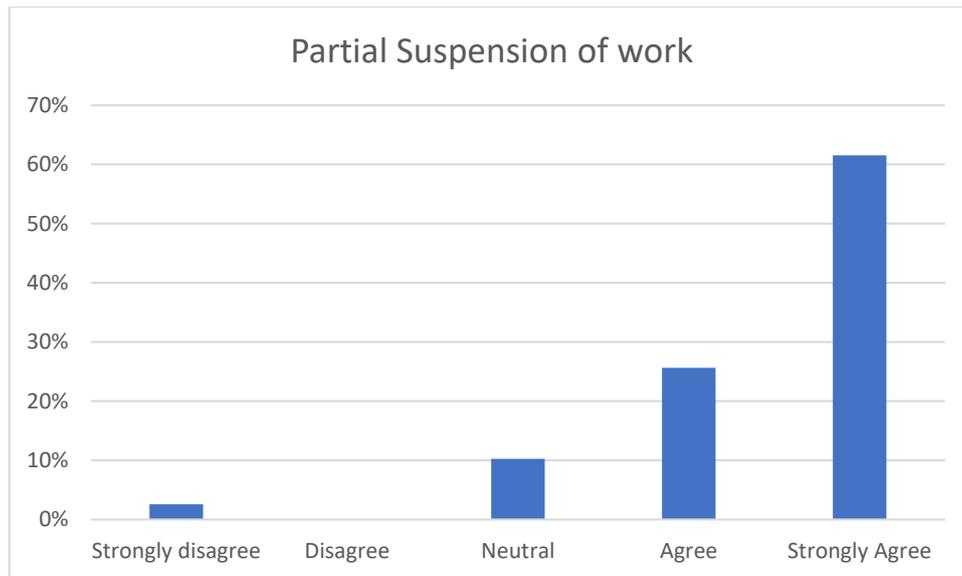


Figure 24: Partial suspension of work

Figures 22, 23 and 24 illustrates how the sudden outbreak of the COVID-19 has affected the suspension of work in the Construction sites. Regarding the restricted working hours, 56% of the respondents agreed and 49% were neutral. For the full and partial suspension of works results were very similar, more than 88% agreed and 10% were neutral.

The respondent's answers vary since restricted working hours were not the same through the duration of the COVID-19 Outbreak. For instance, on 24th of March 2020, there was a daily curfew imposed between 7.00pm and 6.00am to reduce non-essential social interaction. This resulted in affecting the working hours. In addition, many Contractors decided to take one or more weeks off at the beginning of the outbreak. Due to these irregular times for suspension of works the respondents had different opinions.

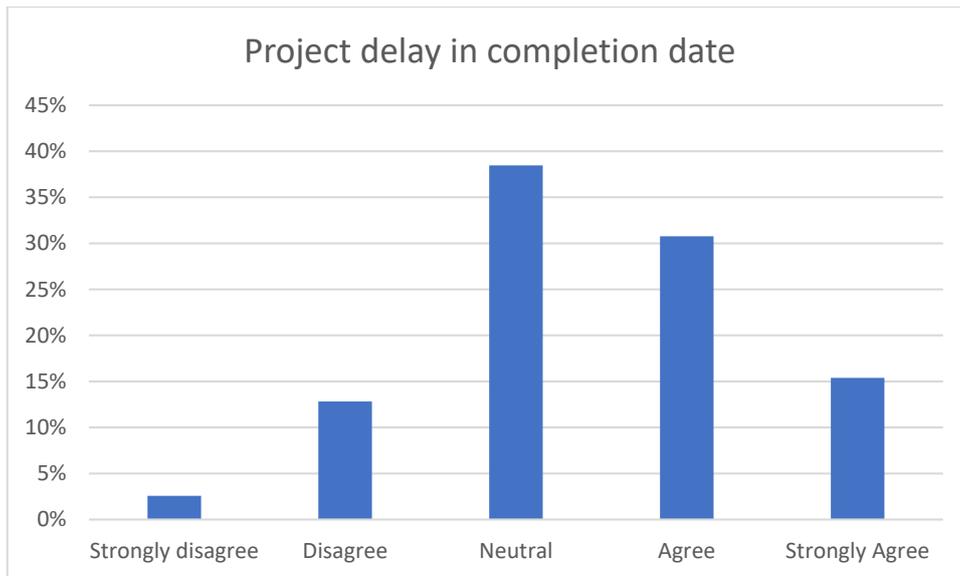


Figure 25: Project delay in completion date

The results above showcase the opinions of the respondents; in Figure 25 that illustrates whether such event resulted in Project delay in completion date, there were a variety of opinions. 38% of the respondents stated that they were neutral while 46% of the respondents either agreed or disagreed. This left 16% of the respondents disagree.

This variation in results may be due to the fact that not all Construction projects faces the same downfalls with the appearance of the virus. For example, some projects obtained all material before the virus spread out therefore this did not delay them. Also some sites were shut down for a couple of weeks while others didn't.

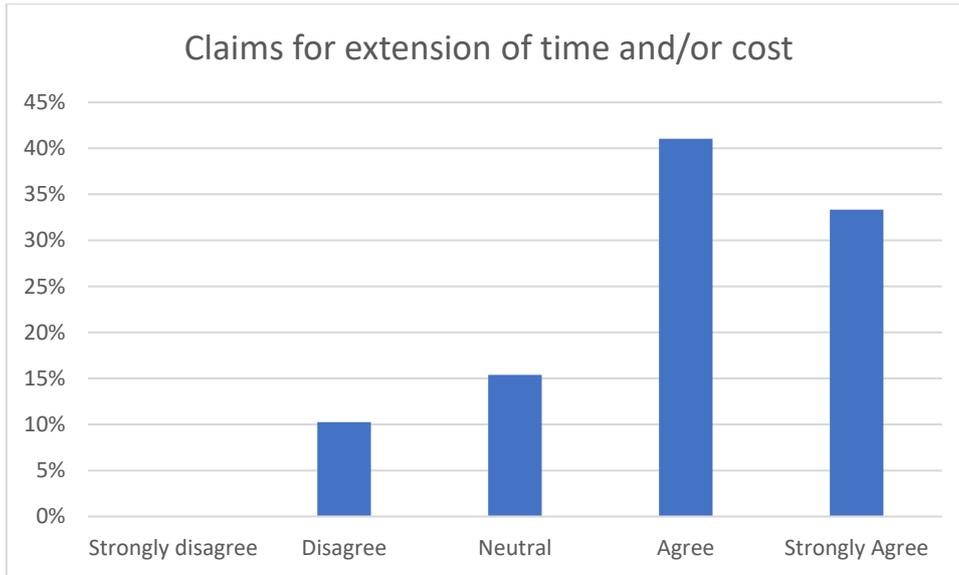


Figure 26: Claims for extension of time and/or cost

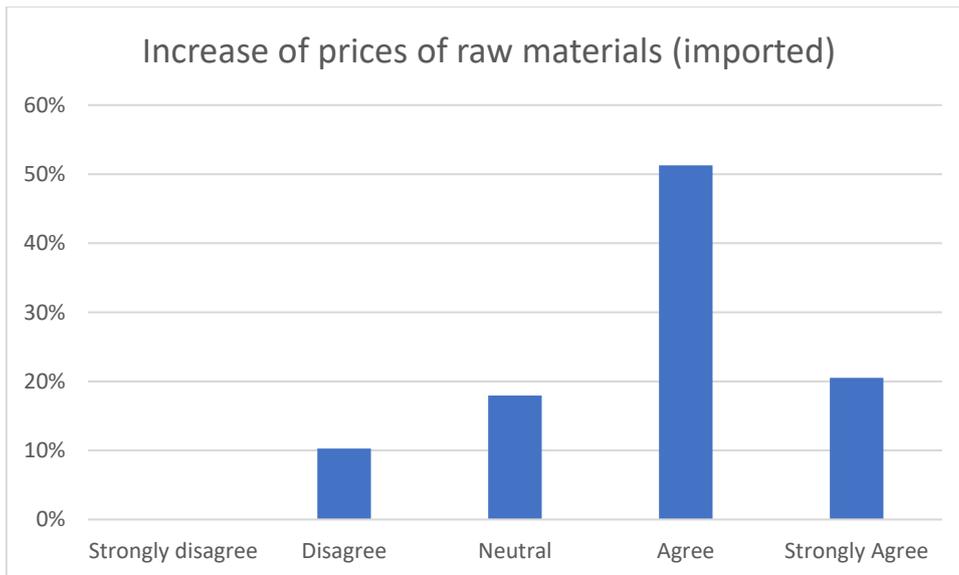


Figure 27: Increase in prices of raw materials

Figures 26 and 27 illustrates whether Claims were sent out for extension of time and/ or cost and if there was an increase in prices of raw materials, both graphs showed very similar results. More than 70% of the respondents agreed with both statements. 10% agreed in both statements and 15-17% were neutral.

These results illustrate the fact that most of the Contractors have in fact Claimed for extra time and cost, in addition many Contractors had difficulties in obtaining material from outside the Country since all flights were suspended since 19th of March 2020.

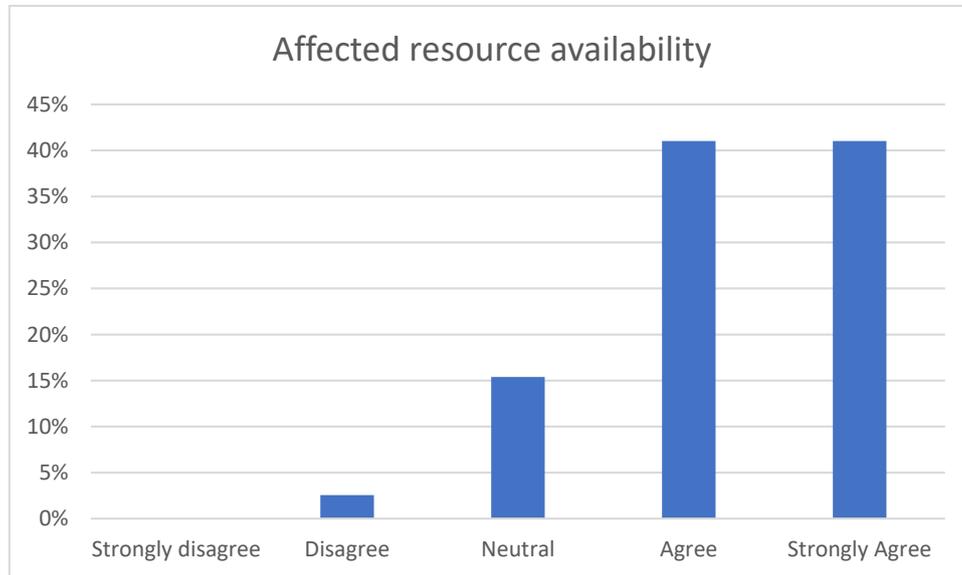


Figure 28: Affected resource availability

Imposing curfews and restricting movement in the Country has definitely contributed to the availability of resources (labour) on site. In addition, since the virus spread quickly many labour workers were infected which prevented them from going to work as usual. 82% of the respondents agreed with this statement while 15% were neutral and only 3% disagreed.

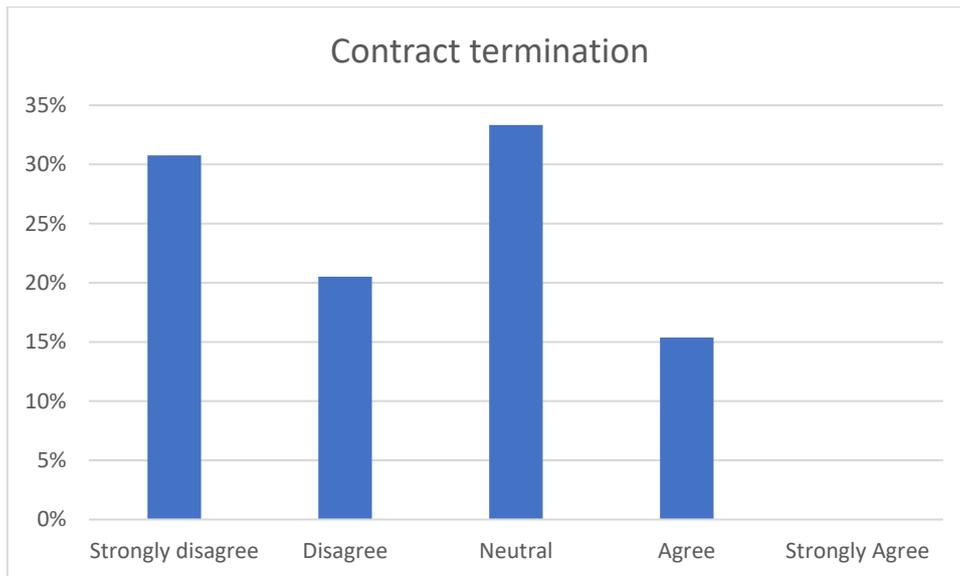


Figure 29: Contract Termination

As shown in Figure 29, most of the respondents (52%) disagreed with such statement, 33% were neutral and 15% agreed.

RII Result

Impact No.		RII	Rank
1	Partial Suspension of work	0.864	1
2	Restricted working hours	0.826	2
3	Full Suspension of work	0.816	3
4	Affected resource availability	0.779	4
5	Claims for extension of time and/or cost	0.755	5
6	Increase of prices of raw materials (imported)	0.716	6
7	Project delay in completion date	0.661	7
8	Contract termination	0.422	8

Table 13: RII for the impacts of COVID-19

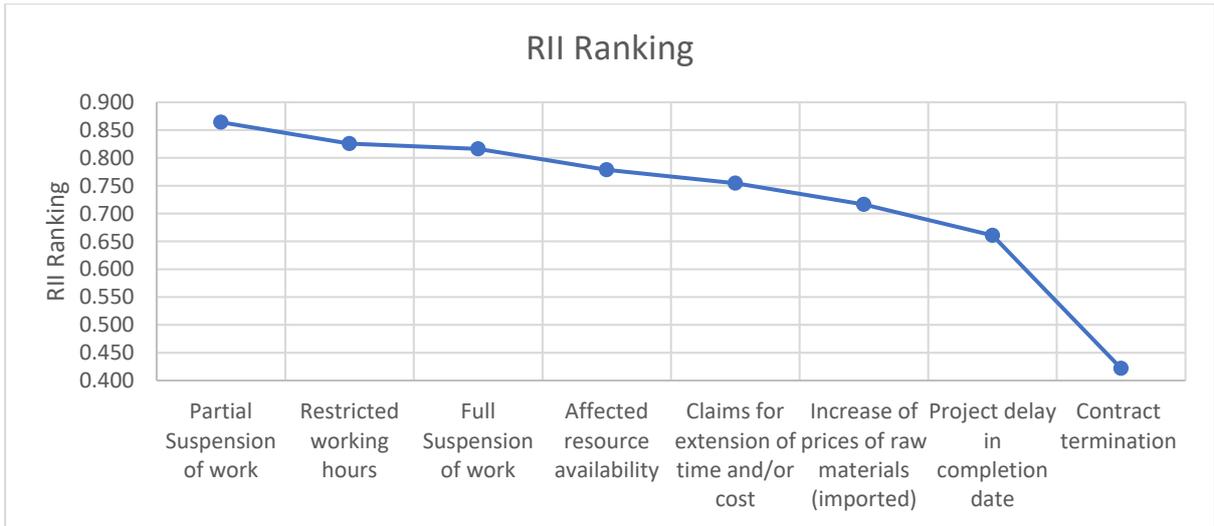


Figure 30: RII ranking for the impacts of COVID-19

The Relative Importance Index ranked the impact of the devaluation of the Egyptian Pound as shown in Table 11. It can be deduced that impacts no. 1, 2 and 3 were categorised as Extremely Critical (EC), impacts no. 4,5,6,7 are Critical (E) and impact no. 8 is Average Critical (AC).

4.2.1.10 Legal Characterization of the COVID-19 Outbreak

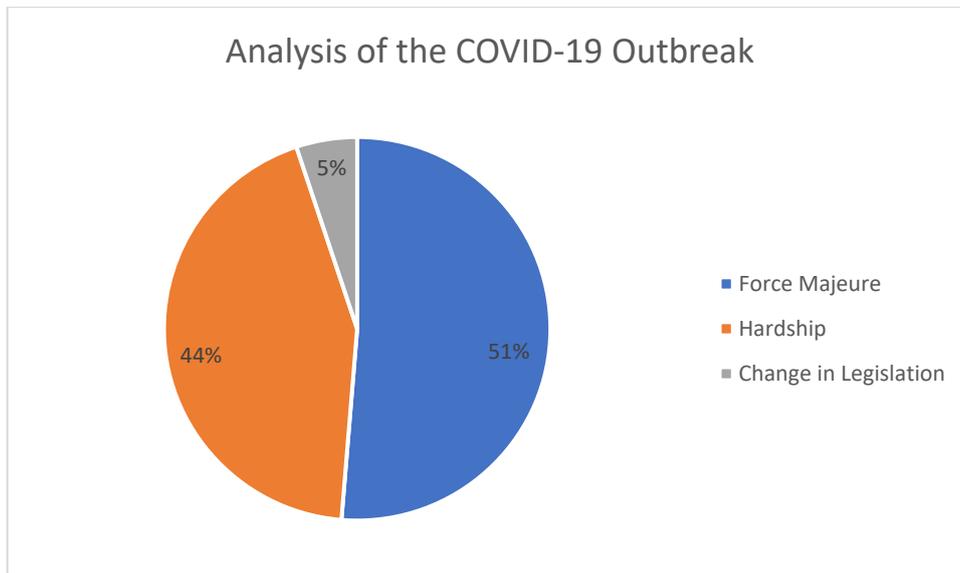


Figure 31: Characterisation of the COVID-19

When the respondents were asked whether the COVID-19 outbreak was considered a Force Majeure, Hardship or Change in legislation the responds were as follows; 51% stated it was Force Majeure, 44% stated it was a Hardship and only 5% stated it was Change in Legislation. To further analyse the chart in Figure 31 it is important to dissect the results to obtain a more accurate conclusion.

	Employer	Consultant	Contractor
Force Majeure	0%	5%	46%
Hardship	38%	3%	3%
Change in Legislation	1%	2%	2%

Table 14: Characterisation of responses of COVID-19

Table 14 shows that the analysis of this survey depends mostly on which party the respondent belongs to this was previously seen with the categorization of the devaluation of the Egyptian pound. In this case, there were significant differences between the responses of the Contractors compared with Employers.

While 46% of the Contractors stated that the COVID-19 outbreak is a Force Majeure, 0% of the Employers chose that option. On the other side only 3% of the Contractors stated that this event is a Hardship while 38% of the responses for this choice were Employers.

This again confirms the fact that it is very hard to choose one option and apply it on all projects as every party will be biased to what beneficial for them. Even though there is no definite answer to this question, further expert interviews were conducted with different project parties as well as legal practitioners to dig deeper into everyone’s insight and supporting arguments on this topic.

4.2.1.11 Financial Shortfalls due to COVID-19

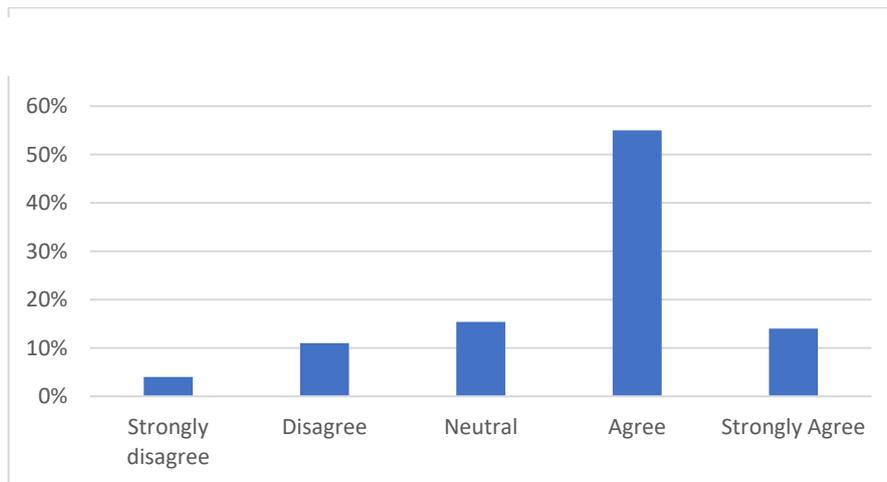


Figure 32: Financial Shortfalls due to COVID-19

Based on the results that were shown in Figure 32, 69% of the respondents mentioned that their projects were facing some financial shortfalls hindering them from continuing the project execution. On the other hand, 15% of respondents see that the COVID-19 has a neutral impact on their financial affairs; meanwhile, the remaining 16% of the respondents mentioned that their companies were above the situation and succeeded in handling their business with minimal financial problems.

4.2.1.12 Respondents opinion on market recovery

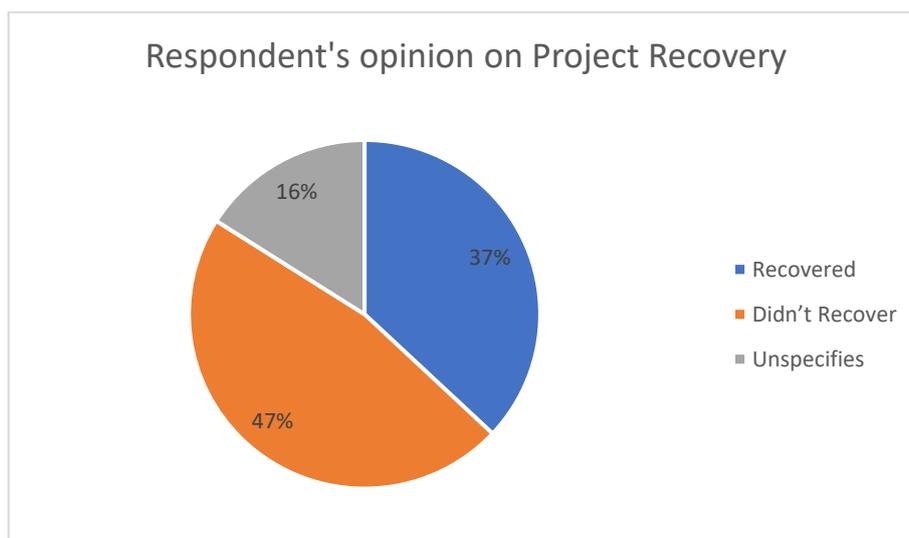


Figure 33: Respondents' opinion on project recovery

In the survey, respondents were asked on their opinion on how they see the Construction industry recovering in the next few years, the results showed 37% of surveyed companies mention that the market has recovered from the pandemic and is on its way to adapting to the new business lifestyle. 47% of respondents believe that the industry is still on the road to recovery, while 16% of respondents cannot specify whether the market has recovered or not.

4.2.2 Survey Questionnaire

In order to acquire accurate data and meet the purpose of this research, interviews were done with expert engineers (+15 years' experience) in the Contracts/Legal industry. To have an unbiased conclusion, interviews were conducted with parties from the Employer, Contractor and Engineers point of view to obtain a wider range of opinion. Table 15 below illustrates the response of the experts:

Expert No.	Devaluation of the Egyptian Pound	Justification	COVID-19 Outbreak	Justification
1 (Employer)	Change in legislation	Due to increase in prices Contractors were compensated	Hardship	Egyptian government did not announce that COVID-19 is a pandemic/ epidemic.
2 (Employer)	Change in legislation	Increase in fuel prices and private projects were not compensated.	Hardship	Delay in imported materials
3 (Consultant)	Change in legislation	Sudden increase in material prices	Hardship	Limited labour resources
4 (Consultant)	Change in Legislation	Law 84 of 2017 compensated Contractors in the public sectors.	Hardship	There was no impossibility to perform work.

5 (Contractor)	Change in Legislation	Law 84 of 2017 compensated Contractors in the public sectors.	Force Majeure	Limited labor resources and unable to obtain imported material.
6 (Contractor)	Hardship	Sudden increase in material prices	Force Majeure	Curfew prevented the Contractor from performing 100%
7 (Legal Practitioner)	Change in Legislation	Law 84 of 2017 compensated Contractors in the public sectors.	Hardship	Contractors faced delays due to slow progress on site.
8 (Legal Practitioner)	Change in Legislation	Law 84 of 2017 compensated Contractors in the public sectors.	Hardship	Delay in imported materials

Table 15: Characterisation of the devaluation of the Egyptian Pound & COVID-19

This table summarizes the feedback obtained from each expert interview where they mentioned their legal categorization for the devaluation of the Egyptian Pound and the COVID-19 outbreak. In addition, they supported their statement with reasons to further verify their answer.

Based on the results, for the Devaluation of the Egyptian Pound, 7 out of 8 mentioned it was Change in Legislation while 1 interviewee categorized it as a Hardship. For COVID-19, 6/8 interviewees categorised it as Hardship while 2 out of 8 categorised it as Force Majeure.

Again, the results are biased and reflect selections to the benefit of each party (especially the Contractor) yet the closest parties to the nearest categorisation to both events are the Employers and Lawyers.

4.2.3 Case Studies

Since results obtained were not unanimous and the responses were biased towards each parties' benefit, it was essential to study three Companies from different parties (Employer, Consultant and Contractor) to further analyse the two events. These case studies were very beneficial to reach the goal of this thesis as it also showcased how did these companies survive during both events.

1. Employer

The Employer is based in UAE and it is present in more than 20 countries, it has a noticeable contribution in the development of real estate and commercial buildings in Egypt. The Employer has witnessed both events that are studied in this research.

For the event of the devaluation of the Egyptian Pound and even though this company is not Egyptian, yet it was negatively affected with such event. The sudden event crippled all parties including Employers such as a real estate companies were they had obligations to submit properties to their clients; which means that if the Contractor was unable to complete works on time this will negatively affect everyone.

In the case of this Company, since its private sector, the compensation Law No. 84 of 2017 was not applicable, but it was crucial for their own benefit to relief the Contractor from the financial burden that resulted from the devaluation of the Egyptian Pound. These actions included:

- Extension of time
- Application of escalation of prices formulas to compensate the Contractor

- Flexibility with changing certain items that were to be imported to accommodate for the drastic increase in prices.

Based on the companies' analysis to what this event represented, it is fair to say that it was considered a Change in Legislation event. Even though the Contractors wanted to treat this event as a "Fait du Prince" and receive compensation like with Public Authority projects but this was rejected since it would consequently harm the Employer.

In the Case of COVID-19 Outbreak, it was categorised as a hardship event due to the following reasons:

- It was not announced by the Egyptian Authorities that the COVID-19 is a Pandemic.
- There was no enforced decision to stop Construction works on Sites, therefore there was not impossibility in performing such work.
- Since there was no impossibility to perform works, it can't be a Force Majeure event; therefore, it's hardship.

2. Consultant

The Consultant is a major international group in the construction engineering and mobility services sectors it places its multiple fields of expertise at the disposal of the community and makes cutting-edge innovation accessible to all projects throughout their lifecycle: consulting, engineering and operation.

The purpose of adding a Consultant in this analysis is to have an unbiased opinion about both events. In the Case of the devaluation of the Egyptian Pound, the impacts that both parties suffered were clearly discussed in the previous chapter. The analysis here would depend on

the type of Contract; if it is an Administrative Contract then it is Fait du prince and the Contractor will be Compensated by the Public Authority. On the other hand, if the Contract is with a Private sector were they follow FIDIC Contracts then this event would be considered a Change in Legislation and therefore escalation formulas will be applicable to accommodate for the Increase in prices.

In the Case of COVID-19, Prima Facia it seems to be a Force Majeure event due to the fact that it was a sudden event that no one expected and impacted the whole world not just the Construction industry. But what is missing is the fundamental condition for Force Majeure to be present; the impossibility to perform work. Therefore, and according to the Egyptian Civil Code (ECC); articles 147-2 (Obligation becomes onerous) and 658-4 (Causes contractor financial losses) are applicable therefore it is a Hardship event.

3. Contractor

The third case we have is the Contractor, the company is one of the leading Contractors Egypt with over 70 years of in the construction market leader where it has claimed its dominance within real estate development and investment, both residential and commercial, diverse industrial activities.

In the case of the devaluation of the Egyptian Pound, the Contractor faced several negative impacts in result of this sudden event. These consequences included:

- Sudden increase in prices of Steel and Fuel
- Delay in getting awarded new projects due to the re-evaluation of the prices and schedules.

It is crucial to mention that the Contractor stated that the impact of such event was maintained with minimal losses due to a precise risk management plan to be able to overcome this sudden Change in legislation that the Country has experienced. One of the precautionary measures that were taken into consideration was to include a condition of escalation in prices in any Fixed Price Contract. In addition, when the devaluation happened, acquisitions were made with other companies to have a more solid ground in the Construction market.

Due to the following actions and as per the compensation law that was enforced by all Public project, this event may have indulged hardship to Contractors but it is fair to say that it a Change in Legislation.

In the Case of COVID-19 the Contractor Claimed for extension of time and cost according to the following justifications:

- Sudden Outbreak of the COVID-19 pandemic
- Shortages of labour workers due to fear of infection
- Faced difficulty to obtain imported materials
- The prime Minister's decree on 24th of March 2020 to enforce lockdown
- Curfews were applied to ensure limitation of the spread which affected working hours

Due to the following consequence of the COVID-19 outbreak, and the Contractual support in accordance with Sub-Clauses 6.7.1, 19.1 and 19.2 of FIDIC 1999 Redbook and article 215 of the ECC, where such event matches the definition of Force Majeure.

4.3 Analysis of Research Findings

4.3.1 Devaluation of the Egyptian Pound

From the literature review it was found that the devaluation of the exchange rate of the Egyptian pound in 2016 and the significant decrease in its exchange rate against foreign currencies and the sharp rise in prices in following most relevant items;

1. Increase of fuel prices, twice
2. Increase in steel prices as shown in details in chapter 2.

As a result, most of the Contractors were crippled and in debt, consequently the Egyptian Government intervened to establish the right of the Contractors to compensate for their losses in accordance with Law No. 84 of 2017 as they have suffered as a result of the increase in prices. The state has taken the necessary measures to preserve the large investments that have been pumped into national projects, which resulted in the issuance of a law on compensation for contracting contracts, supplies and public services No. 84 of 2017, explaining that the Supreme Committee for Compensation is concerned with determining the foundations, controls and percentages of compensation arising from economic decisions issued in From 1/3/2016 to 31/12/2016, which resulted in the financial imbalance of the contracting, supply and public services contracts in force during that period, in which the state or any of the companies owned by it or any of the public legal persons is a party to it, for the works carried out starting from 1/3/2016 until the end of the contract implementation.

Due to the fact that the devaluation was an exceptional event by the Egyptian Public authority a decision was made by the Country. The legal reaction to such event was this law to

compensate the Contractors as well as give them 6 months' extension of time (working with public authority).

Law 84 of 2017 referred to Article No. 147 (2) of the Egyptian Civil Code which correspond to Hardship stating that *“if general extraordinary events crop up and it has **not been possible to anticipate them**, and their incidence resulted in the fact that the **implementation of the contractual obligation**, even though it has not become impossible, has become so exhausting to the debtor that it **threatens him with exorbitant loss**, the judge, as conditions warrant, may in balancing the interests of the two parties, restore the exhausting obligation to plausible limits, and any other contradictory agreement shall thus become invalid.”*

While the law mentioned above included all sectors public and private, a contradiction prevailed when used as reference by private companies for their claims. The law only applied to governmental projects, which is considered an ambiguity some may argue a loophole in "Law 84" therefore creating an unexpected obstacle for private contractors who were left to fend for themselves

The literature above was later confirmed by the findings obtained from this research, in chapter 4, the survey showcased how the respondents categorised this event. Figure 31 showcased how 46% of the respondents categorised the devaluation of the Egyptian Pound as a Change in Legislation. To further verify this finding, in the expert interviews, 7 out of 8 interviewees agreed with this statement. In the case studies, the Employer and Consultant categorised such event as a *Fait du Prince* while the Contractor categorised it as a Change in Legislation.

Based on the findings above, the categorisation for the devaluation of the Egyptian Pound should be Change in Legislation. But for the public sector – in administrative Contracts- this event is considered “Fait du Prince”.

4.3.2 COVID-19

In order to reach the goal of this thesis. i.e. characterize COVID-19 from a legal perspective whether it is a Force Majeure, Hardship or Change in Legislation. The following steps were taken:

1. Surveys were conducted to gather data on expert opinions on the topics.
2. Expert interviews were conducted to obtain their insights on the event.
3. Case studies for three companies were collected to study the survival of these companies in the event of COVID-19.

4.3.3 Flowchart Formulation

According to the data gathered and discussed above, a flowchart was developed to 1) Further verify the findings that were obtained and characterize the COVID-19 event. 2) To be used as a guidance in future similar unexpected events.

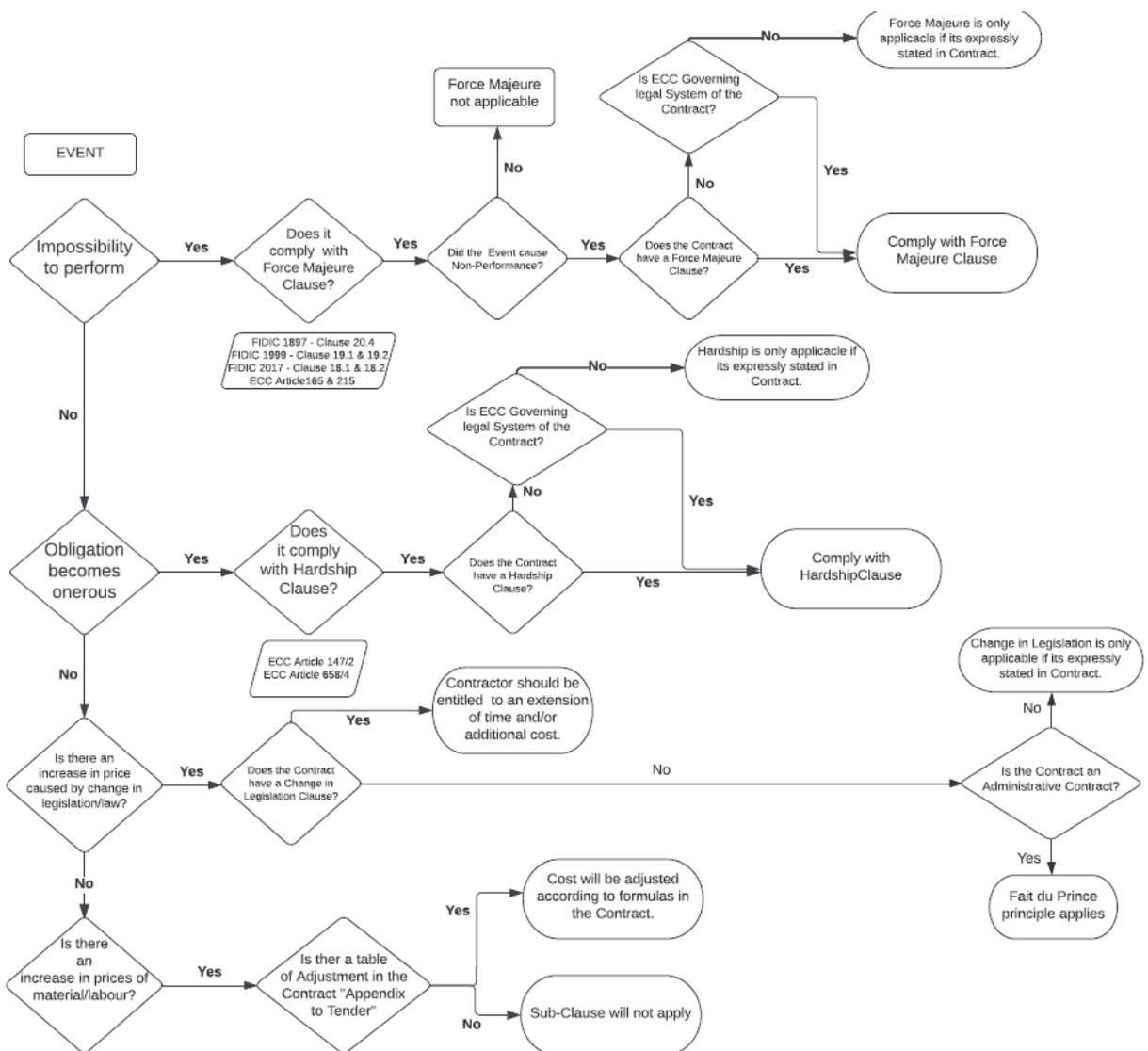


Figure 34: Decision flowchart

Using the flowchart in Figure 34 to analyse the COVID-19, from a broad point of view, it can be categorized as a Force Majeure. But since impossibility to fulfil the Contractual obligation was not applicable yet only onerous therefore the main requirement for an event to be Forced Majeure is absent. Consequently, with the absence of impossibility and the fact that the Egyptian Government did not announce that the COVID-19 outbreak is a Pandemic, treating it as a Force Majeure is inaccurate.

This narrows down the options to Hardship, the requirements are that the event has not been possible to anticipate, resulted in the fact that the implementation of the contractual obligation was onerous and has become so exhausting to the debtor that it threatens him with exorbitant loss. Since all these factors were present in the COVID-19 event, this indicates that it is likely to be treated as a Hardship.

4.3.4 Case Study of the Ukraine war using the Decision Flowchart

While conducting the research, a new unexpected event has occurred. This event is the war between Russia and Ukraine. Even though this war is far away from Egypt, yet in consequences has effected the whole world and from many aspects and the Construction industry in specific.

Due to the fact that both Russia and Ukraine are critical suppliers of metals and raw materials. Russia controls around 10% of global copper reserves and is a major producer of nickel and platinum. Ukraine is one of Europe's top producers of uranium, titanium, manganese, iron and mercury ores and has the third largest shale gas reserves in Europe. In anticipation of access to and production of these materials being hindered, prices are already increasing and the market is looking to other countries and alternative supply chains. Moreover, Russia supplies 30% of Europe's oil and 35% of its natural gas. (JDSUPRA, 2022)

In February 2022, significant foreign investments withdrew from the Egyptian market following the Russian war on Ukraine and the global investment uncertainty, leaving a major gap in the Egyptian investment landscape and leading major investment houses to predict further monetary actions from the Government of Egypt to cover for the flaring in the traded

deficit and depleting reserve. As a result, this affected the Countries worldwide, including Egypt in areas such as:

- Unavailability/ delay of material
- Unavailability resulting in increase in prices of material
- Steel prices in Egypt increase from 16000 EGP/ ton to 22000 EGP/ top. This huge increase in prices will affect any Contractor negatively in their project

In result, the Central Bank of Egypt announced that the exchange rate of the US dollar increased on 21st March 2022 to LE 17.5, compared to LE 15.74 on 20th March 2022 trading. The exchange rate continued to increase during the same day until it reached at LE 18.22. This increase was related to the sudden war between Russia and Ukraine that started on 24th February 2022.

The decline of almost 16% in EGP exchange rate combined with the impact of war are expected to increase economic burdens on Egypt following the rise in prices for fuel and basic commodity prices. The shortages of foreign currencies have led to blockages at Egyptian ports, after importers could not obtain necessary foreign currency for letters of credit to get their goods cleared. This will create bottle necks in the supply chains and is expected to distort the market.

To be able to categorise this event from a legal/contractual perspective, the Flowchart that was showcased above will be used as guidance.

Is this event considered Force Majeure?

Looking at the Russia and Ukraine war this is a Force Majeure event, but the consequences of such event, i.e. the increase in Dollar rate against Egyptian Pound is not considered a Force Majeure event. The Force Majeure Clause in the FIDIC or ECC includes clearly the condition of impossibility, which is not present in this event.

Is this event considered a Hardship?

Referring to ECC- Article 147(2) which states that the event is 1. Exceptional and unpredictable 2. Without becoming impossible and 3. Threaten the debtor with exorbitant loss, even though the first two points apply, in order to claim for hardship, the Contractor needs to prove that he suffered exorbitant loss, which till date is still unclear therefore it is incorrect to categorise this event as a Hardship.

Is this event considered Change in Legislation?

Due to the fact that the devaluation was an exceptional event by the Egyptian Public authority a decision was made by the Country. The legal reaction to such event so far is to not apply any delay fines on administrative Contracts as per decree 186, dated 22th March 2022. Since the decision of devaluating the Egyptian Pound was a choice made by the Central bank of Egypt, therefore it is considered a Change in Legislation – similar to the devaluation that occurred in 2016 - and affected parties are advised to claim accordingly.

4.3.5 Reaction of the Egyptian Market to COVID-19

Based on the results illustrated, it is shown that 69% of the respondents mentioned that their projects were facing some financial shortfalls hindering them from continuing the project execution. On the other hand, 15% of respondents see that the COVID-19 has a neutral impact on their financial affairs; meanwhile, the remaining 16% of the respondents mentioned that their companies were above the situation and succeeded in handling their business with minimal financial problems.

To further enhance the above results, it was shown from the Case Studies that the Employer and Contractor both had no problems in financing their projects. The Contractor's invoices were paid in time, no Employees were let go and salaries were paid on time. Although this might not be the case in all companies but there are many companies that are surviving during COVID-19 which again confirms the fact that this event is not a Force Majeure.

4.3.5.1 Recovery of the Egyptian Market

Based on the data discussed above, as well as the problems the Construction industry is experiencing as a result of the COVID-19, it's time to have a more optimistic view of recovery and the adoption of a new normal. In the survey, respondents were asked on their opinion on how they see the Construction industry recovering in the next few years, the results showed in Figure 33 that 37% of surveyed companies mention that the market has recovered from the pandemic and is on its way to adapting to the new business lifestyle. 47% of respondents believe that the industry is still on the road to recovery, while 16% of respondents cannot specify whether the market has recovered or not.

Since the COVID-19 outbreak, the government has announced a number of initiatives to help the construction industry, including the CBE's EGP 100 billion plan to boost the private sector, which included the Construction industry. Furthermore, the government pays close attention to the country's comprehensive development strategy, particularly the construction projects in new cities around the country.

Furthermore, the government initiated a campaign in 2020 to eliminate building code infractions and encroachment on public property. Property owners who break the law are required to submit reconciliation requests as a result of this campaign. The government has prolonged the reconciliation time to the end of March 2021 in order to allow the owners to obey the requirements. As a result, the government received around 2.75 million reconciliation requests valued EGP 18 billion until March 11. It's worth noting that there are approximately 3.16 million building code infractions across the state. Not only that, but the government is working on new building regulations that are supposed to regulate all issues relating to construction infractions.

In addition, large infrastructure projects, such as the New Administrative Capital (NAC), New Alamein, and New Galala, which are labor-intensive, ensured that construction avoided some of the disruptions experienced by other sectors of the economy and continued on schedule; without this ongoing work on public megaprojects, the slowdown would have been much worse. The government is concentrating its efforts on raising public spending in order to develop new projects and improve services.

According to all the data that was discussed above and based on the fact that impossibility to perform work was not present, it is deduced that COVID-19 is a Hardship event.

Chapter 5: Conclusion and Recommendations

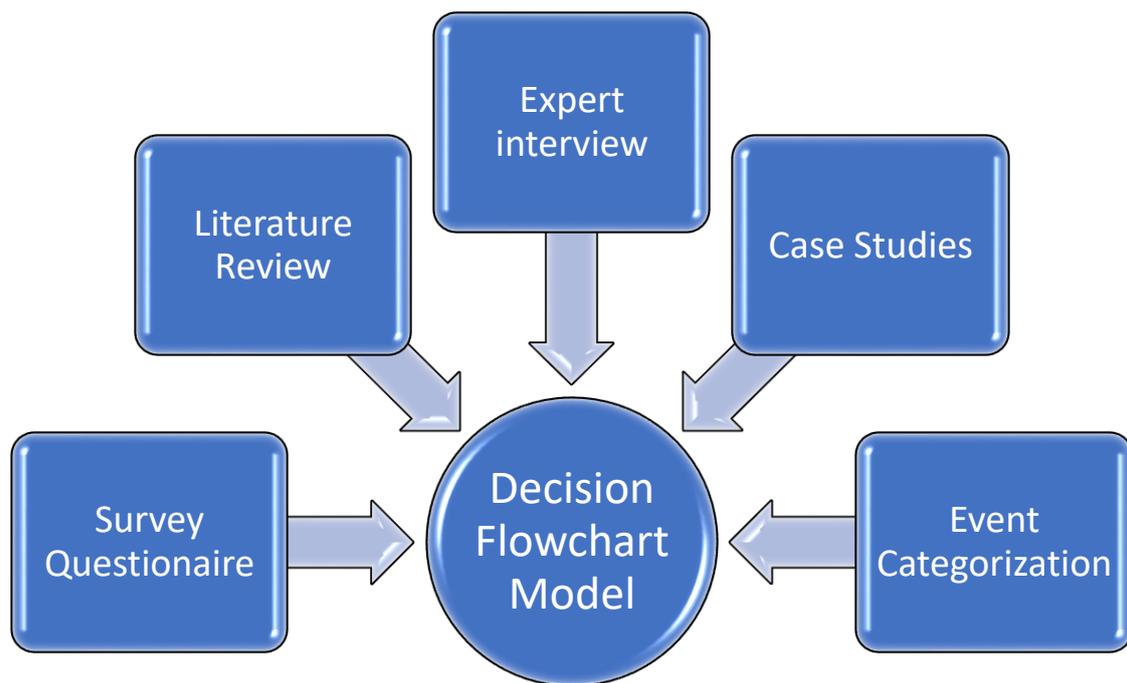


Figure 35: Conclusion Flowchart

This chapter concludes the findings that were obtained from the survey questionnaire in Chapter 4, which pertains to expert interviews and case studies done in the literature review. Due to the controversial nature of the subject at hand, which has been perceived and communicated by several parties, who play different roles in the Egyptian construction market industry, a detailed breakdown is illustrated to characterize these two events in question.

This research presents a summary of the research, the key findings, the limitations and recommendations for future work.

5.1 Research Conclusion

To conclude, the devaluation of the Egyptian Pound and COVID-19 are both significant events that affected the Construction industry tremendously. As shown in the above analysis, each

project party has a different opinion regarding the characterization of both events. It is very hard with this type of analysis to obtain one unanimous opinion, as every project is different and consequences of the two events were not the same for every project. In such case the main aim is to mitigate losses, where both the Employer and the developer carry some of the burden.

Regarding the Devaluation of the Egyptian Pound, most Contractors were crippled in debt due to the increase exchange rate which resulted in the increase of Fuel prices twice and in steel prices as well. Consequently, the Egyptian Government intervened to establish the right of the Contractors to compensate for their losses in accordance with Law No. 84 of 2017 as they have suffered drastically.

Due to the fact that the Devaluation of the Egyptian Pound was a decision from the Country and the fact Compensation Law No. 84 of 2017 was implemented proves that this event is a Change in Legislation and for administrative Contracts it is treated as a “Fait du Prince”.

To obtain a solid conclusion for COVID-19 and based on the finding of this research that were illustrated in Chapter 4, the survey showed that 51% of the respondents stated it was Force Majeure, 44% stated it was a Hardship and only 5% stated it was Change in Legislation. This means that the option of the event being Change in legislation is excluded.

To verify whether this event is a Force Majeure or Hardship, it was crucial to analyse the results found from the expert interviews and the case studies. The expert interviews showed that 60% of the interviews categorized COVID-19 as a Hardship while 40% categorised it as a Force Majeure. The case studies showcased that the Employer and Consultant categorised this event as a Hardship while the Contractor Categorised it as a Force Majeure event. After

analysing all these findings, a decision flow chart was formulated to obtain a solid analysis based on substantiation from legal Contract Clauses rather than opinions.

Based on all the findings mentioned, the following could be deduced:

- It was not announced by the Egyptian Authorities that the COVID-19 is a Pandemic.
- There was no enforced decision to stop Construction works on Sites, therefore there was not impossibility in performing such work.
- Since there was no impossibility to perform works, it can't be a Force Majeure event.
- According to the Egyptian Civil Code (ECC); articles 147-2 (Obligation becomes onerous) and 658-4 (Causes contractor financial losses) are applicable therefore it is a Hardship event.

5.2 Research Limitations

Throughout the research, there were some limitations that should be considered in future research reference. First limitation was regarding the survey which this research depended mainly on. The sample size was only 75 and the majority of the respondents were less than 15 years' experience, it was very hard to find enough suitable engineers for the study with 15+ years' experience which affected the credibility of the study.

Secondly, this study was developed based on engineers from all sorts of companies such as the Employer, Contractor and Consultant. this resulted in a variety of results that were biased to each parties' benefit. In addition, in the case of Contractors, the study was developed based on engineers in the Contracting field regardless the size or speciality of the company, which again resulted in a deviation of the results.

Thirdly, this research only considered first category companies while collecting data. However, such data collected may be applicable to lower categories/smaller companies as well.

Lastly, since this research was conducted in 2021-2022, where the COVID-19 outbreak was at its peak; this hindered the means of data collection and affected the research. This was reflected in the time taken to conduct expert interviews, not all interviewees were open to meet physically to avoid the spread of the virus and this slowed down the whole process. In addition, some interviewees rejected meeting via video or voice call to stay anonymous which again limited the number of interviews to accommodate for the COVID-19 conditions.

5.3 Recommendation for Future Research

Even though this research was able to answer the thesis question and achieve the objective, nevertheless, there are some recommendations to be taken into account to further improve it for future researchers:

1. Include a larger amount of respondents for the study to obtain more reliable results.
2. This research studied the Case of Egypt only, it is recommended to compare the finding with another country to know how did each country deal with the two events.
3. Categorise the findings according to different Company types to obtain more accurate results.
4. Add more case studies to build a database for the actions taken contractually for the event of the devaluation of the Egyptian Pound and COVID-19.

5. Based on the case studies collected, build a model where the user inputs data – in the form of events – and the data base suggests Contractual Clauses to be used to solve the case.

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Appendix A – SURVEY QUESTIONNAIRE

Section 1 of 3

Survey on “Legal Characterization of the challenges faced by the Construction market during Covid-19 and devaluation of the Egyptian pound.”

This survey is conducted as part of a Master Thesis for the Construction Engineering Department at The American University in Cairo.

All data and information collected through this survey will remain confidential and will only be used for the purpose of this study.

Egypt has faced two major events in the past decade, the first was the devaluation of the Egyptian Pound against the Dollar rate and the second was the Covid-19 pandemic.

This survey will be focusing on the Construction industry in Egypt. The main objective of this thesis is to characterize the challenges faced by the Construction market during Covid-19 and devaluation of the Egyptian pound from a legal/Contractual perspective.

Based on your experience and knowledge of the Construction Industry in Egypt, please answer the survey according to your opinion

Thank you for participating in the survey.

يتم إجراء هذا الاستطلاع كجزء من رسالة ماجستير لقسم هندسة التشييد بالجامعة الأمريكية بالقاهرة.

ستبقى جميع البيانات والمعلومات التي تم جمعها من خلال هذا الاستطلاع سرية ولن يتم استخدامها إلا لغرض هذه الدراسة. واجهت مصر حدثين رئيسيين في العقد الماضي ، الأول كان تخفيض قيمة الجنيه المصري مقابل الدولار والثاني هو جائحة Covid-19. سيركز هذا الاستطلاع على صناعة البناء في مصر. الهدف الرئيسي من هذه البحث هو وصف التحديات التي واجهها سوق البناء خلال Covid-19 وخفض قيمة الجنيه المصري من منظور قانوني / تعاقدي.

بناءً على خبرتك ومعرفتك بصناعة البناء في مصر ، يرجى الإجابة على الاستبيان وفقاً لرأيك

شكراً لك على المشاركة في الاستطلاع!



1. Please enter your name (If you wish to remain anonymous you can leave this blank) يرجى كتابة اسمك (إذا كنت ترغب في عدم الكشف عن هويتك ، يمكنك ترك هذا فارغًا)

Short answer text

2. Please enter the name of your company (If you wish to remain anonymous you can leave this blank) يرجى كتابة اسم شركتك (إذا كنت ترغب في عدم الكشف عن هويتك ، يمكنك ترك هذا فارغًا)

Short answer text



3. What is the role of the company you work for? * ما هو دور الشركة التي تعمل بها؟

- Employer
- Consultant
- Engineer
- Contractor
- Sub-Contractor
- Other...

4. What is the highest level of education you have completed? *

- Bachelors Degree
- Masters Degree
- PhD

5. Please state your job title. *

Short answer text

6. How many years of experience do you have in the construction industry? *

كم عدد سنوات الخبرة التي لديك في مجال التشييد

- 0-5 years
- 5-10 years
- 10-20 years
- 20+ years

7. How many years of experience do you have in the Contracts field? *

كم عدد سنوات الخبرة التي تمتلكها في مجال العقود

- 0-5 years
- 5-10 years
- 10-20 years
- 20+ years

8. Please state the type of Contracts used in your Project (Click all applicable choices) يرجى *

تحديد نوع العقود المستخدمة في مشروعك (انقر فوق جميع الخيارات القابلة للتطبيق)

- FIDIC Redbook 1987
- FIDIC Redbook 1999
- FIDIC Redbook 2017
- Administrative Contracts (following Law 89 and 182)
- Construction Contracts under the Egyptian Civil Code
- Other...

9. Please state whether the Contracts you experienced included a Clause dealing with an unforeseen event that fundamentally changes the contractual bargain?(Please mention the types of Contracts used)

يرجى تحديد ما إذا كانت العقود التي واجهتها قد تضمنت بنداً يتعامل مع حدث غير متوقع يؤدي إلى تغيير جذري في الصفة التعاقدية؟ (يرجى ذكر نوع العقود المستخدمة)

For each option please states the types of Contracts used, if you didn't encounter any please type "N/A".

لكل خيار ، يرجى ذكر أنواع العقود التي تحتوي على هذه البنود ، إذا لم تكن مشروطاً بأي منها ، يرجى كتابة "لا ينطبق"

⋮

Force Majeure – (Force majeure refers to unpredictable events beyond anyone's reasonable control, which hinder one or more of the parties involved from fulfilling the agreed terms in the contract.)
القوة القاهرة - (تشير القوة القاهرة إلى الأحداث غير المتوقعة الخارجة عن السيطرة المعقولة لأي شخص ، والتي تعيق واحداً أو أكثر من الأطراف المعنية من الوفاء بالشروط المتفق عليها في العقد.)

Long answer text

Théorie de l'imprévision (Hardship) – (Hardship is defined as a change in circumstances, which was unforeseeable by the parties and makes the performance of obligations to be onerous.)
يتم تعريف المشقة على أنها تغيير في الظروف، وهو ما لم يكن متوقعاً من قبل الأطراف ويجعل أداء الالتزامات مرهقاً

Long answer text

Fait du prince (Change in Legislation) – (defined as an act by a public authority without fault or breach on its part, and that results in increasing the misalignment of the contracting parties' position in an administrative contract.) * نظرية عمل الامير -

(تغيير في التشريع) - (يُعرَّف بأنه فعل من قبل سلطة عامة دون خطأ أو خرق من جانبها ، ويؤدي ذلك إلى زيادة اختلال موقف الأطراف المتعاقدة في العقد الإداري.)

Long answer text

10. In your opinion, which of the following concepts are under the theory of Hardship “Théorie de l'imprévision”, Force Majeure or Change in Legislation “Fait du prince” في رأيك، أي من المفاهيم التالية تندرج تحت نظرية المشقة، القوة القاهرة و نظرية عمل الامير (تغيير في التشريع)؟ *

	Force Majeure - القوة القاهرة	Hardship - المشقة	Fait du Prince - نظرية عمل الامير
Event is beyond Parties' control الحدث خارج عن سيطرة الأطراف	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unexpected event حدث غير متوقع	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Event resulted in impossibility of performance أدى الحدث إلى استحالة الأداء	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Event resulted in excessive onerous obligation أدى الحدث إلى التزام مرهق مفرط	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restoring economic equilibrium is a consequence of the event استعادة التوازن الاقتصادي هي نتيجة لهذا الحدث	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. In your opinion, what are the consequences of the sudden devaluation of the Egyptian Pound in 2016. * ما هي برأيك عواقب الانخفاض المفاجئ لقيمة الجنيه المصري في عام 2016.

	Strongly disagree لا أوافق بشدة	Disagree لا أوافق	Neutral حيادي	Agree أوافق	Strongly Agree أوافق بشدة
Project delay in completion date تأخير المشروع في تاريخ البدء	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Claims for extension of time and/or cost مطالبات لتمديد الوقت و / أو التكلفة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increase of prices of raw materials (imported) زيادة أسعار المواد الأولية (مستوردة)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contractor did not meet his Contractual obligations لم يفِ المقاول بالتزاماته التعاقدية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contract termination إنهاء العقد	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. In your opinion, is the sudden Devaluation of the Egyptian Pound considered a Hardship "Théorie de l'imprévision", Force Majeure or Change in Legislation "Fait du prince" في رأيك ، يعتبر التخفيض المفاجئ لقيمة الجنيه المصري تندرج تحت نظرية المشقة، القوة القاهرة ام؟* نظرية عمل الامير (تغيير في التشريع)؟

- Force Majeure القوة القاهرة
- Hardship "Théorie de l'imprévision" نظرية المشقة
- Change in Legislation "Fait du prince" نظرية عمل الامير

Please comment on your above selection *

Your answer

13. In your opinion, what are the consequences of the COVID-19 Pandemic in 2020؟* ما هي برأيك عواقب جائحة كورونا في عام 2020؟

	Strongly disagree لا أوافق بشدة	Disagree لا أوافق	Neutral حيادي	Agree اوافق	Strongly Agree اوافق بشدة
Restricted working hours ساعات العمل المقيدة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Full Suspension of work الإيقاف الكامل عن العمل	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partial Suspension of work الإيقاف الجزئي عن العمل	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project delay in completion date تأخير المشروع في تاريخ البدء	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Claims for extension of time and/or cost
مطالبات لتمديد الوقت و / أو التكلفة

Increase of prices of raw materials (imported)
زيادة أسعار المواد الأولية (مستوردة)

Affected resource availability
تأثر توافر الموارد

Contractor did not meet his Contractual obligations
لم يف المفاول بالتزاماته التعاقدية

Contract termination
إنهاء العقد

14. In your opinion, is Covid-19 considered a Hardship “Théorie de l'imprévision”, Force Majeure or Change in Legislation “Fait du prince”? في رأيك ، تعتبر جائحة كورونا * تدرج تحت نظرية المشقة, القوة القاهرة ام نظرية عمل الامير (تغيير في التشريع)؟

- Force Majeure القوة القاهرة
- Hardship “Théorie de l'imprévision” نظرية المشقة
- Change in Legislation “Fait du prince” نظرية عمل الامير

Please comment on your above selection *

Your answer

Appendix B – FIDIC 1987 Redbook

- Employer's Risks 20.4** The Employer's risks are:
- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
 - (b) rebellion, revolution, insurrection, or military or usurped power, or civil war,
 - (c) ionising radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof,
 - (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
 - (e) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors and arising from the conduct of the Works,
 - (f) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract,
 - (g) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible, and
 - (h) any operation of the forces of nature against which an experienced contractor could not reasonably have been expected to take precautions.

Special Risks

- No Liability for Special Risks 65.1** The Contractor shall be under no liability whatsoever in consequence of any of the special risks referred to in Sub-Clause 65.2, whether by way of indemnity or otherwise, for or in respect of:
- (a) destruction of or damage to the Works, save to work condemned under the provisions of Clause 39 prior to the occurrence of any of the said special risks,
 - (b) destruction of or damage to property, whether of the Employer or third parties, or
 - (c) injury or loss of life.
- Special Risks 65.2** The special risks are:
- (a) the risks defined under paragraphs (a), (c), (d) and (e) of Sub-Clause 20.4, and
 - (b) the risks defined under paragraph (b) of Sub-Clause 20.4 insofar as these relate to the country in which the Works are to be executed.

Release from Performance

- Payment in Event of Release from Performance 66.1** If any circumstance outside the control of both parties arises after the issue of the Letter of Acceptance which renders it impossible or unlawful for either or both parties to fulfil his or their contractual obligations, or under the law governing the Contract the parties are released from further performance, then the parties shall be discharged from the Contract, except as to their rights under this Clause and Clause 67 and without prejudice to the rights of either party in respect of any antecedent breach of the Contract, and the sum payable by the Employer to the Contractor in respect of the work executed shall be the same as that which would have been payable under Clause 65 if the Contract had been terminated under the provisions of Clause 65.

Appendix C – FIDIC 1999 Redbook

13.7

Adjustments for Changes in Legislation

The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

19.2

Notice of Force Majeure

If a Party is or will be prevented from performing any of its obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.



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Conditions of Contract for Construction

The Party shall, having given notice, be excused performance of such obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

19.4

Consequences of Force Majeure

If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [*Notice of Force Majeure*], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*], and
- (b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [*Definition of Force Majeure*] and, in the case of sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [*Determinations*] to agree or determine these matters.

19.6

Optional Termination, Payment and Release

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2 [*Notice of Force Majeure*], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Cessation of Work and Removal of Contractor's Equipment*].

Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:

- (a) the amounts payable for any work carried out for which a price is stated in the Contract;
- (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- (c) any other Cost or liability which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the Works;
- (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
- (e) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.



General Conditions

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19.7

Release from Performance under the Law

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [*Optional Termination, Payment and Release*] if the Contract had been terminated under Sub-Clause 19.6.

Appendix D – FIDIC 2017 Redbook

18.2

Notice of an Exceptional Event

If a Party is or will be prevented from performing any obligations under the Contract due to an Exceptional Event (the "affected Party" in this Clause), then the affected Party shall give a Notice to the other Party of such an Exceptional Event, and shall specify the obligations, the performance of which is or will be prevented (the "prevented obligations" in this Clause).

This Notice shall be given within 14 days after the affected Party became aware, or should have become aware, of the Exceptional Event, and

the affected Party shall then be excused performance of the prevented obligations from the date such performance is prevented by the Exceptional Event. If this Notice is received by the other Party after this period of 14 days, the affected Party shall be excused performance of the prevented obligations only from the date on which this Notice is received by the other Party.

Thereafter, the affected Party shall be excused performance of the prevented obligations for so long as such Exceptional Event prevents the affected Party from performing them. Other than performance of the prevented obligations, the affected Party shall not be excused performance of all other obligations under the Contract.

However, the obligations of either Party to make payments due to the other Party under the Contract shall not be excused by an Exceptional Event.

18.5

Optional Termination

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of an Exceptional Event of which Notice has been given under Sub-Clause 18.2 [*Notice of an Exceptional Event*], or for multiple periods which total more than 140 days due to the same Exceptional Event, then either Party may give to the other Party a Notice of termination of the Contract.

In this event, the date of termination shall be the date 7 days after the Notice is received by the other Party, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Contractor's Obligations After Termination*].

After the date of termination the Contractor shall, as soon as practicable, submit detailed supporting particulars (as reasonably required by the Engineer) of the value of the work done, which shall include:

- (a) the amounts payable for any work carried out for which a price is stated in the Contract;
- (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery. This Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- (c) any other Cost or liability which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the Works;
- (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's place of business in the Contractor's country (or to any other destination(s) at no greater cost); and
- (e) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.

The Engineer shall then proceed under Sub-Clause 3.7 [*Agreement or Determination*] to agree or determine the value of work done (and, for the purpose of Sub-Clause 3.7.3 [*Time limits*], the date the Engineer receives the Contractor's particulars under this Sub-Clause shall be the date of commencement of the time limit for agreement under Sub-Clause 3.7.3).

The Engineer shall issue a Payment Certificate, under Sub-Clause 14.6 [*Issue of IPC*], for the amount so agreed or determined, without the need for the Contractor to submit a Statement.

18.6

Release from Performance under the Law

In addition to any other provision of this Clause, if any event arises outside the control of the Parties (including, but not limited to, an Exceptional Event) which:

- (a) makes it impossible or unlawful for either Party or both Parties to fulfil their contractual obligations; or
- (b) under the law governing the Contract, entitles the Parties to be released from further performance of the Contract,

and if the Parties are unable to agree on an amendment to the Contract that would permit the continued performance of the Contract, then after either Party gives a Notice to the other Party of such event:

- (i) the Parties shall be discharged from further performance, and without prejudice to the rights of either Party in respect of any previous breach of the Contract; and
 - (ii) the amount payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 18.5 [*Optional Termination*], and such amount shall be certified by the Engineer, as if the Contract had been terminated under that Sub-Clause.
-

Appendix E – Egyptian Civil Code

Article 147: (1) A contract is the law of the contracting parties. It cannot be nullified or amended without the agreement of these parties, or the causes specified by the law.

(2) However, if general extraordinary events crop up and it has not been possible to anticipate them, and their incidence resulted in the fact that the implementation of the contractual obligation, even though it has not become impossible, has become so exhausting to the debtor that it threatens him with exorbitant loss, the judge, as conditions warrant, may in balancing the interests of the two parties, restore the exhausting obligation to plausible limits, and any other contradictory agreement shall thus become invalid.

Article 159: In contracts binding to the two parties, if an obligation is terminated because of impossibility of its implementation, counter-obligations shall also be terminated, and the contract shall be rescinded by itself.

Article 165: If the person produces evidence the damage was caused by an alien cause with which he had nothing to do, such as a sudden accident a force majeure, a mistake of the wronged person, or a mistake of a third party, he shall not be bound to pay damages for such injury, unless there is a provision prescribing otherwise.

Article 215: If it is impossible for the debtor to effect a corporeal implementation of the obligation, he will be subject to a court ruling sentencing him to pay damages for failure to fulfil his commitments, unless he proves that the impossibility to implement his obligation was caused by an alien reason in which he had no hand. The same ruling shall be passed if the debtor delays the implementation of his obligation.

Article 373: An obligation shall be terminated if the debtor established that fulfilment has become impossible for an alien reason in which he has no hand.

Article 658:

- (4) However, if the economic balance between the obligations of each of the business owner and the contractor collapses, owing to extraordinary general accidents that were not taken into account at the time the contract was concluded, and thus the basis on which the financial assessment of the contract deed falters, the judge may order that remunerations be increased, or the contract annulled.

Article 667:

- (1) If the contract is terminated with the contractor's death, the business owner shall pay to the estate of the deceased the cost of works prosecuted and those expended on carrying out the part not yet completed, to the extent of such benefit as would revert to him from such works and costs.
- (2) The business owner may in return, ask that the materials already provided and the drawings and designs of work which started to be carried out, be handed over to him, provided he shall pay a just indemnity.
- (3) These rules shall also be applicable if the contractor has begun implementing the work then rendered unable to complete it for a reason he has no hand in.



السنة السعون	الصادر في ١٥ شوال سنة ١٤٣٨ هـ الموافق (٩ يولية سنة ٢٠١٧ م)	العدد ٢٧ (مكرر)
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قانون رقم ٨٤ لسنة ٢٠١٧

بإصدار قانون تعويضات حقوق المقاولات والتوريدات والخدمات العامة

باسم الشعب

رئيس الجمهورية

قرر مجلس النواب القانون الآتي نصه ، وقد أصدرناه :

(المادة الأولى)

تسرى أحكام هذا القانون على العقود المبرمة في المادة (١) من القانون المرافق والتي تأثرت بالقرارات الاقتصادية الصادرة في الفترة من ٢٠١٦/٣/١ وحتى ٢٠١٦/١٢/٣١

(المادة الثانية)

يُلغى أي حكم يُخالف أحكام هذا القانون والقانون المرافق له .

(المادة الثالثة)

يُنشر هذا القانون في الجريدة الرسمية ، ويُعمل به من اليوم التالي لتاريخ نشره .

يُصم هذا القانون بخاتم الدولة ، ويُنقل كقانون من قوانينها .

صدر برئاسة الجمهورية في ١٥ شوال سنة ١٤٣٨ هـ

(الموافق ٩ يوليوز سنة ٢٠١٧ م) .

عبد الفتاح السيسي

قانون تعويضات

حقوق المقاولات والعقود والخدمات العامة

مادة (١):

تُنشأ لجنة تسمى «اللجنة العليا للتعويضات» ، يكون مقرها وزارة الإسكان والمرافق والمجمعات العمرانية ، تختص بتحديد أسس وضوابط ونسب التعويضات عن الأضرار الناشئة عن القرارات الاقتصادية الصادرة في الفترة من ٢٠١٦/٣/١ وحتى ٢٠١٦/١٢/٣١ ، والتي ترتب عليها الإخلال بالتوازن المالي لعقود المقاولات والعقود والخدمات العامة السارية خلال تلك الفترة ، والتي تكون الدولة أو أي من الشركات المملوكة لها أو أي من الأشخاص الاعتبارية العامة طرفاً فيها ، وذلك عن الأعمال المنقذة بدءاً من ٢٠١٦/٣/١ وحتى نهاية تنفيذ العقد ، وذلك كله ما لم يكن هناك تأخير في التنفيذ لسبب يرجع إلى المتعاقد .

ويقدم صاحب الشأن طلباً بصرف التعويض للجهة التي يحددها وزير الإسكان معضماً ما يلزم لهذا الطلب من بيانات ، بالإضافة إلى بيان ما تم صرفه من دفعات تحت الحساب ودفعات مقدمة وفروق أسعار وفقاً للمواد (٢٢) و(٢٢ مكرراً) و(٢٢ مكرراً «١») من قانون تنظيم المناقصات والمزايدات الصادر بالقانون رقم ٨٩ لسنة ١٩٩٨

مادة (٢):

يصدر بتشكيل اللجنة المنصوص عليها في المادة (١) من هذا القانون قرار من رئيس مجلس الوزراء ، برئاسة وزير الإسكان والمرافق والمجمعات العمرانية ، وعضوية كل من :

- ١ - رئيس إدارة القعوى لوزارة الإسكان بمجلس الدولة .
- ٢ - ممثل عن وزارة المالية .
- ٣ - ممثل عن هيئة الرقابة الإدارية .
- ٤ - ممثل عن الجهاز المركزي للتعينة العامة والإحصاء .
- ٥ - ممثل عن الاتحاد العام للقرف التجارية .
- ٦ - ممثل عن اتحاد الصناعات المصرية .
- ٧ - ممثل عن الهيئة الهندسية للقوات المسلحة .
- ٨ - ممثل عن الاتحاد المصرى لمقاولى التشييد والبناء .

وللجنة أن تستعين بمن تراه من ذوي الخبرة في مجال عملها ، على ألا يكون له حق التصويت على أعمال وقرارات اللجنة .

ولرئيس اللجنة أن يُصدر قراراً بتشكيل أمانة فنية تتضمن العناصر والخبرات الفنية والمالية والقانونية المطلوبة لتمكين اللجنة من إتمام أعمالها ، وتعرض الأمانة الفنية تقاريرها على اللجنة العليا للتعويضات لتقرير ما تراه .
مادة (٣) :

يعرض رئيس اللجنة على مجلس الوزراء تقريراً بالأسس والضوابط ونسب التعويضات زيادة أو نقصاناً والمدة اللازمة لصرف هذه التعويضات حسب الظروف كلما دعت الحاجة لاعتمادها وإصدار التعليمات اللازمة للعمل بها في الجهات المخاطبة بأحكام هذا القانون .
مادة (٤) :

مع عدم الإخلال بأحكام المادة (١٤٧) من القانون المدني ، يتولى مجلس الوزراء إقرار صرف التعويضات المشار إليها بناءً على تقرير يرفع إليه من اللجنة العليا للتعويضات ، وذلك بالنسبة للعقود التي أبرمتها الدولة أو أي من الشركات المملوكة لها أو أي من الأشخاص الاعتبارية العامة عن الأعمال المنفذة في الفترة المشار إليها في المادة (١) من هذا القانون .
مادة (٥) :

مع عدم الإخلال بأحكام المادة (١٤٧) من القانون المدني ، يحق لأشخاص القانون الخاص الاسترشاد بالأسس والضوابط والنسب التي تضعها اللجنة المنصوص عليها في المادة (١) من هذا القانون في شأن العقود المبرمة فيما بينهم .
مادة (٦) :

يُصدر وزير الإسكان والمرافق والمجمعات العمرانية القرارات اللازمة لتنفيذ هذا القانون خلال ثلاثين يوماً من تاريخ تشكيل اللجنة المنصوص عليها في المادة (١) من هذا القانون .