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CONCURRENT DELAY ANALYSIS IN PUBLIC WORKS CONSTRUCTION DISPUTES

A cross-jurisdictional study of Egypt, Scotland and England

By
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A thesis submitted in fulfilment for the degree of Doctor of Philosophy
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A Ph.D. thesis submitted for the award of the Ph.D. degree in Law at the Law School, University of Strathclyde

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This thesis is the result of the author's original research. It has been composed by the author and has not been previously submitted for examination which has led to the award of a degree.

Signed: 

Date: 22nd Sep. 2017

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DEDICATION

TO MY LATE FATHER

Mohamed Alaraby Hassan Abdalall

He used to say: "knowledge should be reflected in helping other people"

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ABSTRACT

For "Concurrent Delay" dispute in construction projects, within what is called the *Malmaison* approach, English court allow the contractor to gain time but no monetary compensation. Following the issue of the judgment of the *City Inn* case in 2007 in Scotland which departed from the English approach to the apportionment approach for the monetary consequences, an argument on "Concurrent Delay" in construction projects has started. Few writers have commented giving their opinion based on common law grounds. The question can be: should we have different remedies for the same situation in a cross jurisdiction industry like construction industry which has nearly the same characteristics anywhere. When we take the matter to a larger comparative study, the civilian law logic should be brought to the argument on how to deal with "Concurrent Delay". There is a notion of differentiation between private contracts and public contracts in most of the civil law countries. Egypt is a developed example of this. When we examine this notion of differentiation with the possible approaches of the "Concurrent Delay" we may add other philosophical and practical perspective to the matter of "Concurrent Delay".

In view of that issue, the author identifies the notion of the differentiation between the private contracts and the public contracts within the context of public works construction disputes. The author also aims to explore the matter of concurrent delay from its two angles which are the legal perspective and the construction management perspective to identify the concurrent delay issue. The research aims to identify the related matters to the issue of concurrent delay and to test an appropriate regulatory framework for concurrent delay within the civilian law context and in common law context. The main findings of the research can be summarized that, within modern construction industry, a unified fair and reasonable advocated resolution or remedy can be developed to be applicable in different jurisdictions as long as the characteristics and the nature of the dispute are nearly the same. These findings will help to support the process of developing a theoretical regulatory framework that will be used as a guide to develop the way we theoretically and practically deal with concurrent delay dispute. One of the aims of this research is to develop the research area of construction law in Egypt.

PUBLICATIONS AND CONFERENCE PRESENTATIONS

Sherif Abdalall, 'Concurrent Delay Analysis in Public Works Construction Disputes', a poster presented at the annual poster competition of the Faculty of Humanities and Social Science, University of Strathclyde, has been chosen together with a limited number of posters to represent the event in at the "IMAGES OF RESEARCH 2012: AN EXHIBITION OF STRATHCLYDE'S IMPACT" at the "Paisley Art Centre". Scotland, from 3rd to 17th December 2012.

Sherif Abdalall, 'Public Works Construction Disputes: The Egyptian civil law approach', a conference presentation presented at the *4th international construction law conference:"Global problems, shared solutions",* this is one conference held every two years, Organized by the Australian society of Construction Law and law school university of Melbourne, Melbourne, Australia, 3-6 September 2013.

Sherif Abdalall, 'How to use the legal system to better build cities from scratch', a conference presentation presented at the *symposium on "Urban Ecologies Doctoral Seminar"*, University of Copenhagen, Denmark, on 13-15 June 2013

Sherif Abdalall, 'Concurrent Delay Analysis in Public Works Construction Disputes: A cross-jurisdictional study of Egypt, Scotland and England', a conference presentation presented at the *Society of Legal Scholars Annual Conference,* University of Edinburgh, Scotland, 3-6 September 2013.

Sherif Abdalall is the author of a chapter on "Arbitration" in a book written by a colleague Judge Chancellor / Fatehy Attia on "Government Contracts" in 2004.

Sherif Abdalall, 'A vision for developing Suez Canal region', a book suggests building a number of new cities from scratch in Egypt and a new second canal to allow the traffic to move in both directions. The final aim is to enhance the public works construction project to move the society forward after a time of political disruption post the 25th Jan. 2011 revolution. The summary of the book was presented to the Egyptian ministry of housing in Dec. 2013*,* Cairo University press, Egypt, *Nov. 2015*

Sherif Abdalall, 'Paten Application number PCT/EG2014/000019 titled: A new method for building new Zero Carbon cities', Published by the World Intellectual Property Organization (WIPO) under publication code WO/2015/188840 on the 17th of Dec. 2015. This PCT patent application is now a PCT national phase number (BHV5772827690) in Australia, a PCT national phase number (R20161037306) in India, a PCT national phase number (application no.EP14894245.1-patent no.1614) in The European Patent office and a PCT national phase number (15315352) in the United States patent office

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

"Public works construction projects" deal with an essential economic *human* activity which provides humans with public buildings and other forms of physical public infrastructure. Since the early civilizations, such projects have enjoyed utmost care and priority in the construction industry.[1] In fact, during the industrial revolution,[2] governments started to recognize the importance of "public works construction projects" for moving newly developed industrial economies forward.[3] After the 2nd World War, governments came to depend on "public works construction projects" in particular to help reduce the unemployment rate[4] which is of *social* importance (Stekler & William 1981).[5]

In modern times, the wider socio-economic importance of "public works construction projects" has been reflected in the fact that governments have generally become a more important client in relation to other clients in the "construction industry" (Ashworth 2001,

[1]In the ancient civilizations such as Greece, Egypt and China much care used to be given to the public buildings in particular. For example, in ancient Egypt, there was a significant differentiation between private buildings and public buildings. This differentiation was borne out in many ways such as the location and the material being used (public buildings including temples used to be built with stones only while other private houses used to be built only by using clay bricks) (Nicholson & Shaw 2000) Also much more care and prestigious position were accorded the professionals involved in building public buildings as is the case with the Architect "Senenmut" in ancient Egypt. (Morton 2006. p.97) In ancient civilizations, public works construction projects became a matter of comparison of ancient civilizations. Public works construction projects in particular used to be regarded as a "finger print" in terms of the shape of the buildings and the architectural design of such buildings.

[2]This has followed the invention of cement by John Smeaton in 1756 (Rankin 1916: p.749) which is a millstone in the history of the construction industry

[3]For example, much care has been given to building transportation networks as the link between this and the improvement of trade and the economic growth had become obvious(James 1983)

[4]In spite of the increase in the dependence on technology and machines, the construction industry is still regarded as a labour intense industry. The workforce involved has been roughly estimated as approximately 8% of the work force.(Morton 2006, p.67)

[5]Governments later found that a leading sector such as "public works construction projects" should be improved and maintained due to its connection with compacting recession (Shutt 1997, p.108)

p.213). This is evidenced in the provision of special rules and regulations for such projects.[6] Such importance contributed in the evolution of an identified *science* devoted to "public works construction projects" from the legal perspective which focuses on investigating the related rules and regulations, as well as the different types of disputes concerning such projects. "Concurrent Delay" dispute is one of these.

Dispute arising from "Concurrent Delay" situation is at the core of this research. "Concurrent Delay" dispute in summary and for the purpose of this chapter is a dispute arising from a situation where both parties to a traditional construction contract caused a delay at the same time with respect to the execution of their obligations under the contract.[7] This brings to the fore two important consequential elements of a concurrent delay dispute, which are: the "extension of time"[8] and the "cost of the prolongation".

In this regard, in 1999, the English judge Dyson J. after referring to the "Concurrent Delay" situation in the case of *Henry Boot v. Malmaison*[9] stated that:

> It is agreed that if there are two concurrent causes of delay, one of which is a relevant event,[10] and the other is not, then the contractor is entitled to an extension of time for the period of delay caused by the relevant event notwithstanding the concurrent effect of the other event.

Later in 2007, the Scottish judge Drummond Young in the case of *City Inn v. Shepherd Construction Ltd*[11] adopted a different approach for the same situation of "Concurrent Delay" which may be termed the "apportionment" approach where the

[6] The special rules and regulations stop at the level of procurement in the common law English and Scottish legal systems, while it goes beyond that in the Egyptian civil law legal system to touch on the substantive dispute resolution as outlined later in chapter two of this thesis

[7] Another section in chapter three of this thesis is focused on the detailed identification and definition of the "Concurrent Delay" dispute in construction industry (see section number: 3.3.2.3 of chapter 3)

[8] Referred to sometimes within the literature as the "EoT"

[9] Henry Boot Construction (UK) Lld v Malmaison Hotel (Manchester) Ltd [1999] 70 Con LR 32, QBD (TCC)

[10] The "relevant event" is outlined in section titled: RELEVANT EVENTS (OR COMPENSATION EVENTS) in chapter 4

[11] City Inn v. Shepherd Construction Ltd (2007) CSOH CA101/00

consequences of concurrent delay dispute is apportioned between the two parties. Such relatively newly developed approach has been put aside in contrast with the above mentioned English approach in the *Malmaison* case.

Considering the above, a debate has ensued in the aftermath of the *City Inn* judgment as to which approach is the correct one. The substantial problem or question[12] is that two approaches found existing while from the "construction management" perspective; "Concurrent Delay" can be regarded as the same situation.[13] And also, the existence of two different approaches for the same situation, to an extent, creates contradictions or impact negatively on the overall certainty that should exist in resolving cross-jurisdictions construction disputes. The matter forms an issue that needs to be carefully investigated, especially when the "Concurrent Delay" dispute is analysed in the light of the existence of the different approach in civil law jurisdictions with respect to how they deal with "public contractual" disputes in terms of the "substantive dispute resolution".[14]

1.2 LITERATURE REVIEW

The issue of "Concurrent Delay" in public works construction disputes – the matter of this thesis – falls mostly within the ambit of Construction Law. In general, Construction Law is a comparatively new and developing area of law. It involves and overlaps with a number of other areas of law[15]as well as "construction management" (Uff 2002).[16] The focus of this

[12] This question is made by the author (the researcher)

[13] The "Concurrent Delay" type of disputes includes a number of other scenarios as outlined in section titled: SCENARIOS in chapter 4. However, the "Concurrent Delay" situation is still the same situation in the sense that both of the parties contributed to the same delay.

[14] The perspective of the "substantive dispute resolution" has been outlined in section titled as: "the second perspective (substantial dispute resolution)" in chapter 2.

[15] Such as "Labour Law", "Insurance Law", "International Private Law", "Tort or Delict", "Company Law" and "Dispute Resolution " related laws and regulations

research is the substantive dispute resolution in cases of public works construction disputes. However, there is no literature in relation to the comparison between "public works construction contracts" in the common law jurisdictions of England and Scotland on the one hand and the "public construction contracts" in the Egyptian civil law jurisdiction on the other hand.[17]

Construction Law is mainly connected with "construction contract law" (James 2002). Therefore, the general framework on which this research sits is the literature on construction contracts,[18] which broadly involves the general literature on Contract Law. Therefore this study will take a step back and shed light on the relevant areas of contract law considering that "construction contracts" bear similarity with the common features and the general rules of contract law across the three jurisdictions considered in this research.

However, across those jurisdictions, there are a number of differences with respect to the general rules of contract law. These differences appear largely due to the wider difference between both the English and the Scottish common law systems on the one hand, as well as the difference between common law in general and the Egyptian civil law legal system on the other hand. In addition, such differences may be attributed to the dissimilarity in the legal, historical and social developments in the three jurisdictions. In addition to the simple differences like the differences in the "time bar" which is 6, 5 and 3 in England, Scotland and Egypt respectively (this is according to section 5 of the Limitation Act 1980 for England and

[16]For the lawyer's understanding and making an attempt at the "Concurrent Delay" dispute in construction project, a significant understanding of the "construction management" aspect of the construction industry should exist. The management side of the construction industry includes a number of matters such as construction health and safety management, project management, contract management and design management (Blyth & Worthington 2007).

[17] These three jurisdictions of this research form one of its limitation (See section titled: the third limitation: England, Scotland and Egypt in chapter 1)

[18] Definitions for a "construction contract" within the three jurisdictions of this research are outlined in section titled: "CONSTRUCTION CONTRACT" in chapter 2

section 6 of the Prescription and Limitation Scotland Act 1973 for Scotland and section 654 of the Civil Code of 1948 for Egypt), there are examples of other more substantive differences. For example[19], under the "consideration" rule in the English legal system both parties cannot agree the opposite to the obligation or commitment which one of the parties has under the contract while the other party has no obligation or commitment in return. However, this is possible in the Scottish legal system (MacQueen & Thomson 2001). On the other side, the Egyptian legal system is the same as the Scottish legal system in this regard as the Egyptian legal system recognizes the relationship when there is nothing in return from one of the parties as a legally binding contract.[20]

Within the contractual context, an example of other substantive difference is that within contract law in the Egyptian legal system, there is a distinction between the manner in which disputes relating to *private contracts* are resolved and the manner in which disputes relating to *public contracts* are resolved. This distinction is one of the areas of analysis in this

[19] Another example of other more substantial differences is that the "contract law" within the Egyptian legal system is comparatively wider as it *includes* "marriage relationship" which is outside the ambit of "contract law" in both the English and the Scottish legal systems. This *inclusion* derives from the Islamic Sharia personal status related rules. The Arabic word "Sharia" means "the Law". Marriage is a contract with a number of rules by default where parties can include[19] any changes or additional terms or conditions except making the contract as a "temporary contract" (Ganem 2009). The rule of "marriage contract cannot be a temporary contract" is one of the "rules of public order" within the Egyptian legal system which are the rules that parties of a contract cannot agree otherwise (i. e. public policy). There is other two examples of the" rules of public order" mentioned in this thesis (see section titled: Implications of the Egyptian approach to "Public Contracts" on "Public Works Construction Disputes" in chapter 2 and section titled: Apportionment in the Egyptian civil law legal system in chapter 5). The typical contractual terms and conditions which are added to the marriage contract normally include the fact that the woman has the right to divorce herself from the marriage if she is not happy with the marriage without seeking the approval for the divorce from the judge which requires revealing logical reasons to the judge. Women sometimes include the obligation that the husband should provide her with a servant as the case if she is from a wealthy family for example and grown up in a family where it is normal to have a servant for example. Typical terms and conditions include also obligation on the husband side not to have a second wife at all or that he must get her permission first. Typical terms and conditions include also living in a house rather than a flat or in a particular town or district for example to be close to her mother or her family. Both parties can raise a case asking for enforcement and/or compensation for violating any of these contractual terms and conditions like any other contract. However, the majority of these "terms and conditions related" cases or disputes are settled in the "mediation" stage which is mandatory in such personal status matters (article 21 of Act no. 25 of 1929 amended by Act no. 1 of 2000).

[20] This has been regulated in section 486 of the Egyptian civil code of 1948.

research as it relates to "public works construction disputes".[21]

Within the area of public contracts, relevant literature on the differentiation between "public works construction contracts" and private ones within England and Scotland used to focus on the procurement aspect of the matter rather than the substantial dispute resolution. This can be attributed to the non-existence of a similar differentiation between substantive dispute resolution in the case of "public contracts" and that of "private contracts" in England and Scotland. Within the literature, Jean-Bernard Auby for example, tried to argue that the differences between the French legal system and the English common law system are getting narrower in relation to the differentiation between "public contracts" and "private contracts". He built his claim on the fact that the new tendency in the common law jurisdiction of England is to follow similar arguments as that in the French civil law system in relation to putting "public contracts" in a different position (Auby 2007).

However, Auby did not provide any significant evidence to support such broad postulation in relation to substantive dispute resolution itself within the mentioned common law jurisdiction when it comes to the differentiation between public contracts and private ones in terms of a tendency of treating disputes of "public contracts" differently. This is a typical example of how the literature in a common law jurisdiction start to argue that "public contracts" are treated differently in common law jurisdictions based on the procurement perspective. On the other side, within the Egyptian legal system, when it comes to the substantive resolution itself in relation to the distinction between "public contracts" and

[21] This analysis has been made in chapter two of this research

"private contracts", the literature is developed.[22]

However, as construction law is still a developing area of law in Egypt, the literature does not adequately cover this distinction[23] within "public construction contracts".[24] After reviewing the relevant literature in Egypt, this research has found that the literature does not examine whether or not courts have applied their typical relatively harsher special approach of "public contracts" to "public works construction contracts" with the same degree (this issue is one of the objectives of this Ph.D. research).

In relation to the "Concurrent Delay" issue, this research found no literature that has dealt with the matter within the Egyptian legal system, neither within the context of "public works construction disputes" nor at all. On the other hand, a limited number of writers have attempted to tackle the "Concurrent Delay" issue within the jurisdictions of England and Scotland. However, none it was found made an attempt to tackle the issue of "Concurrent Delay" within the context of public works construction disputes. This is understood, as both the English and the Scottish jurisdictions do not make any distinction between "private contracts" and "public contracts" in terms of the substantive dispute resolution.

Nonetheless, the commentators who have dealt with the matter within the English and the

[22]Such a distinction applies to the construction contract when it takes the form of a traditional construction contract which is the perspective of this research for the angle of "public works construction disputes". Within the Egyptian civil law legal system, such distinction is a developed and systematic distinction based on developed theories and justification. Such distinction starts to operate once a contract has been identified as a "public contract" according to three criteria. This is outlined later in section titled: Criteria for Public Contracts in chapter 2

[23] i. e. the dispute resolution substantive distinction between public contractual disputes and private contractual disputes which typically involves a harsh approach against private entity

[24]The construction contract takes the form of a traditional construction contract when the government body acts as a direct employer- It is also possible for such special approach to be applied for the other "contractual structure" of construction contracts (such as the BOOT/PPP/PFI) once the three criteria exist. However the contract (as a whole) then will be treated as a "public contract" which includes a traditional "construction" contract. The later in turn may or may not be a "public contract" depending on the existence, or not, of the three criteria again. Further outline for this can be found in chapter two.

Scottish jurisdictions appeared to have focused more on the two leading approaches[25] taken by the courts in both jurisdictions rather than focusing on how to better approach the matter in a neutral way based on its contractual nature while taking into consideration the nature of the dispute from a construction management perspective and the perspective of dealing with the construction as a business. Within the relatively limited literature which dealt with the matter of dispute arising from "Concurrent Delay", the views that follow are the main points found relevant to the aims and objectives of this research.

In 2002, in the aftermath of the English *Malmaison* judgment, John Marrin QC presented his paper where he argued that the correct approach for the "Concurrent Delay" issue is the one adopted in the *Malmaison* case. He stated that "of the various approaches discussed above, the main contenders, at least in relation to the chosen example, are the dominant cause approach and the Malmaison approach. It is thought that the latter is to be preferred".[26] Such approach has been seen as an authoritative guidance on the issue of "Concurrent Delay"(Marrin 2002).[27] Shortly after and on the contrary, while commenting on the *Malmaison* case, Shafim Kauser argued that the courts failed to issue an authoritative guidance on the issue of "Concurrent Delay" as he stated that "courts have grappled with for many years and judging by the many conflicting decisions there would appear to be no clear answer" (Kauser 2002).[28]

Similarly, the Scottish *City Inn* judgment in 2007[29] awakened the debate on the issue of "Concurrent Delay" in the light of this newly developed judgment. In the 4th of December,

[25] i.e. the (*Malmaison* approach) and the (*City Inn* approach)
[26] See paragraph number 6 (the penultimate paragraph) on page 15 of the above mentioned paper
[27] This view was presented in his paper submitted to the Society of Construction Law in the 5th of February 2002.
[28] This paper was published on the 5th of June 2002 (which means that it succeeded John Marrin's first paper)
[29] Succeeded by the appeal decision in 2010 (City Inn Ltd v Shepherd Construction Ltd [2010] Scot CS CSIH68)

2012, John Marrin QC once again presented a second paper where he maintained partial support for the *Malmaison* approach; as for the consequential extension of time, he stated that "the contractor should succeed on its extension of time claim upon an application of the Malmaison approach" (Marrin 2013b). For the cost of prolongation, he recommended "the application of the common law principles applicable to the proof of causation, including the but- for test".

1.3 RESEARCH JUSTIFICATION

The "Concurrent Delay" dispute should be addressed for a number of points and in order to fill a number of "gaps".

1.3.1 Point1: The importance of "public construction projects"

The construction industry, including "Public Works Construction Projects", affects and shapes our lives a great deal in a lot of ways.[30] "Public Works Construction Projects" include projects such as roads, ports, power houses and premises in which government and local authorities operate from. Such projects interact with other sectors of the economy (Chang & Nieh 2004),[31] such as the energy sector.[32] They also form together one of the pillars of most economies across the world and a leading sector for the economy's other sectors (Myers 2008: 7). In different ways and percentages, this interaction occurs also indirectly with other sectors such as the manufacturing sector as it relates to building material (Giang & Sui Pheng 2011), as well as other sectors, like that of tourism, which may be

[30] As Winston Churchill said "We shape our buildings, and afterwards our buildings shape us" in a speech to the House of Commons in 28 October 1943 regarding the rebuilding of the parliament after its destruction

[31] The same thing happens with other leading sectors of any economy other than the construction industry

[32] Improving energy sector, in turn, is essential for other sectors of the economy which include sectors such as the factories of different industries and services sector

thought of as unconnected.[33]

The public sector share of the annual UK construction output is around 37 % (The National Audit Office 2005: p.25).[34] The annual public sector construction output has grown by over a third between 1999 and 2003 from just under £23 billion per year to around 33.5 billion(The National Audit Office 2005: p.3). According to the Royal Institute of British Architects (RIBA), 40% of the turnover in the UK construction industry is generated from the public sector (Pike 2012).[35] In the same vein, the Scottish construction sector employs 170,000 people -10% of all Scottish jobs across 31,000 businesses, with a GVA of £8.7 billion. In 2011/12, for example, the top 10 Scottish construction firms had a total turnover of £2.2 billion and employed 6,000 people directly (Construction Scotland Innovation Centre 2014). In this light, "Public Works Construction Projects" play a substantial role in generating jobs and income in any society. This leads to a further reduction in the unemployment rates in other sectors of the economy and may result in an increase in wages in the areas where there is an increase in the execution of construction projects (Saks 2008).

In terms of the social importance, public buildings and other public infrastructure play an essential role in the ability of the state to function and perform its duties, while also providing the public with diverse essential public services. From another angle, some "Public Works Construction Projects" share some similarity in importance across the world, such as their sovereignty importance for the state. For instance, public buildings which host the head of government of a state or its main authorities normally represent the state and are regarded

[33]This is because the tourism industry depends on some factors one of which is the local infrastructure in the tourist destination which depends in turn on a progressing public works construction sector.

[34] This is for the period between 1999 and 2003

[35]The importance of public works construction projects can be summarized for example by the statement of David Cameron in January 2013 that the new speed railway line (i.e.: the "HS2") from London to Leeds and Manchester can be regarded as an engine for the whole UK economy.See the Guardian 28 Jan 2013 (BBC 2013)

as symbols of its sovereignty. This becomes obvious in times of war, conflict or political instability, as such buildings (or infrastructure) become strategic assets to be controlled by one side or to be protected by the other.

For the above-mentioned importance, dispute resolution related academic studies, in this vital sector of the economy, are essential. The viability of different sectors and economic activities in a nation, including those related to "Public Works Construction Projects", are influenced by how effective and developed its dispute resolution system is. Academic studies on how to develop and resolve any particular type of construction delay disputes is indeed a step towards having the construction sector work properly and smoothly to achieve its objectives within the wider economy. This applies to how the dispute is being resolved in terms of the substantive resolution.

Academic studies and research can provide the industry, governments and legislators with viable alternative approaches to addressing specific types of disputes such as concurrent delay disputes - the subject matter of this research. This will help in making it easier for the dispute resolvers[36] to approach such type of disputes in a comparatively quicker way. Also, this might be a step towards tackling the problem of undue delay in litigation and arbitration proceedings bothering on construction industry in the three jurisdictions of this study,[37] as

[36] This includes judges and arbitrators in Scotland, England and Egypt as well as adjudicators in Scotland and England

[37] The Scottish "City Inn" case on "Concurrent Delay" itself can be regarded as an example of the prolongation in litigation as it took a year for the judge to reach a decision. This research argues that this can be attributed to the complexity of the "Concurrent Delay" dispute especially if the dispute has been raised before a non-specialized judge. This also may be attributed to the lack of previous developed research on the matter from both the legal and management perspectives.

well as the problem of undue delay in issuing a decision in adjudication proceedings[38] in England and Scotland separately.[39]

1.3.2 Point 2: The legal discussion

"Concurrent Delay" dispute as an issue in construction law is a relatively new and controversial one. In the view of the researcher, "Concurrent Delay" disputes can be characterized by an absence of legal discussion of more than one perspective. Moreover, construction law related literature shows that there is a lack of consensus and a degree of misunderstanding as it relates to the definition of the situation of "Concurrent Delay".[40] Also, there is evidence to show that, to an extent, some legal analysis on "Concurrent Delay" disputes do not sufficiently consider the relevant wealth of knowledge on the technical issues of construction management which negatively influence the identification of the "Concurrent Delay" dispute.[41]

In other words, most of the efforts which have been made to analyze "Concurrent Delay" dispute lack the sufficient overall understanding of the situation of "Concurrent

[38]There is adjudication in England (according to part 2 of the HGCR Act 1996) and in Scotland. In the meanwhile, there is no adjudication in construction disputes in the Egyptian civil law legal system. However within public works construction disputes, article 28 of the *Conseild'État*(or Council of state) Act 47 of 1972 provide a voluntary accepted resolution system which can be considered as close to be a form of "mediation" but limited to public law related matters. Article 28 can be improved (within a potential legislative amendments) to be a developed mediation mechanism with the possibility to transform it to a binding resolution mechanism if necessary. This will be better than creating a new mechanism from scratch as it will be building on a mechanism that is already exist.

[39] This is taking into consideration the already existing problem that the 28days allocated to reach a resolution is a limited period of time which is typically not enough for such complicated delay disputes such as the "Concurrent Delay" problem. Providing for 28 days in the Housing Grants Construction and Regeneration Act 1996 does not take into account the complexity of delay analysis claims. Thus, adjudicators tend to ask for extensions and parties sometimes emphasize on adopting other means of dispute resolution, such as arbitration. Further, the mentioned legislation should be amended with respect to complicated types of claims or disputes in particular.

[40]This is outlined in further details in section titled: THE CAUSE AND EFFECT OF CONSTRUCTION WORKS in chapter 4

[41] Evidence referred to is outlined in the identification of the "concurrent delay" in section titled: Concurrent Delay in chapter 3

Delay", including the construction management perspective which is essential for the proper understanding and overall analysis for such situation. This lack also influences or alters one's understanding of the way in which the technical issues of construction management may make changes to how such disputes should be dealt with on a case by case basis.[42] After reviewing the literature, it was found that the dearth of a deeper and robust investigation of "Concurrent Delay" situations, which sufficiently takes into consideration the issue of construction management, is a *gap* in the relevant legal studies on the matter. Therefore, this research aims to make an attempt to bridge this gap by analyzing the nature of this type of construction disputes from both the legal and construction management perspectives.

Furthermore, this research will also focus on the area of "Public Works Construction Disputes" aiming to partially contribute in developing this area of law within the three jurisdictions of this study. Since the English and the Scottish jurisdictions do not distinguish between *public contracts* and *private contracts* in terms of the substantive resolution of disputes relating to both, the English and the Scottish "Concurrent Delay" approaches outlined above[43] are applicable as precedents for the "public works construction disputes" besides the private ones.[44] In other words, the issue of the distinction between Public Works Contracts and Private Works Contracts which exists in civil law jurisdictions has no significance in terms of dealing with "Concurrent Delay" disputes within England and Scotland. In contrast to that position, in the Egyptian civil law jurisdiction, such distinction may make a difference.

[42] See section titled: THE CAUSE AND EFFECT OF CONSTRUCTION WORKS in chapter 4 and section titled: THE TRUE CONCURRENCY in chapter 4 and section titled: SCENARIOS in chapter 4

[43] i.e. the English approach of *Malmaison* and the Scottish approach of *City Inn*

[44] The position of precedents is different in the three jurisdictions of this research. The rule of "stare decisis" (which means that a court must follow and apply the law as set out in the decisions of higher courts in previous cases) exists in England and Scotland (Mcadzean and Ryan, 2010: p. 75). In the meanwhile, it does not exist in the Egyptian civil law legal system.

The afore mentioned civil law system adopts a policy of making a robust and comparatively well-developed distinction between public contracts and private contracts in terms of the substantive resolution of the disputes.[45] As this research focuses on the "Concurrent Delay" disputes, there is room for examining the effect of the wider policy of making such a distinction an issue which has not been examined before in Egypt. Within the Egyptian context, there are a number of gaps in this regard. One of such gaps has to do with the unexplored limit, scope and implications of such wider policy when it comes to public works construction disputes in particular.

Considering such potential implications of such wider policy on public works construction disputes, it has been found that a lack of investigation for the "Concurrent Delay" situation in this regard is a gap in the legal studies of construction law as the situation of "Concurrent Delay" within the Egyptian legal system is unclear.[46]

1.3.3 Point 3: certainty

From a construction management perspective, the situation of the "Concurrent Delay" dispute is regarded as one situation[47] as it raises the issue of the contributory breach[48] of a contract. Therefore the resolution for this type of construction delay dispute ought to be the same. The dispute of "Concurrent Delay" can be characterized by an absence of legal certainty. Although concurrent delay dispute has been identified within both the Scottish and the English legal systems, courts in Scotland and England approached the matter in different

[45]This is part of a collective tendency in civil law jurisdictions of which the legal system makes a robust and comparatively well-developed distinction between "public contracts" and "private contracts" in terms of the substantive resolution of the disputes (Venoit 2009, p.11)

[46] An analysis for the Egyptian legal position in relation to the "Concurrent Delay" is in section titled: The apportionment principle in chapter 5

[47]Although the concurrent delay situation may include a number of scenarios but still it can be considered as one situation where both the employer and the contractor have contributed to the delay

[48]By an act or omission regarding the mutual contractual obligations

ways.[49] In the meanwhile, in the Egyptian legal system, the legal position for "Concurrent Delay" dispute is vague. On the whole, the current situation does not provide the industry with certainty.

The cross jurisdictional angle of the issue of uncertainty is relevant because while the dispute arises from a project which is being carried out in a jurisdiction, the normal domestic rules of choice of law, connecting factors and the rules of conflict of laws may lead the case to be heard in another jurisdiction. This applies to each one of the three jurisdictions focused on this study. In other words, it might be the case that a project is in England and the dispute ends up being heard in Scotland (under the Scottish law)[50]or in Egypt (under the Egyptian law) and vice versa.[51]

In these cases concerning public works construction disputes, the judge, the arbitrator or the adjudicator might be bound to apply the laws of one of these three jurisdictions to the "Concurrent Delay" dispute according to the rules of the choice of the substantive law while the project is situated within another jurisdiction of the three countries. Therefore, in terms of the substantive resolution of the dispute and since there is a difference in terms of the position of law on "Concurrent Delay", parties may not be sure about what the outcome will be once a "Concurrent Delay" dispute has been raised. This generates uncertainty. Such an issue became important recently because the transfer of the services (including construction

[49] The difference in approaching the "Concurrent Delay" dispute was the reason for including both the Scottish and the English legal systems in this comparative work. Otherwise only one of them was intended to be compared with the Egyptian system. The issue of "Concurrent Delay" is one of few points in "Construction Law" where there is difference between the Scottish and the English legal systems.

[50]The case of "City Inn" is an example of a case that has been heard in Scotland although the construction project was in England

[51]If the case had been identified as a public works construction dispute, the foreign contractor who may come from a common law country may be encountered with the special approach of public contract of which the contractor may not be familiar

industry) under the WTO has become feasible more than before.[52] Dealing with the same type of disputes differently in different jurisdictions where the movement of particular services or industries is likely may make securing legal certainty across jurisdictions of more importance. Professionals who work in the field of public works construction which tends to be spread across several jurisdictions may expect the same resolution for the same type of disputes.

The internal jurisdictional angle of the issue of uncertainty is because there is a lack of a neutral attempt to approach the matter of "Concurrent Delay" which takes the technical side of the situation from a "construction management" perspective into consideration (main dimensions 1), as well as the fact that construction is a type of business for both of the parties in the end (secondary dimensions 2). This applies to the existing judicial attempts of approaching the "Concurrent Delay" dispute. In terms of the different non-judicial attempts, the lack of neutrality can be felt when one researches such ways of approaching the "Concurrent Delay" dispute.

The Society of Construction Law (SCL) protocol and the relevant[53]contracts tend to reflect the point of view of the professionals who prepared the document.[54] In some contracts, the party who is in a stronger position in the contractual relationship could impose his will, while neutrality and fairness may come as a second priority.

Finally, it is argued that a neutral attempt should be made with respect to dealing with

[52]Within the Egyptian jurisdiction, the country commitments in relation to liberating a number of services (including construction industry) have taken effect in 2006 therefore this will allow foreign investments in these services including the probability that foreign construction companies in particular to extend their external work and activities to include Egypt in the coming years. This applies to Scottish and English construction companies.

[53] "Relevant" refers to the contracts which dedicated a section or a term to "Concurrent Delay" dispute

[54] The SCL abbreviation refers to the "Society of Construction Law" founded in 1983(Uff 2002)

the matter of "Concurrent Delay". There is a gap of a lack of an attempt[55]at developing a model clause[56]or approach[57] based on a neutral perspective aimed at dealing with the "Concurrent Delay" dispute in the three jurisdictions relevant to this study in the light of the fundamental rules of justice, construction management and the nature of the construction industry as a business. The significance of developing a model clause is outlined in the aims and objectives section of this chapter. A neutral attempt with respect to dealing with the matter of "Concurrent Delay" is what this research tries to do in chapter 6.[58]

1.4 AIMS AND OBJECTIVES

According to Naoum, although to "expand the knowledge" is the general aim of any research, there should be specific aims and objectives for any research project. He stated that "a good piece of research will focus on certain aspects of a topic. It will seek to answer specific questions, solve a particular problem or test a hypothesis. The issue(s) to be addressed must be clearly stated at the outset in the objective(s) of the research"(Naoum 2004, p.2).Hence, the main research question that this work aims to address is:

How to better deal with "Concurrent Delay" disputes in public works construction disputes towards developing a neutral model clause within a comparative study that includes Scotland, England and Egypt taking into consideration the construction management perspective and the common and civil law special approaches of public contracts

The objectives can be crystallized in points as follows:

1- A look at the concept of "Public Contracts" shows that it is slightly different in the

[55] Which may depart from approaches taken by courts and not necessary to favor one or the other
[56] That can be incorporated as contractual clause during the formation of the contract or at a later stage
[57] To be adopted by the parties or the dispute resolver once a "Concurrent Delay" dispute occurred
[58] Chapter 6 is titled: the development of a model clause for concurrent delay with respect to public works construction disputes

Egyptian civil law jurisdiction on one hand compared with the common law jurisdictions of England and Scotland on the other hand.[59] One of the aims and objectives of this research is to identify the scope and the limit of this concept when it comes to "Public Works Construction Disputes" within the Egyptian civil law jurisdiction from the legal point of view. This includes identification for the "Public Works Construction Disputes". The research investigates whether or not such approach can (or should) affect the approach for "Concurrent Delay" dispute of "Public Works Construction Disputes".

This actually requires an initial investigation from the legal point of view on the extent to which the traditional substantial differentiation between "public contracts" and "private contracts" influences "Public Works Construction Disputes". The argument at this stage is what the extent of the differentiation is in the area of "Public Works Construction Disputes" and whether or not this differentiation relies on a justified logic when it comes to the area of "Public Works Construction Disputes". Finally, also in issue is the question of the implications of this in the situation of "Concurrent Delay" considering, in particular, its consequences on "time" and "money".

2- The second objective is to investigate the issue of "Concurrent Delay" itself which is the substantial objective of this research. In this regard, the general objective of the thesis is to develop knowledge and understanding of the dispute of "Concurrent Delay" including controversies and misunderstanding that often arise about "Concurrent Delay" related disputes or claims. This will be done in the light of the nature of the situation of "Concurrent Delay" from both the construction management perspective and the legal perspective.

[59]This is due to historical and legal educational reasons as outlined later section titled" The legal education in chapter 2.

3- The third objective is to critically address how courts have tackled "Concurrent Delay" disputes in the English and the Scottish jurisdictions. In doing this, effort will also be made to predict how the dispute of "Concurrent Delay" can be approached in the Egyptian civil law jurisdiction within the context of the above-mentioned *policy* of making a distinction between the "private contracts" and the "public contracts". This analysis will be made within the context of a neutral understanding that different jurisdictions may learn from each other, and this applies to the first objective as well. This will be expanded to find out how different non-judicial attempts have tackled and approached the "Concurrent Delay" dispute in "Public Works Construction Projects" within the three jurisdictions in focus.

4- The last objective is to make an attempt to develop a model contractual clause or a viable and effective approach to "Concurrent Delay" dispute that is applicable within the three comparator jurisdictions of this research, as a way to avoid the uncertain, unfair, unexpected or inaccurate elements of the current approaches for both of the parties.[60] This will be dealt with within "Public Works Construction Disputes" which, as mentioned, slightly vary in the Egyptian civil law jurisdiction. The significance of developing a model clause is to provide the research with a neutral guidance on approaching "Concurrent Delay" dispute after making a neutral investigation for such dispute. In relation to contracts, in the absence of a neutral approach of dealing with the matter, it may be possible for the potential "Concurrent Delay" related contractual rule to be influenced by the will of the strongest contracting parties in the beginning of the contractual relationship. This is significant especially in "Public Works Construction Contracts" as typically the governmental party is usually the strongest one in the pre-contract stage and it may be easy for such party to impose specific

[60] The mentioned attempt of developing a model clause for the dispute of "Concurrent Delay" has been outlined in chapter 6.

rules, regulations or clauses in the contract while the other party, in most of the cases, is under the pressure of the need to get the anticipated construction job being granted. From another perspective, this is also useful for "Concurrent Delay-related" future judicial decisions within the three jurisdictions in focus as the non-specialized dispute resolver[61] might be influenced or find himself/herself confined to different approaches that derive from other area of law which may not be compatible with the nature of the construction industry, taking into consideration the construction management side of it.[62] There may be an impact from this on the development of construction law as well as a step forward towards developing our understanding and sense of justice and fairness in the issue of "Concurrent Delay" within the three relevant jurisdictions. After developing the model clause or viable approach for "Concurrent Delay" dispute, the research aims to address the question of whether or not the model clause or approach, in this regard, can be transplanted.

1.5 SCOPE OF RESEARCH

1.5.1 The First Limitation: Public Works Construction Disputes

Limitations in research are necessary in order that adequate depth and rigor of investigation of the topic can be undertaken (Fellows & Liu 1999, p. 26). This research focuses on "public works construction disputes" which is the first and main limitation of the research. A major reason behind limiting this research to such disputes is that the researcher

[61]The term "dispute resolver" here refers to the judge, the arbitrator, the mediator or the adjudicator

[62] In general, normally, the judicial structure mainly rely on the "Generalist Courts" while the examples of the specialized courts are limited however useful. Examples include the "Court of International Trade" in the USA and marriage courts in some states (Abadinsky, 1995: P. 162 and P. 303) and the "Technology and Construction Court" in London.

works[63] at one of the courts of the Egyptian "*Conseild'État*",[64] the jurisdiction of which includes disputes arise from public contracts[65] and does not include those of private ones.[66] According to its bye-law, a study leave can be granted only if the intended research focuses on its public administrative law related jurisdiction. This pre-condition is a necessary requirement to grant the researcher a study leave and has consequently limited the researcher's proposal to the above-mentioned area of study.

However, it is worth mentioning that although the focus of the research is on "Public Works Construction Disputes", the findings of the research shall inform the debate on "Concurrent Delay" in private works construction disputes as well. This is because, before disputes arise, construction contracts[67] for various purposes are quite similar at the stage of preparation, and are usable for public works construction projects or private ones. Also, the process of executing the construction works is nearly the same regardless of whether it is for a project which is regarded as a public works construction project or not.

Nonetheless, from the legal perspective, after the dispute arises this limitation starts to operate. Once a dispute has been identified as a dispute arising out of a public contract, the Egyptian civil law jurisdiction treats it slightly differently in relation to the substantive

[63]Since graduation, the researcher has worked as a commissioner for a number of years attached to the contract bench at the "Court of the Administrative Judiciary" in Cairo and later (prior to the beginning of the research) as a junior judge at the "Disciplinary Court" in Cairo (which deals with some disciplinary claims). These courts are both under the umbrella of the Egyptian "*Conseild'État*". Judiciary in Egypt is based on a career profession where top law school graduates are appointed as commissioners or prosecutors immediately after graduation and an upgrade is made from the age of 30 to the position of a "junior judge" who works in one of the lower courts and deals with small claims

[64] There is a judicial body of the "*Conseild'État*" which means "Council of State" in the majority of the main civil law countries such as France, Belgium, Italy, Egypt, Turkey, Algeria, Tunisia and Greece(Papahadjis 1953) However, the term "Council of State" in some other countries gives a different indication. For example the same term in China gives a non-judicial meaning which is the "government cabinet". This is the top of the administrative authority and of course not part of the judicial authority in this country.

[65] Including "public worksconstruction contracts"

[66]The jurisdiction of the Egyptian "*Conseild'État*" concerns public administrative related disputes including disputes arise out of a public contract.

[67] Regardless of whether the contract was a bespoke contract (written specifically for the job) or a standard form of construction contract

dispute resolution compared to the counterpart dispute that arises from a private contract. This notion or approach has been transplanted and incorporated in the Egyptian civil law jurisdiction from the French counterpart. This notion does not exist in common law jurisdictions like England and Scotland. Therefore, considering this significant difference, this notion or approach which bothers on the legal aspect of the construction industry should receive special attention. Consequently, the research will focus on "public works construction disputes".

1.5.2 The Second Limitation: Concurrent Delay

Disputes in the construction industry include non-contractual disputes and contractual ones.[68] Contractual disputes include disputes that arise from the main construction contract (between the contractor and the employer) and disputes that arise from other contracts associated or attached to the construction process as a whole.[69] However, disputes of the main contract constitute the *core* of such industry's disputes. This includes disputes relating to building defects, structural design related errors and failures, evaluation of cost or additional cost for additional cost, subsidence damage, delay and disruption and tenders related disputes.

Of the above list delay disputes are among *the most important* within the construction industry. Delay dispute can be a "single delay" dispute caused solely by a delaying event for

[68]The last mentioned one includes disputes such as construction negligence, personal injuries and accidents caused by construction plants under tort law and health and safety disputes. It also includes "design" or "material" related disputes as well as disputes related to the noise caused by the construction works and brought to courts by the local communities seeking compensation against the contractor, the employer or both.

[69] The term "construction process" refers to all stages lead to the execution of the construction project including briefing, sketch plan, working drawings and site operation (Forster 1990, p.102). Contracts other than the traditional construction contract for doing the construction works include the contract for doing the drawings, insurance contract as well as contracts between the main contractor and the sub-contractors, mechanical and electrical engineering sub-contracts and some specific skilled work-labor contracts.

which one of the parties is responsible. It can be a "sequential delay" dispute caused by delaying events, each of which is the responsibility of one of the parties. The construction dispute can also be a "Concurrent Delay" dispute which is caused by delaying events, one (or some) of which is (or are) caused by the contractor, and the other(s) caused by the employer, with each having effect at the same time in the course of the progress of the construction work.

It is important to make this limitation clear as the scope of this research does not include the construction dispute of the "global claim" which may overlap with the dispute of "Concurrent Delay".[70]Also, the scope of this research does not include the "disruption claim"[71] which is a separate type of disputes that may occur independently or in conjunction with "single delay", "sequential delay" or the "Concurrent Delay" dispute. The "Concurrent Delay" type of construction disputes are among the most complicated in the construction industry and includes a large number of scenarios which need a focused investigation.

1.5.3 The Third Limitation: England, Scotland and Egypt

There are two main types of legal systems; civil law systems and the common law systems.[72] Within the contractual context of this research, this categorization is mainly

[70] A "global claim" is a type of claim in construction industry which can be defined as : "those where a global or composite sum, however computed, is put forward as the measure of damages or contractual compensation where there are two or more separate matters of claim or complaint, and where it is said to be impractical or impossible to provide a breakdown or sub-division of the sum claimed between those matters."(Hudson and Wallace, 2004: paragraph 8.200) (see: Crosby J. & Sons Ltd v Portland Urban District Council (1967) 5 BLR 121, QBD) Global claims is referred to by the protocol of the 2002 of the Society of Construction Law as: "the composite claims made by the contractor without substantive cause and effect"

[71] Disruption claim is defined in the protocol of the 2002 of the Society of Construction Law as: "disturbance, hindrance or interruption to a Contractor's normal working methods, resulting in lower efficiency. If caused by the employer, it may give rise to a right to compensation either under the contract or a breach of contract. (SCL 2002:9)

[72] There are a number of other types of legal systems which are based on custom and religion of the people. This research focus on civil law and common law traditions

because of the way courts are bound by the precedents or in other words "the adoption of the doctrine of judicial precedents".[73][74] Also, this is because of the way judges[75] interpret legislation. Also within the same context of this research, in common law countries, the primary means of regulation is through the decisions of the courts, while legislations play a secondary role. The situation in civil law countries is the opposite.

"Civil law" legal systems adopt deductive reasoning which takes the issue from broad principles to the particular facts of the disputes, and the courts, while doing this, are not bound by the precedents unless such is incorporated into a statute as is sometimes the case. The way judges interpret the legislation is also slightly different in civil law jurisdictions compared to that of common law. There are further secondary, though important, features of civil law jurisdictions such as the dual judicial system in addition to the adoption of a special approach for handling substantive dispute bothering on public contracts. The later approach is being analysed in this research within its context of public works construction disputes.

As it relates to the rules of Construction Law, this research tries to explore the

[73] In the Egyptian civilian legal system, judges can depart from a previous approach that has been taken by a supreme court. However this does not happen quite often. In the meanwhile, in common law jurisdictions, judges of all levels of courts hierarchy must follow decisions made by higher courts(Hanson 2003, p.66). President is a formal source of law within the Scottish and English legal system (White, Willock and MacQueen, 2013: p. 297).

[74] As a secondary limitations within this broader limitation, this research while analysing the three legal system does not consider the arbitration awards because they do not make any difference in terms of the precedents within the three jurisdictions of this research. In addition, the arbitration tribunal is typically formed of one or more than one arbitrator where in many cases none of them comes from a legal background. In addition to that, given the arbitration was not confidential, most of the arbitration tribunals typically tend to approach the disputes in a pragmatic way and do not care much about the legal theoretical grounds and foundations and the legal reasoning of the resolution they came up with.

[75] While judges are appointed as "career judges" in civilian jurisdictions like Egypt based on the logic that judges should be neutral from the start at an early age as they are appointed as prosecutors or commissioner immediately after graduation with LLB degree, judges in common law countries like England and Scotland are appointed after a comparatively senior age under the logic that promotion to the bench occurs as recognition of years of proven ability as a barrister(Hanson 2003, p.77).

possibility of different legal systems learning from each other.[76] The original plan for this research was to compare a civil law jurisdiction (which has a comparatively well-developed notion or approach to substantive resolution of disputes relating to public contracts with one of the common law jurisdictions (which do not have such notion or approach) within the context of construction "Delay Analysis" disputes. The research aimed in the beginning to investigate how the mentioned civil law notion of public contracts adopted in the Egyptian legal system may interact, affect or dictate the resolution or the approach which should be adopted for each of the "Delay Analysis" controversial issues or points[77]including "Concurrent Delay" type of disputes.

The two chosen jurisdictions at the inception of this research for the purpose of comparison were limited to Egypt - to represent the civil law jurisdictions (as the researcher comes from such jurisdiction) - and either England or Scotland to represent the common law jurisdictions.[78]At an early stage of this research, it was found that focusing on only one of the "Delay Analysis" issues or points is sufficient for having a developed and focused piece of research. The issue of "Concurrent Delay" has been selected for such analysis. However, the

[76]This applies in all levels including the details of any particular type of legal dispute or even in the practical side of how legal systems deals with related matters such as the administration of justice or the system of expert witness which will be outlined in the findings. The interaction between common law and civil law jurisdiction is a larger continuous phenomenon that exists even within the smaller construction law context. The incorporation of the "frustration doctrine" by civilian law countries from the English jurisdiction via the FIDIC (transplanted from the ICE) standard forms of construction contracts is an example of this. The construction industry abroad may also influence the local domestic construction market. (Naughton 1989 p. 262)

[77] These include other issues such as the delay analysis methodologies, ownership of float time and global claims

[78]It is relevant in this point to mention that Scotland (which kept its own independent legal system since the Act of Union in 1707) within the contractual context of this research has been considered as a common law country for practical reasons. This is because of the reasoning logic adopted by the Scottish courts particularly the way courts are bound by the precedents (the adoption of the doctrine of judicial precedents) in the context of the Scottish contract law. Precedents, in general, are a formal source of law in Scotland as the case in England (White, Willock and MacQueen, 2013: p. 297). Although considered by many as a hybrid legal system (Crossan 2004), Scotland can be regarded more as a common law country within the context of the "Construction contractual law" in particular. One reason of that is that this research is based on the area of contract law which is an area of law that is based on president (White, Willock and MacQueen, 2013: p. 299).

initial investigation in this study found that the Scottish judiciary has dealt with "Concurrent Delay" dispute in a significantly different way from that of the English counterpart. This is one of the few points in construction law where there is a difference between the law in Scotland and the law in England. Therefore, the research has departed from its original plan of choosing either England or Scotland to represent common law jurisdictions and both the English and the Scottish jurisdictions have been considered and included in this research. Therefore the research settled with the mentioned three jurisdictions.[79]

Given the above outline, this research does not include jurisdictions other than the Egyptian one to represent the civil law family of jurisdictions. This means that France, for example, is not included although it is the jurisdiction from which the difference between public contracts and private ones in terms of the approach to resolving the substantive dispute emerging from them originated. This is because of two reasons. The *first* is that Egypt is a well-developed example of a civil law jurisdiction in terms of the context of the mentioned difference between public contracts and the private ones. This is in addition to the existence of the wider substantial features[80] of a civil law legal system.[81] The *second* (which is a practical reason) is that the researcher is not from a French speaking country. Hence the language barrier encounters doing a developed detailed research regarding analyzing the related legal position in the French jurisdiction.

[79] i.e. Scotland, England and Egypt

[80] Including that the reasoning logic is based on taking previous precedents into consideration but not as a binding source of law while the codified rules in the form of legislations are the main source which is interpreted in the light of a number of legal sets of rules such as customs. And also this is in addition to the secondary features such as the dual judicial system (the Egyptian court system is explained later in the thesis which shows that it is nearly a copy of the French model of the structure of the judiciary - See section titled: The establishment of a counterpart of the French "*Conseild'État"* in chapter 2 and the following related illustrations)and the existence of a number of transplanted approaches such as the special approach for the "public contracts"

[81] The development which led the Egyptian legal system to be a civil law jurisdiction is attributed to a number of reasons including a socio-political, historical, educational reasons and developments which are discussed in some details in chapter two.

Construction law[82]as an identified distinguished area of law is still a comparatively new and developing field of legal studies. Consequently, there are few academic works in English related to French Construction Law. Therefore investigating a precise issue such as the "Concurrent Delay" problem within French construction law requires a full inquiry into the related "judgments" from the administrative courts in France which are delivered in French, the mission which has been found better to be left to a French speaking scholar in a future research similar to this one.[83]

Common law jurisdictions are represented in this research by Scotland and England. Other common law jurisdictions such as Australia[84], Hong Kong, USA[85]and Canada[86]are not included. These jurisdictions have been left for future similar research. Also, it is not necessary to include other common law jurisdictions because the two main approaches for

[82] The term "Construction Law" itself is not accurately identified. It is used in three senses: 1- the principles which govern the duties and liabilities of the parties involved in the construction process and which arise out of that process and 2- the law which affects the construction industry and 3- the rules governing the administration of a construction contract(James 2002). However the last mentioned author defines it as "the body of law that governs the civil liability for the construction of defective buildings".

[83] At the inception of this research (in 10th of June 2012), the researcher approached Mr. Hugues Périnet-Marquet the chairman of the newly established French construction law society by an e mail enquiring about the position of law and the related judgements on the issue of "Concurrent Delay" in construction law in France but there was no reply. Therefore there was an assumption that there is no judgement on the issue of "Concurrent Delay" in public works construction disputes yet as the case in Egypt otherwise at least the name of the appropriate case might be given in a reply. Based on this assumption, the matter might require future legal research in France which is better done separately from this research.

[84]An Australian standard form of construction contracts has been referred to within the "non-judicial attempts to deal with the "Concurrent Delay". However, mentioning a standard contract that has been developed in a specific jurisdiction is something and including such jurisdiction within the analysis of this research is something else. Including a jurisdiction within the analysis of this research means that both "Concurrent Delay" related judgements and legislations within this jurisdiction will be analysed. This will be done for England, Scotland and Egypt. There is no contradiction in not including the Australian jurisdiction and referring to an Australian standard form of construction contract. This is because nothing prevents from building the contractual bond in Egypt, England or Scotland based on a standard form of construction contract that has been developed in another jurisdiction subject to the will of the two contracting parties. Parties within any of the three jurisdictions of this research, or their contract drafters, can even extract the "Concurrent Delay" related section of a standard form of construction contract that has been developed in another jurisdiction subject the will of the two contracting parties. Therefore, with the non-judicial attempts for approaching the "Concurrent Delay", it is relevant to widen the scope to include contracts other than those developed within the three jurisdictions of this research as nothing prevents these contracts from being used as contract within one of the three jurisdictions of this research. The same thing applies the UAE Abu Dhabi standard form of construction contract while the UAE jurisdiction is not included within this research.

[85]Excluding Louisiana (Abadinsky, 1995: P. 21).

[86]Excluding Quebec (Gall and Reeves, 1990: P. 165).

dealing with the issue of "Concurrent Delay" are represented by Scotland and England which are, respectively, the "apportionment" approach and the "all or nothing" approach. Other common law jurisdictions can be ranked below these two main approaches.[87]

While an attempt to start dealing with the research problem was made, it was encountered by the fact that the concept and the notion of public contracts may vary from one legal system to another in relation to the dispute resolution itself[88] and the fact that there are two judicial approaches for dealing with the "Concurrent Delay" dispute. In the three jurisdictions of this research, both of these two facts have been reflected and well represented. Comparative studies, like this one, are useful in this circumstance because of the existence of significantly different approaches as this may provide developed solutions based on looking at the matter from different perspectives which each may induce new ideas from other jurisdictions that may, in turn, be useful for tackling a specific problem in other jurisdictions.

Regarding the further justification for the use of England, Scotland and Egypt as comparators, the research tries to explore the possibility that different jurisdictions from different family of jurisdictions can learn from each other. This is also to find out the

[87] For example, based on the construction case of *W Hing Construction Co Ltd v Boost Investments Ltd* [2009] BLR 339, (High Court of Hong Kong) in Hong Kong the approach taken in Hong Kong can be regarded similar to the Scottish one in this context (Marrin 2013b). However, the American approach has been regarded as similar to the English common law "All or nothing" approach. In the same time the Canadian courts tend to adopt an apportionment approach similar to the Scottish one in similar disputes other than disputes of construction works (Cocklin 2013). The same is in Australia which was found similar to the Scottish one (Tobin 2007).

[88] For a number of historical and legal reasons and circumstances (analyzed in chapter two), the French transplanted approach of dealing with the public contractual disputes in a slightly different way compared to the private ones has been incorporated into the Egyptian legal system. On the contrary, similar notion does not exist in the legal systems of Scotland and England. Then, this difference in policy will to be analyzed within the specific narrower context of the public works construction disputes before the *implications* of this to the disputes of "Concurrent Delay" are analyzed.

possibilities that each of the two main family of jurisdictions may learn from each other.[89] Finally, it is relevant to clarify that this research deals with the matter of "public works construction disputes" within the internal legal system of each of these three jurisdictions and not with in the international legal aspect.

1.6 RESEARCH MEHODOLOGY

1.6.1 Introduction

A research needs to be able to argue convincingly that something new and of value has been added to the body of knowledge. The *Concise Oxford Dictionary* defines research as "careful search or inquiry endeavor to discover new or collate old facts etc. by scientific study of a subject, course or critical investigation" (Naoum 2004, p.2). In this regard, Sekaran (1984) states that the aim of research is to find answers or solutions to problems through an organized, critical, systematic, scientific, data-based inquiry or investigation (Sekaran 1984). Also Nachmias (1996) describe the role of research as "An attempt to increase the sum of what is known, usually referred to as a "body of knowledge", by the discovery of new facts or relationship through a process of systemic scientific inquiry, the research process" (Nachmias & Nachmias 1996).In order to make this happen, it should be done via an academic "research methodology". In this regard, Mason (1996) describes the planning of research and choosing the "research methodology" as "recognizing the centrality of the research question to the research process, and of linking research questions to one's own philosophical and methodical position on the one hand, and to appropriate data generation methods on other" (Mason 1996).

[89] What is meant by "learn" in this context refers to the opportunity that the Egyptian civil law legal system may learn from the relatively developed approaches in dealing with the "Concurrent Delay" and vice versa in relation to the civilian law approach of making a distinction between "public contract" and "private contracts". It refers also to the comparison in terms of the administration of the judicial work.

The role of the "research methodology", therefore, is to direct the research process through a system of procedures. In view of the above, this part first reviews and discusses the possible relevant "research methodologies". At the later stage, the selection of the methodology that will be employed in this work to achieve its aims and objectives, and the respective research design for this research is discussed, including the research strategy for the collection of relevant research materials used in this work and how they are analyzed to realize the research outcomes.

1.6.2 Relevant Research Methodologies for legal studies

Legal research plays an important role in developing law and in ensuring the application of law in accordance with the pursuit of justice and relevant policy aims via identify legal problems or questions.[90] Legal research methodology encompasses approaches which mainly include doctrinal research methods and non-doctrinal research methods. Legal research sometimes involves different types of research methods and techniques which are not limited to doctrinal and non-doctrinal formats.[91] The legal research methodology may be domestic or international in nature. It encompasses also the approaches of "the comparative legal-research method" which can be in cross jurisdictions where more than one jurisdiction is included in the analysis. It also can be within the local level where more than one preceding sets of rules; legislations or judicial approaches are compared. Importantly, legal

[90] In this regard, the ability to undertake legal research is a practical everyday skill lawyers need in order to find and use information relevant to legal problems. Legal research requires skills in three broad areas: 1- identify and analysing legal problems or questions. 2- Finding appropriate information to answer the question. 3- Communicating he results of analysis and research effectively (Mcadzean and Ryan, 2010: p. 4).

[91] This applied to the case where the legal research relates to the qualitative and the quantitative research where the data collected are via questionnaires, web survey, interviews and focus groups. These methodologies can be adopted in legal research mainly for areas such as criminal law and family law to address particular social related phenomena in practical sense or to suggest solutions for a specific matter based on the view of those involved in the matter.

research methods can be socio-legal in nature where the analysis of the law is connected with social phenomenon, events, traditions, customs or the interactions between the people within a specific society or community or across different societies or communities.

Each research methodology has its own strengths and weakness. There is no one "ideal" methodology to fit all legal research issues. While it is possible to adopt a particular legal method which can be doctrinal or non-doctrinal in a legal research, it is also possible that the research methodology can be a mixture of more than one. In this regard, McConville and Chui state that "It is possible to employ two or more methods depending on the overall scope of the legal scholarship, because these methods sometimes overlap" (McConville & Chui 2007).

1.6.3 The Chosen Research Methodology

The question of the appropriate research methodology depends, to a great extent, on a study's research questions and objectives, and these naturally, vary across the whole research spectrum. Undoubtedly, the proper selection of the methods, and the understanding of their application to the research context, is vital to the success of the research in presenting the problem being studied in a scientific frame. A decision on the appropriateness of a particular method cannot be made in isolation of the context in which the research problem exists (Downey 1979). Creswell (1994) and Remenyi et al (1998) point out that the topic to be researched and the specific research question is one of the main drivers in the choice of research methodology.[92] Hence, we can say that the selection of the approach will be justified in terms of its appropriateness and usefulness to the research project in order to achieve the

[92] The research question has been outlined in this chapter (chapter one) under subsection titled as "Aims and Objectives".

study objectives (Creswell 1994) (Remenyi 1998).

The focus of this research is on the specific issue of "Concurrent Delay" in construction law within three jurisdictions the English, the Scottish and the Egyptian jurisdictions. The focus of this research is also on the "public works construction disputes" as it relates to concurrent delay. To achieve its objectives, the research will analyze the nature of the "public works construction disputes" in the mentioned jurisdictions. As the analysis will explore the nature, limit and characteristics of a specific legal approach or judicial policy within a domestic legal system, it is very much suits the "doctrinal" methodology which does not include questionnaire or interviews. Hence, the doctrinal research methodology (i. e. pure theoretical research) will be adopted with the comparative legal research. The library based doctrinal approach will be used to outline the starting points of the research analysis.

Furthermore, it expounds what the "Concurrent Delay" problem is with an analysis of doctrines of delay in this area of construction law.[93] This will also include what "the courts' judgments and approaches of the two sides of the evaluation of the extension of time and the additional cost of prolongation when "Concurrent Delays" exists. The comparative legal research will also overlap as the "Concurrent Delay" dispute will be analysed within the mentioned three jurisdictions. The doctrinal methodology will remain effective for developing the judicial approaches to achieve justice and balance regarding risk allocation in the construction contract. This will be followed by a suggested contractual model for dealing with "Concurrent Delay" problems. In this regard, the research will adopt the socio-legal methodology as it relates to the construction industry. This methodology is useful for outlining how the nature of the society and its legal background (which may vary from one

[93] This will be explained in section titled: DELAY MECHANISM IN PUBLIC WORKS CONSTRUCTION DISPUTES in chapter 3

jurisdiction to another) usually affects the legal approach adopted to tackle a problem even though the problem is the same in each of the jurisdictions. The nature of the society in this context includes a number of factors such as the social, cultural, historical and political background of the jurisdiction relevant to the research. The analysis based on the socio-legal methodology may be partially or completely different in other areas of law.

The sources of data relevant to this work are mainly the relevant court judgments related to the issue of "Concurrent Delay". This data, which is a primary source, will be used by analyzing the facts of the cases before the courts and critically analyzing how the judge has formulated the judgment. With secondary sources, the research tends to use the available annotated version of relevant works on "Concurrent Delay" such as case comments, articles in law journals and chapters in books among others. This also includes the SCL protocol and the relevant standard forms of construction contracts. In an effort to track down as wide a range of potential sources as possible, the research uses wide parameters in the search terms in mining relevant literature in the area and the related social backgrounds. The research essentially followed eight-stages methodology:

1. Finding of primary sources of relevant legal materials and analyzing them to extract the relevant legal principles;
2. In-depth examination of the secondary resources to extract the relevant principles;
3. Outlining the related legal provisions surrounding the research problem;
4. Outlining the legal concept and the conditions of "public works construction disputes".
5. Analyzing the "Concurrent Delay" problem from; both legal and construction management perspectives;
6. Identifying desirable policy goals for a regime dealing with "Concurrent Delay";

7. Analyzing the possible approaches that can be adopted in "Concurrent Delay" situation, and
8. Examining the appropriate approaches in relation to the relevant justification tests for the different approaches.

1.7 THE ORIGINALITY

The originality of this research can be summarized in the following points:

To the best of the author's knowledge, the research is the first to examine the interaction between one of the versions[94] of the special civil law approach with regard to public contracts[95] in the area of public works construction disputes with the "Concurrent Delay" dispute in relation to the extension of time and cost of prolongation. Regarding how this research adds to the literature on construction law and contract law, it contributes an external perspective from the civil law family of jurisdictions on how typical construction dispute will be dealt with once the contract has been identified as a "public contract".

Furthermore, within the civil law approach for "public contracts", this research develops an additional perspective and understanding for the construction "Concurrent Delay" dispute in relation to the "public works construction disputes". In addition, the research widens the understanding of "Concurrent Delay" dispute in construction law based on the "construction management" background. This is done by illustrated identification of the different scenarios that might be found in the "Concurrent Delay" situation. The research is not the first to discuss the difference between the Scottish and the English approaches in

[94] That is the Egyptian civil law version of the approach
[95]This civil law approach for "public contracts" prevails, in different degrees, in the many of civil law countries

relation to "Concurrent Delay" dispute. However, to the best of the author's knowledge, it is the first in examining both approaches in the light of the fundamental rules of contractual justice by looking at the issue from the perspective of dealing with construction works as a business within a legal transplantability perspective.[96]

Lastly, the originality of this research includes, as a step beyond other existing works, the research made a neutral attempt to suggest an approach for handling disputes emanating from "Concurrent Delay" in the form of a "model clause or approach" which takes into consideration the construction management and business aspects of the construction industry. It also takes into consideration the Egyptian civil law approach for dealing with public contracts as well as the fact that such model can be applicable within the "common law" jurisdictions of Scotland and England.

1.8 GUIDE TO THE THESIS

After the present chapter, the next *chapter two* addresses the nature of public contracts and the special treatment it receives in the Egyptian civil law legal system when it comes to "public works construction disputes". This chapter also aims to examine whether or not such differentiation in favor of "public contracts" can or should result in a specific approach in dealing with the "Concurrent Delay" dispute. This is then followed by *chapter three* which is about the identification and analysis of "Concurrent Delay" dispute. This requires identification of the "delay" in the program of a construction project. This chapter will include the explanation of the delay mechanism in the contracts of the construction works. Also, the chapter will draw upon the distinction between "Concurrent Delay" and other delay

[96] This has been outlined in chapter 6 of the thesis.

disputes in the construction law.

Chapter four will be concerned with the relationship between causation and the "Concurrent Delay" dispute in construction works. *Chapters five* will outline the different judicial and non-judicial approaches that have been adopted in dealing with "Concurrent Delay" disputes in England and Scotland. Such approaches include the "Malmaison" approach of the English court (time but no money) and the "City Inn" approach of the Scottish Court (apportionment). This will be followed by the non-judicial guidance on the issue of "Concurrent Delay".

Chapter six will focus on the attempt of this research to develop a fair and reasonable approach that can be adopted in public works construction disputes whether by a mediator, an adjudicator or an arbitrator or a judge. Such viable approach will also be capable of being incorporated into construction contracts intended to be used for public works construction projects within the three jurisdictions of this research. The *concluding chapter* will mainly consist of a summary of research findings and the way forward.

CHAPTER 2: GENERAL CONDITIONS OF PUBLIC WORKS CONSTRUCTION DISPUTES

2.1 INTRODUCTION

The initial understanding of the meaning of the "public works construction disputes", refers to disputes related to construction projects for public schools, public hospitals, courts, dams, prisons, highways, bridges, road works, rail ways, power stations, police stations, water purification plants, sewage treatment facilities and other public utility infrastructure. However the term "public works construction disputes" needs more exploration as, from the legal point of view, it is not exactly the same across the three jurisdictions in focus. This exploration requires an analysis for the identification of what is meant by the "construction contract", "public contract" and "public works construction disputes". This chapter will shed light on the special legal meaning of the term "public works construction disputes" in the Egyptian civil law jurisdiction. This includes outlining the special approach to public contracts to show how this contrasts with cognate perspective in the jurisdictions of England and Scotland. The analysis of this chapter feeds into the research objective of finding out whether or not the special approach to public contracts which exists in the Egyptian civil law legal system has an implication on the issue of "public works construction disputes" for both the grant of the extension of time and the cost of prolongation. This feeds also into the research objective of finding out whether or not such special approach to public contracts has an implication on the issue of Concurrent Delay for both the grant of the extension of time and loss and expense within the Egyptian civil law jurisdiction. The identification of what is meant by the "public works construction disputes" initially requires an outline of the perspective from which this research approaches the matter.

2.2 "CONSTRUCTION CONTRACT" DEFINED

The 1996 HGCR[97]act defines "construction contract" as "an agreement with a person for any of the following (a) the carrying out of construction operations; (b) arranging for the carrying out of construction operations by others, whether under sub-contract to him or otherwise; (c) providing his own labor, or the labor of others, for the carrying out of construction operations".[98] On the other hand, a "construction contract" is defined in Article 646 of the Egyptian Civil Code no. 131 of 1948 as "A contract where one of the parties undertakes to produce a piece of work or perform a service in return for the sum of money which the other party undertakes to pay".[99]

The construction contract typically refers to the contractual agreement between the contractor and the client (employer in building construction contract and sometimes promoter in civil engineering construction contract) (Ashworth 2001, p.59). Robert J Smith defines the construction contract by focusing on its role as a tool for "clarification of rights, responsibilities and procedures identification, assignment and transfer of risk" (Smith 1987). A construction contract is further described by Mosey as "acting as a 'planning tool' so that there are fewer surprises and dilemmas during construction" (Mosey 2011: p.9). Hence, we can say that the "construction contract" is an important part and can be regarded as a corner stone in the process of the construction industry in any jurisdiction. However, as the "public works construction contracts" falls within the broader concept of "public contracts" in the Egyptian civil law jurisdiction, it warrant shedding light first on the concept or notion of

[97] This is the abbreviation of the "Housing grants construction and regeneration Act 1996" for England and Wales. See "list of abbreviations" at the end of this thesis for other abbreviations referred to in this thesis

[98] This definition is in Part Two section 104 of the HGCR Act 1996

[99] See Said Hanafi page 445 - This definition has been repeated in different judicial decisions to differentiate the construction contracts from other types of contracts that may overlap and which may be seen mistakenly by their parties as a construction contract while they are not.

"public contracts" first.[100]

2.3 "PUBLIC CONTRACT" DEFINED

The description of the Egyptian special approach to "public works construction contracts" should start with the definition of the concept of "public contract". Research reveals that the meaning of "public contract" within the three jurisdictions of concern in this research is not the same from the legal point of view. In other words, what is referred to as a "public contract" in the Egyptian civil law legal system is slightly different from what is referred to as "public contract" in both the English and the Scottish jurisdictions. In England, the Public Contracts Regulations Act no. 5 of 2006 defines "public contract" by focusing on its main purposes which the contract aims to achieve: "*public contract* means a public services contract, a public supply contract or a public works contract".[101] The same definition is repeated in the Public Contracts (Scotland) Regulations Act 2012.[102] Therefore, in England and Scotland, a contract is a "public contract" once the contract is for public services, a public supply or a public works construction project.

On the other hand, in Egypt, there is no legislative definition for "public contract" in its body of legislation.[103] However, the Egyptian supreme administrative court defined "public contract" as:

> A contract made by a government body for the purpose of managing the providing of a public service to the public. This has to be done in conjunction with an intention from the government body to use the methods of the "public authority" driven from the public and administrative law by incorporating terms and conditions which some of them are not

[100] Light will be shedding on the legal concept of "Public Contracts" in the following section of this chapter
[101] See part 1 General (Interpretation) of the Act
[102] Act no. 88 of 2012 - See part 1 General (Interpretation) of the Act
[103] The absence of a legislative definition for "public contract" in the body of legislation of the Egyptian civil law legal system is due to the historical legal development of the concept of public contract in Egypt where the judiciary played a crucial role in such development. The notion of "Public Contracts" originated from France. Further outline is described later in this chapter.

> common in the similar cognate private contracts [sic].[104]

According to this definition, the term "public contract" in the Egyptian civil law legal system refers more to a notion or a legal concept rather than to a particular specific type (or types) of contract(s) as the case in both the English and the Scottish jurisdictions outlined above.

From the above judicial definition and the incorporated criteria,[105] a "governmental contract" in Egypt is not always regarded as a "public contract". Hence, the title of this thesis intentionally contained the term "public" in its second half rather than the term "governmental". This is in order to reflect the focus and scope of this research,[106] in the sense that not all government construction contracts can be regarded as "public works construction contracts".

This concept was first developed in France and was adopted in the 1950s by the Egyptian *Conseild'État* (Council of State) among other legal concepts, approaches and rules driven and transplanted from France into the Egyptian legal system in the second half of the 19th century.[107] Although a contractual concept, as is the case in France, the concept of "Public Contracts" falls within the discipline of Administrative Law" in the Egyptian legal system.[108] This branch of law has a specific nature in the civil law jurisdictions from more than one

[104] Judgement in the case no. 779 for the judicial year 22 , judgement date 24th Feb. 1975
[105] Mentioned in further details in section titled "Criteria for Public Contracts" in this chapter
[106] See chapter one, limitation outlined in section titled: The First Limitation: Public Works Construction Disputes in chapter 1
[107] Such concept for "public contracts" has been transplanted to the other civil law legal systems such as Belgium, Italy, Greece and Turkey in different degrees according to a number of different factors. Such factors includes "to what extent" each civilian legal system has been influenced by the French civil law legal system and the overall policy which governs the jurisdiction's internal regulation for the "public contracts".
[108] This concept falls within and constitutes a significant part of the legal system of "Administrative Law" in France too

perspective.[109] While in both England and Scotland, Administrative Law does not include contracts.

The description of the Egyptian special approach to the concept of "Public Contracts" should start with an overview of the Egyptian legal system with an outline of the relevant historical legal background. This is because this approach is an outcome of a historical legal development driven by a "*French influence*" within the modern Egyptian legal system. As this concept is linked with such modern development,[110] it is important to shed light on the origins and the roots of such developments.[111] This issue will be discussed in the following section followed by a description of the "Public Contracts" approach.

2.3.1 Overview of the Egyptian legal system

The French *legal* influence in Egypt dates back to Napoleon's French short occupation of Egypt in the early 19thcentury (1798-1801) and promulgated through the subsequent education and training of Egyptian jurists in France. On the 22nd of October 1869, Egypt had its first written and binding Constitution[112] which was subsequently replaced by the Constitution of 1879 and, later, the Constitution of 1882. These versions of the written Constitutions were heavily influenced by the post-revolution French Constitution of 1789.[113]

[109] From the theoretical perspective, the system is built on both the theory of "social contract" and the "separation of powers". This affects the regulations of administrative law and how different state's authorities and departments perform their functions and their duties and the way they interact with each other. From the practical perspective, the government employees (except ministers) are by default career jobs and it is not common to employ personnel via a contract. This resulted in a number of specific detailed regulations concerning the public job outside the limit of contact law.

[110] 1869 onward

[111] i e : the concept of "public works construction contracts" and the concept of "public contracts".

[112] This was the Constitutional Decree of 22 October 1869 promulgating the function of the parliament's "upper house" assembly. - Before this date, the country used to have a non-written constitution based on constitutional customs and traditions

[113] Since the Constitution of 1879 until present, the Egyptian civil law legal system has been governed by the Constitutions of 1923, 1956, 1971, 2012 and 2014 respectively

In addition, the issuing of the Egyptian Civil Code of 1875,[114] which was similar[115] to the French Civil Code of 1804, was one[116] of the manifestations of *French influence*.[117] Since then, the Egyptian legal system has departed[118] from being a jurist and judges made legal system and started to be based upon a well-established system of codified sets of laws and legislations and started then to be described as a civil law system.[119]

The current Egyptian Civil Code of 1948 which replaced the mentioned previous versions of the civil code includes also a clear *French influence*.[120] The current civil code of 1948 has regulated "contract law" among other areas of the law.[121] While much of the

[114] The Civil Code referred to is the Act of 28 June 1875 promulgating the Egyptian civil code

[115] Regarding the similarities between French civil code of 1804 and the Egyptian Civil Code of 1875, the historical facts and circumstances that surrounded the *introduction* of the French civil code were always not clear. According to one of a recent researches by Chancellor El-Bishry which has been presented in a subsection of the "The Legal Forum" of the state of Sharjah, United Arab Emirates in 21st of March 2013, what facilitated the transplantation of the French legal system into the Egyptian legal system in 1875 was because the majority of solutions included in the French civil code have been found very similar to the solutions of the "Maliki" school of thought which used to exist in Egypt long time before the *introduction* of such transplanted French code. Chancellor Tarek found an unpublished report of a meeting of Alazhar top scholars during the time of such *introduction* concludes with an outcome of not to resist the intention of the "French educated" governor of Egypt at that time to incorporated the Napoleonic French civil code into the internal Egyptian legal system in the form of a codified legislation. In such report, Alazhar top scholars explained by indicating that the majority of solutions in the French civil code are similar to the legal solutions of the "Maliki" School of thought therefore they are much closer to the Egyptians as the "Maliki" and "Shafi'i" schools are more popular among the majority of the normal people across Egypt while there was continuous tendency to impose the Hanafi School of thought by the Ottoman Empire which Egypt was still part of it and was in process of a long slow process of independence devolution (Www.muntada.ae 2013).

[116] Shortly after, a second parallel version of the civil code has been issued which was the Act of 28 October 1883 promulgating the civil code The first used to be applied by "Mixed Courts" (i.e. Egyptians v non-Egyptians) and the second used to be applied by the national courts (i.e. Egyptians v Egyptians) Both acts were nearly copies of the Napoleonic French code of 1804

[117] Prior to transplanting of the legal rules from the French legal system into the Egyptian one in the late 19 century, the judges used to have the option to choose one of the "pre-made" or "pre-developed" solutions or remedies from one of the four schools of thoughts (the "Maliki", the "Shafi'i", the "Hanbali" and the "Hanafi"). The judge could also discard all the opinions in the mentioned four schools if he (or she) is not convinced of any of them and develops then his or her own solution in a way which is similar, to some extent, to how the judge in a common law jurisdiction, in the sense that a judge in a vacuum of codified rules, makes his or her own decision.

[118] See point number 5 of secondary findings in section titled: Secondary findings: on the legal transplantation in chapter 7

[119] See section titled: The establishment of a counterpart of the French "*Conseild'État"* in chapter 2

[120] "Previous versions" refer to the act of 28 June 1875 and the act of 28 October 1883 - This current civil code was issued on the 16th of July 1948 under act no. 131 to be enforced from 15 October 1949.

[121] Other areas of the law include areas such as conflict of laws, assets, liability and tort. The current civil code has also regulated the transactions between natural persons or legal entities whether the entity is a "private entity" or a "public entity".

Egyptian Civil Code of 1948 draws upon the French Civil Code,[122] in relation to personal status, the Egyptian legal system is more akin to that found in Sharia.[123] Therefore some commentators describe the Egyptian legal system in general as a 'hybrid' comprising a mix of Sharia and the Napoleonic Code (Megacom et al. 2005).

2.3.1.1 The legal education

The background and the circumstances surrounded the *French influence* which has led Egypt to adopt a number of the French codified civilian laws are connected with the cultural links between France and Egypt in the first half of the 19th century. In the aftermath of the short French occupation (1798-1801), ties remained between France and Egypt via institutions and individuals.[124] Also in the first half of the 19th century, the educational ties between both nations commenced with the governor of Egypt[125] (at the time) sending groups of tens of Egyptians to study different disciplines in France. Furthermore, with the English occupation of Egypt (1882-1922), many Egyptian families started to send their sons and daughters to study in France as a symbolic way of showing resistance to the English occupation.

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[122] The current civil code of 1948 also draws upon other continental European codes to a lesser extent

[123] According to the Islamic Sharia, the approach for the "one law for all" is temporary suspended for the personal status matters. For non-Muslims, the judge applies the laws and rules in their own religion according to what the council of the senior religious leaders decide in every denomination of every religion. The rules they decide receive the power of the law by the parliament once the council issue or make amendments to the rules in the form of parliamentary approval without interference. This has been always the case even before the modern recent constitution as this rule is a secondary rules drives from the principal rule of the "freedom of religion" in the Islamic Sharia as the "freedom of religion" has been stipulated in a clear and direct statement in the Quran (2/256, 2/62& 49/13). The final legal outcome of this is that for personal matters within the same domestic jurisdiction, there is more than one set of rules which are applied to citizens of the same nationality in the same matters or types of disputes that are decided by the same judge. The chosen set of rules is applied according to the religion of the disputing parties of which they declare in the beginning of the dispute before the judge. The secular methodology within the modern Egyptian legal system has accepted such suspension of the approach of "One law for all" because this situation is based on protecting the freedom of religions which is one of the objectives of such methodology as the compulsion to accept a resolution for a personal matters dispute that is external to the religion of the disputing parties it is not accepted.

[124] Such as Jacques-François de Menou and Joseph Anthelme Sève who established the modern Egyptian army.

[125] Mohamed Ali Pasha

This "educational ties" related to different disciplines including legal studies. Indeed, it is vital to mention this legal "educational ties" when discussing the approach or the concept of "public contracts". This is so considering that the legal "education ties" between both nations has a relationship with the approach or the concept of "Public Contracts" as it was transferred from the French legal system via the Egyptian law scholars who received their legal education in France.[126] These legal scholars obtained academic, judicial and political positions in Egypt upon their return from France. This "educational ties" resulted in a long term "culture ties" between Egypt and France as reflected into a number of indicative symbolic political decisions by Egyptian authorities.[127]

2.3.1.2 The establishment of a counterpart of the French "*Conseild'État*" in Egypt

There are a number of elements which indicate whether or not a legal system is a civil law legal system.[128] One of the main elements include the presence of the "*Conseild'État*" (Council of State).[129] This section sheds light on the establishment of the Egyptian *Conseild'État* not only to show that the Egyptian legal system is a complete example of a

[126] Many Egyptians went to study law in France in the 19th century and early 20th century including rulers of the country such as Kedev Ismael. Examples of law scholars educated in France included "Mustafa Kamil" and "Abd El-Razzak El-Sanhuri" and many others. Most of the Egyptians preferred to go to France to study different disciplines. However, there are very few Egyptians who went to England instead of France to study such as Dr. Ali Mosharafa. They were not in human science and the decision for them to go to England was made by an "occupation influenced" government and was not a personal decision.

[127] Such as for "Charles de Gaulle" during the 2nd world war to use Cairo "in Zamalek" as one of the main capital cities to temporarily live and lead the French resistance from and for Egypt to accept an invitation to join the establishment of the "Francophonie" organization rather than the "Commonwealth" one and for France to play a key role in supporting the nomination made by the Egyptian government for the late minister Boutros Boutros-Ghali to hold the competitive UN main post in 1991.

[128] Such elements include the legal system being based on a codified civil code as the default system of regulations.

[129] The judicial body of the "*Conseild'État*" which means "Council of State" exists in majority of the main civil law countries such as France, Belgium, Italy, Egypt, Turkey, Algeria, Tunisia and Greece(Papahadjis 1953). The term "Council of State" in some other countries has a different meaning. For example the same term in China refers to the "government cabinet" which is a non-judicial body. For example also the same term in Oman refers to the "parliament" which is a non-judicial body.

civil law jurisdiction within the context of the area of law of this research study but also because of the important role that the mentioned judicial body has played in the establishment and development of the concept of "public contracts" in the Egyptian civil law system that follows the French civil law model.

The first attempt to establish an Egyptian counterpart to the French "*Conseild'État*"[130] was in 1879 when Isma'il Pasha, the French educated Khedive[131] of Egypt, issued a decree[132] to establish a "*Conseild'État*" in the Egyptian legal system based on the French model with three main duties.[133] However, this objective did not materialize as implementation of this decree encountered financial difficulty, however which blocked such development.[134] The second attempt to implement the aforementioned decree was in 1939 when the government instructed its "litigation committee" which included the French educated eminent law professor Dr. Abdel Hameed Badawy[135] to draft a legislation for the establishment of an Egyptian counterpart of the French "*Conseild'État*". This was compatible with the increasing phenomena (at this time) of incorporating features of the French legal system into the Egyptian one via French educated law scholars.[136]

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[130] Established in 1799

[131] This is a special term at this time, which is close to the meaning of "a viceroy" with a form of autonomy including controlling an independent Egyptian army and represent Egypt as a state under The Ottoman Empire. In simple terms, the Khedive of Egypt at that time means the ruler of Egypt. This term remained from 1805 to 1867 without recognition from the Ottoman Empire and with such recognition from 1867 until the establishment of the Egyptian Sultanate in 1914 the event which was English managed Egyptian independence from the Ottoman Empire during the brink of the World War 1 joined by a political English promise to the Egyptians to end the English occupation too in the aftermath of the war. This event has been followed by the establishment of the modern Egyptian kingdom in 1922.

[132] Known as "decree number 33"

[133] Such duties included issuing judicial judgments concerning administrative public disputes. This type of disputes included disputes arising between individuals and any government body and disputes between a government body and other government body

[134] Khedive Isma'il Pasha had exhausted the Egyptian state treasury in two wars "Ethiopia war and Mexico war". This also was associated with a number of major public works construction projects without enough feasibility studies. These factors led to the bankruptcy of the Egyptian treasury in 1877

[135] Dr. "Abdel Hameed Badawy" was a notable law scholar who received a significant part of his education in France

[136] This included incorporating features such as criminal rules, criminal procedures rules, civil procedures rules, and other features from the French legal system into the Egyptian

Nevertheless, there was division between the members of the above-mentioned committee on whether or not the cabinet should be given the power to approve judgments that are issued against any government body so that such judgments would be unenforceable unless approved by the cabinet.[137] This division resulted in the postponement of the drafting of the legislation meant to actualize the Egyptian "*Conseild'État*". The third attempt to achieve this was in 1940 when Dr. "Abdel Hameed Badawy" who became the Minister of Finance (i.e. Chancellor of the Exchequer) published his suggestion to establish an Egyptian *Conseild'État* with full judicial power (and without the above mentioned power of approval being conferred on the cabinet). However, his suggestions did not come to the point of fruition.[138] But finally, one of the members of the Egyptian parliament presented a proposal in 1945 for the establishment of an Egyptian counterpart of the French "*Conseild'État*". The parliament studied the proposal and issued the Act number 112 of 1946 which is known as the "*Conseild'État*" Establishment Act.[139][140]

2.3.1.3 The effect of the establishment of the *Conseild'État*

The establishment of the Egyptian *Conseild'État* (Council of State) can be considered as one of the outcomes of the legal educational ties between Egypt and France. In this light, the structure of the Egyptian judiciary is divided into two main sections which are the Egyptian *Conseild'État* (Council of state) and the "ordinary courts".[141] The later term refers to the courts outside the *Conseild'État* (Council of State) which deal with private law related

[137] This was an example of the typical government resistance to submitting to a judicial review

[138] This suggestion received criticism at that time from the press (Qiladah 1980) on the basis of a claim that the expected *Conseild'État* (Council of State) will have extra power more than the government itself.

[139] The current law for the *Conseild'État* (Council of State) is Act number 47 of 1972

[140] Since its establishment, the French "*Conseild'État*" regularly invites the judges of the Egyptian "*Conseild'État*" to its internal training courses.

[141] The courts of the *Conseild'État* have been collectively referred to as "courts of the administrative judiciary"

disputes.[142] The internal structure of the Egyptian "*Conseild'État*" includes the "Court of the Administrative Judiciary", an "Administrative Court" and a "Disciplinary Court" in every governorate (Mundi 2012: p.2).[143]

Attached to this structure are the "Advisory Department" and the "Legislative Department".[144] On top of the structure of the courts of the "*Conseild'État*", there is the "Supreme Administrative Court" in Cairo. This court is the counterpart of the Egyptian Court of Cassation[145] as shown below.[146] Because of the presence of two hierarchy of courts with a Supreme Court[147] for each, the structure of the judiciary in Egypt (and in other "civil law" legal systems) is sometimes referred to as the "dual judiciary" system. Since its establishment, the Egyptian courts used to refer to the precedents of the Supreme Administrative Court, of the "*Conseild'État*", for administrative and other public law related matters even though the precedents are not binding but merely provide persuasive guidance.[148]

[142] These include criminal, civil, commercial and personal matters disputes

[143] In every governorate, there is an "Administrative Court" and a counterpart "Disciplinary Court". Both are under the umbrella of the Egyptian Council of State and both deal with "administrative law" related disputes. The "Administrative Court" has the general jurisdiction for the "administrative law" related disputes within the governorate. However, the jurisdiction of the "Disciplinary Court" is limited only to the misconduct of the government different levels of employees. The "court of the administrative judiciary" is based in Cairo and has a number of specialized chambers and a number of chambers in the main governorates across the country

[144] The mentioned two departments play the second role (besides the judicial role) of the *Conseild'État*(Council of State) of providing the state's non judicial authorities with legal advice. This is the case also in other jurisdictions which follow the "Civil Law" legal system(Boughey 2013) (I.C.L.Q. 66)

[145] Covering all matters which are not public disputes such civil, commercial, and criminal matters

[146] The Egyptian constitutional court is not above of the two divisions of the judiciary. However it is regarded as one of the three supreme courts in the judicial system with a specialized role. It accepts cases only if referred from any of the courts if there is a possibility that a specific legislative rule is not constitutional

[147] The Supreme Court of the "regular ordinary civil courts" is the court of cassation while the Supreme Court for the "courts of the *Conseild'État* or Council of State" is the Supreme Administrative Court.

[148] This is one of the differences between the civil law family of jurisdictions and the common law family of jurisdictions where the precedent is a formal source of law. Precedent is a formal source of law within the Scottish and English legal system (White, Willock and MacQueen, 2013: p. 297).

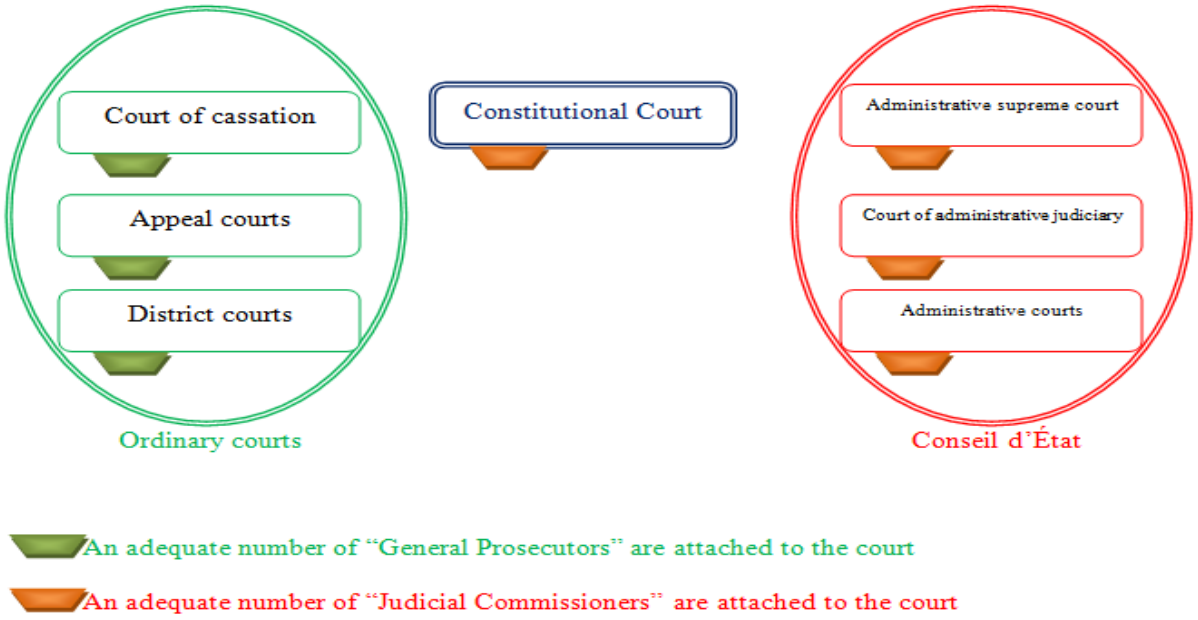

Figure 1: The two supreme courts in the Egyptian judicial system

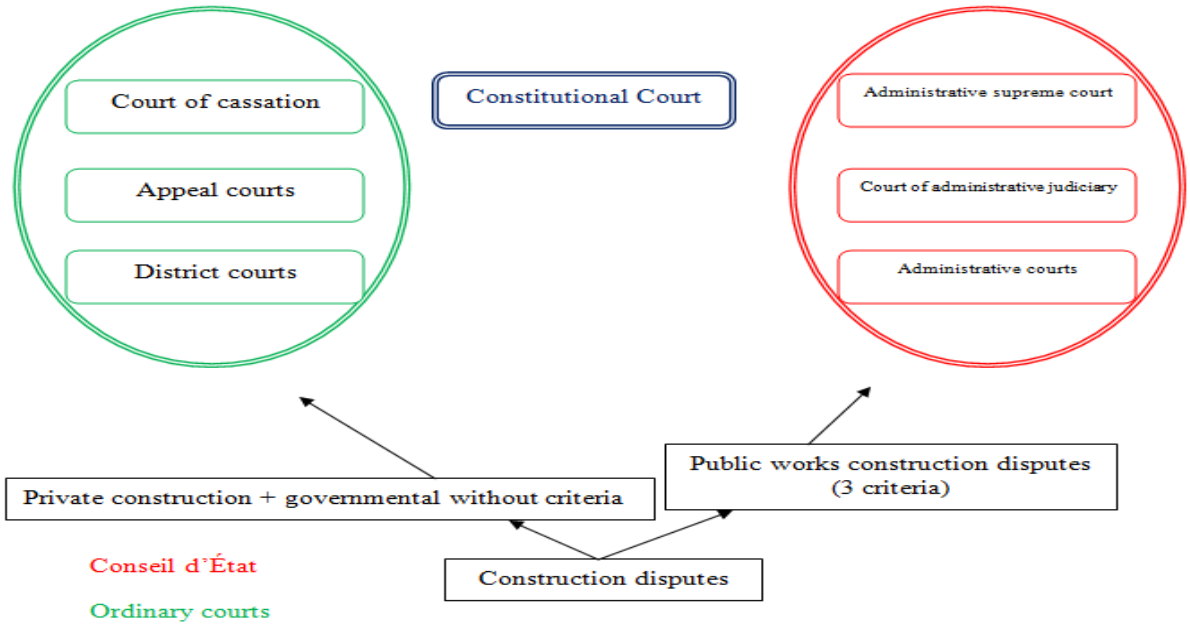

Figure 2: The "Public Works Construction Disputes" in the Egyptian judicial system

Since the establishment of the *Conseild'État*, any individual or private law entity could sue the central government and the local government body for any public

administrative related disputes before the courts of the *Conseild'État*.[149] The latter's establishment constitutes a substantial development in the Egyptian legal system in relation to "Public Administrative Law" (including disputes of "public contracts"). In addition the establishment of the Egyptian *Conseild'État* (Council of State) was key to the development of the differentiation between public and private contractual disputes[150] (i. e. the public contracts approach) which is analyzed in the following section of this chapter. The figures above show the structure of the judiciary of the Egyptian civil law legal system in the context of the "Public Works Construction Disputes".

2.3.2 The differentiation between "private" and "public contracts"

There is a variety perspective of the ways the legal systems categorize contracts. Contracts come in different forms. There are civil contracts and commercial contracts. There are economic contracts as well as social welfare contracts.[151] One can also have transaction contracts as distinct from hiring or lease contracts. Contracts may also be long term or temporary in nature. There are also governmental contracts and non-governmental contracts on the bases of whether or not one of the contracting parties is a government body.

Specifically, there are a variety of ways the legal system deals with the governmental contracts. The Egyptian "civil law" legal system mainly deals with such contracts on the primary bases of whether or not the governmental contract falls within the notion of "public contract". After its establishment in 1946, the Egyptian *Conseild'État* (Council of State) has adopted the French perspective as it pertains to the legal classification of "public

[149] As per the jurisdiction of the *Conseild'État* or Council of State, any government body can sue another government body before the advisory section of the *Conseild'État*or Council of State"

[150] Including public Works Construction Disputes.

[151] Such as trust

contracts".[152] Because of the absence of a specific legislative set of rules[153] to further regulate public contracts, the court of administrative judiciary[154] during the 1950s began to establish judiciary made rules to govern and further regulate public contracts via a number of successive judicial precedents (Qiladah 1980).[155]

Most of these precedents can be regarded as copies of judgments made by the French "*Conseild'État*" in similar cases. Hence, with regard to the constitution of a "public contract", the Egyptian legal system is mainly based on transplanted judicial approaches derived from the French *Conseild'État* (i.e French Council of State). In theory, in civil law countries, different courts can depart from the precedents developed by higher courts. However, this rarely occurs when the issue relates to public contracts in the Egyptian "*Conseild'État*".

When it comes to "governmental construction works", in addition to such precedents, the Civil Code of 1948 is applicable. To govern and to further regulate the governmental construction works, the Egyptian parliament issued the Public Tendering and Auctions Act 89 of 1998[156] and the Public Private Partnership (PPP) Act 67 of 2010.[157] The legal system for "governmental construction works" may seem complicated[158]as it majorly consists of three legislations together with judicial precedents. However, the variety of legislation is only to give the public governmental body the opportunity to choose from a number of sets of

[152] One year after its establishment, the Egyptian *Conseild'État* (Council of State) started to consider cases that have been raised against government bodies including exercising the jurisdiction to consider public contractual disputes. The jurisdiction to hear contractual disputes has been established by Act no. 9 of 1949 which has expanded the jurisdiction of the *Conseild'État* to include relevant contracts. This was a year after the establishment of the *Conseild'État*.

[153] Except the Civil Code of 1948 which provides the legal system with the basic rules for both contract law and construction contracts in both private and public contracts.

[154] One of the courts of the Egyptian *Conseild'État*(Council of State). See the relevant figure.

[155] Referred to as case number 377 published in the judicial Law Reports number 11 of the Egyptian *Conseild'État*(Council of State) (page 607).

[156] See section titled: "Under The Public Tendering and Auctions Act No. 89 of 1998" in chapter 2

[157] See section titled: "Under The Public Tendering and Auctions Act No. 89 of 1998" in chapter 2

[158] As it is built on a number of judicial precedents and three legislations

rules that which may best suits the project concerned.[159] The special approach for "public contracts" which makes it a separate category among the "government contract" is outlined in the following sections by outlining the current position in relation to the special approach for the "public contractual disputes" in the Egyptian legal system (together with its criteria and its logic) before undertaking an analysis of the current situation regarding "public works construction disputes" in the Egyptian legal system which is part of the focus of this research.

2.3.2.1Criteria for Public Contracts

Regarding the substantial legal differentiation between private and public contracts, according to judicial precedents, three conditions must be satisfied in order for a governmental contract to be considered a "public contract". First, a government body should be at least one of the contracting parties.[160] Secondly, the purpose of the contract must be related to a project or a service which provides the public with public service(s); such service provided constitutes the "interest of the public". And finally, the provisions of the contract should include at least a condition which is different from its counterpart provision found within similar private contracts.[161] These criteria have been established by precedents issued by the courts of the Egyptian *Conseild'État* (Council of State).[162] In other words, the origin of these criteria can be traces to the French "*Conseild'État*".

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[159] After all, the government body should abide by the judicial precedents regardless of which of the three mentioned legislations the government body acts within. In terms of the contractual context, the public bodies can even chose to apply a foreign law of a foreign jurisdiction but this option is not preferred by such bodies for reasons of convenience and familiarity. (Hanafi 2005: p.445)

[160] That is the same regulations for "public contracts" applies if both of the parties to the contract are government bodies

[161] For example: in a supply contract for cars, normally (in private contract) the price will be paid on delivery but when the public body issues a similar supply contract for cars , the contract may include abnormal terms and conditions such as a deposit should be paid in advance from the seller himself to the government body (which will be returned after the whole delivery of the cars) in addition to that the government body has the right to postpones (or withhold) the payments of the price itself for some time. The same thing happens in construction industry

[162]Egyptian Supreme Administrative Court, Case no 62/2, Judgement date: 13th May 1961 - Egyptian Supreme Administrative Court, Case no 1965/6, Judgement date: 31st May 1962 - Egyptian Supreme Administrative Court, Case no 1059/7, Judgement date: 25th May 1963

According to the above-mentioned criteria, governmental contracts should not always be regarded as "public contracts". Hence, the title of this thesis containing "public works construction disputes" was chosen in particular to reflect the focus and scope of this study and to distinguish it from the relatively broader concept of "governmental contracts". Based on this, the Egyptian civil law legal system recognizes two categories of contracts where a governmental department is involved. One is the "public contracts" where the mentioned criteria are met and the other is the "governmental contracts" where a government body is still a contracting party but one (or the other two) of the criteria is missing.

The Egyptian economic system in the 1960s tended to apply economic principles resembling those of socialism the issue and this had a number of implications on a number of legal concepts such as the concept of the "monetary ownership" and the notion of "public contracts" where the mentioned criteria were under examination.[163] During this era, government activities were frequently expanded to include contractual relationships that were of a commercial nature. Such new areas of governmental contracts had no link to the traditional role of the government in society which is mainly focused on "providing the public with public services in a continuous regular manner"[164] which justifies treating "public

[163] The economic system which Egypt adopted in the 1960s was influenced by the "communism" as an economic system. This had not changed the economic system completely away from being based on the capital market. During that time the government bodies used to intervene in many simple "small scale" businesses which were typically the job of the private sector. The situation would have been much worse for the private sector if the courts blindly applied the judicial notion of "public contracts" then. This is because the private sector would have encountered the harsher approach for "public contracts" within almost most of the economic activities. The Egyptian legal system then found its way towards a balanced position between the "communism" or "socialism" influence and the strong concept of the "Personal monetary ownership" of in the Egyptian legal system.

[164] See section 2.3.4.3 of this chapter

contracts" differently.[165]

During the 1960s, the courts of the Egyptian *Conseild'État* (Council of State) kept the concept of "public contract" as it is without overlapping with these new (at that time) areas of governmental contractual relationships. This was done so as to keep the logic behind the concept of "public contracts" as it is which justifies dealing with disputes arising from such contracts differently. This 1960s tendency, of the state to engage in commercial economic activities declined and became very limited from the 1990s onward. The illustration below shows that the Egyptian legal system deals with the governmental body in two types of contracts.[166] Finally, such concept of "public contracts" applies regardless of the degree of the complexity of the "public contract".

[165] The justification for this approach was made clear in the "Winkell" judgement of the Frensh *Conseild'État* of the 7th of August1909 as the court then stated that the "continuity" is the core of the public services operated by public authorities and utilities. This has been reinforced by the judgement of "Anguet" in 3rd of December 1911 (Marwa, 2003: P. 44)

[166] This is different from the perspective of the public body itself as the government is normally not concerned with whether the contract is a "public contract" or mere a "government contract".

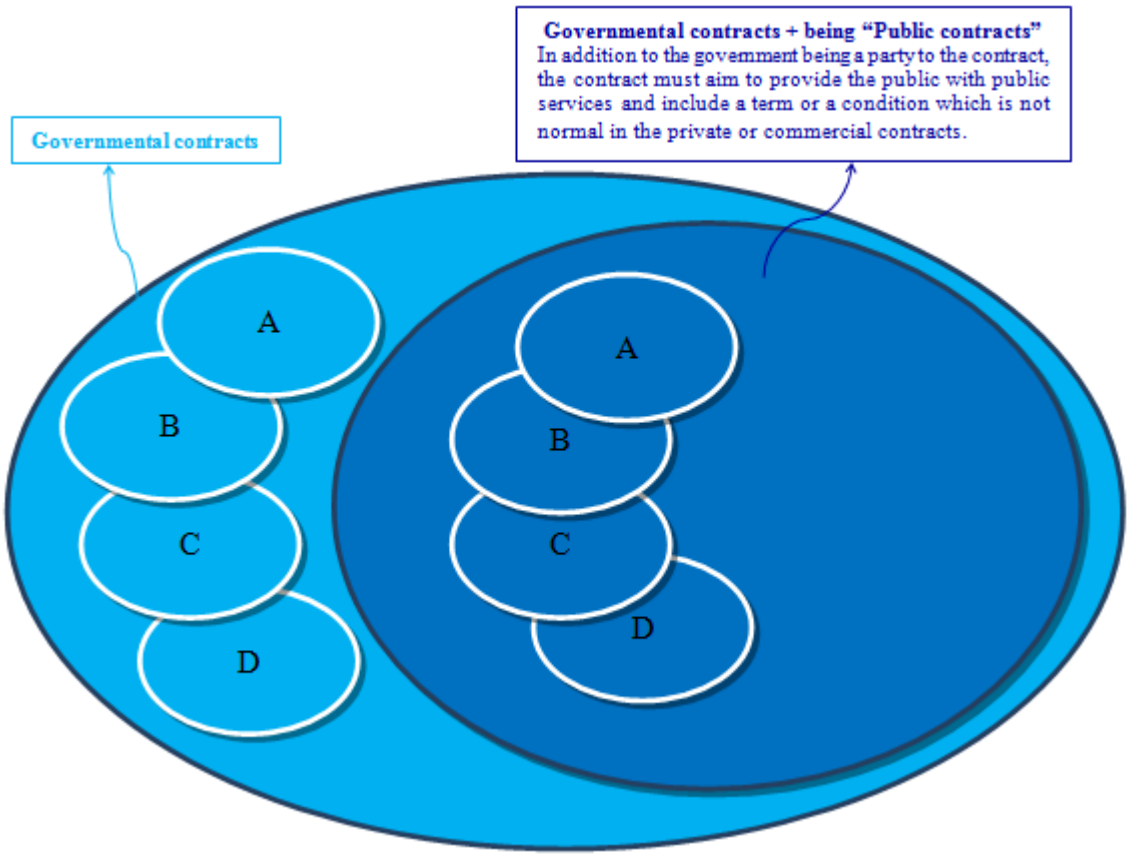

Figure 3: "Public Contracts" v. "Government Contracts"

This research focuses on the notion of "public contracts" which is of a limited nature and falls within the relatively wider notion of "Government Contracts". A, B, C and D can be any type of contracts such as "supply contract", "construction contract", "rent contract" and "operating a service".

2.3.2.2 The logic behind the differentiation

The logic which justifies the notion of "public contracts" is both a philosophical theoretical and practical one. The structural base of the mentioned logic starts from the philosophical ideas that led to the French revolution. The historical legal background that led to the notion of "public contracts" in civil law countries dates back to the origin of, and relies

on the "social contract" theory[167] and the theory of "separation of powers"[168] which formed together the modern base of the notion of the post-French revolution modern constitutions. These two theories allocated particular specialized duties to each of the three main authorities of the state (administrative, judicial and legislative authority). Such duties are regarded as the main pillars for the state's existence from a "civil law" perspective. These two theories require the governmental departments in particular to have executive administrative duties to perform in the society on behalf of the society. Such duties entitle these departments to exercise certain powers and take certain actions which the other two authorities,[169] the private bodies and the individuals cannot undertake.

During the normal course of day to day life, disputes may arise between individuals and governmental departments for various reasons. Accidently, the two sides may enter into a contractual legally binding relationship. In this case, there is a difference in the legal power[170], position, duties in the society and the legal capacity of the contracting parties.[171] There are also differences in the nature and source of funding for "public contracts" compared to "private contracts". The ideas of the sovereignty of the state and the immunity of the state are somehow also connected with this differentiation because, by nature, the "public

[167]This theory was developed byJean Jacques Rousseau (an Austrian philosopher 1712 – 1778). It was outlined in Rousseau's book of "*Du Contrat Social, Principes du droit politique*" or "principles and the law of the social contract" which has been written in 1762 and inspired the written post revolution constitution of USA in 1787 and France one in 1791 and the Egyptian first written constitutional document of 1869 at a later stage

[168]This theory was developed by the French philosopher "Montesquieu" 1689 – 1755 (Barendt 1995) and states that the state should be divided into three main authorities which are the administrative authority (i. e. the government), the judicial authority and the legislative authority

[169] The "other two authorities" refers to the judicial authority and the legislative authority

[170] The powers of the administrative authority include the right to issue a number of immediate actions of which the individual is not able to do.

[171]A clarification for the difference between the governmental departments and individuals has been clarified by the Egyptian Supreme Administrative Court, Case no 115 / 7 , Judgement date: 28December1963

contract" should embody the provisions of public authorities.[172]

These differences may require different special approaches in order to accurately avoid any deduction from the individual's rights in the society as well as avoiding any disruption to the government's ability to carry on its duties in the society which feeds at the end in the "public interest" of which concerns the individual again. Dealing with "public contracts" in a different special approach aims to keep the balance in such contractual complicated relationships.

The concept of "public contracts" in civil law systems adopts the logic that the relations between the state (including its agencies) and individuals or private entities cannot necessarily be governed by the same legal principles which govern the relations between private parties. This is because the rule and the main duty as well as the function of the state are different from those of the individuals and also different from those of the private utilities given that the main focus of the latter is to make a profit for their stockholders.

In the French legal system, such differentiation of public contracts "Les contrats Administratif", was inspired initially by the French Act of State Public Debt Contracts, of July 17, 1790 and incorporated later into French Administrative Law. The historical development in dealing with "public contracts" in France has gone through two stages. The milestone between the two stages was the judgment of the "Terrier" case in the 6th of February 1903 which was issued by the French "*Conseild'État*" (Brown et al. 1998: 130).

[172] There may be issues that needs to be brought to the council of state courts between the individuals and the governmental bodies outside the remit of the contractual relationships such as the injuries caused by a car or bus owned by a governmental body, case related to the freedom of expression, case relates to fundamental human rights, a dispute between the employee of a governmental department and the governmental department he or she works at given that the employment relationship is not based on a contract (i. e. permanent job).

This judgment established clearly the foundations of the modern concept of "public contract" in France which has been transplanted later in Egypt and in other civil law countries.

Dealing with "public contracts" within different approaches mainly protects the right of the individuals to be provided with different public services such as water, electricity, education, security and others which are actually the responsibility of government departments. The main aim of the differentiating between public and private contractual disputes is the need to keep the public sector working for the benefit of the citizens and the need to *continuously* secure the process of providing the public with public services. This is one of the theories of public administrative law in civil law countries. This theory governs public contractual disputes in general. The following section will examine the limit of this theory when it comes to "public works construction disputes".

In private contracts, the effect if anything goes wrong with the implementation of the contract will not go beyond the limited[173] number of individuals who are parties to this contract. Normally, no effect will be felt by the public. This governing theory of "the need to *continuously* provide the public with public services" stands in contrast to the fact that the public may be widely affected if something goes wrong in the application and performance of the "public contracts". The state's ability to provide the public with public services "in a continuous manner" is one of the objectives of public administrative law in civil law countries (Jaidane 2005).

The difference in powers,[174] the position and the duties in the society between the two sides requires specific accurate judicial approaches in order to keep the balance between the

[173] If the number is relatively big, it remains limited compared to the massive number of members of the public in any jurisdiction

[174] The powers of the governments differ from one legal system to another

individual's rights and securing the government's ability to carry on its duties in the society. This dictates that the judiciary which will assess this critical relationship should be a separate specialized judicial body within the judicial structure itself rather than leaving this entirely to the judges of the ordinary courts who deal with disputes of individuals. This is because judges of the ordinary courts apply the normal legal rules which are not designed to govern the "public" relationships as these judges asses the maters normally on a basis of equal starting position. Referring the public contracts to a specialized court of the *Conseild'État* (Council of State) helps accelerate the resolution of the dispute in this field. This is because it is important for the public matters to resolve such disputes as quickly as possible. In addition to this, within a "public contractual disputes", there is no other disputes resolution mechanisms attached with the sector in question[175] such as adjudication.[176] In the same time there are some limitations[177] in relation to resolving disputes via the arbitration[178] in cases relating to public contracts. The strict way of dealing with arbitration in both Egypt and France is an additional clue reflects the special care that has been given to the public contracts in these two legal systems.

The need to designing the judicial structure to have a particular judicial body for public administrative related disputes relies on the philosophical basis of the difference in position between the government on and the individual (or private bodies) as parties to a dispute. As one of the main three authorities, the government by its nature and role in the society has a variety of both practical and legal options to deal with different matters while the individual is only protected by his or her personal rights in the constitution and the relevant related legislations. "Specialism" has been used in this regard as a tool for bridging

[175] That is the "construction law" related legal system in Egypt
[176] This is a relatively quicker way for resolving construction disputes compared to litigation
[177] Such as the requirement of an approval from the minister for the arbitration clause (see below)
[178] This is a relatively quicker way (most probably) for resolving construction disputes compared to litigation

the gap in the balance between these two sides. This philosophical perspective[179] is not limited to disputes relating to "public contracts" as it applies to all other public and administrative law related disputes.[180]

Reflecting the difference in their societal duties, the legal actions (including contracting) taken by the government while performing its duties in the society should be distinguished from other private law relationships and legal actions.

2.3.2.3 The consequences of such differentiation

There are a number of legal and practical consequences that result from the differentiation between public and private contractual disputes. As the logic mainly depends on protecting the interests of the public, the consequences of the differentiation are connected to this protection.[181]

The first consequence concerns the jurisdiction of the courts to hear the case. According to the Egyptian Constitution,[182] the courts of the "*Conseild'État*" are exclusively concerned with all public administrative disputes.[183] So where a case is related to a public contract, other courts under the "ordinary civil courts" should deny jurisdiction to hear the case and refer[184] the matter to one of the "*Conseild'État*" courts.[185] Both the "Court of the

[179] That is, the perspective of justifying the dedication of a separate body within the judicial structure to decide over disputes of which a public body is involvement
[180] Such as the human rights related disputes and "keeping public order" related government decisions
[181] The evaluation of public interest is undertaken on a regular basis every judicial year which starts from 1st of October to the end of September of every year. According to article 69 of the State Council Act no. 47 of 1972, normally a judicial annual report is made regarding the evaluation of the different sides of the public interest and what problems in this regard have the new cases or judgements revealed during the year before the report.
[182] According to article 174 of the Constitution of 2012 and article 190 of the Constitution of 2014
[183] As well as all disputes related to the enforcement of judgments related to these disputes
[184] Referring the dispute should be done according to article 110 of the Civil Procedures Act number 13 of 1968

Administrative Judiciary" and the "Administrative Court" apply certain public law rules and judicial precedents and approaches to the dispute.[186] These rules have been mainly developed by judges specialized in public disputes (which include public contractual disputes). This specialism gives the judges the opportunity to appropriately determine the limit of the public interest in contrast to the interest of individual or private entities according to the experience and training they receive on a regular basis.[187]

The second consequence related to the arbitration issue. According to the Egyptian Arbitration Act,[188] if the contract concerned has been classified as a "public contact", an arbitration clause cannot be included in the contract until the minister in charge of the contracting government body approves the inclusion of an arbitration clause. Also, judicial supervision[189] of the arbitration process in the case of a public contract lies with the courts of the *Conseild'État* (Council of State). These courts normally apply approaches which can be considered "strict" when compared with the supervision of the ordinary courts when the arbitration concerns private contracts.[190]

2.4 THE DEFINITION OF "PUBLIC WORKS CONSTRUCTION CONTRACT"

The definition of "public works construction contracts" raises the issue of the different

[185] The matter is to be referred to one of the chambers of the court of the administrative judiciary at the *Conseild'État*(Council of State)if the value of the dispute is above 5000 pounds or one of the local "administrative courts" (one in every governorate) if the value of the dispute is below 5000 pounds (Article 10 of Act 47 of 1972)

[186] Since the establishment of the Egyptian *Conseild'État*(Council of State), such rules have been established via a process of simulation to the French *Conseild'État*(Council of State)

[187] The limit of the "public interest" against the "private entities' or individual's rights" varies from one legal area to another within public law. It is different in some other fields of law compared with the field of "public contracts"; see section tilted: The concept of justice within the context of "Concurrent Delay" dispute in chapter 6

[188] Act no. 27 of 1994

[189] According to article 9 of the Arbitration Act no. 27 of 1994

[190] This is according to article 9 in conjunction with article 14 of the Arbitration Act which allocates the judicial jurisdictions for the supervision of the arbitration related matters

research perspectives for dealing with the matter. This phrase might produce a plethora of diverse meanings if the perspective of the query has not been specified. The issue of "public works construction contracts" can be dealt with from two main angles, which are: the procurement perspective and the substantial dispute resolution perspective. The perspective that is the focus of this research is the second one. However, it is relevant to shed light on the first perspective too.

2.4.1 The first perspective (procurement)

This perspective is the "Public Private Partnership" (referred to later as "PPP"),[191] the Public Finance Initiative (referred to later as "PFI")[192] and the Build Own Transfer (referred to later as "BOT")[193] family of contracts which is normally first thought of when the term "public works construction contracts" is mentioned. The formats for the BOOT/PPP/PFI family of contracts vary according to the nature and the size of the project and different legal forms can be encountered across different jurisdictions (Badr 2003: p.356).[194] This family of contracts is frequently referred to as "public works construction contracts" if one of the contracting parties is a government body.[195] This family of contracts includes a number of *stages* which are combined together in one contract. Such *stages* are normally identified into stages of finance, design, build, own, lease, manage, operate, co-operate (partnership) and

[191] "PPP" is an abbreviation for "Public Private Partnership"
[192] "PFI" is an abbreviation for "Private Finance Initiative" introduced by the UK government in 1992. Then it has been outlined in a DETR report in 1993(Ashworth 2001, p.166). The first project of such scheme was the "Cross-Channel rail link"(Uff 2005). It has been considered as one, albeit highly significant, form of the PPP(HM-Treasury 2000)
[193] "BOOT" refers to a family of contracts on its own which includes BOT, BOOT, BO, BOO, BLT, DBFO, DBOT and DCMF (reference is needed).
[194] See also the above note of (Abdalah 2013)
[195] The BOOT&PPP/PFI type of contracts can alternatively also be used in private law relationships between private entities with each other

transfer depending on the exact terms and conditions of the contract.[196] The nature, the size and the period of each *stage* differ from one contract to the other depending on a number of factors[197] and these are dictated by the strategic objective of the contracts according to the economics circumstances of the project. The feasibility studies dictate the ownership period and the operating period so that the project becomes profitable for the joint venture after recovering its expenses within the agreed period of time.[198]

Technically, BOOT/PPP/PFI contracts are not "traditional construction contract" in themself. They are wider contractual frameworks for dealing with "governmental construction contract" and their main goal is to provide public services with no additional expenses on the part of the government.[199] However, in Egypt, BOOT/PPP/PFI contracts can be regarded, viewed from different perspectives, as a "public contract" or a "private contract".[200]

Typically, in every PPP/PFI/BOOT contract, there should be an incorporated "traditional construction contract" which normally constitutes a significant part of the BOOT/PPP/PFI contract. However, the financial aspect (and related terms and conditions) is the main focus of the BOOT/PPP/PFI contract rather than the "traditional construction contract" itself. This

[196] There are a variety of forms of this type of contracts. The most common form is the "BOOT" which is normally used to refer to this family of contracts. This family of contracts includes (BOOT: Build own, operate transfer) , (BOOT: Build own operate transfer) , (BOO: Build own operate) , (BOR: Build operate renewal) , (BLT: Build lease transfer) , (BROT: Build rent operate transfer) , (BOLT: Build own lease transfer) , (DBFO: Design build finance operate) , (BFT: build finance transfer) , (LROT: Lease renewal operate transfer) , (MOT: modernise operate transfer) and (ROO: Rehabilitate own operate) (Abdalah 2013)

[197] The amount of construction works themselves depend on the size of project and the period or term of which the contract will remain effective depends on the capital investment directed to the project and the expected revenue and whether or not the government contributed with a definite percentage to the capital investment allocated to the project

[198] In most of the cases, the expenses required for the project and the diverse skills needed dictates the formation of the joint venture as it will be difficult for one company (even it is a large company) to execute the project.(Morton 2006, p.57)

[199] The PPP/PFI/BOOT is a legal mechanism on its own. Such form of contracts can be used by a private body for building or procuring its own projects

[200] A BOOT/PPP/PFI contracts can be regarded as "public contract" if the 3 criteria of public contracts exist.

perspective of the BOOT/PPP/PFI for "public works construction contracts" is based more on the financial focus of the need to provide the government bodies with a legal tool to relieve these bodies from the high cost required in providing public services. Regardless of the jurisdiction, the core terms and conditions of this family of contacts and its aim are mainly focused on providing the relevant government body with the required construction works at a reasonable price and quality (Hoxley 2001).

In that regard, Sarie-Eldin (1997) while commenting on BOOT contracts in particular states, noted that: "a BOT scheme is a mean to finance infrastructure projects and the public utility projects of the balance sheet of the government" (Sarie-Eldin 1997: p.125). Because of that, such family of contracts has been described as a "procurement model" (Tvarno 2006). The BOOT/PPP/PFI contracts can be regarded as a "funding mechanism" into which a "traditional construction contract" is incorporated.[201]

The BOOT/PPP/PFI type of contracts normally involve a joint venture or a "special purpose" company (Roe & Wallace 2004).[202] The joint venture aims to play a number of roles including being the employer in the incorporated traditional construction contract.[203] The breakdown of such contracts does not include the fact that the relevant government body appears as a direct employer in the traditional construction contract which is a stage between the joint venture or the SPV[204]and its contractor.[205] The contractor can be part of the SPV or any of its companies and can also be external contractor to the SPV.

[201] This depends on the wordings of the PPP/PFI or the BOOT contract.
[202]Sometimes referred to as "special purpose vehicle"
[203]According to the contract, its role is expanded later to act as a temporary owner as well as an operating body for the project prior to the final handover to the government body
[204]"special purpose vehicle" (Uff 2005) page 240
[205] The contractor sometimes is part of the SPV or part of the companies which constitute the SPV.

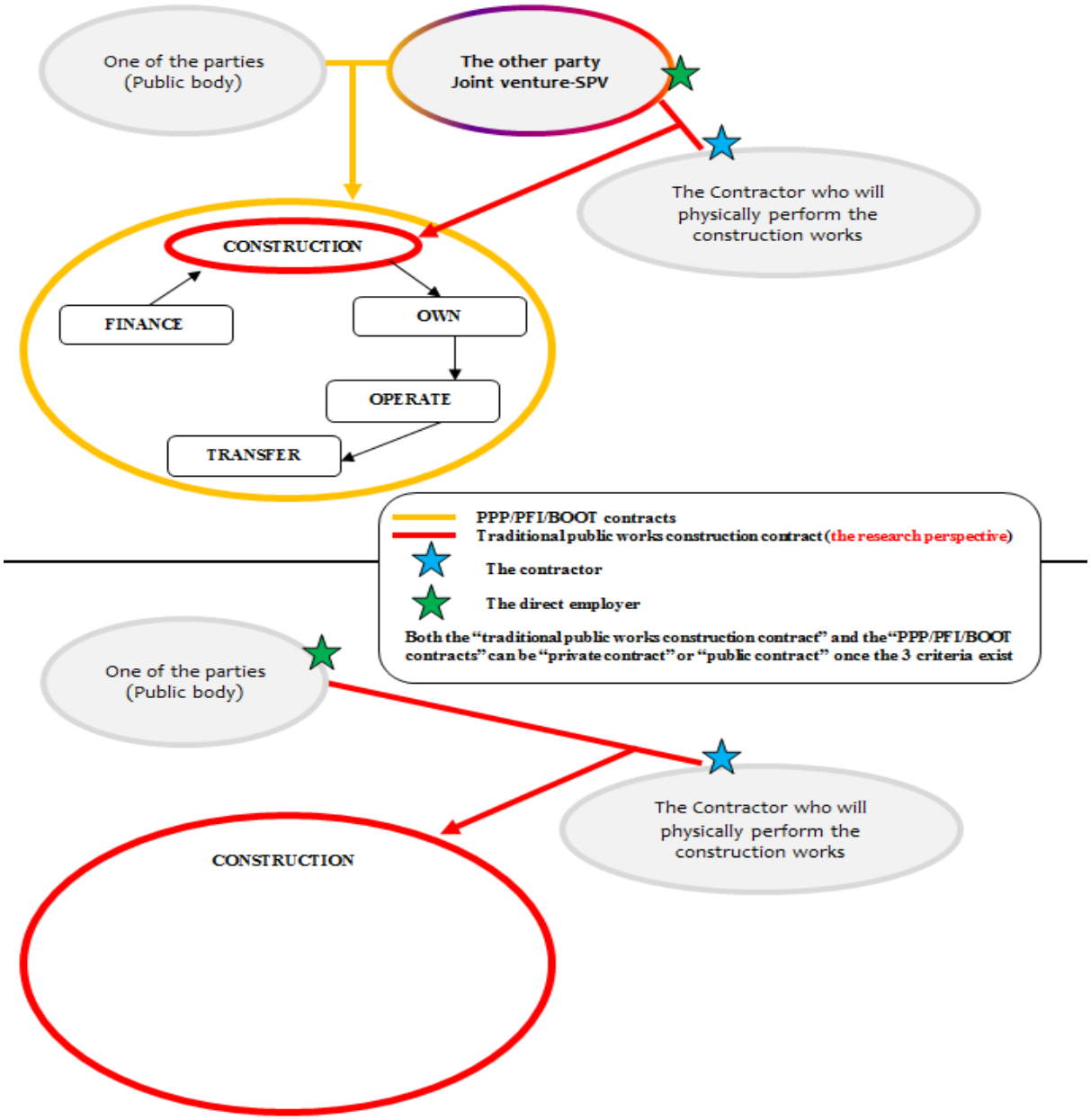

Figure 4: The research scope for "Public Works Construction Disputes"

The presence of a legislative and procedurally different set of rules for BOOT/PPP/PFI contracts is due to the fact that governments are keen to regulate "public works construction projects" in a way which is slightly different from that followed in "private works" construction projects. The aim of such separate regulations is to achieve the normal objectives of any project which, especially from the perspective of the government, is for its

execution to be effective in terms of "cost", "duration" and "quality" (Caniëls et al. 2012).[206] In addition to these objectives, the special regulations for "public works construction projects" aim to achieve a fair and just legal environment for the construction companies that aim to work (or are already working) in the public construction works sector of the construction industry and provide them with equal opportunities (Padhi & Mohapatra 2011).

Issues of delay in the progress of the construction works may arise from the traditional construction works contract included in the BOOT/PPP/PFI contracts. BOOT/PPP/PFI contracts will not involve a construction delay dispute, within this research's context, unless the relevant government body was a direct employer to in traditional construction contract included.

2.4.1.1In both the English and the Scottish jurisdictions

PPP/PFI form of construction contracts were introduced to the UK in 1992(Blanchard 2003). However, the growth of the usage of the PPP/PFI contracts in the UK had a poor start due to the lack of experience in the public sector between 1992 and 1997(Cartlidge 2006: p.201). The development of such contracts were motivated and dictated by the logic that one of the aims of government bodies as employer (or as a client from the construction industry's point of view) is to promote efficiency in this industry's operations(National Economic Development Office 1975: p4). In addition to that, the PPP/PFI schemes in the UK have been developed to assist governmental programmes to obtain value for money spent on public construction projects(The National Audit Office 2005). This is the main focus of these forms of contracts together with the fact that the associated focus of the PPP/PFI family of contracts

[206] This has been referred to as the project objectives triangle

is on the services intended to be provided to the members of public.

Although the PPP/PFI systems are now well developed in both the English and the Scottish jurisdictions, public bodies still stick to some extent with the traditional construction contracts where the public body acts as a direct employer. This is due to a number of reasons such as the availability of public fund and the project being less attractive for the private sector in relation to the profitability matter especially schools or public facilities in remote areas of the country and buildings relates to the sovereignty of the state.[207]

2.4.1.2In the Egyptian civil law legal system[208]

The reform of "governmental contracts" in Egypt over the last two decades has been driven by the post 1990s reform of the "public sector" as part of the government's strategy to liberalize the Egyptian economy and increase investment in the country's infrastructure by leveraging commercial knowledge, expertise and efficiency into the public sector(Emerging market intelegence 2011). Prior to this, "public works construction projects" were governed by the Civil Code of 1948. Like a number of developing countries, during the 1990s, development was carried out through BOOT contracts which are based on the Civil Code, as a way of combating the lack of the funding.

These developments have culminated in the enactment of new Public Tenders and Auction Act no. 89 of 1998 to govern "governmental contracts". In addition, these

[207]For example, while preparing for the building of the Scottish parliament, politicians in charge of the matter refused a proposal to build this project as a PPP/PFI contract. This is because of the symbolic nature of this building as it has been found that it is inappropriate to give this building for a private company for a number of years via a PPP/PFI contract where this private body becomes responsible for managing the building.

[208] According to the Egyptian civil law legal system, these contracts can be a "public works construction contract" only if three criteria found existing (see section titled: criteria for public contracts in this chapter) otherwise they are regarded private contracts made by a government body (Abdalah 2013)

developments have culminated in the enactment of a PPP Act no. 67 of 2010.[209] Under these legal provisions, the procurement of goods or services is to be undertaken through a competitive tendering process, competitive negotiation or, in special circumstances, through a direct agreement.[210] One of the main aims of the new PPP legislation of 2010 is to modernize the BOOT process for large-scale public infrastructure construction works and provide much clearer procedures for both local and international construction companies and investors. The new legislation streamlined the procurement procedures and it can at least be argued that it has delivered better value for the public purse.[211]

Although many critics (Ismael 2010: p.151) of the reform considered Law 89 to provide an adequate framework for the procurement of goods and services including large "public works construction projects", the government considered otherwise, citing its inadequacies for large-scale, complex public works construction projects.(Batiekh 2011: p.28) The new PPP Act is by no means a complete panacea to the challenges faced in the public works construction sector. The aim of this Act was to help attracting foreign investments towards public services. However, the Egyptian government should remain mindful that the process is potentially risky and costly, with no guarantees that the private sector will be able to deliver projects on time and within budget. This could have disastrous consequences for government budgets, with the potential for increased long-term debt and pressure on sovereign-ratings that could stem from a failure to make the necessary payments timeously. Nonetheless, in the

[209]Some writers regard that the PPP is not completely a new type of contracts to the Egyptian legal system as they consider that the Suez canal project in Egypt was one of the early forms of PPP projects (Tang et al. 2010).

[210] The direct agreement is only for contracts under a particular limit. It used to be 300000 Egyptian pounds (about 30000 sterling pounds) before the issue of the Egyptian PPP act and now it is 10 million Egyptian pounds according to the latest amendment of act number 48 of 2014. Direct agreement is only made by the senior executive personnel who are authorized by the law. The prime minister can exceed this limit in the case of emergency

[211] In relation to the exemption of the public purse from a large investment in a public service, evidence of a successful application of this Act is the construction "water waste station" of the "New Cairo" in 2010. This project has been constructed by the joint venture between an Egyptian construction company "Orascom" and a Spanish construction company "Aqualia" (Orascom 2010)

last few years, many governments in developing countries such as Angola[212], Kenya[213]and Croatia[214] have introduced substantive procurement reforms, mirroring the approach in Egypt.

Within the Egyptian civil law context, the first perspective (i.e. the BOT/PPP/PFI perspective) may limit or expand the jurisdictional issues of the different courts in relation to their capacity to hear the disputes.[215] This in turn may have implications on the possibility of the courts imposing specific set of rules on disputes among those which might exist in the legal system. For example, within the Egyptian civil law context, the court of administrative judiciary can hear a dispute that arises from a BOOT or a PPP agreement only if the three criteria of "public contract" exist.[216] However if part of the dispute is related to a "construction contract" attached to the BOOT or the PPP agreement of which the "construction contract" attached involves two parties none of whom is a public body, the court will deny its jurisdiction[217] to entertain a dispute on this part of the agreement in particular.

2.4.1.3The importance of an overview of PPP/PFI/BOOT contracts

The description of the term "public works construction contracts" would depend on the research perspective from which one intends to deal with the issue, as the term has different

[212] Angola PPP act of 2011
[213] Kenya PPP act of 2012
[214] Croatia PPP act of 2012
[215]Depending on whether or not the court has considered the (BOOT&PPP/PFI) contract as a "public works construction contract"
[216] The three criteria are: First, a government body should be at least one of the contracting parties. Secondly the purpose of the contract must be related to a project or a service which provides the public with public service(s). And finally, the provisions of the contract should include at least a condition which is different from its counterpart provision found within similar private contracts. See the criteria in a section of chapter 2 title: Criteria for Public Contracts
[217] The court then should refer the matter to the commercial court according to article 110 of the Egyptian Civil Litigation Procedures act number 13 of 1968

meanings in different contexts Shedding light on the first perspective of the PPP/PFI/BOOT contracts feeds into outlining the background, the scope and the limit of the research's perspective. What is more important is that within the Egyptian civil law legal system, a PPP/PFI/BOOT contract as a whole can be regarded as a "private contract" or "public contract" depending on the (non-) existence of the three criteria mentioned later in this chapter.[218] Consequently the courts of the Egyptian Council of State "Conseild'État" will apply the special approach for "public contracts" to the PPP/PFI/BOOT family of contracts. The same thing applies to the traditional construction contract (incorporated into the PPP/PFI/BOOT) if it meets the aforementioned criteria.[219]

Finally, in describing and reviewing PPP/PFI/BOOT contract, it is also important to state that, within the three jurisdictions of concern in this research; the PPP/PFI/BOOT contracts have been treated differently in terms of the pre-dispute perspective. The main motivation for such distinction is to provide the government with value for money as it relates to cost, quality and time. However, after the dispute arises and while the contract is being performed, the distinction in the substantive disputes resolution between the "public contracts" and "private contracts" starts to operate only in the Egyptian jurisdictions. This will be outlined in the following section.

2.4.2 The second perspective (substantial dispute resolution)

The *second* perspective from which the term "public works construction contracts" can be dealt with is the "traditional construction contract" perspective where the execution of the contract, in terms of the construction and building process itself, is the focus. Of concern in

[218] See the criteria in section titled: Criteria for Public Contracts in chapter 2

[219] i. e. the courts of the Council of State "Conseild'État" apply the special approach for "public contracts" to the dispute matter

this research is the situation where the public body acts as a direct employer in a straightforward sense, and sets out a legal relationship with a contractor where the contractor's duty is to execute the required public construction works and do what is necessary to have the construction works accomplished. In simple terms, this research deals with the perspective where a concurrent delay dispute arises from the performance of a "traditional construction contract".

Within this prospective of the "public works construction disputes", in England and Scotland, disputes are being dealt with in the same way in terms of the substantive dispute resolution regardless of the contract being a "private" or "public works construction contract" and regardless of whether or not the contracting party is a private or a public body.

Within this perspective both the English and the Scottish jurisdictions on the one hand do not differentiate between "private" and the "public works construction contracts". On the other hand, the Egyptian civil law legal system makes a degree of legal distinction between "private" and the "public works construction contracts" as the Egyptian jurisdiction deals with "public works construction disputes" within the broader concept of "public contracts". While the in England and Scotland comparators jurisdictions of this research study uses the term "public works construction contracts" to refer to contracts of housing projects and public sector other than housing projects such as channel tunnel projects, airports projects and motorways project (Shutt 1997, p102), only similar projects which meet the mentioned three criteria fall within the concept of "public works construction contracts" in Egypt.

2.4.3 The difference between Private and "Public Works Construction Disputes"

The description of the Egyptian special approach to "public works construction contracts" should start with a few words on the concept of "public contracts". The special approach to "public contract" within the Egyptian legal system applies to all types of contracts. This special approach is clearer regarding the different types of "public contracts" however the scope and the limit of the special approach for the "public contracts" in the Egyptian legal system is not clear when it comes to the "public works construction disputes".

In this section an analysis will be undertaken in respect of the current situation regarding "public works construction disputes" in the Egyptian legal system. This will begin with analysing what provisions govern "public works construction disputes" in the Egyptian legislative structure. This will be followed by an analysis of the issue as to what extent the broader concept of public contracts affects the approaches taken by courts which govern the "public works construction disputes". The aim is to examine whether or not such a broader concept of "public contracts" becomes slightly less harsh against the private contracting party when it specifically concerns "public works construction disputes" due to the nature of construction industry itself.

As mentioned, the justification of the special approach for public contracts within the Egyptian context takes into consideration the fact that the public body is a representative of the interest of the public. In the Egyptian case, although the differentiation between private and public contractual disputes was imported into Egypt from the French legal system before 1952[220] as alluded to earlier in this chapter, the post 1952 judiciary has reinforced the concept of "private" versus "public" in the economic context including in situations of economic

[220] 1953 is a millstone year in which Egypt was transformed from a kingdom to be a republic state. Prior to 1952 the Egyptian economy was a capital liberal one with strong connections with economies of Western Europe and Italy. While during the late 50th and 60th, the economy became close to the Russian and Eastern European module.

contractual disputes. In July 1961,[221] a massive nationalization plan was put in place which produced an economy in which the state controlled or owned all significant means of production(Waterbury 1993: p.60). This included the majority of the construction sector, as well as infrastructure providing public services such as power stations, ports, airports and railroads (Waterbury 1993: p.62). This led to the notion of the state's responsibility to provide the public with public services to be deepened to some extent in the legal system, which fact has been reflected in a number of judicial decisions in the 1960s and 1970s.

Although the Egyptian economy since the early 1990s gradually departed from being a communist or socialist economy, it still has some features of the 1960s and 1970s era in the construction industry. For example, until today, the main construction companies in Egypt are "government" owned companies[222] besides a number of emerging private construction companies.[223] The norm in communist counties used to accept a great deal of state intervention in the industry (Shutt 1997: p.20). In a situation like this where the state can intervene in the industry based on the retained features of a socialism background and at the same time it can act as an employer in construction contracts, the question of what the limits are of the state as an employer in this context, is relevant in order to avoid negative implications for the concept of justice in this industry and the concept of justice in the society in general.

2.4.3.1 Legislative conditions governing "public works construction disputes"

Regarding the special approach of "public contracts" in Egypt, while an established

[221] The socialist decree of 19th of July 1961
[222] Such as "The Arab Contractor" construction company and "Hassan Allam" construction company
[223] Such as "Orascom" construction company

system of codified sets of rules does not exist, previous "*Conseild'État*" judicial decisions in this regard do have a degree of persuasive authority. Thus, the leading judgments issued by the Egyptian supreme administrative court of the Egyptian "*Conseild'État*" played a crucial role in developing the Egyptian version of "public contracts". However, it is relevant to shed light on the codified sets of rules which govern governmental contracts" at large as they are applicable to public contracts as well.

2.5.5.1.1 Under the Egyptian Civil Code (No. 131 of 1948)

The current Egyptian Civil Code of 1948 regulates contracts in general.[224] This includes construction contracts whether they fall within the public or the private domain.[225] Although there is the Public Tendering and Auctions Act No. 89 of 1998 and the the Public Private Partnership (PPP) Act No. 67 of 2010, the Code remains the main source of legal rules applicable to contracts whether of a private or public nature.[226] Granted that it is often regarded as an old legislation compared to Act No. 89 of 1998[227] and Act No. 67 of 2010,[228] government bodies are still able to utilize the public franchise section in the Civil Code for the procurement of public sector construction projects, though it is quite rarely invoked nowadays.

Public utility franchises are regulated by articles from 668 to 673 of the Egyptian

[224] The current civil law code of Egypt is Act no. 131 of 1948 which was drafted by the eminent known Egyptian professor of law Abd El Razzaq Al Sanhouri who studied law in France (Hanafi 2005: p.444).
[225] The Egyptian Civil Code of 1948 has made a difference between what is called the "un-named contracts" and the "named contracts" of which specific regulations are added to some of these contracts. The construction contract is among the "named contracts".
[226] For private works construction contract, only the construction contracts related regulations of the mentioned civil code of 1948 regulate them, while a number of other Acts contribute to the regulation of the public contracts. (i.e. the Public Tendering and Auctions Act 89 of 1998 and the Public Private Partnership PPP Act 67 of 2010)
[227] It will be discussed in the next section
[228] It will be discussed in a following section

Civil Code. Under these articles, it is not necessary for the contracting parties to be in the form of a company, so individuals can apply for such schemes.[229] The main rules governing this section regulate the relationship between the service provider and the customer, as well as the price for the provision of the service. There are two scenarios that can occur under this" public utility franchise arrangement". The first is to manage and operate an existing public service carried out by a government body under the necessary terms and conditions of a contract with the government body. The second scenario includes "public construction works" being carried out by the license holder under the necessary clauses in the "government contract" entered into with the relevant government body. The application of the above public franchise section was hitherto somewhat limited, until it began to be used as a basis[230] for regulating BOOT contracts in the late 1990s (Sarie-Eldin 1997: p.126).

2.5.5.1.2 Under the Public Tendering and Auctions Act No. 89 of 1998

This Act is regarded as the main legal legislative tool for "public contracts" including "public works construction projects" carried out by different public government bodies in Egypt.[231] The 1998 Act regulates "public works construction projects" including the related procurement system.[232] This Act is usually applied in conjunction with a bye law governing public works.[233] Since its introduction, there has been much debate about its limitations

[229] The counterpart scheme within the Egyptian Public Private Partnership act of 67 / 2010, projects are limited to companies only

[230] Since the inception of the BOOT type of contracts in Egypt, the public franchise sections of the "Civil Law" of 1946 has been regarded a sufficient legal basis for the mentioned type of contracts. Such approach has been adopted by the eminent professor of public law professor Mohamed Badran of Law School, Cairo University.

[231] This Act replaced a previous version of an act with the same name (Act no. 9 of 1983) and replaced "the execution of the economic developments plan" Act (Act no. 147 of 1962)

[232] The procurement system for "Public Works Construction Contracts" has been addressed by the Public Tendering and Auctions Act no. 89 of 1998 under articles from 1 to 26

[233] This bye-law is represented by articles from 1 to 104 of the finance minister's decision no. 1367 of 1998 (issued in 6th Sept. 1998)

within different government bodies and within the industry.[234] Much of the debate was associated with the practical problems arising from the process of implementation and its coverage as it relates to the provisions of some other legislation including the Civil Code of 1948.[235] To address much of this confusion, the Egyptian Supreme Administrative Court[236] established an approach to the effect that, with respect to the governance of government contracts on construction works, the provisions of the 1998 Act would be applied unless the Civil Code of 1948 had been explicitly referred to in the contract.[237]

2.5.5.1.3 Under the Public Private Partnership (PPP) Act No. 67 of 2010

Public sector reform in Egypt ended with this new legislation, the PPP Act, meant to govern the newly introduced PPP legal process for government projects in 2010. One of the main aims of the new PPP legislation was to modernize the process of public infrastructure projects and paving the way for international investors who are familiar with the new PPP process as against the former process that existed under the domestic traditional construction contracts and the domestic versions of the BOOT projects (both being governed by the Tenders and Auctions Act of 1998 and the Civil Code of 1948). In accordance with the new PPP Act the traditional construction contract can be incorporated within the PPP contract in two scenarios. The first is when the relevant government body is involved as a direct party to

[234] The debate was about issues such as whether or not the Act applies to the contracts made by the Egyptian Central bank (judicial decision made by the advisory section of the *Conseild'État*(Council of State) in 21 April 1999 "file number 16/2/35" suggested that it applies to the Central bank) (Hend & Hassan 2003: p.12) The debate also included whether or not the Act applies to the urban communities authority under act number 59 of 1979.

[235] The overlap is mainly with the Civil Code of 1948 as well as the Local Governorates Administration Act no. 43 of 1979 and the New Urban Communities Act no. 59 of 1979.

[236] In the Egyptian legal system, there is no committee to review the existing legislations as the "the law commission" in the UK so the overlap here was raised by the courts while investigating related disputes

[237]Case no. 30952/56 – 31314/56 Judgment date 14th September 2010

such internal traditional construction contract in association with the SPV.[238] The second scenario is when the government body is not a party to the traditional construction contract but a party to the PPP contract. For such internal traditional construction contract to be regarded as a "public contract" within the Egyptian civil law legal system, the first scenario should be the case once the other two criteria earlier discussed are found existing.[239] As for the second scenario, one of the applicable criteria is missing as the government body is *not* a party to the internal traditional construction contract.[240]

2.4.3.2 Implications of the Egyptian approach to "Public Contracts" on "Public Works Construction Disputes"

This section analyses the implications of the Egyptian version of the "civil law" special approach to "public contracts" on "public works construction disputes". It will also include an analysis of the extent to which the differentiation between private and "public contracts" in terms of substantive dispute resolution, within the Egyptian legal system, applies in the context of "public works construction disputes". This analysis adopts the methodology of simultaneously outlining the principle that applies to "public contracts" and to "public works construction contract" specifically. These analyses constitute part of the contribution to knowledge made by this research as they have never been undertaken before. The analysis will feed into the final argument of this thesis as to how the situation of "Concurrent Delay" should be dealt with in the Egyptian civil law legal system when it arises

[238] An abbreviation for the "Special Purpose Vehicle" which is a company formed to Act as a knot of that connects the overall process of the PP process including the construction works and the maintenance and the management of the providing of the services intended to meet a particular demand of the public

[239] The three criteria are: First, a government body should be at least one of the contracting parties. Secondly the purpose of the contract must be related to a project or a service which provides the public with public service(s). And finally, the provisions of the contract should include at least a condition which is different from its counterpart provision found within similar private contracts. See the criteria in a section of chapter 2 title: Criteria for Public Contracts

[240] When it comes to the PPP contract as a whole, the PPP can be a "public contract" once the three criteria found existing. However the PPP as a whole is not a "traditional construction contract".

out of a "public works construction contract".

2.5.5.2.1 The amendments

Contracts, including public contracts, become binding immediately after they have been signed by both parties unless the parties agree otherwise.[241] When the contract becomes enforceable, the parties cannot unilaterally alter or change any of the terms or conditions of the contract. However, in the Egyptian civil law jurisdiction, the relevant government body has the right to make changes to the contractual "terms and conditions" in "public contracts" without the consent of the other contracting party.[242] This can happen during the performance of the contract. This right has been justified by connecting it with the idea of the public authority and the idea of sovereignty of the state and the idea of the interest of the public in both Egypt and France (McKendrick 2013: 28). This principle applies within "Public Contracts" special approach regardless of whether or not there was a term in the contract that gives the government body this right (Khalifa 2009: p.21). This is because the right of the relevant government body to amend the contract has been regarded by the Egyptian Administrative Supreme Court as one of the domestic "public order" rules.[243] This means, in the context of "civil law" legal systems, that the government body itself cannot agree to waive this right in an agreement whether in a contractual context or otherwise.[244]

This possibility to change or amend one or more of the terms and conditions of the contract can be a ground for a later case for compensation raised against the government

[241]That is the parties agree that the enforcement of the contract depends on the occurrence of a specific future event

[242]Egyptian Supreme Administrative Court, Case no 882 / 10 , Judgement date: 2nd of March1968

[243] That is public policy. (see judgement of case number 1006 judicial year 42 judgement date 4/11/1998)

[244] Otherwise refers to administrative legal actions other than the "public contract" such as the "administrative decisions" and the issue of "bye-laws".

body. The judge then has his (or her) own discretion to stipulate a compensation or not and to evaluate the damages and loss resulting from the amendment made by the government body. The contracting party can ask the court to consider the change made by the government body as unenforceable. This can be accepted only if the way the change was made does not precisely match the laws or internal rules of the government body itself.[245] This means that the government body's internal rules and bye-laws regarding the contracting and procurement process should be strictly followed by the government body otherwise this will entitle the contractor to be exempted from any obligations in relation to the changes.

The latter point does not affect the right of a government body to make changes to the terms or conditions of a "public contract". A limited number of law professors[246] in Egypt argue that this principle is accepted with respect to public contracts but it is not fair when, specifically, it comes to "public works construction contracts". They argue that at least there should be some legislative limits to the applicable of the principle when it comes to public works construction contract. However this "amendment" principle is still one of the main features of the judicial special approach to "public contracts" and remains applicable with the same degree in "public works construction contracts".

2.5.5.2.2 The termination of the contract

In England and Scotland, if one of the parties substantially fails to perform the contract, the other party is entitled to terminate the contract (Powell-Smith & Furmston 2000).[247] Similarly, the general principle in Egyptian contract law is that (unless agreed

[245]Egyptian Supreme Administrative Court, Case no 845 / 15 , Judgement date: 13June1996
[246] Professor Tharwat Badawi and Professor Kamal Wasfi (Badawi 2005)
[247]See also the case of: Tannenbaum and Downsview Meadows Ltd v. Wright-Winston Ltd [1965] 49 DLR (2d) 386

otherwise) both parties have the right to terminate or end the contract if the other party does not perform substantially the main duty imposed on the latter by the contract. However, unless agreed otherwise, this has to be done via a case brought before the court. The judge then has two options. The *first* is to give the other party extra time or the chance to perform the obligations under the contract. The *second* is to meet the request and terminate the contract and apply the consequences of that.[248] In the case of a "public contract", this rule is slightly different(Okasha 1998: p.250).The government body can terminate the contract in this case[249] without raising the matter to the court.[250] The case is the same in many other civil law countries (Venoit 2009: 11). The other side in relation to the termination issue is that, unlike the government body, the private party involved in a "public contract" has no right under any circumstances to end or terminate the contract from its side without the consent of the government contracting party. Such private contracting party still has to ask for termination of the contract via a judicial case brought to the court.

2.5.5.2.3 The defence to "non-performance"

The general rule in Egyptian contract law is that the parties to the contract can raise the defense of "non-performance of the contract" and suspend the execution of the construction works (Peel 2011). The same rule applies in England and Scotland as well (Chappel 2002, p.277). In the Egyptian scenario, such a rule exists in private contracts under article 161 of the Egyptian Civil Code of 1948. It states:

> "In the contracts which are binding for both parties[251], in case that one of the obligations is due, both of the parties can suspend carrying out his obligation if the

[248] Article 157 / 2 of the Egyptian Civil Code no. 131 of 1948
[249] i.e. if the other party did not perform the main duty of the contract
[250] Egyptian Supreme Administrative Court, Case no 1019 / 9 , Judgement date: 10th of December1966
[251] The legislators used this wording because under the civil law there are contracts which are binding for only one of their parties such as the different types of donation when it takes the form of contracts (article 493 of the Civil Code no. of 131 of 1948)

other party did not perform his."

However, this principle is not applicable in the case of "public contracts" (Mabrook 2001). Unlike the situation in private works construction disputes, the contractor to a public works construction contract is not allowed[252] to make use of a defense of "non-performance of the contract". In case no. 1027 of the judicial year 15 Judgement date 28 January 1978, the Egyptian Supreme Administrative Court shed light on the reasons behind such approach to public contractual disputes. In the mentioned case, the court stated that:

> "The public contract has a specific nature. Such nature is found where a specific public service is aimed to be provided by this contract. This slightly higher weight of the public interests compared to the interests of an individual justifies the approach. While the interest of the private parties of a private contract is exactly the same, the situation is not the same in "public contracts". This idea is what stipulated the following rule which is the default in the execution of public contracts. A contracting private party must not suspend the works - or even perform in a way less than it should be - under a claim that the governmental contracting party has not done a specific obligation under the contract."

According to this judicial special approach for public contracts, the private contractor cannot suspend the works as a remedy. This rule used to be applied in all types of "public contracts". However, in 1997, the Egyptian Supreme Administrative Court[253] limited the afore-mentioned approach to some extent in the field of the "public works construction disputes". The main disputing point in the mentioned case was in relation to delays in the interim payments. The court held that in "public works construction contracts" in particular, such a rule exists[254] but if the government body's failure to perform the obligation of paying interim payments was to the extent that the contractor will definitely become "completely

[252]Egyptian Supreme Administrative Court, Case no 767/11 , Judgement date: 5th of July1969 - Egyptian Supreme Administrative Court, Case no 618/40 , Judgment date: 9th of February1999 - Egyptian Supreme Administrative Court, Case no 1734/39 , Judgment date: 4th of April 2000 - Egyptian Supreme Administrative Court, Case no 7353/44 , Judgment date: 12th of December 2000 - Egyptian Supreme Administrative Court, Case no 5959/44 , Judgment date: 26th of January 2001

[253] In case no 9983/41 judgment date: 6th of May 1997

[254]That is a contracting private party cannot suspend the works under a claim of non-performance against the government contracting party for not carrying out a specific obligation under the contract

incapable" to continue the execution of the works, then the contractor can stop the works under article 161 of the Civil Code of 1948. This much more lenient approach (compared with the original harsh one) is due to the specific nature of the construction industry. There are a number of consequences and implications resulting from this new position.[255]

2.5.5.2.4 The debts

In public contracts, the state has a superiority regarding its debts against the private contracting party and it has the power to deduct its debts by different means other than means of litigation via courts. Regarding this rule, the same applies to public works construction contracts. There is no difference between the "public contracts" in general and the "public works construction contracts" in particular.

2.5.5.2.5 Procedures issues

According to article 55 of the Egyptian *Conseild'État* (Council of State) Act no. 47 of 1972, when a government body is about to enter into a "public contract", it should *refer* the matter to the advisory department at the *Conseild'État* (Council of State).[256] The obligation derived from this article is only the referral of the matter. Therefore, if the public body does not take into consideration any or all of the points raised by the mentioned advisory department as a reply to such referral, there will be no consequences. In practice, government bodies take most of the points (if not all) into consideration before taking the final draft of the public contract to the next stage. The advisory department while dealing with this matter

[255] This feeds the analysis on the expected position on "Concurrent Delay" and the description of the concept of justice in public works construction disputes outlined in section titled: The concept of justice within the context of "Concurrent Delay" dispute number: 6.5.1 in chapter 6

[256] This applies if the value of the contract exceeds 5000 Egyptian pounds (Equivalent to around 500 sterling pounds) so it applies to nearly all "public works construction contracts" as nearly all construction works exceeds this limit.

works only on whether or not the draft contract is compatible with the laws. It cannot intervene in the issue of the "contract strategy and evaluation".[257] This applies to the "public works construction contracts" with the same degree.

Within the Egyptian civil law legal system, *arbitration* in "public contracts" is different from arbitration in the private ones. In order to include an arbitration clause in a public contract, there should be permission from the minister who is responsible for the contracting government body.[258] In addition to this, the court which supervises the arbitration process in public contracts is the court of the administrative judiciary at the Egyptian "*Conseild'État*", while the court which supervises arbitration in private contracts is one of the district courts that is outside the Egyptian "*Conseild'État*".[259] Again, this applies to "public works construction contracts" with the same degree.

In terms of the judicial *jurisdiction* to hear a dispute, for "public contracts", the courts of the "*Conseild'État*" (Council of State) have the exclusive judicial jurisdiction to hear the case.[260] This applies to the "Public Works Construction Contracts" with the same degree.

2.4.4 Appraisal

Although the Egyptian legal system puts relatively heavy pressure on the private contracting party as against the public body based on the theory that the government body

[257] Report no. 443 date 22/6/2003
[258] This is according to article number 1 of Act no. 9 of 1997 (which is an amendment to the Egyptian Arbitration Act no. 27 of 1994)
[259] This is according to article 9 / 1 of the Egyptian Arbitration Act no. 27 of 1994
[260] This is according to article number 190 of the Egyptian Constitution and according to article 10/11 of the"*Conseild'État*" (Council of State) Act no. 47 of 1972.

represents the interest of the public and is under the necessity of providing public services in a continuous and sustained manner. The difference in treatment of the special approach for "public contracts", it is argued, is that it tends to help achieve a degree of balance between the contracting parties and bring them to state of near-equality in terms of burden as it relates to the nature of "construction industry". As discussed above, the judicial tendency in relation to "defense of non-performance" has been lightened to some extent when it comes to "public works construction dispute". Also from another perspective, the implication and the effect of any "problem" which might emerge during the performance of the construction contract on providing the public with public services in a continuous and sustained manner is relatively different from other types of "public contracts".

There is additional evidence, from Egyptian environmental law, that supports the fact that the Egyptian legal system deals in a more lenient manner with "public works construction contracts" compared to other "public contracts". This can be seen from analyzing the legislative policies for the protection of "air" and the "marine life" in the Egyptian Environmental Act.[261] The provision of article 49 when analyzed in conjunction with section 1 of article 90 of the Act, reveals that the legislators of the lower house of the parliament made an obvious distinction between the activities of government ships and the private ones (whether owned and operated by a local or a foreign private body or entity) while they did not make any distinction between public and private construction in this regard.

Article 49 of the above mentioned Act made a distinction between the privately

[261] Act no. 4 of 1992 promulgating the Egyptian Environmental Act

owned ships and the publicly owned ships (which move in the internal waters[262]or in the exclusive economic zone).[263]The distinction is that the first paragraph of this article particularly mentions the privately owned ships (regardless of the nationality of the owner). This paragraph stipulates a clear prohibition of pollution of the environment of the sea by throwing "oil" or "blend of oil". The "consequences" if the described pollution occurs has been stated in article 91 which provides compensation as well as a criminal punishment. However, the second paragraph of this article "49", particularly that which deals with "publicly" owned ships states that the publicly owned ships "should" take precautionary measures to avoid polluting the above mentioned waters.

In the same legislation, there is no difference between the private and "public construction works" in all of the "construction works" related obligations stipulated in the Act. These obligations can be summarized in the following points.

1- In section 1 of article 19 of the Egyptian Environmental Act of 1992, a rule has been stipulated that for any construction works, whether the employer is a private or government body, the employer should prepare and serve a full study of the environmental effect of the intended project to the government.
2- In article 43 of the Egyptian Environmental Act of 1992, a rule has been stipulated that the executors of any construction project whether the employer is a private or public body, should take all the necessary precaution to prevent the pollution of the air.
3- In article 69 of the Egyptian Environmental Act of 1992, a rule has been stipulated that the executors of any construction project or a building whether the employer is a

[262] Includes the contiguous zone and the territorial water - the distance of 24 nautical miles from the sea coast line according to the United Nations International Convention on the Law of the Sea 1982
[263] The exclusive economic zonerefers to the "Continental Shelf" - the distance of 200 nautical miles from the sea coast line according to the United Nations International Convention on the Law of the Sea 1982

private or public body, should not dispose of polluted material or untreated liquids in a manner that may cause pollution to the Egyptian seashores and the direct neighboring seashores.

4- In article 70 of the Egyptian Environmental Act of 1992, the legislators provided an exception to the rule in article 69 stated above to the effect that if it is in accordance with the nature of the relevant construction works for the Egyptian seashores and the direct neighboring seashores to be unavoidably polluted by materials therefrom, the employer should prepare and serve a full study of the environmental effect of the intended construction project to the government and should provide for purifying devices for these wastes. Within this obligation, the Act again did not make any distinction as to whether the employer is a private or public body.

5- In article 73 of the Egyptian Environmental Act of 1992, it is stipulated that any construction project (whether the employer is a private or public body) should be away from the line of the Egyptian seashores by 200 meters unless special permission is granted by the environmental department of the government. In this regard, no distinctions are made by the bye-law of this Act between public and private buildings.

6- Article 74 has stipulated a ban for doing any action[264] that may change the line of the Egyptian seashores unless a special permission is granted by the government and the environmental department of the government. Again, in this regard, no distinction is made between public and private buildings.[265]

The implication of the above is that the publicly owned ships have been given better and special status in practical sense to avoid the high compensation that might be stipulated by the courts against the public body which owns and operates the ships that might be

[264] This includes any construction works
[265] Within the meaning of "action"

responsible for environmental pollution. This, basically, is because the ships work for the interest and the benefit of the public. This confirms that the legal system tends to deal with public works construction the same as the private works construction when there is no point to differentiate.

In both English and Scottish jurisdictions, the non-existence of a similar approach to the "public contracts" has to be reconsidered. The existence of such approach in any legal system will help to allow more accurate and realistic approaches to deal with "public works construction projects". It also allows further steps to be taken to protect public funds when it is used for "public works construction projects". For example, in the Egyptian civil law legal system, considering the special approach to dealing with "public contracts" as outlined above, the legal system developed the rule of "tender priority". This rule was developed by a judicial report from the "advisory department"[266] of the *Conseild'État* (Council of State) and it has subsequently been incorporated[267] into the written codified set of rules which govern the legal system in this regard particularly in articles 78 and 82 of the finance minister's decision number 1367 of 1998.[268] The latter decision is the bye-law of the Tenders and Auctions Act no. 89 of 1998.

"*Tender priority*" rule, within the context of construction works, means that the winning tender for the public construction job must continuously be the best for the job among other tenders from the beginning of the works until the end of the project. An explanation of how the rule works is as follows:

[266] Advisory report number 443 decided in 5th of April 1989 – approved in the 30th of April 1989 – files number 43 / 112 / 306 and 44 / 112 / 306

[267] This rule has been developed by the Egyptian *Conseild'État*(Council of State) within the notion of "public contracts", however while being stipulated by the mentioned bye- law no. 1367 of 1998, it has been applicable for all governmental contracts whether a "public contract" or not

[268] The finance minister's decision number 1367 of 1998 issued in 6th Sept. 1998

If the contract for a "public works construction project" includes for example 4 or 5 sections all of which involves developing a relatively large piece of land. This entire project is governed by one construction contract[269] and the sections may be buildings such as a medium size bus station, a shopping mall, a sports center, an elderly care home, a number of dwellings or social houses.[270] In this situation it might be highly expected that the employer (i. e. the government body) during the actual performance of the contract will ask for one of the sections, such as the houses or flats, to be duplicated. The Tender priority rule is that: if as expected, the extra construction works has been ordered by the employer as a variation during the actual execution of the work and this has led to the total value of the work (after the extra work have been ordered) becoming higher than the total cost of the second tender[271] including the cost of the extra construction works, then the contractor is entitled only to the cost of what the second tenderer was going to cost the government body in case the second tenderer won the job.

[269] There is another related rule developed also within the "public contracts" approach in the Egyptian civil law system that the contract in a case like this (works can be divided into separate sections), the public contract cannot be divided by the public body into a number of contracts of the number of the sections or parts that can be identified as single parts of the project on their own. This rule performs as a general principle within this context. As an exception for that, the contract can be divided only if this will lead to any monetary savings for the public money

[270] Normally this rules applied within the works sections of the same single building or the same infrastructure project which leads to that the rule to be applied in a complicated way but for the purpose of explaining the rules in a clear and simple way, the above simple example has been adopted

[271] The second tender which came second in the competition of the tenders prior to the contracting stage

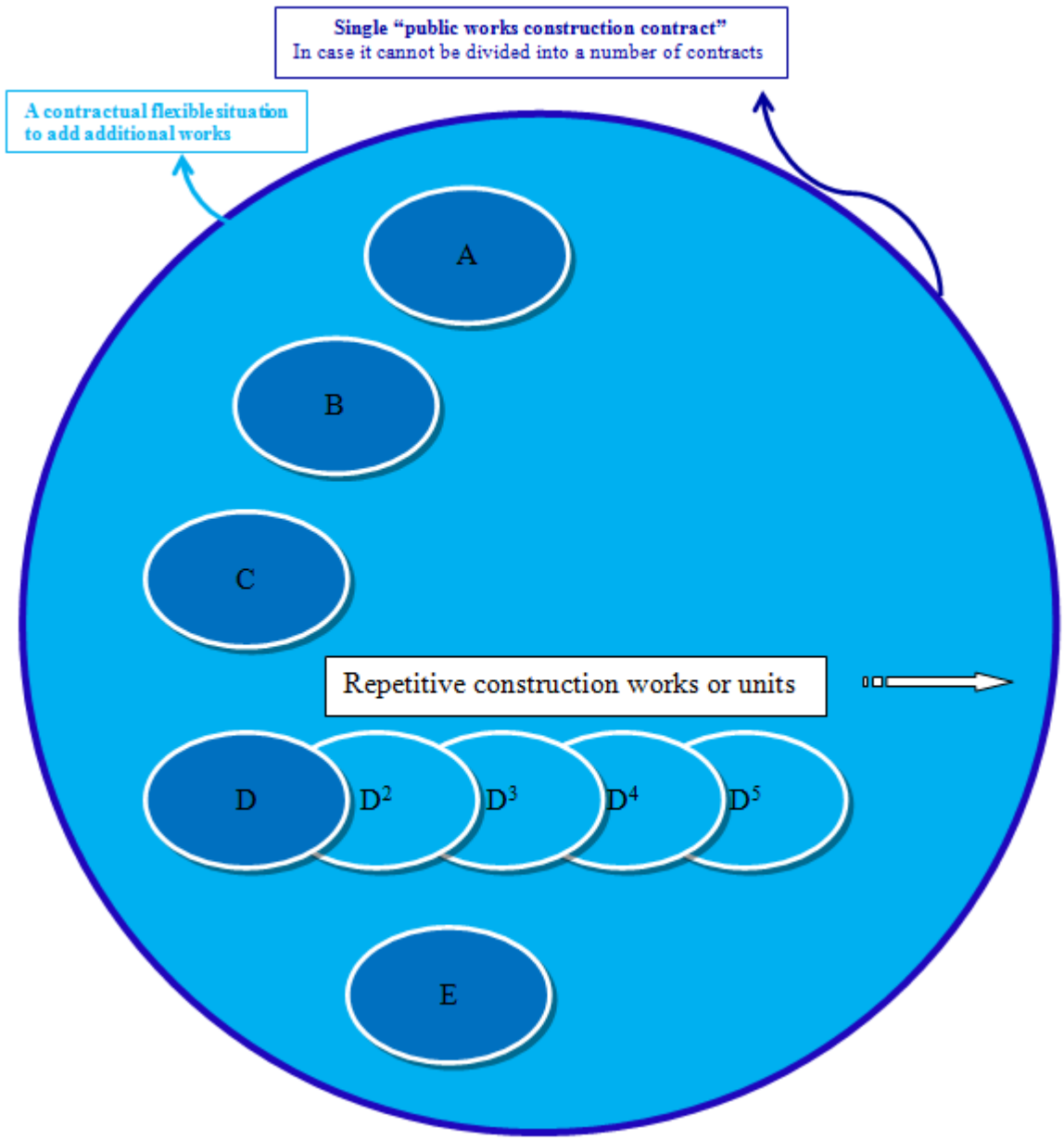

Figure 5: Rule of "Tender Priority"

A, B, C, and E can be any section of the construction works such as bus stop, a shopping mall, a sports Recreation Centre, service or food court. while D is a section of the construction works of which duplications is expected to be instructed by the employer while the construction works are progressing.[272]

[272] i. e. under the relevant additional works or variation clause of the construction contract

The aim of this rule is to adequately protect public money involved in the construction works, and to avoid the possibility of that the contractors to taking undue advantage of the system by reducing the cost of one or more of the sections other than section D (which the contractor is most likely going to be asked by the employer to repeat or duplicate during the actual course of the execution of the construction works) in order to win the contract. This is a practical example of the Egyptian civil law approach to "public works construction contracts" which might also help in saving the public fund should it be introduced into both Scottish and English legal systems.

There is no similar rule in both the Scottish or English legal system as they deal with both "public contracts" and "private contracts" in the same way. In Scotland and England, there is no deduction from the project's final cost in case the above mentioned situation occurs. The comparison between the specific approach to "public works construction disputes" as part of the special concept of the "public contracts" in the Egyptian legal system with what obtained in the English and the Scottish systems should be made by taking into consideration the broader context of the legal system in Egypt (as influenced by France) which is different from the legal systems in England and Scotland. The presence of a specialized courts (i. e. the administrative courts of the Egyptian "*Conseild'État*") played a critical role in this regard. Therefore adopting a similar approach in Scotland or England most probably requires the establishment of a counterpart specialized judicial body. It is possible to happen without such establishment however potential judicial approaches to simulate such special approach for "public contracts" may encounter the lack of relevant legal environment. This is because it will be like jumping into the unknown if the judges in England and Scotland started to deal differently with public-private relationships in contractual disputes.

Finally in this regard, it is appropriate to refer to the fact that there was an attempt in the late 1990s to establish an English version of the French "*Conseild'État*", However this attempt was not successful. Such point can be added to the arguments of the establishment of a "*Conseild'État*" in England if the matter has been raised again. This is the case also in Scotland.[273]

2.5 SUMMARY

Public works construction contract is not different, in terms of the nature of the disputes that might be encountered, from the normal construction contract between private only.[274] As is the case in private works construction contracts, a "public works construction project" may encounter disputes related to insurance, labor, injuries, design errors and delay. What may differ with respect to the various types of contracts and the associated potential disputes is that, within the Egyptian legal system, the remedies available if the contract is one of public works construction may slightly vary compared if the contract was one for private works construction. When this is compared to the English and the Scottish counterparts the description of "public works construction disputes" starts to have a separate meaning of BOOT/PFI/PPP as outlined in this chapter which is a different perspective from that which is of concern in to this the research's perspective.

Within the perspective of BOOT/PPP/PFI different jurisdictions deal with the matter of "public contracts" differently. However the main idea cuts across these contracts is that public bodies is looking for value for money. What is meant by "public works construction

[273] as in case of a future consideration for a restructure of the judicial system within the possible different models of judicial structure which have already been identified as nine models for re-structuring the judicial system most of which are from continental Europe

[274] This includes "private contracts " and "government contracts" where one or more of the criteria of the "public contracts" do not exist

disputes" in this research is the perspective of the substantive resolution for the dispute after the dispute arises. However discussing the BOOT/PFI/PPP was necessary to identify the perspective and the angle from which this research deals with the issues of "public works construction disputes"

The conclusion of this chapter is that, in civil law countries like Egypt, once a contract has been identifies as a "public contract", a specific special approach is then applied while resolving the dispute. The "public contract" in the Egyptian jurisdiction is a legal notion[275] rather than focusing on particular types of contracts as the case is in both Scottish and English jurisdictions. The "public works construction contract" has a specific set of rules as a "public contract". Such rules are slightly different from those of the private construction disputes. This approach exists in the Egyptian legal system as part of a long lasting influence from the French legal system over the last century. This legal influence has a background of a long history and relationship between the two countries and their two nations. This includes political, economic, educational and social relationships. Such an influence led to the Egyptian legal system to be considered as clear example of a civil law system from the public law perspective.[276] In England and Scotland, there is no similar differentiation between public and private contractual disputes.

This chapter outlines the nature of the mentioned differentiation in the construction context as part of the broader concept of the "public contracts". The chapter gives an outline for the historical developments and the different levels[277] of connections between France and

[275] a legal notion based on three criteria developed by the judiciary as outlined above in this chapter

[276] The situation is the same from the constitutional political perspective as well. This is because the way the power of the administrative authority of the state in Egyptian constitutional system (across different constitutions) can be regarded as a copy of the French system as the prime minister shares the president a number of administrative powers.

[277] This included the historical, political, cultural, educational and judicial structure related levels of connection

Egypt which led Egypt to be regarded as a "civil law" jurisdiction in the first instance and led later to the incorporation of such special approach in relation to "public contracts". The chapter examined the limit of the application of the mentioned concept in the "public works construction disputes". This chapter is a necessary analysis for the following question; should such differentiation, exist in civil law countries like the Egyptian jurisdiction, lead to a specific approach in dealing with the "Concurrent Delay" dispute? To what extent, can such a differentiation affect the proper approach for dealing with "Concurrent Delay" dispute in "public works construction projects" within the context of the Egyptian civil law legal system? This will be analyzed in the final chapter taking into account the special nature of such type of construction delay disputes (i.e. "Concurrent Delay") outlined in chapters three and four.

The summary of this chapter is that in the Egyptian civil law legal system, the system differentiates between the public and the private contracts. In the Egyptian legal system, the identification of "public contracts" depends on three criteria. Once a "public contract" has been identified, the judiciary deals with the dispute in a slightly different manner and policy compared to the "private contracts". The findings of this research is that although the judicial system gives a long lasting well-established and clear better position[278] for the government body as a party to a "public contract" in a number of issues, when it comes to a "construction contract", the judiciary adopts a comparatively lighter and less harsh approaches. This less harsh approach may be because judges take into consideration the special nature of the construction industry. Judges, in this context, may be motivated by achieving justice for the contractor. This judicial less harsh approach may be made in the light of the practical requirements of the construction industry and the special nature of the construction industry

[278] The long lasting well-established and clear better position the judicial system gives to the government body is in the form of specific special approaches to the dispute which may be slightly different from the same dispute of private contracts which ends u for the governmental body to have a relatively better position.

compared with other fields of "public contracts". Finally in this regard, the research finds that there are possibilities that any legal system can learn from other legal systems across the world.

Following from this chapter and as a conclusion, this research's definition for the "public works construction contract" in the Egyptian civil law legal system can be: "A contract for performing a construction job where one of the parties is a government body and the job is supposed to serve a public purpose and one (or more) of the terms and conditions is (or are) abnormal compared with the similar private counterpart contracts". Such a special approach typically applies when the construction contract takes the form of a traditional construction contract which is the main perspective of this research for a "construction contract". It is also possible for such special approach to be applied for the other forms of construction contracts (such as the BOOT/PPP/PFI) once the three criteria exist. However the contract (as a whole) then will be treated as a "public contract" which includes a traditional "construction" contract. This traditional "construction" contract in turn may or may not be a "public contract" depending again on the existence of the three criteria for this traditional "construction" contract separately. Further outline for this can be found in chapter two.

CHAPTER 3: THE NATURE OF DELAYS IN CONSTRUCTION PROJECT PROGRAMMES

3.1 INTRODUCTION

Before 1871[279] and for a long time, the construction industry used to be based on a simple "construction contract" and a straightforward process.[280] This has been the case until recent developments in construction management and programming starting from the middle of the last century.[281] By the end of 1990s, after the development of "computer based" software programmes for construction management, construction delay analysis became an emerging area of "Construction Law" where a large number of construction activities might be connected together(Barry 2009: p.11).[282] It became clear, with the necessary illustrations, how the progress of the contractors' performance of the planned sequence of "construction tasks" can be hampered by a mistake made by the other side (i.e. the employer) or by a third party or by an external neutral cause.

In this regard, the legal issues used to be dealt with in isolation from the construction management issues until "delay disputes" in the construction industry recently to became much more complicated and reflective of the increasing number of complicated construction projects. Such complication required that the legal way of thinking while dealing with

[279] In 1871, the first standard form of construction contract was issued by the Society of Builders (the predecessor of the CIOB) and the Royal Institute of British Architects with a very limited and basic reference to the programming. (Pickavance 2013)

[280] "Simple" and "Straightforward" refer to the traditional way of contracting for construction works where the contract can be summarized as "A" agrees with "B" to build a building or infrastructure construction works in the "X" location for the "Y" amount of money without referring to "the schedule or the programme of executing the construction works" leaving the matter to contractor.

[281] In the 1950s new techniques started to be used in the construction industry. For example, the US Navy special project office started to use a new technique which was referred to as Programme Evaluation and Review Technique "PERT" (Meredith & Mantel 2006: p.376).

[282] In some other countries the concept of "delay analysis" in the construction industry started later, such as Australia in 2005(Elliott 2012). While in other countries, such as Egypt it still does not exist in the legal studies as the area of construction law is still a developing area of law.

construction law related matters should be informed by the construction management perspective. This applies to the dispute resolver who comes from a legal background.[283] In modern construction industry, the dispute resolver should investigate in depth the managerial and programme related steps that the construction works have gone through in order to properly identify and allocate the responsibilities of the contracting parties. This chapter clarifies concurrent delay related matters from the construction management perspective which will feed into successive chapters.

3.1.1 THE CONCEPT OF DELAY

The definition of the word "delay" in the Cambridge dictionary is; "to make something happen at a later time than originally planned or expected"(Cambridge n.d.). However, "delay" has slightly different meanings, nature and consequences depending on the discipline and context within which it is being discussed. Delay in construction industry has a slightly different nature and consequences from delay in other industries. Within construction industry, the meaning of delay differs from the legal context to the context of "construction management". The *first* mainly deals with the legal consequences of the contractor exceeding the contractual completion date, especially as it relates to the consequential extension of time and the loss and expense.[284] On the other hand, the *second* mainly focuses on how to control the works while they are carried out in order to ensure that the projects are executed within the relevant time limit and budget. The *second* is also concerned with the reduction of the time limit for completion[285] it if necessary as well as how to accelerate the execution of the

[283] The dispute resolver refers to the mediator, the arbitrator or the judge.

[284] Delay, within the second perspective, can be defined by this research as "the overrun of the project completion date beyond the handover date of the contract".

[285] Within construction management, the reduction of the time limit for completion is referred to as "acceleration". Acceleration is used to finish the project earlier that it was planned or to tackle delay problem to bring the progress of the construction works back to what was planned on the program

project especially if the progress of the works has already encountered delay in order that the works be accelerated and completed on the planned date without additional cost (if possible).[286] A sufficient understanding of the *second* context feeds into the legal analysis of the research topic of "concurrent delay".

It is important while identifying "delay" in construction projects to differentiate between "disruption" and "delay". "Disruption" is where there is "loss of efficiency due to lower than expected productivity or some interference with normal progress" (Cooke & Williams 2009: p.360). "Disruption" may and may not lead to delaying the handover date. "Disruption" without delay to the completion date of the contract does not entail the application of the delay mechanism[287] to the dispute (Howick & Eden 2001). The society of construction law protocol defines "disruption" as "disturbance, hindrance or interruption to a contractor's normal working methods, resulting in lower efficiency"(SCL 2002: p.31).[288] In such situation "disruption without affecting the completion date" can be a matter for a separate dispute if there is a term or a condition in the contract that can be regarded as a legal foundation for such separate claim. However, this issue is out of the scope of this research. This research does not include disruption disputes. Nevertheless, if the disruption affects the completion date, the dispute is then regarded as a delay dispute from the contractual perspective. Hence, such a dispute will fall within the scope of this research.

3.1.2 THE IMPORTANCE OF TIME IN CONSTRUCTION PROJECTS

Time is important in business in general and when it comes to construction industry it

[286] Lowsley and Linnett (2006) stated that delay in construction projects means: "delay to the planned completion date"(Lowsley & Linnett 2006: p.3). This represents the first perspective for delay within construction industry.
[287] The "delay mechanism" will be explained later in this chapter
[288] The Society of Construction Law Delay and Disruption Protocol October 2002 - Section 1.19.1

becomes of much more importance (Meynardie & Molavi 2007). It is well known that; "time is money", and when we deal with construction disputes, we deal in fact with time and money. Delay is a common situation in the construction industry. No type of construction projects is immune from it. Delay-related issues constitute the majority of construction claims and disputes. Such disputes are common in construction industry (Hegazy et al. 2008). Although the situation of delay in the construction industry might improve a little bit from time to time,[289] yet it remains a phenomenon which is always associated with the construction industry. The risk of delay is one of the risks in the construction industry and its probability exists in any construction works(Doloi et al. 2012).

Delay may occur at any stage of the process of a construction work. From the inception of the construction process,[290] the duration of the work is one of the main and most important issues to be addressed in planning the execution of the project. This is also the case in the pre-contract phase, as well as in the negotiations before and during the contracting phase of the construction project. Demonstrating the urgency and importance of this issue, in 2001 a report by the UK National Audit Office, entitled "Modernizing Construction" indicated that 70% of projects undertaken by government departments and agencies were delivered late (The National Audit Office 2001: p.4). Also, a survey in 2002 has shown that 58% of the private construction works in the UK have been delayed and 66% of the government construction works have been delayed as well.[291] In Egypt, the situation is more or less the same and the delay has been regarded as a phenomenon associated with all types of

[289] Within the large span of time, the situation of delay in construction industry might be improved a little bit from time to time. For example, a report of the national audit office in 2005 shows that 63 % of the public works construction projects were delivered in time in 2003 compared to 34 % in 1999 (The National Audit Office 2005: p.5)

[290] Construction process refers to the larger scope of performing the construction project including the briefing stage, the sketch plan stage, the working drawings stage and the site operation stage where the construction works are physically performed(Forster 1990, p.102).

[291] This survey has been published in the "Construction News" journal

construction work whether of a public or private nature (El-razek et al. 2009).

This chapter addresses the issue of "delay" from its two perspectives that is "construction management" and the "legal" perspectives. From the "construction management" perspective, the chapter sheds light on the construction programme and how construction activities are developed and linked together within such programme. This aims to outline the importance and the role of the critical activities included in the "critical path" for the analysis of "delay disputes"(including the "Concurrent Delay" ones). This also aims to outline what happens when these chain of the critical activities are interrupted.[292] Outlining the programming for the construction works is important to analyzing delay disputes. The final purpose of "delay analysis" is mainly to ascertain whether or not the contractor is entitled to extension of time and or money.

From the "legal perspective", this chapter identifies the different types of delay which might affect the project. In construction contracts, time is a key factor in the tendering and negotiating process. Therefore a fixed time and date is clearly set for completion in the contract. The section of the contract which states the completion date is important being a direct obligation on the contractor's side which will result in a number of consequences. The issue of time represents the background to many other important terms and conditions of the construction contract such as the liquidated damages clause and the extension of time clause. The mentioned clauses and other principles will be discussed under "delay mechanism" below.[293] This will be done by outlining the "delay mechanism" in the three jurisdictions of concern in this study. The chapter then clearly identifies the research problem of "Concurrent

[292] This chain of critical activities may be interrupted because of the act or omission of the employer with respect to bearing its responsibility, whether contractual or non-contractual. It can be interrupted due to a neutral reason. Finally it can be interrupted due to the act or omission of the contractor himself.

[293] The time-related terms and conditions are broader than the contractual terms and conditions which are part of "delay mechanism"

Delay" and outlines the special nature of "Concurrent Delay" dispute in the construction industry. Finally the chapter analyses the legal perspective in relation to delay in "public works construction disputes" in the three jurisdictions of the research.[294]

3.2 CONSTRUCTION PROJECT PROGRAMMING

A project has been defined as "A temporary endeavor undertaken to create a unique product or service" (Meredith & Mantel 2010: p.9) and as "A unique set of coordinated activities, with definite starting and finishing points, undertaken by an individual or organization to meet specific objectives within defined schedule, cost and performance parameters"(Lester 2007: p.1). For the project to be accomplished, initially, the contractor usually prepares a programme to help organize the works.[295] This programme typically starts with a basic one made during the tender stage (Cooke & Williams 2009: p.137).

While the contractor prepares for his bidding "tender" for the job, the contractor takes into account the nature of the construction works and the employer's requirements (Skitmore & Thomas Ng 2003). According to the employer's requirements and the job specifications and based on the contractor's experience, the contractor prepares a preliminary schedule or network for the construction works. (Lowsley & Linnett 2006: p.10) This preliminary programme is based on the expected sequence of activities. The value of every aspect of the work within the time allocated is evaluated. This programme is then enclosed with the tender of the contractor. This enables the contractor to estimate his tender and the value of the contract (Watt et al. 2009). There are many variables in this stage according to the nature and

[294] i.e. : Egypt, England and Scotland

[295] However, the obligation of the contractor to provide and work to a programme varies in the different standard forms of construction contracts (Naughton 1989). While the programme is optional in some of them, it became a substantial part of the construction contract in the NEC3 which made it as a frame for a number of legal timely contractual bonds through the execution of the contract and the project.

the size of the project and the work system followed as per the contractor's organization.

In relation to the complexity of the construction programme and the number of different tasks involved, there are different types of construction projects. Firstly, there are simple projects which require activities of "repetitive work" such as laying of pipe lines, building roads, and trenches and canals excavation (Duffy et al. 2012). Such projects involve a limited number of tasks carried out in a simple sequence.[296] Analyzing the delay in such projects is normally relatively easy and straightforward. Secondly, there are medium sized projects in terms of complexity such as the construction of schools, hospitals, airports and new cities.[297] Finally, there are more complicated construction projects which include cement factories, petroleum refineries and fossil fuel or nuclear electricity power stations, the likes of which require much more complicated programmes. Based on the basic preliminary network, the contractor can also make the necessary changes concerning the sequence of activities, the labor, the plant and other elements so as to reduce the price of his tender to the lowest possible(Cooke & Williams 2009). After the tender stage, and in the event that the contractor is being awarded the contract, the contractor prepares a larger and better-organized schedule, including much more detail for the construction works.

The aim of designing such programme is to complete the project within the time stipulated for its handover date in the contract (Harrison & Lock 2004). Although, it is important to accurately set up these programmes in details, it is possible to amend them as the

[296] For example the "pipeline" project involves a limited number of repetitive construction activities which can be summarised in excavation work activity for the trenches, pipe stringing, welding and coating pipes, lowering pipe in and backfilling and restoration. The same limited number of activities is found in building roads or rail ways or excavation of trenches and canals in terms of the involvement of a limited number of activities but with different ones. From the construction management perspective, these projects are called the "linear construction project".

[297] These projects require that the project manager possesses a higher degree of experience compared to the first type of construction projects of the "linear projects" nature as the degree of complexity is higher and this becomes obvious in the case of applying "acceleration" in the case of a delay during the life of the project.

works progress with the aim of accelerating[298] the works or reducing cost or overcoming unexpected challenges or circumstances.[299] However, it is difficult to plan in detail beyond a certain point: for example, in the case of a project lasting three years or more, it will be sufficient to determine the principal tasks and activities in addition to the main details. What is important for the programme is that regardless of whether it has been set up in details or not or has been amended or not during the project duration, it should not exceed the date for completion agreed in the contract. Practically, most programmes are designed to ensure the execution of the project within a reasonable time prior to the contract completion date. Time always has been described as one of the risks of the construction project programme (Cooke & Williams 2009: p.124). A proper network programme for a project is of great importance to its sound execution and the reduction of claims during its lifespan.[300]

The programme or the network is significant insofar as it identifies both the "critical path" activities or tasks and the "non-critical" activities or tasks. One of the main purposes of the contractor's programme is to identify the "critical path" or the critical activities involved in the project. This is because the *total time* required to finish the project depends on the "critical path", as it comprises the total of the critical activities, omitting the non-critical tasks (Mawdesley et al. 1997: p125).[301]

3.2.1 "Physical Logic" and "Resource Logic"

[298] A common reason to accelerate the progress of the works is when the progress of the delay encountered a delay which pushed the handover date back compared with the original handover date

[299] Unexpected circumstances sometimes occur in construction projects. In these circumstances, the programme should be amended to commence the execution of other parts of the project until the problematic issue is resolved. For example, sometimes in Egypt, monuments are found while excavating in the construction site. One of the latest examples of this is that in 29 October 2016, in the Egyptian city "Banha", workers found pharaonic monuments while excavating a tunnel.(Http://www.dotmsr.com 2016)

[300] It is important also for the programme to be designed in a way which allows a smooth acceleration of the works in case a delay occurs.

[301] The total time that the construction works will take should end before the contractual date of handover.

At the inception of planning for the construction project programme, the different phases and clusters of the works are first identified according to what or which construction works is/are required in a "work breakdown structure" (Harrison & Lock 2004: p.105). Then the different construction activities and tasks are identified. After that and according to a "physical logic" and "resources logic", tasks are formulated in a network analysis(Cooke & Williams 1998: p.124).

"Physical logic" is determining which tasks can or should be physically connected to which one (Wang 2005). Simple examples for that include the fact that the concrete cannot be poured unless steel reinforcement is done and that the floor must be completed before installing the floor covering (Halpin & Senior 2011: p.112). "Resources logic", o the other hand, is determining which tasks use the same labour or machinery in order to determine, which activities can (or should) be done simultaneously and which activities can (or should) be done after or before each other. A simple example of that is the fact that two tasks can be connected by a "start to start"[302] relationship if they use the same type of labour and each requires a half day's work. In this regard, Cooke & Williams (1998) state that "the planner has the facility to assign priorities to labour, plant, material and subcontractor resources to each operation on the network" (Cooke & Williams 1998: p.135). Both the construction "physical logic" and "resource logic" dictates what activities and tasks are needed to execute the required construction works (Winch & Kelsey 2005). Determining the required set of the project activities for a specific construction project depends also on a number of other factors other than the "physical and resources" logics such as the nature of the soil of the site and the

[302] i.e. the first activity starts the same time as when the second activity starts

material which will be used.[303]

Regarding the relationships between construction tasks, any construction project usually contains a large number of activities and tasks many of which are interconnected in nature. The relationship between tasks can be a relationship of "finish to start", "start to start" or "finish to finish" as shown below.

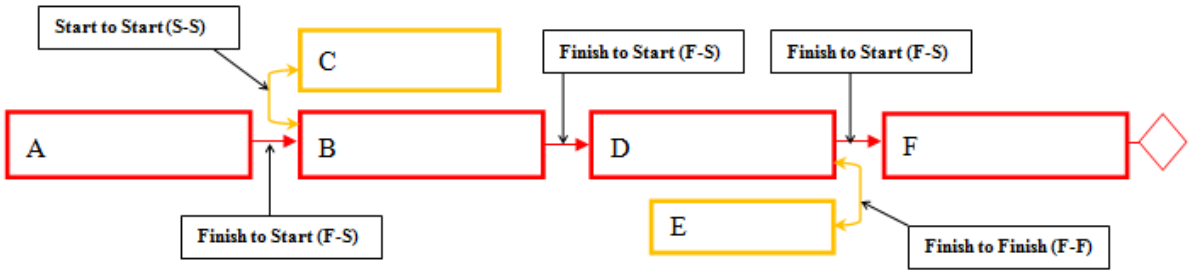

Figure 6: Different types of relationships between construction activities or tasks

A "finish-to-start" relationship is one where a specific construction activity or task "B" for example cannot start unless the other construction activity or task "A" finishes. A "start to start" relationship is one where construction activity "C" cannot start unless the other activity or task "B" starts and vice versa (Mawdesley et al. 1997: p.105). Finally, a finish to finish relationship is one where two or more construction activities or tasks (such as "D" and "E") cannot finish unless the other activity or task finishes (Cooke & Williams 2009: p.155).[304]

[303] Such material needs specific preparations and specific construction tasks and specific connections between the different dependant tasks while other material may need other specific preparations and other specific construction tasks and other specific connections between the different dependant tasks or other professions of labour. Some construction projects are based on metal material while others are made by using brick or reinforced concrete or timber or a mixture of two or more of these materials.

[304] Understanding these relationships for lawyers is very important for a proper evaluation of the monetary consequences that result from a delay. In practical sense and according to the above example, the delay that affects task C may suffer monetary consequences that is connected only on task C (the same with task F), while the delay that affects task B may suffer monetary consequences that is not only connected to task B but also will be expanded to include tasks C, D, F and probably task E as well depending on the nature of the delay and the nature of the mentioned tasks.

3.2.2 The Planning Techniques

There are a number of different planning techniques and methods which have been developed and used in construction industry throughout the last century. Such techniques include the "Bar Chart", the "Critical Path", "Line of Balance", "PERT" and "Phasing Diagram". The first two are the most important. The "Bar Chart" was developed and used in the 1920s by the American industrialist and management consultant Henry Laurence Gantt. This technique has been successfully used by the industry in many major projects.[305] It was later transferred for use in the European construction industry. Before the existence of computers, this method was prepared manually as the majority of construction planning was undertaken manually (Lowsley & Linnett 2006: p.19). In construction programmes for large and mega projects which involve a large number of activities and tasks, it is difficult to update the programme task after task. In the 1990s, computer software programmes began to be used in construction planning, scheduling and control.[306] One of the aims for the programme techniques is to identify the critical paths or paths of the construction project which is important for the contractual handover date.

3.2.3 The Critical Path

The "critical path" analysis technique was developed in the 1950s in the US.[307] This technique aims to identify the minimum duration for a project depending on the critical path

[305] Such as "Hoover Dam" project, Arizona, USA

[306] Such software programmes included programmes such as C.S project Professional, Hornet, Micro-planner Expert, Plantrac, Power Project Professional, Primavera and Superproject(Cooke & Williams 1998: p.134)

[307] The US Navy special project office (in the 1950s) was one of the successful early users of this new technique, which at that time was referred to as Programme Evaluation and Review Technique "PERT" (Meredith & Mantel 2006: p.376). It was known in the beginning of its development as the programming technique of "CPA". It is sometimes known as Evaluation and Review Technique "PERT" (Lowsley & Linnett 2006: p.23)

or paths (Mouhoub et al. 2011). The introduction of computers software programmes again made it easier to amend and upgrade the activities in the programme, and to calculate automatically the minimum duration of each activity or task or groups of them and the potential minimum duration of the entire "critical path" of the construction project and the possible changes within both critical and non-critical activities in the case of acceleration to overcome a delay. Computers software programmes can also re-connect activities in the light of new amendments or updates for certain groups of works without changing the final completion date. Although the software programmes made it easier, they sometimes operate blindly in the way they operates or process the details of the critical path so the human manual interference remains necessary to ensure proper monitoring of the progress of the programme.

The delay and disruption protocol[308] defines the "critical path" as "the sequence of activities through a project network from start to finish, the sum of whose duration determines the overall project duration (SCL 2002: p.54). Meredith and Mantel (2006) also define it as "activities, events or paths which, if delayed, will delay the completion date of the project. A project's "critical path" is understood to mean that sequence of critical activities and "critical events" that connects the start event to its finish event and which cannot be delayed without delaying the project" (Meredith & Mantel 2006: p.377). In addition, Mawdesley define the "critical path" as "the activities with the least total are called critical activities and the route(s) which connect the critical activities are the critical path(s) through the network" and concluded by stating that "the critical path is therefore the longest path (or paths) through a network" (Mawdesley et al. 1997: p.102). On their part, Lowsley and Linnett defines the "critical path" as "the sequence of activities that represents the shortest possible

[308] This protocol has been developed in 2002 by the Society of Construction Law (SCL). A second draft has been issued in June 2016.

time to complete that project"(Lowsley & Linnett 2006: p.41). In fact, the critical path is an algorithm for scheduling a set of project activities. The critical path comprises a group of tasks that are connected to each other in such a way that if any delay occurs in the "critical path", it will affect and delay in turn the planned completion date of the construction project and therefore the handover date of the entire project.[309] In essence, the critical path is considered the main chain of activities of the programme.

The determination of the "critical path" is essential for the determination of the final handover date of the project. Depending on the determination of the start and end dates of each activity in the critical path, the determination of the start and end dates for the entire construction works of the project will be identified. The identification of the duration of each critical activity is based on the physical logic of the construction and the availability of the relevant material, labor or plants at a specific time during the programme.

If a delay occurs in a task of the critical path, a delay in the programme final completion date will occur therefore the project contractual handover date may occur. If this happens, contractual related questions will be raised such as whether or not the contractor is entitled to an extension of time and more money and whether or not the employer can ask for liquidated damages. This is why, although the understanding and the determination of the "critical path" is a "construction management" issue, it has substantial connections with a number of legal contractual maters.[310]

[309] The handover date of the entire project is a contractual obligation and also, from a "construction management" perspective, it is an event which cannot be postponed in any way.

[310]The understanding and the determination of the "critical path" is a "construction management" issue because the "critical path" determination is basically important for the control of the project's budget during the execution phase or phases and controlling the acceleration of the construction works at a certain point in time during the execution of the project. The contractor, with arrangements with the employer, can make changes to the critical and non-critical paths according to different circumstances arise during the progress of the project such as labor and plant issues.

On the other hand, the non-critical tasks are shown as the group of tasks to which some flexibility in timing may be applied. The non-critical tasks are those which may be moved forwards and backwards in the programme within a specific duration of time. Every non-critical task has an allotted period of time in which it may shift without affecting the next task or the previous one.[311] Any delay in one or more of the non-critical tasks will not affect the final date of the handover of the project, unless such delay exceeds the period of time within which the task may move. Moving these tasks depends on different facts and circumstances that the contractor or the project manager[312] might encounter during the life of the project. Many factors govern the project manager's decision concerning the time within which he or she should schedule the non-critical task. Some of these factors have to do with achieving the lowest labor and plant costs and the best performance (Harrison & Lock 2004: p.114). The non-critical path[313] is usually identified in the planning of the project. The importance of the "non-critical path" is that it is used sometimes for the acceleration of the progress of the project by the project manager to bridge a delay which may occur at any point in time during the progress of the construction works.[314]

3.2.4 Milestones

A milestone in construction programme is an end or a start of a stage of the project

[311] This period of time is referred to as "the float time"

[312] The project managers in the construction industry are: those who hold themselves out as being experts in managing and co-ordinating the construction (design and fabrication) process (Murdoch & Hughes 1992) page 25

[313] The "non-critical path" is the group of construction activities or tasks which can be described as "non-critical activity or task". The alteration in the "non-critical path" will not affect the end date of the project (i.e. the finish date of the entire project). The programme of a construction project may include a number of "non-critical paths" each of which may be parallel to the "critical path". The end date of every "non-critical path" can be the end date of the entire project or it can be a specific point in time on the "critical path". This depends on the last non-critical activity of the end of each non-critical path.

[314] This issue generates the question of who owns the float time in the case of a contradiction of interests or a conflict of interests between the contractor and the employer which is one of the points of the delay analysis which will be a matter for future research in the area of public works construction disputes

programme which is used to "identify a key point in time"(Lowsley & Linnett 2006: p.33). In construction programmes for large and mega projects which involve a large number of activities and tasks, there are usually milestones with zero duration.[315] A certain group of activities (i.e. section of the works) may be identified as together forming one stage.[316] The end of such group is known as a "milestone"(Cooke & Williams 2009: p.350). Identifying a milestone helps the project manager to manage his or her work from one specific period to another. Moreover, it also enables the project manager to monitor and measure the progress of the project. What is important is that delay in the earlier point of a stage sometimes does not affect the following stage after a milestone. The point in which the delay occurs has a significant relationship with the point in which a milestone exists on the programme of the construction works.

Therefore, recognizing "milestones" assists the dispute resolver in studying the progress of the project and finding out whether or not a relationship or a "mutual effect" exists between the different periods of delay in the light of the existence of a milestone(s). The relevance of the milestones within the "delay analysis" is that they are normally the end of a group of construction activities and the start of a number of other construction activities within the same programme of the project. However, the effect (or effects) of the delay (if there is any) in the previous "activities" of the period prior to the milestone on the "activities" after the milestone is normally *limited* and in some circumstances are no effects at all. This effect (or these effects) should be taken into consideration while analyzing the different periods of delay on the programme.

[315] Typically within "construction management", the "milestone" is represented in the programme by a zero duration activity of task

[316] Examples of these include milestones such as "the commencement of structural steel" and "having the permanent power supply connected" (Lowsley & Linnett 2006: p.61)

3.3 TYPES OF DELAY

Delays that might occur during the construction project may be classified into more than one category according to the variety of reasons which the delay may be attributed to and depending on the perspective from which the matter of delay is analyzed.

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3.3.1 In terms of liability (Culpable delay v. excusable delay)

The delay may be "culpable delay", where the cause of the delay is the fault of the contractor.[317] In this case, normally, the contractor is not entitled to any extension of time or any reimbursement for his loss and expense or the cost of prolongation due to the delay. On the other hand, the delay may be "excusable delay", where the cause of the delay is not the fault of the contractor but an external reason out of the contractor's control in the light of his contractual obligations. This can be the fault of the employer or the fault of someone or something else acting as a "neutral event". Normally, the "excusable delay" can be a "compensable delay" if the fault[318] was that of the employer. In this case, the contractor is normally entitled to both an extension of time and the cost of prolongation.[319] Examples for this include delay caused by the late issuance of instructions which are necessary for a particular part or phase of the works. The "excusable delay" can be a non-compensable delay if the cause was that of a neutral event. In this case, the contractor is unable to recover the costs he suffered since the risk was his, and the contractor normally - according to the contract's terms and conditions - will be entitled to an extension of time only. Examples for this include delay caused by the exceptionally adverse weather.

[317] Examples of this include the delay caused by the shortage of labour, material or plants.

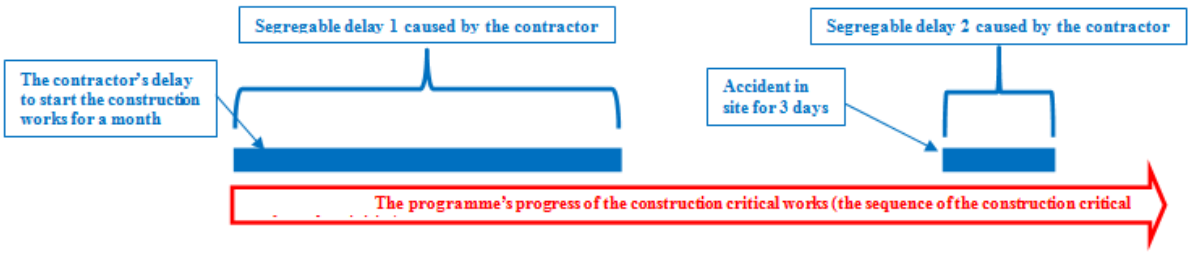
[318] Such fault can be an action such as clause 31.1of the NEC3 (which obliges the employer not to take any action which may prevent the contractor to access to and use of each part of the construction site) or an inaction such as clause21.1(which stipulates that the contractor to submit a first plan within a period of time for plans which have not been identified within the contract) of the NEC3

[319] This may vary according to the contract

3.3.2 In terms of occurrence (Segregable delay v. Parallel delay)

3.3.2.1 Segregable Delay

The delay can be "segregable" or an independent delay when one delay occurs without any link with other delays. "Segregable delay" is normally caused by one of the parties' risk events. Examples of this include delay for a month caused by the contractor with respect to starting the construction works although the contractor had taken possession of the construction site from the programme start date of the construction works and there is no mistake on the part of the employer resulting in the contractor being unable to start the first activities of the construction works. In month three of three, the contractor delayed the works for 3 days because of a site accident of which he is responsible for. In this example we have two periods of delay one for a month and the other is for a week. These two periods of delay are "segregable delays" as we can recognize or acknowledge each one of them separately.

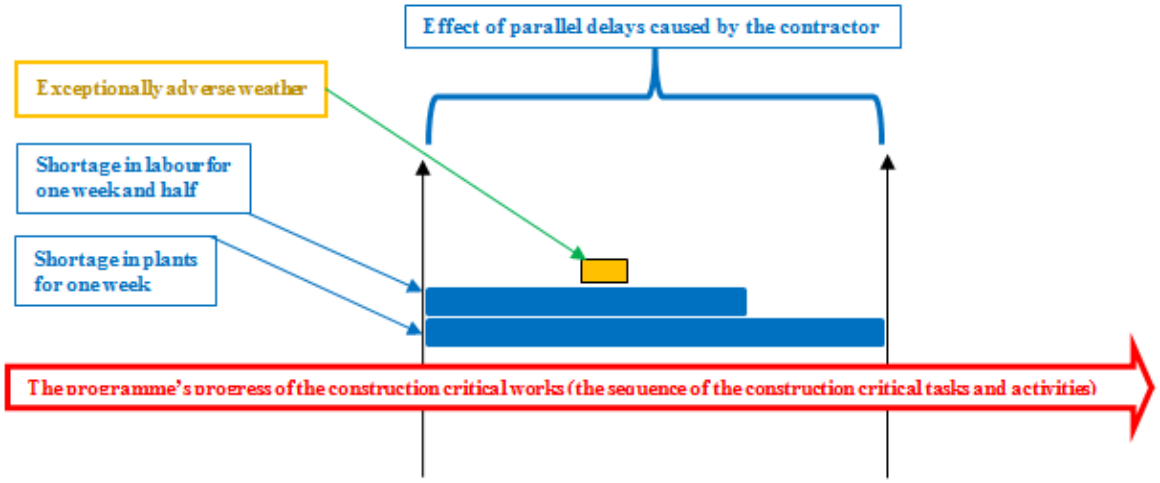


3.3.2.2 Parallel Delay

The delay can be a parallel delay when more than one delay periods occur which are all caused by one party's risk events in the same time. Examples of this include delay[320] caused by the contractor because of shortage of labor meant to execute a specific activity or

[320] This is based on the assumption that this task or activity needs both labor force and machinery to be performed. One of these two elements can partially execute the activity or task.

task for a week and, in the same time, the progress of the construction works encountered a delay caused by shortage of plants meant to work on the same or another activity or task for one and half week and/or the progress of the construction works encountered a delay caused by exceptionally adverse weather for two days in the same time. The validity of these examples is based on the assumption that there is no mistake from the employer's risk events in the same time.



3.3.2.3Concurrent Delay

Alternate to the "Segregable delay" and the "parallel delay", the delay can be a "Concurrent Delay". As the "Concurrent Delay" is the issue under research, the following part analyses the nature of "Concurrent Delay" in construction projects.

A description of "Concurrent Delay"

The construction industry is much more complicated than it seems to be. This industry involves a number of different players. In addition to the two main parties of a construction contract (i.e. the contractor and the employer[321]), there are the architect,[322] the quantity

[321] which is a "government body" in the case of the public works construction projects

surveyor,[323] the supplier for building materials,[324] the sub-contractors,[325] the sub-sub-contractor (sometimes), the financial lending body,[326] the insurer and the machine and plant rental agencies, the professionals or entities that will do the planning and/or the drawings, the manager of the construction project, the manager of the performance of construction contract, and others.

The performance of a number of tasks, duties or actions is required from everyone involved in the "construction process" according to the different contracts involved.[327] This network of dependent but connected legal bonds requires actions and responsibilities to be fulfilled at specific times. The same legal relationships apply in the smaller traditional construction contract. In the course of programming at the beginning of the project, there is always a risk that such actions, tasks or duties not to be done as planned. From the

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[322] The position of the architect in practical sense depends on the degree of construction related knowledge the employer has and therefore the need for the employer to have an external professional person or body to act as an architect (Chappel 2002: p.47). The architect sometimes becomes like a neutral part of the contract depending to the wording of the contract and the form of contract being used. In most of the cases, depending on the wording of the contract again, the architect acts on behalf of the employer. In the London Borough of Merton v. Stanley Hugh Leach case, the court held that "It is an implied term of the contract in JCT terms that the employer will not hinder or prevent the contractor from carrying out its obligations in accordance with the terms of the contract and from executing the works in a regular and orderly manner. This implied term extends to these things which the architect must do to enable the contractor to carry out the work and the employer is liable for any breach of this duty on the part of the out the work and the employer is liable for any breach of this duty on the part of the architect".(Powell-Smith & Furmston 2000, p.156)

[323]The quantity surveyor's in most of the cases decides over the Quantum. He or she sometimes can decide over the liability if the contract allows doing so. The position of the quantity surveyor in practical sense depends on the express or implied terms of the wording of the construction contract. (see case: John Laing Construction Ltd v. County & District Properties Ltd [1982] 23 BLR 1 Queen's Bench Division)

[324]The supply contract is an external contract in relation to the construction contract that exists between the contractor and the employer in a way that the employer is regarded as a third party to the supply contract. However as soon as the material is supplied and fixed in the construction site and incorporated in the construction works, the material supplied becomes then the property of the employer.

[325]The sub-contractor is typically appointed by the contractor. Alternatively, in some cases and for some sub-contractors, the sub-contractor is appointed by the employer.

[326]The financial lending body is a separate institution which supports the employer in order to be able to cover the cost of the construction works. The relationship between the financial body and the contractor is a separate relationship from the construction works contract unless the last mentioned contract states otherwise as if the financial body is involved in the mechanism of payments including the interim ones. Such a relationship can take the form of lending. It can also take the form of donation sometime as the case with some internationally funded projects in developing countries

[327] Whether the main construction contract, the contract for doing the planning and/or the drawings, the construction subcontract, the contract of the supply of the construction material, the insurance contracts, the labour & professionals contracts and the machinery and plants rental contracts.

construction management perspective, this renders the "critical path" imperative in identifying the features of the process, to be updated subsequently. However, from the legal perspective, this raises the question of contributory negligence on the part of the relevant players with regards to fulfilling the commitments stipulated in the construction contracts.

Because of the relatively large number of parties involved in the process of executing the construction works, delay is expected and is not always a simple or straightforward matter. It is difficult sometimes to analyze because of the complexity of reasons. The entire period of delay might sometimes include a number of delays some of which occur at the same time and are attributed to more than one reason and, in fact, a complex array of factors. Such delays may have arisen due to a mistake of one or more parties to the main construction contract or owing to an error made by a third party. It also may have arisen due to a neutral reason which is an external reason out of the control of every one of the contract participants.

The common delay scenario is that the contractor is entitled to an extension of time and and/or the cost of prolongation when the contractor faces a single delay which is attributed to a party other than the contractor. However, this situation sometimes overlaps with a delay caused by the contractor himself at the same time.[328] Such a situation, termed "Concurrent Delay", occurs when two or more delays occur simultaneously. Each of the delays is attributed to one party to the construction contract (the contractor and the employer). Each of the delays affects the progress of the construction works as on the programme at one point or period of time.

[328] The contractor's delay can be due to the fault of the contractor himself because of an internal administrative mistake or due to the failure of a subcontractor or a supplier of a particular building material. However in these cases the delay remains the "contractor's delay" as these are classified under the "third party" to the main construction contract.

Literature's Definitions of "Concurrent Delay"

The "Concurrent Delay" situation constitutes a noticed part of this delay phenomenon in the modern construction industry (Barry 2011b).[329] John Merrin defines "Concurrent Delay" as: "a period of project overrun which is caused by two or more effective causes of delay which are of approximately equal causative potency"(Marrin 2002: p.3). According to Wrzesien and Wessing, "Concurrent Delay" is defined as: "a concurrent delay is assumed to arise where a single period of delay is caused by more than one event. On this analysis it is the time that the delay is suffered, and not the time that the event occurs, that is the key factor in determining concurrency" (Wrzesien & Wessing 2005: p.22). Additionally, Lowsley and Linnett (2006), define "Concurrent Delay" as "Two or more delay events occurring at the same time. For example, a project may be delayed simultaneously due to bad weather, a late variation instruction and labor problems" (Lowsley & Linnett 2006: p.227).

Furthermore, Cooke and Williams define "Concurrent Delay" as "where two or more delay events arise at the same time and at least one of the delays has been caused by the client and another by the contractor (Cooke & Williams 2009: p.361).[330] On their part, Haidar and Barnes define "Concurrent Delay" as: "two delays events that have an impact on the critical path to completion occur at the same time"(Haidar & Barnes 2011: p.38). Keith Pickavance in his 4th edition defines "Concurrent Delay" as: "where two causes (one of which is the liability of one party and one the liability of the other) result in the same loss, liability either lies where it falls and neither party receives compensation, or some form of inferential machinery is employed in order to facilitate distribution of the loss between the

[329] Const LJ 165 para 4

[330] From the perspective of the construction industry as a business, the client in meant to be the employer. There are other names for the employer such as the project owner or the developer in some other contexts.

parties"(Pickavance et al. 2010: p.1037).[331] And Stephen Furst and Vivian Ramsey in "Keating on Construction Contract" defined "Concurrent Delay" as "a period of project overrun which is caused by two or more effective causes of delay which are of approximately equal causative potency"(Furst, S. et al 2011: p.283)

While defining the "Concurrent Delay" situation, the "delay and disruption" protocol has differentiated between "True Concurrency" and "Concurrent Delay". The definition for the true concurrency is "the occurrence of two or more delay events at the same time, one an employer risk event, the other a contractor risk event, and the effects of which are felt at the same time".[332] Meanwhile, the protocol states that "the term Concurrent Delay is often used to describe the situation where two or more delay events arise at different times, but the effects of them are felt -in whole or in part- at the same time"(SCL 2002: p.16).[333] Finally, the "Planning Engineers Organization" defines "Concurrent Delay" as "The parallel timing of two or more activities or parts of a programme more often used to describe the effect of two or more discrete delaying events affecting or delaying the completion of a project in parallel. Had either of the delaying events happened in isolation then the project would still have been delayed".[334]

Judges' Definitions for "Concurrent Delay"

Judge Lord Drummond Young in the "City Inn" case has defined the situation of

[331]That was in Keith Pickavance's 4th edition of his "Delay and disruption in construction contracts". Keith Pickavance has defined the "concurrent Delay" dispute in his 3rd previous edition as "two or more causative events occurring over a calendar period of time (at least one of which is at the employer's risk and at least one at the contractor's risk and where the effect may also be experienced over a single calendar"(Pickavance 2005: p.835)

[332] See in section 1.4.4 of the protocol

[333] See in section 1.4.6 of the protocol

[334] This has been referred to by Andrew Baldwin, David Bordoli (Baldwin & Bordoli 2014).

"Concurrent Delay" as: "Where there is true concurrency between a relevant event[335] and a contractor default, in the sense that both existed simultaneously, regardless of which stared first".[336] Judge Hamblen in the "Adyard" case has adopted and referred to the definition of John Merrin QC which is "a period of project overrun which is caused by two or more effective causes of delay which are of approximately equal causative potency".[337]

Mis- use of the term of "Concurrent Delay":

The meaning of "Concurrent Delay" in most of the construction law related literature is the delay caused by both the contractor and the employer at the same time. There are a number of examples of the misuse of the term "Concurrent Delay". For example, in the JCT 1980 (Clause 25.2.2) and JCT 1998 (Clause 25.2.2.2) contracts, the term "Concurrent Delay" has been used to describe the delays caused by relevant events at the same time,[338] of which none of them is the contractor's responsibility (Pickavance et al. 2010). Such concept should have been referred to as "parallel delay". The same misuse of the term is found in clause 12.7.3 of the JCT 2003 Major project form(Jones 2004, p.117). Some writers also proffer wrong definitions of the term, such as this definition: "A delay to completion caused by two or more events. Where all of the causative events are the responsibility of one party" (Barry 2011a).[339]

Another example of the misuse of the term "Concurrent Delay" is that the court in *City Inn Ltd v Shepherd Construction* case referred to two delays as "concurrent" while they

[335] The "relevant event" is outlined in section titled: RELEVANT EVENTS (OR COMPENSATION EVENTS) in chapter 4
[336] *City Inn Ltd v. Shepherd Construction Ltd* [2007] CSOH 190 CA101/00 paragraph [18].
[337] *Adyard Abu Dhabi v SD. Marine Services* [2011] EWHC 848 paragraph [277] (Comm)
[338] The "relevant event" is outlined in section titled: RELEVANT EVENTS (OR COMPENSATION EVENTS) in chapter 4
[339] Const. L.J. 166 paragraph 2

were "consequential delays". These two delays were among a number of other delays in the case which all were in a position of "Concurrent Delay". "Concurrent Delay" is different from the sequential delays. Sequential delays are where a number of delays occur during the process of executing the "construction works" each of which occurs at a different point in time on the programme. The "sequential delays" usually occur immediately after each other. They can be independent periods of delays or in some cases some of them can be as results of an earlier delay on the programme. "Sequential delays" can be caused by one reason or a number of independent reasons. From the legal perspective, "sequential delays" are usually dealt with as one period of delay under the application of the extension of time clause if they come immediately after each other and if they are caused by one reason under the risk of the employer or under a neutral reason.

The definition adopted in this research

The research defines the situation of "Concurrent Delay" as follows:

"Concurrent Delay" dispute is a situation where the main contractor[340] found in a culpable delay while the employer caused a delay (or delays) too. The effects of the two delays, caused by the two sides, occurred and overlapped at the same time. At least one of these delays was caused by a party other than the party which caused the other delay (or delays). This situation may overlap with a neutral delaying event".[341]

[340] The definition has made an emphasis on the main contractor as the subcontractors have no direct legal relationship with the employer in the situation of "Concurrent Delay" although the subcontractor may be causing one or more of delays of the main contractor.

[341] This definition does not directly include the neutral events as they are not the responsibility of any of the contracting parties. There are implications for neutral events but it has nothing to do with parties' responsibilities in the situation of "Concurrent Delay" where its perspective in this research is more of a legal contractual perspective for a situation between the contractor and the employer. The research's definition has excluded the neutral events because the neural event is not the responsibility of the contractor or the employer and this is consistent with the model clause suggested by this research later in chapter 6.

3.4 DELAY MECHANISM IN PUBLIC WORKS CONSTRUCTION DISPUTES

As time is an important element in the construction industry, such importance has been reflected in "construction contracts". The construction contract can be seen as a *tool* to allocate the risks in the construction industry (Bunni 2001: p.524). One of these risks is time. The contract can be regarded as a legally enforceable "tool" to help two wills to set binding obligations together. The "construction contract" puts the will of both the contractor and the employer to carry out the required construction works. The construction contract (including any standard form of construction contracts) has to be designed to tackle a number of matters normally associated with the nature of the construction industry. Tackling such matters is essential to achieve the objectives of both parties as laid out in the contract. These matters many require further details in the form of a mechanism which comprises of a number of harmonized terms and conditions. Examples of such mechanisms include mechanisms governing payments,[342] insurance, defects, dispute resolution and project handover delay.[343] Every mechanism in construction contracts may vary from a standard form of contract to another and from a bespoke contract to another.[344] However, there are common substantial conditions and rules that normally govern the core of each mechanism. To understand the research issue of the "Concurrent Delay", it is important to outline the "delay mechanism" in construction contracts. Following is an outline for such mechanism within the context of "public works construction contracts" in the three jurisdictions of this research study.

Firstly, "Delay mechanism" is one of the most important legal devices governing the

[342] The construction contract mechanism for payments slightly differs according to the type of the construction contract from the "fixed price construction contract" to "re-measurement construction contract" to "Lump sum construction contract" (Chappel 2002, p.5)

[343] Such mechanisms typically involve a number of judicial precedents to clarify certain matters and fill the gaps which might exist.

[344] A bespoke construction contract is a contract which has been written specifically for the job

construction industry. "Delay mechanism" comprises of a set of rules governing the situation of delay. The delay mechanism is based on a number of time related clauses and principles which have been derived from the contract's terms and conditions. It consists also of a number of judicial precedents. The primary aim of the "delay mechanism" is to achieve a fair and just allocation of time related risks for both of the parties to the construction contract. Such rules allow the contract to function effectively as regards its time related objectives.

Second, "handover date" is critical for both the contractor and the employer. This fact has been reflected by the importance of the clause which states the handing over date to which the parties to the contract pay close attention. The rough idea about the required anticipated handing over date starts normally at the stage of the strategic planning and feasibility study of the construction project. The handover date is stated normally afterward at the tendering process. The clause which states the project completion date is regarded as one of the most important clauses to be taken into consideration during the negotiations stage prior to the signature of the construction contract. Such date becomes one of the critical facts of the project, which normally affect the tenderers' decisions whether to place an offer or not and consequently affect their monetary evaluation of the cost of the construction works. By the end of the tendering process, while the contract is being drafted, the completion date might slightly be changed after determining the actual size of the construction works according to the final agreement prior to the latter being signed. The time becomes "at large" in the case of the absence of a contract term states the "completion date" of the subject matter of the contract(Jones 2004, p.79).[345]

The project period is normally calculated starting from the date of possession of the

[345] For time to be at large, within the construction context, means that there is no specific time for the construction project to be completed by the contractor. In such circumstance, project has to be completed within a "reasonable" time.

site by the contractor. Therefore, such completion date is contractually connected with the employer's obligation to handover the possession of the site to the contractor. In addition to the completion date clause and the "employer's obligation to handover the possession of the site" clause, delay mechanism in the three jurisdiction of this research study (i.e. England, Scotland and Egypt) includes the following principles:

3.4.1 In England and Scotland

In England and Scotland, there is no difference between public and private construction contracts in relation to how the core of the disputes are dealt with and resolved by the judiciary. Therefore the delay mechanism in "public works construction contracts" is the same with respect to private construction contracts in the jurisdictions of England and Scotland. In addition to the completion date clause and the "employer's obligation to handover the possession of the site" clause, the delay mechanism in England and Scotland consists of the liquidated and the ascertained damages clause, the extension of time clause and the "prevention principle".

3.4.1.1 Liquidated damages clause[346]

The liquidated damages clause is an essential condition in construction contracts which tackles the problem of late handover of construction projects. The purpose of the liquidated damage clause as stipulated in contracts is ensure that the employer is reimbursed or compensated with an amount of money by the contractor for the late handover of the project. The amount of the liquidated damages is negotiated in the course of drafting the contract. Such amount usually reflects the actual loss that the employer will suffer once the

[346] The liquidated damages clause is sometimes referred to as the "liquidated and ascertained damages" clause and sometimes referred to as "LAD's"

project has been delayed. The "liquidated damages" is calculated from the date of the contractual handover and is attributed to a specific time unit[347] depending on the nature of the project (Gray & Larson 2008: p.120).

In England and Scotland, the "liquidated damages" clause is normally included in the construction contract to avoid the evaluation of the damages under common law. In the absence of such a clause; the dispute resolver can estimate the amount of damages caused by the breach of the contract by the other party. However, unlike the "liquidated damages" clause, the claimant[348] seeking "un-liquidated damages" under common law has to prove every element of his loss as the estimation of the damages made by the dispute resolver is done according to the actual loss suffered by the claimant.[349] Liquidated damages can be regarded as a penalty if the sum stated can be seen as extravagant and unconscionable in amount in comparison with the actual loss that the employer may have suffered. Such differentiation has been examined in the case of *Dunlop Pneumatic Tyre v. New Garage & Motor*.[350] The judgment, in this case, differentiates between "penalty" and the liquidated damages.[351] This case applies to construction contractual disputes and it has been summarized by Bunni (2005) as follows:

(a) The conventional sum is a penalty if it is extravagant and unconscionable in amount in comparison with the greatest loss that could possibly follow from the breach.
(b) If the obligation of the promisor under the contract is to pay a certain sum of money, and it is agreed that if he fails to do so he shall pay a larger sum, this larger sum is a penalty. The reason is that, since the damage arising from breach is capable of exact definition, the fixing of a larger sum cannot be a pre-estimate of the probable damage.

[347] The time unit refers to periods of time such as hour, day and week
[348] Or the "pursuer" within the Scottish legal system
[349] In some construction works such as petrol and gas construction projects, the damage, in case it happened, normally constitutes a very high cost. Therefore the contractors of the petrol and gas construction projects are very keen to include a "liquidated damages" clause in their contract. This is to limit the compensation and to avoid the actual estimation of the loss in case of the occurrence of any breach of the contract while it is being performed in the future. [This was statement made by MR. Brandon Nolan (a visiting professor at Strathclyde Law School) in his presentation given during the LLM construction law in Glasgow (May 2012)]
[350] *Dunlop Pneumatic Tyre Co. Ltd v New Garage and Motor Co. Ltd* [1915] AC 79 at 86
[351] See also the case of *Ford Motor Co. v. Armstrong* [*1915] 31 TLR 267* (Jones 2004, p.88)

(c) Subject to the preceding rules, it is a canon of construction that, if there is only one event upon which the conventional sum is to be paid, the sum is liquidated damages. This was held to be the case, for instance, where it was provided in a contract for the construction of sewerage works that, if the operations were not complete by 30 April, the contractor should pay £100 and £5 for every seven days during which the work was unfinished after that date.

(d) If a single lump sum is made payable upon the occurrence of one or more or all of several events, some of which may occasion serious and others mere trifling damage, there is a presumption (but no more) that it is a penalty. This presumption, however, is weakened if it is practically impossible to prove the exact monetary loss that will accrue from a breach of the various stipulations. The sum fixed by the parties in such a case, if reasonable in amount, will be allowed as liquidated damages (Bunni 2005: p.372).

Due to the significant expenses involved in the process of executing the "construction project" and the importance of finishing the construction works on time, the "liquidated damages" clause may prove very important for both parties and critical for the employer in particular. The liquidated damages clause not only aims to compensate the employer for the late handover of the project, it also aims to pressure the contractor to abide by the handover date and to avoid lateness in the project handover. Given its significance, the "liquidated damages" clause is present in nearly every construction contract.[352] And conversely, some contracts[353] make provision for an early completion bonus[354] to encourage the contractor to finish early.

3.4.1.2 The Extension of Time clause (EoT)[355]

[352] Clause "X7" of the NEC3 standard form of construction contract 2005 is an example (see appendix note number 1)

[353] Such as clause X6 of the NEC3 contract and clause 47.3 of the FIDIC contract fourth edition (Cox & Thompson 1998) page 106

[354] The early completion bonuses are different from the "acceleration" from the "construction management" perspective. "Acceleration" is used to tackle the delay that appears during the execution of the construction works which normally involves the contractor to bear the cost of an additional amount of money. The role of the project manager who works for the contractor is to control the "risk mitigation" of the delay. This is because the amount of money the contractor pays in the case of delay under the "liquidated damages clause" is not the only financial loss the contractor suffers in the case of a delay. If the project manager were able to control the delay and swiftly manage the acceleration to meet the handover date to relief the contractors with regard to the latter paying the liquidated damages, the contractor may still pay the additional cost of the "acceleration" itself.

[355] Sometimes referred to, in the literature, as the "EOT" clause

Delay may be noticed as the project progresses, to the extent that it becomes clear that the final date of the handover will be difficult to be achieved.[356] Entitlement to extension of time within which to complete the project is a contractual mechanism to protect the contractor from the enforcement of the liquidated damages clause against him by the employer.[357] Under the extension of time rule, the contractor has a right derived from the contract to seek an extension of time within which to complete the project if he encounters a delay caused by a relevant event[358] (or events) for which the contractor is not responsible. Such event may be a neutral in nature or one caused by the employer.[359] During the process of executing the "construction works", the extension of time clause helps to mitigate the effects of the negative circumstances which the contractor might experience when executing the project as it gives the contractor the opportunity to place progress back on track. Whether it has been granted during or after the delay or after the execution of the construction works, the entitlement for the extension of time is to the limit which can be seen as fair and reasonable (Powell-Smith & Furmston 2000, p218)[360].

From the construction management perspective, relevant events[361] vary according to the nature of the construction works. From the legal perspective, relevant events vary also

[356]Clause "63.3" of the NEC3 standard form of construction contract 2005 is an example of the extension of time clause which states that: "a delay to the completion date is assessed as the length of time that, due to the compensation event[356], planned completion is later than planned completion as shown on the accepted programme. A delay to a key fate is assessed as the length of time that, due to the compensation event, the planned date shown on the accepted programme"(Institution of Civil Engineers ICE 2005)

[357] This is in case the delay is not the fault of the contractor

[358] The relevant events are a group of construction related events which might occur during the process of executing the construction works. The term "relevant event" is outlined in section titled: RELEVANT EVENTS (OR COMPENSATION EVENTS) in chapter 4. These event are termed sometimes differently for example in the NEC3 they are termed as "compensation events"

[359] The act or negligence of the employer in performing a contractor obligation on the employer's responsibility side

[360]See the case: *John Barker Construction Ltd v. London Portman Hotel Ltd* (Queen Bench division) [1996] 50 Con LR 43

[361] "Relevant events" is a term used to refer to the causes of delay which entitle the contractor to be granted an extension of time. Typically, this term refers to the main two categories of causes of delay which are the neutral causes of delay and the causes of delay caused by the employer.

from a standard form of construction contract to another.[362] According to the nature of the relevant event which caused the delay, the type of delay can be identified as a "Culpable Delay" or as an "Excusable one". "Culpable delay" occurs where the contractor is responsible. In such instances, the contractor is not entitled to compensation with neither time extension nor costs. "Excusable delay", however, happens where the contractor is not responsible and will, therefore, be entitled to cost and/or extension of time considering the reason for the delay.[363]

Extension of time is a main source of claims in the majority of construction delay disputes. According to the contract, either the architect or the employer or both can grant the contractor such extension. From the construction management perspective, the grant of the extension of time is based on the "critical path". The programming of the execution of the construction works and the sequence of tasks consist of two diverse types of activities or tasks. The first set comprises critical tasks and the second comprises the non-critical tasks. Differentiating between these two identified groups of tasks is imperative, as it affects the understanding of the entitlement of extension of time as the extension of time can be granted to the contractor only if the delay occurred on the "critical tasks" delaying the actual[364]completion date of the construction project.

3.4.1.3The prevention principle

Under the prevention principle, if the contractor is to complete the works planned in

[362] "Relevant Events" normally include events such as the unforeseen "ground conditions", variations, additional construction works, strike, exceptionally adverse weather, force majeure, deferment of the giving of the possession of the site and suspension of the contract.

[363] There are examples of excusable delay without cost. According to the majority of construction contracts, unusual or exceptionally adverse weather (compared to the normal weather at that time of the year) is an excusable delay entitling the contractor to an extension of time, but not entitling the contractor to monetary compensation as an immediate result of the exceptionally adverse weather itself.

[364] Compared with the "planned" completion date

the construction programme within the agreed time frame but is prevented from achieving this by the act or omission of the employer, the liquidated damages clause will not be enforceable.[365] The act or omission mentioned should not be one of the relevant events[366] mentioned in the contract. Such act or omission of the employer is regarded as an excusable delay for the contractor and will prevent the application of the "liquidated damage" clause of the construction contract. In such situation of the application of the "prevention principle", the time is then said to be "at large". However, in such circumstances, the employer is still able[367] to claim for the "un-liquidated" damages if these can be proved (Jones 2004, p.76 & p.88). The prevention principle is not based on contractual provisions[368] as it has been developed in construction law by a number of judicial decisions.[369]

Furthermore, there is a connection between the construction management perspective and the "prevention principle": when the contractor submits a programme showing a completion date earlier than the contractual date of completion, no terms will be implied that the employer should so perform the contract as to enable the contractor to carry out the project in accordance with the programme and to complete it on the earlier date indicated in

[365] This applies also to the architect depending on the wording in the contract. An example on this is the *London Borough of Merton v. Stanley Hugh Leach LTD 32 BLR 51* [1985]. In this case the court held that "It is an implied term of the contract in JCT terms that the employer will not hinder or prevent the contractor from carrying out its obligations in accordance with the terms of the contract and from executing the works in a regular and orderly manner. This implied term extends to these things which the architect must do to enable the contractor to carry out the work and the employer is liable for any breach of this duty on the part of the out the work and the employer is liable for any breach of this duty on the part of the architect".(Powell-Smith & Furmston 2000, p. 156)

[366] Or "compensation event" as per the NEC3 2005 (see section title: RELEVANT EVENTS (OR COMPENSATION EVENTS) in chapter 4)

[367] See the case of : *Rapid Building Group Ltd v. Ealing Family Housing Association Ltd (1984) 29 BLR 5*

[368] This statement does not contradict with the fact that nothing prevent the parties to include a clause in their contract which states clearly the "prevention principle" in the sense that if the contractor was ready to complete the job with the time limit stated in the contract but there was a delay of the contractor and that delay was because of the act or omission of the employer then the liquidated damages clause will cease to operate in this case.

[369] "Prevention Principle" has been developed in construction law by cases such as *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd [1970] 1 BLR 114* and *Percy Bilton Ltd v Greater London Council [1982] 20 BLR 1*

the programme.[370]

Finally, with respect to the "prevention principle", the contractual obligation derived from the completion date clause in the contract is replaced by a common law obligation that the object of the contract should be completed within a time which is fair and reasonable for both of the parties. The time becomes "at large" under the "prevention principle" as a result of the preventive act itself.[371] For time to be at large within the construction context, means that there is no specific time for the construction works to be completed by the contractor. In such circumstance, the project has to be completed within a "reasonable time". In such situation, the time is said to be "at large" to allow the contractor finish the construction works within a "reasonable time". In case both parties do not agree on the limit of the "reasonable time" during the pre-dispute stage, such reasonable time is evaluated and stipulated by the dispute resolver. In the event of the application[372] of a defined specific "time frame" that constitutes a delimitation of the "reasonable time", while the contractor exceeding this specific time limit, it would become possible for the employer to enforce the "liquidated damages" clause.

3.4.2 In Egypt

Unlike the common law jurisdictions, the Egyptian civil law legal system in relation to construction law is substantially based on codified sets of rules.[373] judicial precedents exist

[370] Such rule has been outlined in the case of: *Glenlion Construction Ltd v. The Guinness Trust* [1987] 11 Con LR 126 (Powell-Smith & Furmston 2000, p. 167). This of course applies unless otherwise has been stated in the contract.

[371] As mentioned above, the time becomes "at large" also in the case of the absence of a contract term states the "completion date" of the subject matter of the contract (Jones 2004, p.79)

[372] by a parties' agreement or by a dispute resolver decision

[373] Within the Egyptian legal system, the term construction law is a new legal term and a new area of legal studies - The background of the Egyptian civil law legal system in relation to the concept of "public works construction disputes" and its nature have been discussed in details in section titled: The difference between Private and "Public Works Construction Disputes" in chapter 2

under this civil law system but with a comparatively limited intervention in the overall regulation of the system governing construction contracts in Egypt.[374] Unlike the situation in Scotland and England where there is no differentiation between public and private construction contracts, delay mechanism in "public construction contracts" in Egypt has slightly different[375] regulations compared to if it were in a private construction contract. Such rules have been stipulated mainly by a number of judicial precedents, two legislations and one bye-law.[376]

In that regard, the first legislation is the Civil Code of no. 131 of 1948 which prescribe fundamental rules concerning the regulation of construction contracts regardless of whether the contract is a public or a private one. The second legislation is the Public Auctions and Tenders Act no. 89 of 1998 which prescribes the rules governing construction contracts between a contractor and a government body as an employer. Finally, the bye-law of the ministry of finance's decision no. 1367 of 1998[377]which has regulated, in details, the practical rules governing "public contracts" including "public works construction contracts".

The main preliminary principle regarding *time* is the contractor's obligation to finish the construction works on the completion date mentioned in the contract. Such principle is

[374] However, in the Egyptian "civil law" legal system, the common law doctrine of judicial precedent does not exist. Judicial precedents do not have the same position of the judicial precedents in common law countries. This is because, in theory, different courts still can depart from the precedents issued by supreme courts (whether the court of cassation or the supreme administrative court). However this happens in a limited scale.

[375] The differentiation between public and private construction contracts in civil law systems falls within the broader concept of the differentiation between public and private contracts. This is covered within the Egyptian civil law jurisdiction in chapter two including the criteria for public contracts.

[376] There are other legislations related to construction industry such as Building Act no. 119 of 2008 and its bye law no. 114 of 2009 which regulate the issue of licences for buildings and major construction projects and urban planning issues. However, this Act does not relate to the contractual relationship itself. There are also other legislations regarding the public works construction projects such as the Egyptian Public Private Partnership Act (no. 67 of 2010), however this Act regulates the strategic monetary relationship between the government bodies and the SPV and has no connection with the delay mechanism in the Egyptian legal system in terms of the construction contract itself.

[377]Issued on 6th of September 1998

stipulated by section 147/1, and section 655 of the Egyptian Civil Code Act no. 131 of 1948.[378] In these sections, the contractor has an obligation stipulated by law to finish the construction works and carry out the "hand over" on the relevant date stated in the contract. The mentioned sections constitute the general principle and the legislative framework in Egyptian construction contract law in relation to the obligation to finish the construction works by the "hand over" date. These sections apply to both public and private construction contracts.

If the contractor fails to comply with the handing over date stated in the contract, a number of legal rules and consequences would apply to address this situation. Such rules slightly start to *differ* depending on whether the contract is a public or private one. In private construction projects, the delay mechanism is governed by the contract and the parties are completely free to apply whatever clause they agree to be included in their contract including as it relates to the "delay mechanism". However this is not the case with "public construction contracts" where the government body (i. e. the employer) is expected to abide by the rules of the Public Auctions and Tenders Act no. 89 of 1998 and the relevant bye-law.[379]

Furthermore, the regulation of public construction projects in Egypt also consists of a number of rules stipulated in section 1 to section 26 of the Public Auctions and Tenders Act no. 89 of 1998 and section 79 to section 89 of the above-mentioned bye-law. The "Delay

[378] Section 147/1 of the Egyptian Civil Code Act no. 131 of 1948 states that "The contract is the law of its two parties it cannot be changed unless there is a mutual will from its two parties". Section 655 of this code states that "once the contractor has executed the construction works within the time, he or she should handover immediately the project to the employer who has an obligation then to receive the finished construction works otherwise the handover is regarded done once the contractor has issued a relevant legal formal notice to the employer"

[379] The bye-law of this Act has been issued by decision no. 1367 of 1998 issued by ministry of treasury (i. e. Chancellor of the Exchequer)

Mechanism" for the public construction contracts is provided for in section 23[380] of the above Act and in section 83[381] of the bye-law of this Act. Such mechanism in "public construction contracts" is governed also by a number of judicial precedents issued by different courts of the Egyptian "*Conseild'État*".[382] In addition to the completion date clause and the "employer's obligation to handover the possession of the site" clause, there are legal consequences which may occur as a result of the contractor's failure to finish the construction works on time; these consequences include the "delay fine", the "delay compensation" and the "prevention principle".

3.4.2.1Delay fine

The government body (i.e. the employer) and the contractor can agree in advance on the amount of the "delay fine" which will be included in one of the clauses of the contract. In such a case, the amount of the "delay fine" should be a reasonable amount of money. Otherwise (i. e. if such "in advance" agreed amount of "delay fine" were not reasonable), the judge has the power to reduce it under the general principle stated in section 147/2 of the Civil Code Act 113 of 1947.[383] Section 147/2 gives the judge the power to alter any term or condition of any contract if the application of such term or condition will result in

[380] Section 23 of the Public Auctions and Tenders Act no. of 89 of 1998 states that: if the contractor has delayed the handover date, the government body can issue a notice to finish the works on time and can stipulate or deduct a 10% of the value of the contract as a delay fine.

[381] Section 83 of the bye-law no. 1367 of 1998 states that: if the contractor has delayed the handover date, the government body can stipulate or deduct a 1% per week up to a total of 10% of the value of the contract as a delay fine.

[382] Different courts of the Egyptian "*Conseild'État*" refers to the administrative supreme court of the Egyptian "*Conseild'État*" as well as the different benches of the court of the administrative judiciary see section number 2.3.1.3 of chapter 2

[383] Section 147/2 of the Civil Code Act no. 113 of 1947 states that:"If exceptional events of general nature have occurred, the extent of which could not be foreseen, and these events have the effect that the contractual obligation, without becoming impossible, is onerous for the debtor in a way that potentially inflicts on him a material loss, the judge may, according to the circumstances and considering the equilibrium of the interests of the contracting parties, reduce the onerous obligation to an acceptable limit and any agreement to the contrary is void"

"frustration" to one of the parties.[384] This general rule applies within the context of the "delay fine" in "public construction contracts". "Frustration" within this context means that the amount of the "delay fine" stated in the contract is much higher than the actual damages or loss caused by the delay. The determination of the amount of the "delay fine" claimed will then be assessed according to the degree of the damages caused by the delay pursuant to the judge's own discretion.[385]

In the absence of a contractual clause, the government body has the right to impose a "delay fine" as the legislative mechanism applies. The "delay fine"[386] is stipulated in both the Public Auctions and Tenders Act no. 89 of 1998 and its bye-law. Delay fine is an immediate consequence of the delay. In this case, the government body can impose a delay fine by law. In such case, the amount of "delay fine" has a ceiling or a limited to a maximum rate of 10% of the "value of the contract". Such limitation has been stipulated in section 23[387] of the Public Auctions and Tenders Act no. 89 of 1998. Section 23 gives the government body acting as an employer in a "construction contract" the power to apply such fine or deduct the amount from any amount of money due to the contractor whether to this specific government body or to any other government body across the country.

According to section 23, any delay to the handover date entitles the government body to impose the mentioned "delay fine" without a notice. Section 83 of the bye-law[388] states the stages or steps for imposing such fine. It states that, for first instance and for the first week of

[384] The judge has a wider degree of freedom in using his or her own discretion in this regard compared to the same situation in common law jurisdictions of England and Scotland.

[385]Such approach has been established by the supreme administrative court in the case no 741 judicial (year number 27), judgment date 28th of May 1985.

[386]Can be named as : "statutory liquidated damages"

[387] Section 23 of the Public Auctions and Tenders Act of 89 of 1998 states that: if the contractor has delayed the handover date, the government body can issue a notice to finish the works on time and can stipulate or deduct a 10% of the value of the contract as a delay fine.

[388]This refers to the by-law of the Public Auctions and Tenders Act no. 89 of 1998 which (the by-law) has been issued by the decision no. 1367 of 1998 issued by ministry of treasury (i. e. Chancellor of the Exchequer)

delay (or part of a week), such "delay fine" should begin with 1% of the value of the contract up to the mentioned ceiling of total fine of 10% of the value of the contract.

In 2001, the meaning of the term "value of the contract" was under consideration in the case no 4725/42.[389] In this case, the court of the administrative judiciary at the Egyptian *Conseild'État* (Council of State) held that the value of the contract in the context of section 23 of the Public Auctions and Tenders Act no. 89 of 1998 should mean and be understood as the total value of the final construction works executed by the contractor. It should not be limited to the original primary value stated in the contract.

Finally, in this point, the mentioned section has given an opportunity for an exemption from such fine in two situations. The first one is where there is no damage at all resulting from the delay. The second situation has to do with where the reasons behind the delay were completely out of the contractor's control. In any of these situations, the government body then (with its own discretion) has the right to exempt the contractor from such fine. However, this can be done only after referring the matter to the "advisory department" at the Egyptian *Conseild'État* (Council of State) for an approval.[390]

3.4.2.2 Prevention principle in Egypt

[389] case no 4725 of the judicial year 42 judgment date 27th of February 2001

[390] Similar to the French "*Conseild'État*", the structure of the Egyptian *Conseild'État*(Council of State) includes a department called the "advisory department". This department consists of a number of *Conseild'État*(or "Council of State) judges who are temporarily attached to this department during their career. The main rule of this department is to give the different government bodies the necessary legal advices once requested. The establishment of this department was made by Act no. 112 of 1946. The government bodies are sometimes obliged, by law, to reference specific matters to this "advisory department". There is also another department in the structure of Egyptian council of state called the "legislative department". The duty of this "legislative department" is to give the parliament the necessary advice with respect to the parliament bills. The "advisory department" and the "legislative department" form the "general assembly of the advisory and legislative departments" normally chaired by the first vice president of the chief judge of the Egyptian *Conseild'État* (Council of State).

Regarding the prevention principle, as a "civil law" jurisdiction, the Egyptian legal system has this rule stipulated in a legislative instrument. The Civil Code of 1948 provides for the general principles in two articles: first, article no. 663 provides that "the employer can stop the performance of the construction works at any point in time during the execution of the construction works and the contractor then is entitled to the compensation towards the expenses the contractor has already spent and the works has been already executed and towards the missing monetary profit the contractor was going to obtain from this job"; and article no. 665/3 states that "... if the failure of the execution of the construction works is due to the fault of the employer or due to a problem in the material of which the employer is the one who has provided, then the contractor in entitled to the cost of his work which has been already done".

In addition, article 23 of the auction and Public Auctions and Tenders Act no. 89 of 1998, which focuses on the performance of a contract in which a government body is one of the parties, provides in its last paragraph that: ".... in the case of the allegation that the government body mistakenly did not fulfill one of its contractual obligations, the other party is then entitled to be granted a compensation .....".

3.4.2.3Compensation

In addition to the "delay fine", the government body can claim for compensation under the general rules of contractual compensation. Unlike the "delay fine", there are three conditions in the Egyptian civil law system for such compensation to be applicable. The claim for "compensation" requires that there should have been a *breach* of contract. In the case of claiming for compensation based on delay, the non-compliance with the handing over

date clause provided in the contract constitutes such breach. Second, the claim for "compensation" requires that the "government body" proves the *losses* and damages it has suffered because of the delay in handing over the project at the agreed time. Under the general conditions for contractual compensation, the claimant[391] should prove a "*link*" between the breach and the damages or loses. Therefore, in this case, the "government body"[392] should prove not only the damages and loses but also the link between the damages and the fault of the contractor.[393]

3.5 Cost of Prolongation

As a result of the completion time of the project being extended and prolonged, there might be an additional cost to be added to the total cost of the project. The cost of prolongation is not compensable as long as the delay is caused by the contractor's fault or by a neutral delay event (i.e. not the fault of both the contractor and the employer). This cost might increase or decrease according to different elements and circumstances. The cost of prolongation consists of a *direct* cost, which has arisen directly as a result of the delay. The direct cost includes, for example, material that has been used for carrying out the extended works, electricity on site, materials that might have become useless due to delay and other supporting material have been deployed because of the delay. The direct cost of prolongation will also involve the cost of the additional labor brought to the site solely for the start of the delayed tasks or activities. *Indirect* cost, however, may encompass the cost of the contractor's plant and ordinary staff's waiting on site to resume the project, without working at full

[391] Or the "pursuer" within the Scottish legal system

[392] This applies to the other party too. So individuals or private law entities which contracts with the governmental body should prove not only the damages and loses but also the link between the damages and the fault of the government body.

[393] The "fault of the contractor" refers here, in the context of the delay disputes in construction industry, to the delay caused by the contractor which affects the completion date of the construction works or the construction project.

capacity.

In some complicated projects, the cost of prolongation may also include the cost of special or *additional* insurance for the delay, involving the payment of certain amounts of money as instalments. The amount of these instalments varies according to the extent of the delay and the type of activities which are due to be performed as a result of the delay. The cost of prolongation also includes the cost of the *increase* of the normal insurance owing to the project's prolongation, as the number of instalments due to be paid or already paid increases because of the extension of time. The cost of head office overheads will remain as its commitment to the project continues during the prolonged period(Champion 2011). Finally, the cost of prolongation may include labour and material cost fluctuations.[394]

3.6 SUMMARY

In accordance with the aim of this chapter, the special nature of the delay in construction industry has been analyzed as well as the meaning of delay and the meaning of "Concurrent Delay" in construction context. The fundamental legal frame regarding delay in public works construction contracts including "Concurrent Delay" dispute has also been discussed. In this chapter, specific points have been raised which will be built on in the subsequent chapters of this research. Such points can be summarized as follows:

1. In both private and "public contracts", the construction management perspective is the core of the process of executing the "construction works" as it depends on fragmenting the construction works into the relevant tasks or activities and linking them together in a critical path. There are a number of variations within the same type of construction projects and within the different types of construction projects. The

[394] Typically, the cost of prolongation is decided on a case by case basis and the work of the expert witness is being involved extensively in this regard.

contractor and the project manager can always confront unexpected circumstances or accelerate the construction works by making changes in the critical path if necessary. The ability to do so depends on the experience of the contractor or the project manager and the facts of the situation itself which required making such change. This will later feed into the justification of the suggested model clause in chapter 6.

2. Analyzing the delay in construction projects differs in its difficulty according to the size and the complexity of the construction programme.
3. The contractor and the employer allocate the time-related risks of the process of executing the "construction works" via the construction contract and the agreed programme. Therefore analyzing the "Concurrent Delay" dispute should rely on the contract together with the programme. As the programme is almost unique in every project, the analyses of the concurrent delay situation should also be done on a case by case basis.
4. There are some misuse of the term "Concurrent Delay" and confusion regarding the concept of "Concurrent Delay" in construction industry in the literature as well as in some standard forms of construction contracts.
5. The delay mechanism aims to achieve a degree of balance between the parties to a construction contract regarding their time commitments.
6. The understanding of the "delay mechanism" is important so as to understand the analysis of the situation of "Concurrent Delay".
7. Delay mechanism in the Egyptian civil law jurisdiction has a different character based mainly on the codified rules, and it gives relatively extra power to the government body.

Based on this chapter, the following analysis is on the different causes of delay within the construction industry in order to elaborate that there are different scenarios in the dispute of

"Concurrent Delay". The following chapter broadly discusses causation in the area of construction law. It deals with the possible reasons of delay as it relates to all parties to the construction contract.

CHAPTER 4: THE RELATIONSHIP BETWEEN CAUSATION AND CONCURRENT DELAY

4.1 INTRODUCTION

One of the main characteristics or nature of the "construction industry" is that it encompasses an unlimited variety of projects. The Projects vary from the small projects such as construction works of repairing the asphalt of a public road to complicated projects such as the construction of power houses. This results in that causes of delay that the dispute resolver[395] encounters while resolving a delay dispute, in the construction industry, vary as a result of that. Every construction project is thus unique in relation to its size and nature. The uniqueness and complexity of some construction projects in some cases may result in the adding of additional causes which normally do not exist in the majority of construction projects (Assaf & Al-Hejji 2006). However, these unlimited causes of delay can be categorized into a number of main causes. The list of delay causes includes some main delay causes summarized by some writers such as "Material Related Factors", "Labor Related Factors" and "Equipment Related Factors"(Aziz 2013).

The causes of delay are heavily connected with the "construction contract". The nature of the contract's bonds, responsibilities, rights or obligations slightly differ from a "construction contract" to another. One of the objectives of the "construction contract" is to try to include a number of the main "frequently seen"[396] causes of delay or potential expected causes of delay and allocate the risk of each to one of the parties according to the nature and size of the project. However, it is not applicable to include all possible causes of delay in the contract. In

[395] The dispute resolver is intended to refer to:
1- In Scotland and England: either the judge or the arbitrator or the adjudicator
2- In Egypt: either the judge or the arbitrator

[396] i.e. "frequently seen" causes of delay in the similar previous same type of construction project

this chapter, the appropriate causation approach or test will be analyzed in the situation of "Concurrent Delay".[397] This chapter also examines the main causes of delay in the "Concurrent Delay" situation including the different delay related scenarios that might occur. The aim of the permutations is to assess the causative contribution of each cause in the situation of the "Concurrent Delay".[398] The position in the three jurisdictions of this research study will be analyzed.

4.2 DELAYING EVENTS

A delay dispute becomes straight forward if a single delay is clearly connected with a single cause which is the responsibility of one of the contract's parties (either the contractor or the employer). The situation is still relatively straightforward in cases in which there is one period of delay which is attributed to two or more causes of delay which is the responsibility of one of the parties. The situation becomes more complicated, however, if there is one period of delay caused by two or more causes of delay one or more of which is the responsibility of one side of the contract parties and one or more of which is the responsibility of the other side. The situation becomes more complicated further if there is one period of delay caused by a number of causes some of which are attributed to the employer, others to the contractor and others which are neutral.

A number of potential delaying events are mentioned in the contract which allocates the responsibilities in general and the time-related risks of each of the parties in particular. In all cases, delaying events can be categorized under three headings which are "delaying events of the responsibility of the contractor", "delaying events of the responsibility of the employer"

[397] This term has already been defined in chapter two
[398] Permutations are the possible scenarios that might occur when different delaying events occur together (see section 7.2 of this chapter

and "neutral delaying events". These groups of delaying events are discussed in the following sub-sections.

4.2.1 The delaying events of the "responsibility of the contractor"

One of the main duties of the contractor under a construction contract is to finish the proposed project within the time expected.[399] There are a number of delaying events contractually allocated to the contractor which stem from his contractual obligations. There is an implied[400] duty of the contractor is to avoid these events from happening. This is to avoid being in a situation of breaching the contract.

According to Cooke and Williams (2009), delaying events which are deeded the responsibility of the contractor include events such as "poor quality of workmanship", "inadequate planning", "under resourcing of site operations" and "accidents and incidents on site"(Cooke & Williams 2009: p.359).[401] These delaying events, within the view of others, also include such matters as "shortage of labor", defective works, insufficient plant, inefficient working (Barry 2011c). They also include the "project management" related delaying problems (Meng 2012). For example, in the NEC3 standard form of construction contract, core clause 2 lists the delaying events which are the contractor's responsibility.[402] The first event occurs if the contractor did not provide the works in accordance with the works information.[403] The second event occurs if the contractor did not design the parts of the

[399] The project triangle include "cost" and "quality" besides "time" so the contractor bears other responsibilities and risks of "cost" and "quality" beside time issue
[400] Scottish Power plc v Kvaerner Construction (Regions) Ltd 1999 SLT 721 (CSOH) (Steensma 2010)
[401] In this list of delaying events, Cooke and Williams did not specify a particular standard form of construction contract which mean that this was intended to refer to contracts in general including bespoke construction contracts (written specifically for the job) as well.
[402] i.e. clauses from 20 to 27
[403] Clause 20 of the NEC3 2005

works which the works information states that the contractor is to design.[404] The third event occurs if the contractor did not either employ each key person named to do the job or employ a replacement person who has been accepted by the project manager.[405] The fourth event occurs if the contractor did not co-operate with others in obtaining and providing information (and working area) which they need in connection with the works.[406]

4.2.2 The delaying events of the "responsibility of the employer"

Aside from the contractor's obligations, the employer also has a number of specific commitments, tasks, duties or responsibilities to undertake. These include normal obligations which are seen in the majority of construction projects as well as some specific ones arising in particular forms of construction contract. These commitments or responsibilities might be required before the commencement of the works[407] or during the course of it such as variations.[408] These commitments or responsibilities are often allocated to the employer because of their particular nature. This allocation can be made because the parties agree together to shift these responsibilities to the employer, while allocating the broader concept of risks of the project. This again varies from one contract to another according to the nature and size of the project and its risks. This varies also according to the position of the two parties of

[404] Clause 21 of the NEC3 2005
[405] Clause 24 of the NEC3 2005
[406] Clause 25 of the NEC3 2005
[407] Such as handing over the construction site
[408] Variations can be issued by the employer or by the architect. In this case it is also the responsibility of the employer when it comes to concurrent delay as the architect works then as an agent for the employer. Also, the architect failure to issue variation may constitute breach of contract by the employer. In both cases, it is not possible to employ other contractor to execute the extra works involved in the variations. See the case : CARR V. J.A. BERRIMAN PTY LTD (1953) 89 CLR 327

the contract according to the law.[409]

Examples of delaying events which are allocated on the risk of the employer include those listed in clause 60.1 of the NEC3 2005 which sets out nineteen compensation events 17 of which are delaying events falling within the responsibility of the employer.[410]

Others such as Cooke and Williams summarize the employer's responsibility delaying events as such events that include "incomplete design on site", "delays in flow of design information", "variations and changes in the scope of the works" and "discrepancies in contract documents" (Cooke and Williams, 2009: P. 359). However, this is not sufficient because for example late information from the employer, in general, constitutes a delaying event by the employer. This type of delaying event which is deemed the responsibility of the employer arises in most of the standard forms of construction contracts. It entitles the contractor to both an extension of time and monetary compensation for the cost of prolongation (i. e. loss and expense) suffered.

4.2.3 The neutral delaying events

Many "delaying events" do not fall within the contractor's delaying events or the employer delaying events. These include events such as "unforeseen physical conditions", "strikes affecting site labor or the supply materials", "fire explosion or act of God (force Majeure)" and "bad weather"(Cooke & Williams 2009). This type of "delay events" is

[409] The position of the two parties of a construction project may vary from a jurisdiction to another and from a project to another within the same jurisdiction. For example in the Egyptian legal system, the law has given the right to the government body to stipulate a deposit paid by the contractor after winning the tender and before the draft of the contract (5% of this despite should be paid before the tender process starts). There are different other examples of the extra power that a party has in front of the other party prior to the contract is to be signed.

[410] They are summarized in point 3 of the appendix in the end of this thesis

attributed to reasons which represent an external cause which is sometimes referred to as an "external risk"(El-Sayegh 2008).

Normally neutral events entitle the contractor to only an extension of time equal to the effect of this neutral event on the progress of the works. This is one of the main differences between the neutral events and the "employer caused" delay events as the later entitle the contractor for both an extension of time and the cost of prolongation. For this difference, later, while this research analyses the "permutations" of the scenarios of the "Concurrent Delay" situation, this research will make a differentiation between the issues of the extension of time and the issue of the cost of prolongation.[411]Therefore the neutral delaying events will be joined with the employer's delaying events in analyzing the permutation of the extension of time only.

Exceptionally adverse weather, for example, is one of the main causes of delay which cannot be attributed to any of the contracting parties. Most of the standard forms of construction contracts entitle the contractor for an extension of time but no money as a result of the contractor encountering exceptionally adverse weather conditions. For examples delaying events which are neutral on the risk of none of the employer or the contractor have been listed in clause 60.1 of the NEC3 2005 which states nineteen compensation events three of them are neutral delaying events. They can be summarized as:

1- Physical conditions[412] (clause 60.1.12)

2- Unforeseen weather conditions[413] (clause 60.1.13)

3- Any event that stops or delaying the contractor from completing the works which

[411]See the clarification of this in section titled: Permutations in chapter 4.

[412] Should be on site and should not be weather conditions and could not be judged at the date of the contract by an experienced contractor.

[413] The "unforeseen weather conditions" refers to the exceptionally adverse weather. The NEC3 2005 contract states the criteria for this associated with the history of the weather data for the last 10 years.

parties could not prevent and the experienced contractor could not expect at the time of contracting (clause 60.1.19) (Institution of Civil Engineers ICE 2005)[414]

4.3 RELEVANT EVENTS (OR COMPENSATION EVENTS)

The delaying events which give the contractor the right to seek an extension of time and/or money vary according to the contract and can collectively be termed as the "relevant events". This term is the dominant in the majority of the standard forms of construction contract (Barry 2011c).[415] However, in some standard forms of construction contract, these events are referred to as "compensable events".[416] This term typically includes the employer's risk events in addition to the neutral events. There is no distinction under this term between the employer's risk events and the neutral events.[417]The number of the "possible" causes of delay in different construction projects is unlimited in the sense that they cannot be gathered as a list in the contract. However, as part of the "delay mechanism" of a construction contract, the main expected causes of delay at the time of contract should be mentioned. For this reason of identifying the "delay mechanism", construction contracts are built on the idea of the "relevant events" which are classified into relevant and non-relevant events to reflect the perspective of the "delay mechanism" in relation to the grant of time and money. The way these causes of delay are mentioned in the ideal construction contract should reflect the issues pertaining to the entitlement of time and money.

4.4 CAUSATION AND CONCURRENT DELAY:

[414] Page 15 and 16
[415] Const. L.J. 166 para 1
[416] term "compensation events" has been used to refer to the "relevant events" in the NEC3 2005
[417] See Practical implications: of the Research findings and Recommendations in chapter 7

Causes of "delay disputes" in construction industry take different forms according to the nature and the complexity of the project. Causation is not a straight forward matter as Judge Steyn stated in the *Bank Financiere de la Cite v. Westgate Insurance* case[418] that "There is no more difficult area in our law than causation". The delay cause can be a direct reason considered as a primary cause. It can also be a secondary event constitutes a cause for the delay (Rawling 2011). One of the main duties of the dispute resolver in a delay dispute in construction industry is to figure out whether or not any specific cause for delay can fall within the primary causes or secondary or tertiary ones. A number of approaches can be applied to find out the cause for a specific period of delay.

4.4.1 The causation tests

The "causation tests" which govern the situation of "Concurrent Delay" as a type of dispute arising from construction works can be seen within two contexts. First is the context which arises from a *contractual* relationship. The second is the one which consists of a *contribution* to loss arising from the acts or omissions of the parties. Therefore the "causation test" for "Concurrent Delay" can be categorized into two different types of approaches. The first category of "causation tests" is derived from the common law with no specific special attribution or link to disputes in relation to construction works. The second category is the "causation tests" which has been derived specifically within the context of "construction works" related disputes.

4.4.1.1 Tests in "common law" context

[418] See *Banque Financiere de la Cite SA v Westgate Insurance Co Ltd [1990] 2 All ER947* at paragraph 1047 referred to by Eggleston (Eggleston 1997) page 199

Tests in common law context are the "but for" test, the "burden of proof" approach and the "Devlin" approach. These are outlined as follows:

4.4.1.1.1 The "but for" test

This test derives originally from tort law[419] and constitutes the general conventional principle in common law for causation for the breach in contract law(Broadbent 2009).[420] In the context of delay, the "but for"[421] test depends on the logical thinking of "what would have happened if the alleged cause for delay had not happened". This test may apply to the delay disputes of the construction works from the perspective that such disputes are based on a contract. It has been applied in cases such as the Henry Boot construction v Malmaison Hotel[422] case.

For the situation of "Concurrent Delay" in particular, some commentators remain with the idea that the "but for" test is still active in such situation such as Marrin (2013)[423] who remained in this regard with his opinion of 2002.[424] However, in spite of the fact that this test is suitable for a single delay[425] which entitles the contractor to the extension of time and may entitle for cost of prolongation under the contract, this test in its original logic is not suitable for the "Concurrent Delay" situation as both the parties are in a culpable delay as both of them already are in a situation of breaching the contract and both of them causing the same delay. Both of the parties can claim that the application of the "but for" test is correct from their point of view unless the dispute resolver applies that test for the two parties in the same time. However, this test within it original logic can only be applicable in the "Concurrent

[419] Or "delict" in Scotland
[420] Page 4 (Legal Theory, 15 (2009), 173–191 at 178)
[421] Origin in Latin is "*causa sine qua non*" (Turton 2009) (17-1: 140 at 143)
[422] Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd [1999] 70 Con LR 32
[423] Within his example and for the cost of prolongation (See page 14)
[424] See page 11of his paper in 2002
[425] Caused by the employer's fault or by a neutral event

Delay" situation in the points of time on the critical path where there is no "true concurrency".[426] This test is applicable then for these points either for the contractor or for the employer. Within this context, the "burden of proof" (the next test) might be much more realistic to be used in a "Concurrent Delay" situation which includes a point in time or more where the delay is caused solely by one of the two parties.

4.4.1.1.2 The "burden of proof" approach

The "burden of proof" test (as of the "contributory negligence") is slightly similar to the "but for" test. However, the burden of proof test depends on the ability to differentiate between the delays which can be proven and other delays which cannot be proven by both of the parties. This test aims to identify the limit and the amount of fault caused by one party from the fault of the other party. This causation test has been derived originally from the shipping case of *Government of Ceylon v. Chandris*.[427] This test can be summarized as "if part of the damage is shown to be due to a breach of contract by the claimant[428], the claimant must show how much of the damage is caused otherwise than by his breach of contract" (Keating et al. 2000).

The Society of Construction Law at the "Delay and Disruption Protocol" has adopted the same logic of this approach in point 10 of the "core principles relating to delay and compensation. The protocol stated that "if the contractor incurs additional costs that are caused by employer delay and concurrent contractor delay, then the contractor should only recover compensation to the extent it is able to separately identify the additional costs caused by the employer delay from those caused by the contractor delay. If it would have incurred

[426] See section titled: THE TRUE CONCURRENCY in chapter 4
[427] Government of Ceylon v. Chandris [1965] 3 All ER 48, QBD
[428] Or the "pursuer" within the Scottish legal system

the additional costs in any event as a result of contractor delays, the contractor will not be entitled to recover those additional costs".[429]

4.4.1.1.3 The "Devlin" approach

The "Devlin" approach derives from the case of Heskell v Continental Express.[430] This case was a contractual dispute but not a construction contract one.[431] Such approach has dealt with a situation where there were two causes for the loss which both result in roughly an *equal* effect. According to the judgement adopted in this case and under this approach, the reason which was caused by the fault of the employer can then be a sufficient ground for awarding an extension of time to the contractor in spite of the other fault. The name of such approach has been named in reference to the name of the judge Devlin who handled the case. In his judgment, Judge Devlin J. stated that:

> "Where the wrong is a tort, it is clearly settled that the wrongdoer cannot excuse himself by pointing to another cause. It is enough that the tort should be a cause and it is unnecessary to evaluate competing causes and ascertain which of them is dominant: see Minister of Pensions v Chennell ([1946] 2 All ER 721) per Denning J. In the case of breach of contract the position is not so clear".[432]

He added that:

> "I do not think that I have to deal here with a breach of contract which by the operation of some other cause is reduced to a cause of lower efficacy. It may be that the term "a cause" is, whether in tort or in contract, not rightly used as a term of legal significance unless it denotes a cause of equal efficacy with one or more other causes. Whatever the true rule of causation may be I am satisfied that if a breach of contract is one of two causes, both co-operating and both of equal efficacy, as I find in this case, it is sufficient to carry judgment for damages".[433]

[429] See page 7 of the protocol.
[430] See *Heskell v Continental Express and Another* [1950] 1 All ER 1033
[431] It was a tort case touching the areas of "Shipping" contract and "Negligence" as goods have not been received at dock on time due to more than one reason both of them caused the delay
[432] See para. 1048 of the case ([1950] 1 All ER 1033 at 1048)
[433] See relevant para. of the case ([1950] 1 All ER 1033 at 1049)

In simple terms, this approach means that if there are two causes of the loss (of equal efficacy) encountered while are operating together and one of them is a breach of contract, the party responsible for this breach will be liable for the loss occurred.

4.4.1.2Tests in "construction contracts" context

Tests in construction contracts context are the "dominant cause" approach and the "Malmaison" approach. These are outlined as follows:

4.4.1.2.1 The dominant cause approach "or proximate"

The dominant cause approach is an approach to deal with a number of causes for one single delay by examining which of these causes was the dominant. Determining which cause was the dominant among causes of the delay depends on the dispute resolver's understanding for the construction programming logic and on the point of time of the delay on the program and the facts which led to the delay period.

This approach originally derives from the recovery of damages. An example for this approach is the shipping cases of Leyland v. Norwich Union.[434] In short, according to this case[435], it is required that the judge preliminary identifies the dominant cause among the multiple causes by applying common sense standards which is a question of facts.

[434] *Leyland Shipping Co. Ltd v. Norwich Union Fire Insurance Society Ltd* (1918) AC 350 (HL)
See para. 370 statement of Lord Shaw "Where various factors or causes are concurrent, and one has to be selected, the matter is determined as one of fact, and the choice falls upon the one to which may be variously ascribed the qualities of reality, predominance, efficiency. Fortunately this much would appear to be in accordance with the principles of a plain business transaction, and it is not at all foreign to the law"

[435] The competing causes of the loss in this case were a torpedo hit the ship and later a storm hit the ship which sank as a result of both causes

Marrin (2013) states that "dominant cause approach" is not relevant to "Concurrent Delay" as it aims to determine the dominant cause amongst the factors which have caused a delay but "Concurrent Delay" relates to a situation where there are two causes which are equal or nearly equal. This may be partially correct. However, it is not possible to reject the dominant cause approach completely. The dominant cause can be used as a starting point to reach a conclusion that "there is no dominant cause" in the situation of "Concurrent Delay". The dominant cause test has been applied twice by judge Drummond Young in *John Dolye* and *City Inn* cases.[436] He applied this test and reached a conclusion in regard to the causation that no one among the causes was dominant. This led him to consider that there is an equal causative potency between the two groups of causes (the employer group of causes and the contractor' s one)

4.4.1.2.2 The "Malmaison" approach

This approach was developed and named after the decision in the *Henry Boot v Malmaison Hotel* case.[437] In this case the judge identified two causes of the delay and regarded that the employer's delay is the one which takes effect in relation to the grant of an extension of time. Regarding the extension of time, the judge did not take into consideration any effect from the presence of the contractor's risk delaying event. This approach, in the context of causation, can be understood that the judge ignored the delay cause which is the fault of the contractor when a "Concurrent Delay" situation has been identified. In this case and in relation to money (cost of prolongation), the judge has exempted the delay cause which is the fault of the employer from its effect on "who should pay for" the cost of the prolongation. The main issue in relation to the causation in this case is that the judge did not

[436] See *John Dole case: John Doyle Construction Ltd v Laing Management (Scotland) Ltd* [2004] BLR 295 – *City Inn case: City Inn Ltd v Shepherd Construction Ltd* (2007) CSOH CA101/00
[437] See *Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd* (1999) 70 Con LR 32

examine the efficacy of the two causes of the delay.

4.4.2 Causation in concurrent delay

The different causation tests are examined within the "Concurrent Delay" context in the following section:

The "*first in line*" test: this test has been applied directly in a potential "Concurrent Delay" case in a construction contract context. This case is *The Royal Brompton Hospital NHS Trust v Hammond*.[438] In this case, the judge considered the cause which occurred first to be the cause of the delay regardless of the other causes of the delay. This test temporarily ignores the relative difference in potency of the different causes of the same delay. It focuses on the order in time that the causes occurred rather than the actual causation potency for the delay. The research rejects this approach. This is because, although it may be understood in contributory negligence in tort, this test is not suitable for the nature of the situation of the "Concurrent Delay" in construction industry in particular. This is because this approach is not consistent with the notion of the risk sharing in construction industry as both parties are blamed in the same time. It also turns the situation to something close to gambling as no one knows, in the start of the project, which party will start the delay which the other party will look like a lucky one just because his fault was a little bit late. Construction industry requires kind of certainty since it is assumed to be a contract aims to produce "economic/monetary"[439] profit for both parties.

[438] *Royal Brompton Hospital NHS Trust v Hammond &. Others (No 7) (2001) 76 Con LR 148)*

[439] In "public contracts", the issue of "providing the public with public services" can be regarded as a "economic/social" profit for the employer (which is a government body)

The "*but for*" test, as described above, works in delay claims[440] in a straightforward way. This is because it depends on the question of whether or not the delay would have happened but for the fault of the contractor or the employer or the neutral event. This test can seem to be a logical approach in the "Concurrent Delay" situation as well. In such a situation, it leads to the conclusion that every cause of the delay involved in the "Concurrent Delay" situation would have caused the delay in the absence of the other cause or causes of the other party. This leads to that every cause of the causes of the delay can be linked with the delay (regardless of the other cause or causes) as the delay will exist anyway (because of this delay) in the absence of the other cause or causes. Because of the complexity of the situation of the "Concurrent Delay", some commentators argue that this test is suitable for a single cause of delay rather than a situation of the "Concurrent Delay" (Ghaiwal 2010). However this research argues that it can be used to deal with "Concurrent Delay" as well if every cause of the delay involved in the situation of "Concurrent Delay" has been independently investigated in the same time in relation to whether or not (in the absence of the other cause or causes) the delay would not have happened but for this particular cause which is being investigated.[441]

The "*dominant cause*" approach is an approach which substantially deals with the causative efficacy of more than one cause aiming to determine which of these causes was dominant. The causative potency is discussed later in this chapter. By the nature of the situation of "Concurrent Delay", there should not be a cause – among causes involved - which can be regarded as "the prevailing" one of the delay while the other (or others) is not. If one cause has been regarded dominant, the other cause should be omitted and not regarded and in this case the whole issue of the delay will be attributed to the cause which has been

[440] Other than the "Concurrent Delay" claims

[441] Every cause of the delay" here refers to: "causes caused by one of the two parties of the construction contract or a neutral cause of the delay"

considered the "dominant cause". The "Concurrent Delay" situation stipulates that the causes of the delay from both of the sides of the contract are of roughly an equal potency. In order for this to be the case, the cause (or the causes) of the delay caused by the contractor's side should be very close "in relation to its effect" to the cause caused by the employer on the point in time of which the "Concurrent Delay" occurred. To deal with the "Concurrent Delay" situation, this research suggests that a combination between the application of the "but for" test (in a way that the test becomes positive in examining or investigating the causes of the delay caused by both of the parties as well as the neutral event) and the application of the "dominant cause" test (in a negative way which leads to a conclusion that no cause is dominant based on an investigation for whether or not none of the causes of the delay was dominant).

4.5 THE CAUSE AND EFFECT OF CONSTRUCTION WORKS

It is important in this regard to differentiate between the cause and its effect in relation to construction works. In the construction industry it may sometimes be the case that there is a difference in time between the cause of the delay and its effect. In the situation of "Concurrent Delay", the focus is on the effect of the causes on the progress of the works on the construction programme. The following is an outline for the linkage between the causes and their effects on the construction programme in their different scenarios.

4.5.1 Cause and Effect variety of linkage

Lord Osborne in the Inner House, while dealing with the "City Inn" case, highlighted that the term "Concurrent Delay" refers to different situations and several possibilities although

he did not identify these different scenarios.[442] The purpose of this section is to outline the different situations that the cause of the delay in the construction industry can be linked with its effect. The cause might result into an immediate effect and it might be liked with the effect in a different way other than the immediate linkage. The importance of this section is to outline that it is not necessary that the effect of the delay occurs immediately when the cause starts and it is not necessary that the effect of the delay ceases when the cause stops. This is to show that the time and date of the cause is not necessary to be the time and the date of its effect therefore the time and date of the delay. This in turn helps in developing a better understanding of the problem of "Concurrent Delay".[443]

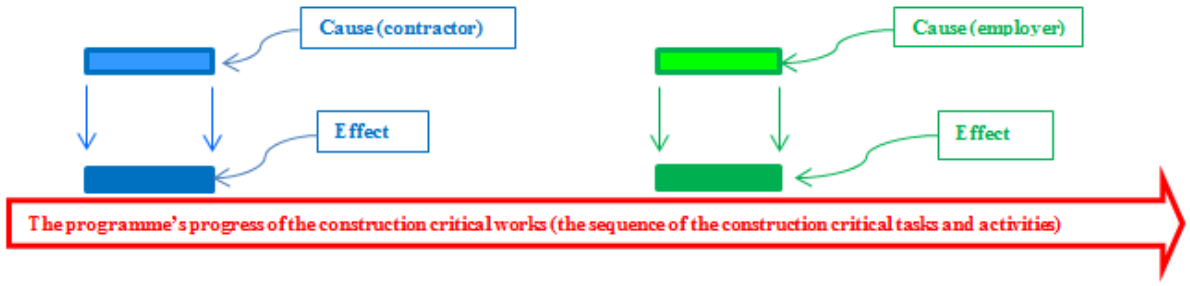

Figure 7: Cause and Effect (scenario 1)

In the above scenario, the cause of the delay can result in an immediate effect on the construction programme. In this case, the time and date of which the effect starts is the time and date of which the cause starts and the same with the finish time and date of both (i.e. they occur at the same time). For example the case that the employer did not hand over particular drawings for particular sections of the works in the expected time while the works is

[442] Paragraph 49 of the judgement of City Inn Ltd v Shepherd [*City Inn Ltd v Shepherd Construction Ltd [2010] ScotCS CSIH68*]

[443] While section number: 3.3.2 title: In terms of occurrence page number: 116in chapter three which distinguish the situation of "Concurrent Delay" from other types of delay discussed the sequent delays of more than one single delay occur after each other on the programme, this section here, within the context of causation, focuses on the single delay itself in relation to its effect

progressing.[444] The contractor will stop the works in this case and will resume it immediately when the employer delivers these drawings (Powell-Smith & Furmston 2000, p. 166).[445] This situation is dominant in most construction delay disputes.

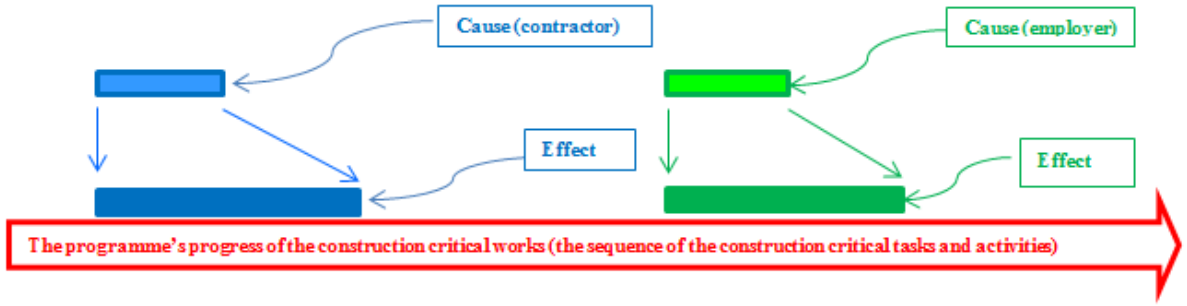

Figure 8: Cause and Effect (scenario 2)

In the above scenario, the effect of the cause is longer than the time of which the duration of the cause itself took to occur. In this case, the time and date of which the effect starts is the time and date of which the cause starts but the finish time of the effect occurs after the finish time of the cause. For example, the site of the construction works encountered a continuous exceptional rain[446] for "one day" which resulted in an effect of a delay period of "two days" as the progress of the works stopped[447] for "two days" because of the rain. The effect in this scenario is: there is a day for the rain itself and there is a second day (which is the following day) as it was not possible to resume the construction works because of the site was full of

[444] See Case : Neodox Ltd v. Borough of Swinton & Pendlebury [1985] 5BLR 34 - Instead of the "drawings", the same example applies for the employer being late in handing over particular related "information" necessary for the commencement of a particular section of the construction works while the construction works of the project are being executed.

[445] The hypothesis of this example is that the contractor cannot continue the works as the sections that need the drawings are in the critical path which means that the later sections are dependent on the section of which these drawings are required. The contractor will resume the works after receiving the drawings from the employer given that there were no variations in the drawings submitted. Instead of the "drawings", the same example applies for the employer being late in handing over particular related "information" necessary for the commencement of a particular section of the construction works while the construction works of the project are being executed.

[446] This is the cause

[447] The effect of the cause

mud everywhere in the second day.[448] Therefore the cause[449] itself remained for one day while the effect was longer than the cause as it remained for two days. This situation or scenario happens quite often in construction delay disputes.

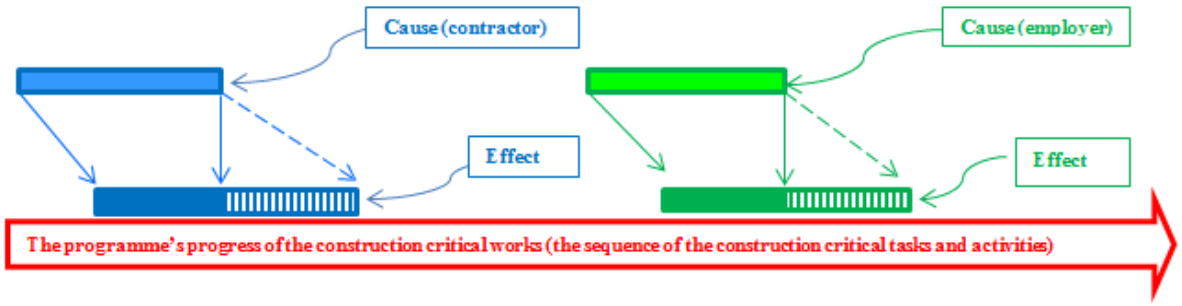

Figure 9: Cause and Effect (scenario 3)

The cause of the delay can also result in an effect which starts to occur in a later stage compared with the start time of the cause. In the above scenario, the effect of the cause may remain until the end of the cause or it may continue for a specific period of time until it stops in a later point in time after the end of the period of time when the cause itself stops In this scenario, the duration of the effect can be the same as the cause or it can be longer than the cause itself.

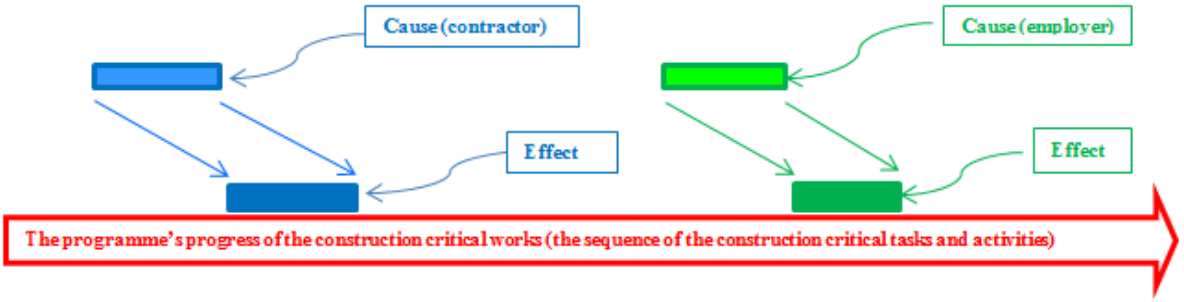

Figure 10: Cause and Effect (scenario 4)

[448] This is in order for the mud to dry up a little bit. In other words, this is in order for the e of the construction works returns back to be suitable for resuming the construction works.
[449] which is neutral in this example

Alternatively, the cause of the delay can result in an effect which starts to occur in a later stage. In the above scenario, the effect of the cause started to occur in a later point in time after the end of the period of time when the cause itself occurred. In this scenario, the duration of the effect can be the same as the cause or it can be longer than the cause. In this case, the whole effect occurs after the occurrence of the cause in the chronological order of time.[450]

The "limit and the scope" of the *effect* itself in the mentioned scenarios may vary in their length according to the nature of the cause. It also varies according to "at what point" on the programme the cause occurs.[451] Finally, it depends on whether or not the cause of the delay is a primary or secondary or thirdly cause of the delay as causes of delay cannot be dealt with in the same way if there are differences of the "causative potency" between each one of them. The issue of the differentiation between causes as primary, secondary or thirdly is discussed in a following section.[452]

[450]For example, the contractor while performing his task or activity of "erecting" the "scaffolding" may have used a cheap "low quality" material or has undertaken his activity with "defective workmanship". Both of which constitute breach of the contractor's obligations the issue which is regarded as the cause. The collapse of the "scaffolding" at a later point in time is of course the effect which has delayed the works.

[451]i.e. a particular cause of delay may induce a specific effect however if the same cause of the delay occurs on a different point in time or a different stage of the progress of the construction works this may result in a longer (or shorter) effect. An example for this is outlined

[452] See section titled: The "equal causative potency" in chapter 4

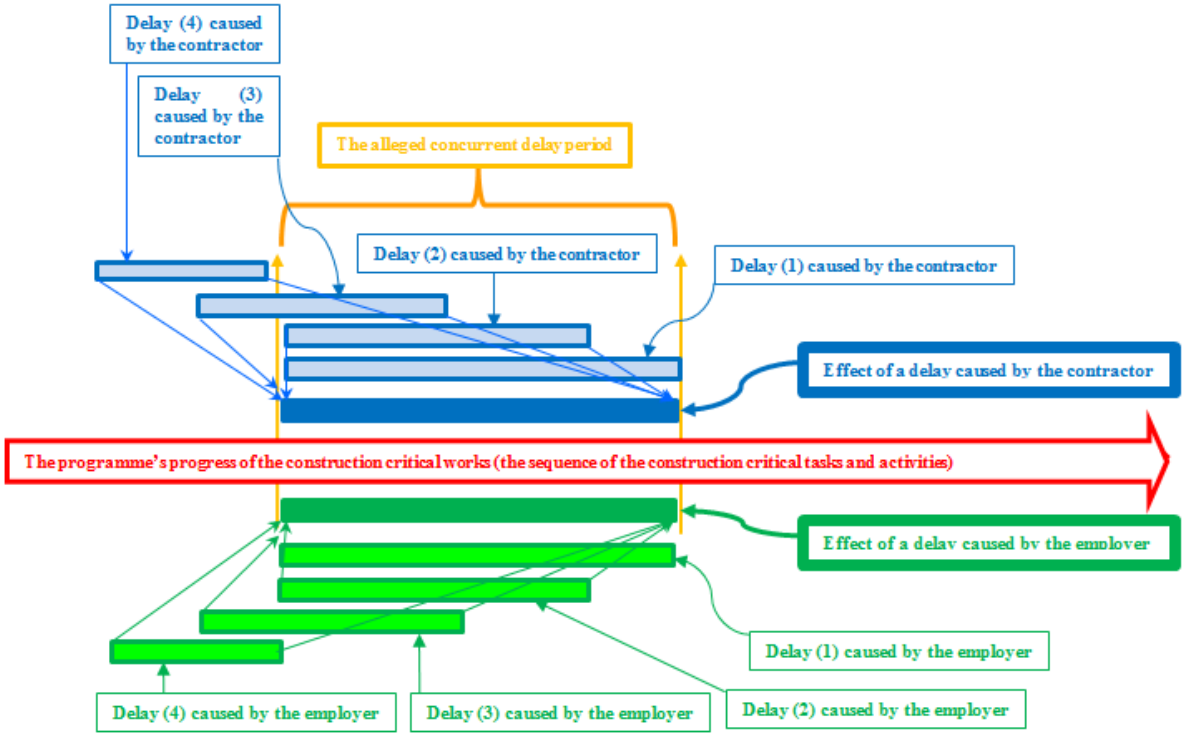

Figure 11: Cause and Effect scenarios within a "Concurrent Delay" dispute

The "Concurrent Delay" dispute can be a combination between the above scenarios or types of linkage between the cause and the effect as shown in the above figure. Although it is easy to show the link between each and every one single cause with its effect on the construction programme and how the effect of the cause of the delay affected the progress of the works, it becomes complicated when the effect of the cause starts to be analyzed in the light of other effects of other causes. Such is typically what the "Concurrent Delay" situation is actually about. Therefore the "Concurrent Delay" situation is not only two delays occurred in the same time, it is more about what was the cause? And what was its effect? And what was the result when each of these effects in particular operated together? This leads to arguing that every "Concurrent Delay" dispute might be unique. In this regard, although the interaction of overlapping effects of causes of delays can be illustrated by the expert witnesses which relatively may clarify the dispute, some Judges while analyzing the delay prefer to deal with the matter according to the common sense rather than the computer

programmes as the judge of the outer house of the Court of Session did in the City Inn case.[453]

Finally, the effect of the cause of the delay may occur not only as a single period of effect but it also can occur as more than one single period of effect. These multiple periods of effect result from one single cause of the delay may occur on different points of time within the construction programme. Some of these effects of the delay can occur simultaneously with the cause and in an alternate scenario, all the different "fragments" of effects of the delay may occur in a time frame after the cause itself happens.

4.5.2 The "equal causative potency"

It may sometimes be the case that after studying the different causes of delay caused by both sides, the dispute resolver cannot figure out which cause was dominant and which one was not. This leads to the usage of the term "equal causative potency" in "Concurrent Delay".

In the context of construction "Concurrent Delay" situation, there is no specific identification or academic definition for the term "causative potency". However, identifying the "causative potency" is left to the discretion of every dispute resolver to determine whether or not the "causative potency" of each cause of the delay (neutral or caused by the contractor and the employer) can be regarded as nearly equal. This depends on weighting the causes versus each other's according to the assessment of the dispute resolver.[454] Judge Wilcox in

[453] *City Inn Limited v Shepherd Construction Limited* [2007] CSOH 190

[454] The assessment of the dispute resolver for the "causative potency" depends on the discretion of the dispute resolver which varies from a dispute resolver to another. The different unique facts of the dispute contribute to the assessment of the dispute resolver.

the *Great eastern Hotel v John Laing Management* case[455] emphasized that the assessment in respect of attributing the delay to the act or omission which constituted the breach of the contract falls under the court's common sense for interpreting the facts.[456] This is the same in the Egyptian legal system as this issue is also left to the discretion of the judge.[457]

4.6 THE TRUE CONCURRENCY

The core part of any "Concurrent Delay" situation is the "true concurrency" period of time. "True concurrency" is a mutual delay caused by the employer and the contractor with a start and an end two points both of which are in the same time. It has been stated by more than one commentator that the true concurrency is a very rare situation.[458] In fact this is not entirely correct. This research argues that any "Concurrent Delay" situation should include a "true Concurrent Delay" part within the total "Concurrent Delay" situation. It is not necessary for a concurrent delay to have accurately and exactly the same start time of a date and the same end time of a date. The "Concurrent Delay" can also include more than one "true Concurrent Delay" on more than one period of time on the critical time line within the total period of the alleged "Concurrent Delay" situation. This is shown in the figures below.

[455] Great Eastern Hotel Company Ltd v. John Laing Construction Ltd. TCC Court [2005] All ER 368 [2005] EWHC 181 (TCC)
[456] See paragraph 313 of the judgement: Great Eastern Hotel Company Ltd v. John Laing Construction Ltd. (TCC Court [2005] All ER 368)
[457] See section titled: CAUSATION IN THE EGYPTIAN LEGAL SYSTEM in chapter 4
[458] The SCL protocol in page 16 paragraph 1.4.4 "True concurrent delay will be rare occurrence"

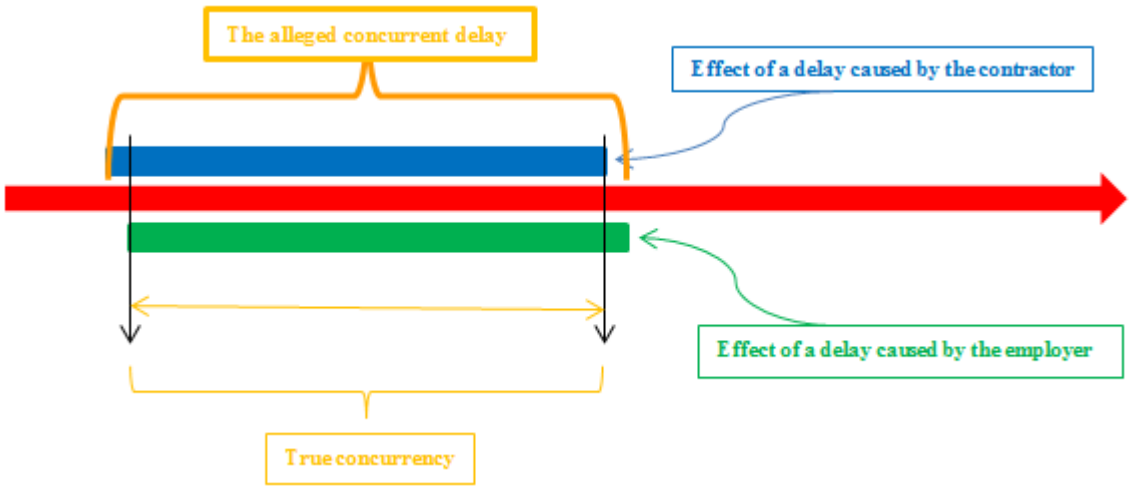

Figure 12: True Concurrent Delay (1)

As shown in the figure above, the "Concurrent Delay" dispute has included a single "true Concurrent Delay". Within this scenario, the effect of both the causes of the delay caused by each of the parties to the dispute starts "nearly" together or finishes "nearly" together. There can be a difference in both the start and the finish time and still there is one single period of "true Concurrent Delay" contained in the "Concurrent Delay" situation.

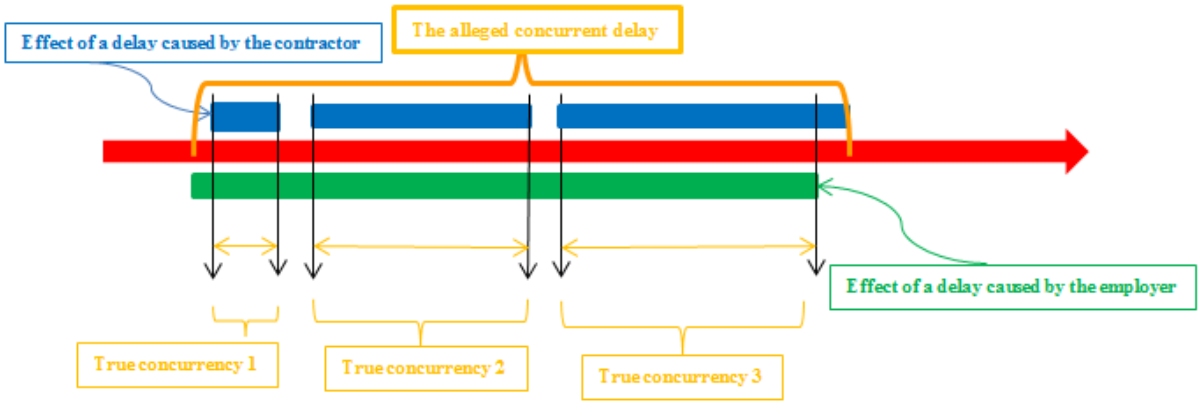

Figure 13: True Concurrent Delay (2)

As shown in the figure above, the "Concurrent Delay" dispute "in total" has included more than one single "true Concurrent Delay". Within this scenario, the start of the effect of both the causes of the delay of each of the parties of the dispute varies in its location on the

time line of the critical path. In this scenario, there is a possibility that the start of the delaying events (from both parties) to start together or finish together. In this scenario, there can be also a difference in both the start and the finish time of the total "Concurrent Delay" situation while the situation may still include a number of the "effects" of the causes each is caused by one party of the dispute and they all overlap with the delay caused by the other party. This will form more than one single "true Concurrent Delay" period contained of the same "Concurrent Delay" dispute as shown in the figure above.

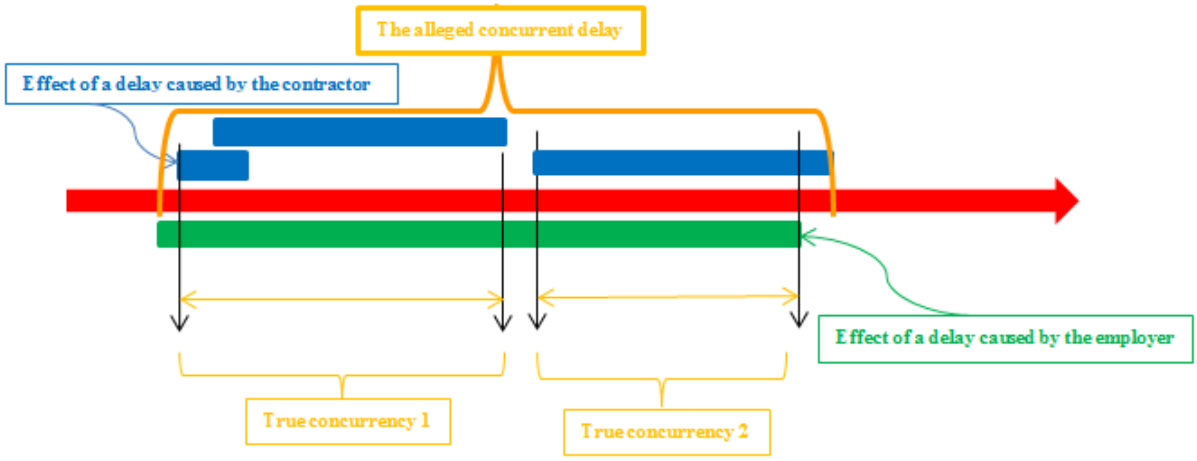

Figure 14: True Concurrent Delay (3)

As shown in the above figure, the "Concurrent Delay" dispute has included more than one single "true Concurrent Delay". Within this scenario, the start of the effect of both the causes of the delay of each of the parties to the dispute varies on the time line of the critical path. In this scenario, it is possible that the start of the delaying events to start together with different end time or start in different points of time and finish together. This results in more than one single true "Concurrent Delay" period. This scenario is similar to the one before. However, it shed light on the possibility that the effects of the causes of the delay caused by one party may overlap together before they overlap again with the delay caused by the other party. This scenario is dealt with from the breach of contract perspective in a way that the

effects of delays caused by one party which overlaps together are dealt with as one period of delay caused by more than one breach of contract caused by this mistaken party.

The scenarios illustrated above outline the delay caused by the employer as one single long delay while different parts of delays caused by the contractor occur concurrently. The same scenarios can occur from the opposite side. The delay can be caused by the contractor as one single long delay while different parts (periods) of delays caused by the employer occur concurrently. Finally, the delay caused by both the contractor and the employer can be both consist of more than one period of delay overlapping all together in the same period of time. These periods of delay can have a gap (or more) where the delay is caused solely by either the contractor or the employer.

4.7 SCENARIOS

The issue of "Concurrent Delay" is always complex as typically a number of causes may cause the delay (Williamson 2005). However, the situation can be categorized under a number of scenarios and permutations. In the previous section, and after outlining what is "true Concurrent Delay", the different possible scenarios within the "true Concurrent Delay" situation have been outlined and illustrated. In the following section of the research there will be an outline and illustration for the main different scenarios of "Concurrent Delay" in relation to the sequence of the delays[459] and in terms of what delay causes exactly overlapped together.[460]

[459] See section titled: "Which happened first?" in chapter 4
[460] See section titled: Permutations in chapter 4

4.7.1 Which happened first?

In this section of the research, the time order for the different delays caused by the employer and the contractor will be analyzed. The delays caused by both of the parties to a construction project are normally different in relation to the "point in time" of which each delay occurs. While the "*time order*" of the delays plays an important role in the "construction management" side mainly while analyzing how to accelerate the progress of the works, the "*time order*" of the delays in this section will be analyzed only in relation to the effect that this shall hold for the "legal side"[461] in relation to the grant of the extension of time and the cost of the prolongation taking an assumption that the causes has immediate effects.

4.7.1.1 One of the causes caused by one of the parties started first

The delay caused by one of the parties (the contractor or the employer) may occur first. Shortly after the start of the period of delay caused by this party, another delay caused by the other party occurs. This "Concurrent Delay" situation contains two scenarios. The first is that the last mentioned delay ceased after the end of the first delay and the second scenario is that it ends before. This has been shown below in the two following simplified figures.

[461] This is in contrast with the "management side" which feeds back into the legal side of determining the cost of the prolongation which is mainly carried out by the expert witness appointed by any or both of the parties.

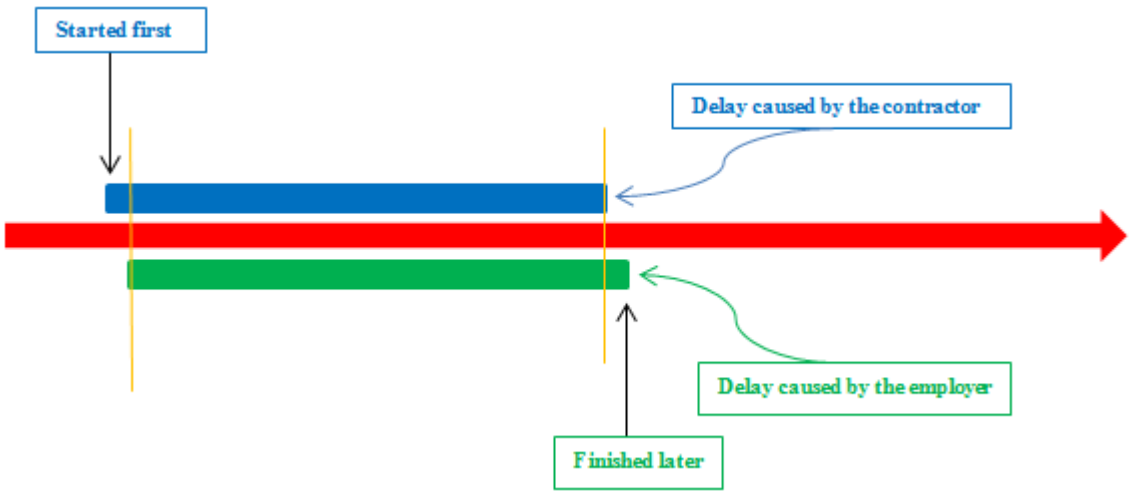

Figure 15: Started First (1) [and Finished Earlier]

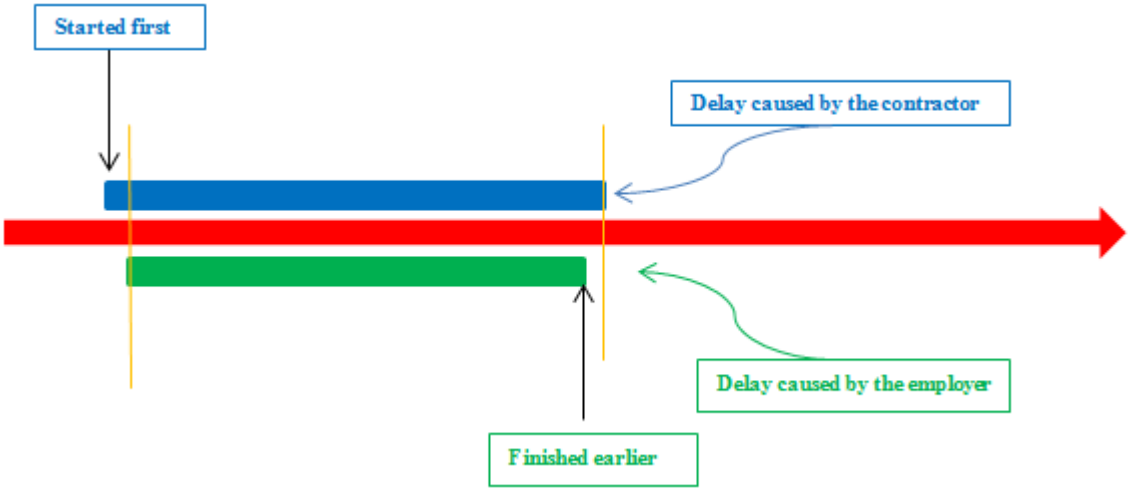

Figure 16: Started First (2) [and Finished Later]

The above scenario stipulates that there is a difference in the time order between the two causes of delay where one of them occurred first and ended later than the other. This scenario was encountered in the case of *Royal Brompton Hospital NHS Trust v Hammond*.[462] In this case, the judge considered that the cause of the delay which occurred first should be deemed the cause of the delay regardless of the existence of any other cause. The above

[462] *The Royal Brompton Hospital NHS Trust v Hammond & Others* (No.7) (2001) 76 Con LR 148at 173

scenario also occurred in the case of *Balfour Beatty v Chestermount Properties*.[463] In this case, the contractor was already in a culpable delay when the employer issued extra work. This issue of the extra works was in the end of the period of the contractor's culpable delay. The court, in this case, established the principle which constitutes the base for the later principle adopted in the "Malaison" approach.

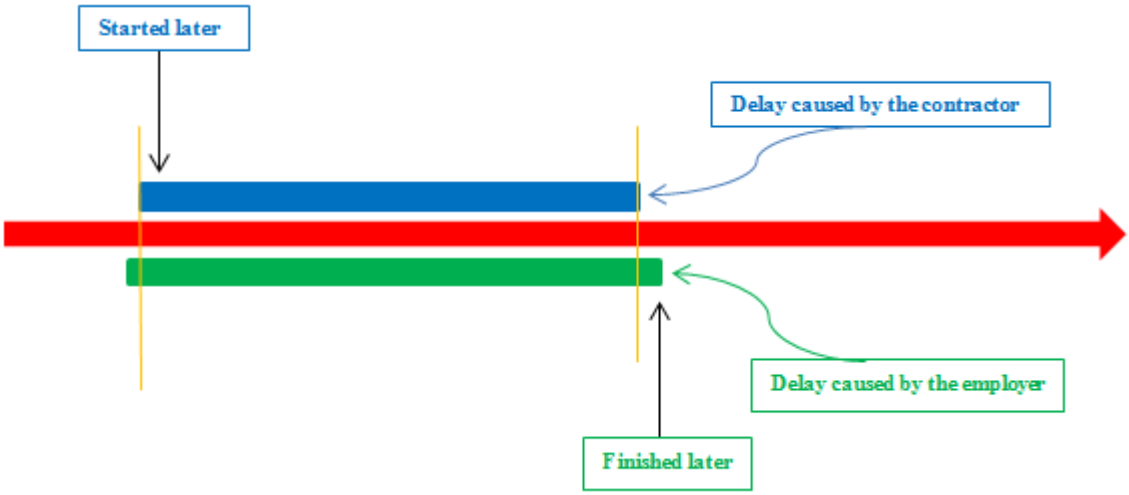

Figure 17: Started Later (1) [and Finished Earlier]

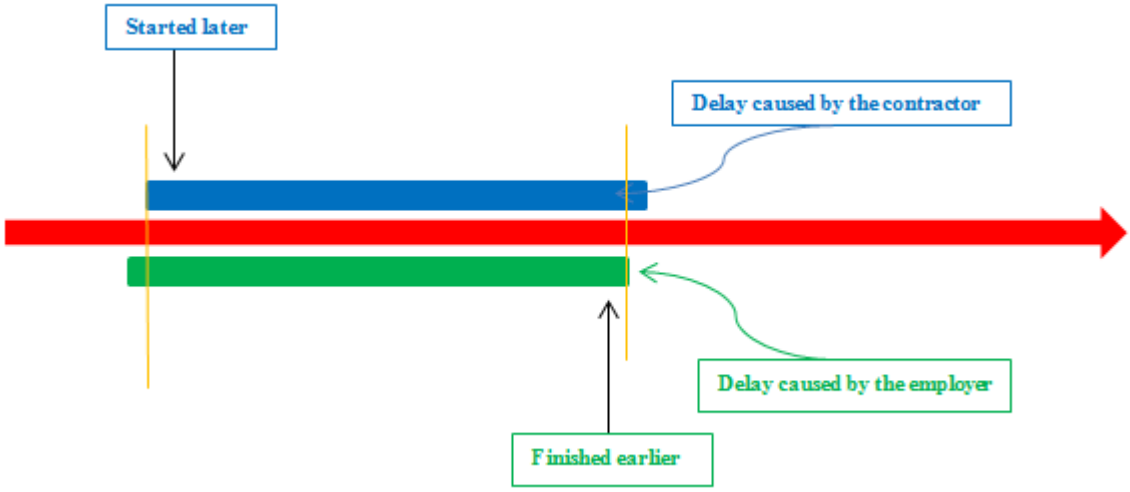

Figure 18: Started Later (2) [and Finished Later]

[463] *Balfour Beatty Building Limited v Chestermount Properties Limited* [1993] 62 BLR 1

4.7.1.2 The two of the causes caused by each of the parties started together

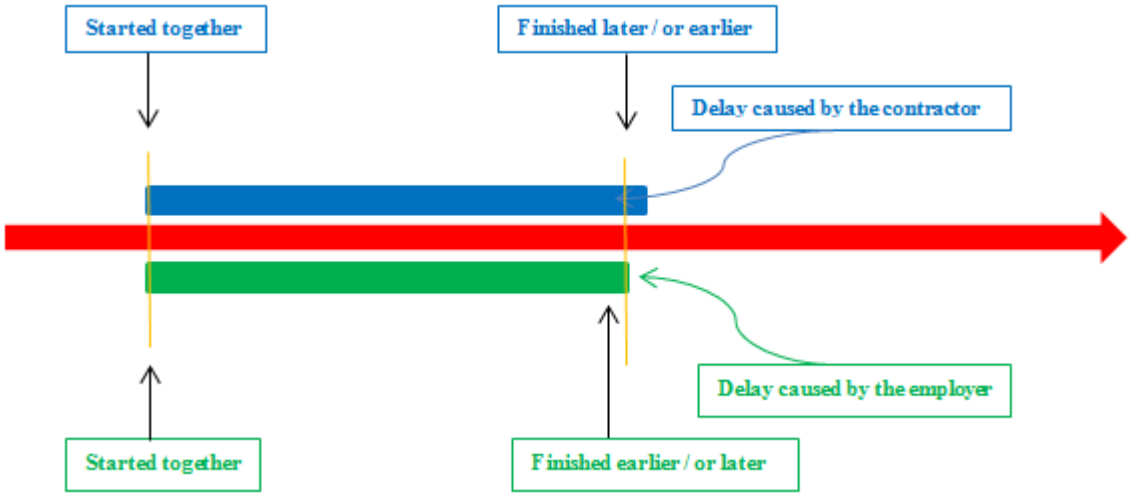

Figure 19: Started together

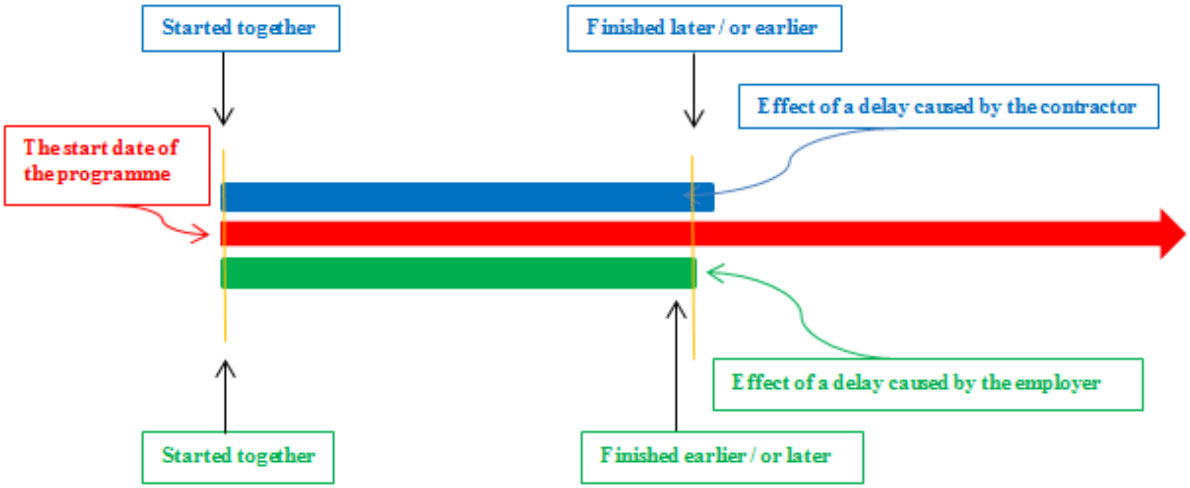

Figure 20: Started together in the beginning of the programme

The main example for this scenario is the situation where the delay is caused by both of the parties at the beginning of the construction works of the project. The employer may delay the possession of the site to the contractor for a specific period of time while simultaneously the contractor has a problem that prevents him from starting the construction

works such as excavation plant not being available or shortage in the labor required to start the construction work.

In this situation the legal remedy can consider the *option* of encouraging the two parties of the dispute to reach an interim agreement to set up a new start date for the project. Such a date starts from the point in time when either the employer's delay or the contractor's delay ceased to operate. The extra time of the delay, if there is any, caused by the other party is then treated as a single delay caused solely by this party. This single delay is then dealt with within the normal delay mechanism of the contract for single delays. This aims to avoid dealing with the mutual delays from the beginning as a "Concurrent Delay" situation which might bring different approaches and solutions in different jurisdictions some of them which would not be seen as achieving accurate justice. To avoid a scenario in which any of the parties refuses to agree on this possible interim agreement, a term stipulating this can be incorporated into the construction contract from the beginning. Within the logic of the Egyptian civil law legal system in relation to contract law, this *option* is accepted from the perspective that the delay caused by both of the parties can be regarded as an "implied terms and condition" that the intention of the two parties can be regarded as it was to re-set the start date of the inception of the works (to be immediately after the delay ended first) as long as both of the parties are aware of the problem of the other party which prevents (or delays) from commencing an obligation which leads to the inception of the works. This is because in this jurisdiction the judge has a comparatively wider capacity to consider the implied terms and conditions of the contract whether at the time of the contract or during the execution of the contract.[464]

[464] The judge in this jurisdiction even has the right to intervene in determining the specific meaning of the terms and the conditions of the contracts by the means of altering or making some changes in the terms or the conditions if he or she found that there is a sever unbalanced position for one of the parties

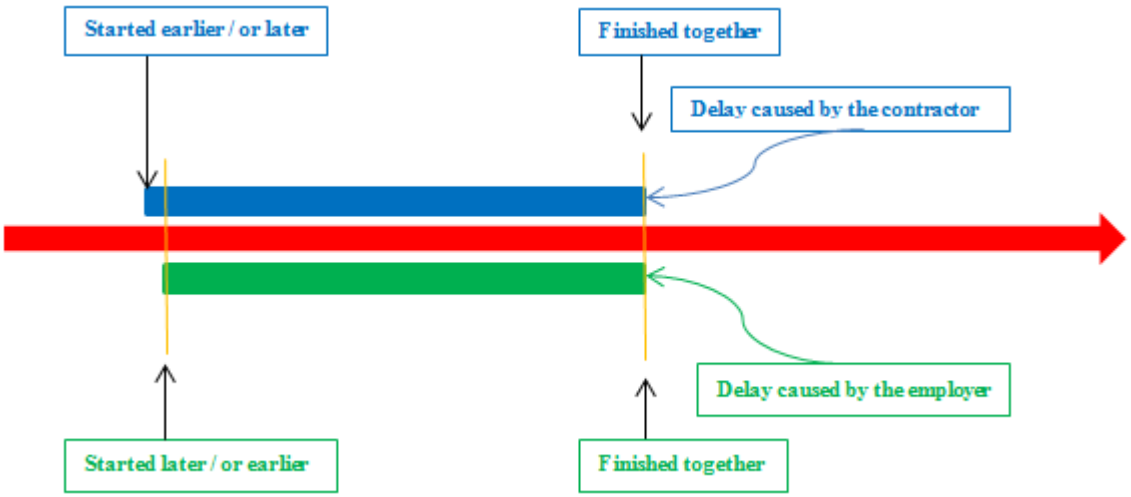

Figure 21: Finished together

In this last scenario, there is a difference in the start time of the two delaying events from both sides while the end of the delaying events is the same.

4.7.2 Permutations

Within the context of "Concurrent Delay" does it matter "*what*" exactly were the multiple causes of delay which occur in the same time? This will be analyzed in this section of this chapter. The permutations aim to provide the industry with a pre-measured assessment for the "culpability degree" or the causative potency of the different causes of delay in the situation of "Concurrent Delay". This can be done via the following table. This table shows the main different possible causes of delay from both sides.[465] The outline of the causes in this "Permutations" tends to attach the causes more to the contractual legal obligations rather than to the "construction management" perspective (which is nearly the same in majority of the cases).This is because the aim is not to find out the best way of managing the progress of

[465] Outlining all different possible causes of delay might lead to voluminous number of permutations as the causes vary to a great extent as there are a number of different types of construction projects each of which includes its unique different possible causes of delay.

the construction works but to find out how to achieve a balanced and fair legal position for both of the parties. Each of the delaying events of both of the sides of each table can overlap with one or more of the causes listed in the other side of the same table as illustrated by the arrows shown between the two sides of each table. There is "a number of situations" within the "Concurrent Delay" dispute might occur according to these permutations. From the contractual perspective, the "*culpability degree*" of each party of the dispute varies from one of these scenarios to another.

The good point about the *Malmaison* approach is that it provides the parties of the contract with certainty. Such certainty will help both of the parties to assess their risks in the process of executing the "construction works" prior to entering into the construction contractual relationship. This assessment helps towards the accurately assessing of both the cost of the job (from the contractor's side) and also the feasibility studies (from the employer's side). The aim of this permutation of the "Concurrent Delay" scenario is to help build a pre-measured assessment to bring a degree of certainty into the situation of "Concurrent Delay". The "*culpability degree*" for each main scenario in the permutation will be assessed to provide the parties, in case of apportionment, the certainty needed in the construction industry for the risk assessment and evaluating the cost for both contractor and the employer.

4.7.2.1 The extension of time

	EMPLOYER + NEUTRAL			CONTRACTOR
1	architect fails to grant possession of the site		A	did not have requisite labor
2	fail to allow *access* to the site		B	defective workmanship
3	extra work		C	strike
4	variation		D	site accident
5	architect fail to approve variations on time		E	shortage of materials required
6	design change		F	labor's low productivity
7	design team failure to provide particular drawings or instructions		G	delay in of contractor submissions
8	fail to secure legal permission from governmental authorities		H	rework due to errors during construction
9	unexplained suspension of work by employer		I	shortage of equipment required
10	lack of finance to complete the works		J	equipment failure to perform specific duties
11	lack of interim payment		K	Delay in Sub-contractors' work
12	force Majeure		L	Supplier start behind schedule plan
13	discovery of unforeseeable ground conditions		M	Designs made by contractor conflict with main designs
14	exceptionally adverse weather		N	Inaccurate contractor' s estimation

In this table, these are examples of some of the most common causes of delay. There are other causes of delay in construction industry which are found depending on the nature and the circumstances of the project. Causes of delay from the *contractor's* side within this table as examples are: [did not have requisite labor, defective workmanship, strike, site accident, shortage of materials required, labor's low productivity, delay in of contractor submissions, rework due to errors during construction, equipment failure to perform specific duties, shortage of equipment required]. While causes of delay from the *employer's* side (and neutral causes of delay) included within this table as examples are: [architect fails to grant possession of the site, fail to allow access to the site (ingress to and egress from the

construction site)[466], Extra work[467], variation, architect fail to approve variations on time, design change, design team failure to provide with particular drawings or instruction, discovery of unforeseeable ground conditions, unexplained suspension of work by employer, weather, force majeure[468], lack of finance to complete the work, lack of interim payment, fail to secure legal permission from government authorities]. However, there are other causes of delay depending on the terms or conditions of the contract such as the employer's failure to appoint the subcontractor on the time required for this.[469]

Permutations within this table are: (1 with A), (1 with B), (1 with C), (1 with D), (1 with E), (1 with F), (1 with G), (1 with H), (1 with I), (1 with J) and (1 with more than one of the multiple causes of the table of A, B, C, D, E, F, G, H, I, J). The same permutations apply with the other causes of delay of this table of 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14.

Neutral delaying events have been included in this table regarding the extension of time as the analysis of the issue of the extension of time should include such events. This is because the neutral delaying events normally entitle the contractor for an extension of time and may overlap with both the delay caused by the contractor and the delay caused by the employer.

[466] This depends on whether or not there is a clause allocates this responsibility to the employer(Chappel 2002, p.298).

[467] The "extra work" does not automatically involve an additional payment (Chappel 2002, p.177)

[468] The term "prevention" is used instead of "force Majeure" in the NEC3 form of construction contract (Wilkinson 2012).

[469]The sub-contractor is typically appointed by the contractor. Alternatively, in some cases and for some sub-contractors, the sub-contractor is appointed by the employer However, in the last case, there is an implied term that the employer's nomination for the sub-contract should be in a specific time or within the appropriate deadline. This time typically allows the contractor to incorporate the work of the sub-contractor (nominated by the employer) into the main programme of the contractor (Powell-Smith & Furmston 2000, p.191).

4.7.2.2 The cost of prolongation

	EMPLOYER		CONTRACTOR
1	architect fails to grant possession of the site	A	did not have requisite labor
2	fail to allow *access* to the site	B	defective workmanship
3	extra work	C	strike
4	variation	D	site accident
5	architect fail to approve variations on time	E	shortage of materials required
6	design change	F	labor's low productivity
7	design team failure to provide particular drawings or instruction	G	delay in of contractor submissions
8	fail to secure legal permission from governmental authorities	H	rework due to errors during construction
9	unexplained suspension of work by employer	I	shortage of equipment required
10	lack of finance to complete the works	J	equipment failure to perform specific duties
11	lack of interim payment	K	Delay in Sub-contractors' work
12		L	Supplier start behind schedule plan
13		M	Designs made by contractor conflict with main designs
14		N	Inaccurate contractor's estimation

Causes of delay included within this table are: [architect fails to grant possession of the site, fail to allow access to the site, Extra work, variation, architect fail to approve variations on time, design change, design team failure to provide with particular drawings or instruction, discovery of unforeseeable ground conditions[470], unexplained suspension of work by employer, lack of finance to complete the work, lack of interim payment, fail to secure legal permission from government authorities] from the employer's side and neutral causes of delay. While causes of delay within this table are: [did not have requisite labor, defective workmanship, strike, site accident, shortage of materials required, labor's low productivity, delay in of contractor submissions, rework due to errors during construction, equipment failure to perform specific duties, shortage of

[470] The discovery of unforeseeable ground conditions can be a neutral cause of the delay depending on the terms and conditions of the contract. Some contracts allocate the risk of investigating the underground conditions to the contractor while other contracts allocates this to be done by the employer on his risk at an early stage before the bidding process for the job while this can be regarded as a neutral delaying event in other construction contracts

equipment required] from the contractor's side.

The same as with the extension of time outlined above, permutations within this table are: (1 with A), (1 with B), (1 with C), (1 with D), (1 with E), (1 with F), (1 with G), (1 with H), (1 with I), (1 with J) and (1 with more than one of the multiple causes of the table of A, B, C, D, E, F, G, H, I, J). The same permutations apply with the other causes of delay of this table of 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14.

The table for the permutations of the cost of the prolongation included only the contractor's delaying events and the employer's delaying events as the monetary issue resulting from the compensation for the cost of prolongation is either shared between them or paid by one of them. The neutral delaying events do not impact upon the cost of prolongation also from the perspective of the degree of culpability of both of the parties in the situation of "Concurrent Delay". However, the neutral delaying events can affect the evaluation[471] of the cost itself. The neutral delaying event may increase (or decrease) the monetary loss in part of the "cost of prolongation" if the neutral delaying event occurred in a specific point in time within the "Concurrent Delay" situation. The monetary loss will be different if the neutral delaying event occurred before this specific point in time and it may be different if the delaying event occurred after. For example, the two figures below show the difference in the loss when the point in time (when the neutral delaying event overlaps with the "Concurrent Delay" situation) moves from a specific point in time to another within the same "Concurrent Delay" situation.

[471] which is undertaken by a financial construction cost expert

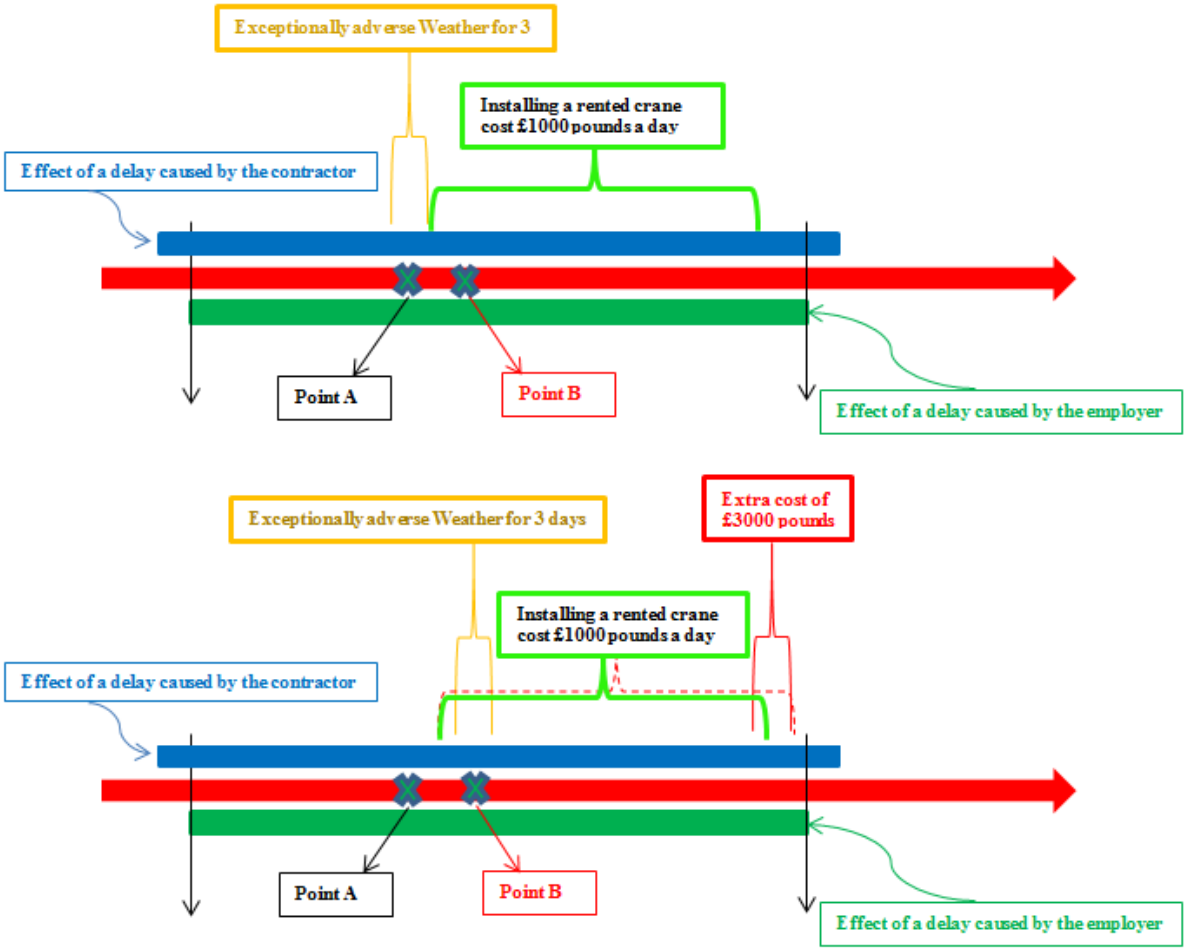

Figure 22: The "Neutral Delay"2 scenarios in relation to the monetary consequences

> These two scenarios show how the monetary consequences of the "Neutral Delay" may significantly vary due to "at which point in time the neutral delay has occurred". The same neutral delay (exceptionally adverse weather) for the same period of time (3 days) occurred in a specific point in time (A) on the programme in the above scenario while occurred in a later different point(B) in the below scenario. There is a significant difference in the costs represented by the extra cost red box. This additional cost resulted because the same neutral delay occurred in a different point.[472]

The importance of each cause of delay on the responsibility of each side of the contract parties varies according to which jurisdiction the evaluation is examined within. For example and regarding *extra work* and *interim payments*, there is much more importance attributed to this cause in the Egyptian civil law system among other causes of the delay the

[472]The numbers mentioned are just for simplifying the outline of this example

employer might be found culpable of. This is because these two causes are directly connected with the theory of "*continuously* providing the public with the public services"[473] So this should be dealt with slightly different when it comes to the "causation culpability degree" perspective in both the Scottish and the English legal system in public works construction contracts on one side compared with the same type of disputes in the Egyptian civil law legal system.

4.8 CAUSATION IN THE EGYPTIAN LEGAL SYSTEM

Causation in the Egyptian civil law system has a number of different connotations and theories concerning the many different areas of law including "criminal law", "tort law" and "medical law". In the area of contract law, the legal responsibility for the "breach" of the contract in the Egyptian civil law jurisdiction is based on the same principle of what is called "the harmful action"[474]under the tort law. The principle for this legal responsibility is that there should be three conditions to exist. According to the civil code of 1948[475],these conditions are the "mistake", "damages or loss" and "link between these two". There is no difference in this regard between public works construction contracts and private works construction contracts; the same principle applies.[476]

Causation theories in the Egyptian civil law jurisdiction aim to analyze the third of the

[473] The theory of "continuously provide the public with public services" is one of the theories of the "administrative law" in France which justifies a number of rules in the area of the activities of the government bodies and the public authority while performing their duties in the society. (Hauriou 1943) page 56 the case is the same in Egypt. (Khaliel 1960) See section title: The logic behind the differentiation in chapter 2

[474] The term "harmful action" is the legal term in the Egyptian civil law system for the "negligence". The term "harmful action" includes both the "positive" and "negative" actions

[475] Article 163/1

[476] However, there are a number of differences between the responsibility for the "harmful action" in tort law and the responsibility in the "the contractual mistake" (the legal term in the Egyptian civil law system for the breach of contracts) such as the "period for the expiry of pursuing damages" and "the requirement for judicial notice for the contracting party to fulfil his duties under the contract".

above mentioned three conditions. The causation in the "harmful action" (in tort law) in the Egyptian tort law has no specific test or approach stipulated by any particular piece of legislation. Determining causation has been left to judicial application according to the judge's discretion after taking precedents into consideration. The situation is the same with "contributory negligence" in the "harmful action" within tort law in the Egyptian legal system. The courts in this regard adopt the theory of the "*Prevailing Cause*"according to the discretion of the judge in relation to linking the facts and the causes with the effects.[477]

Although the Egyptian civil code of 1948 is clear that the "source of the obligations" in tort law is different from its counterpart in contract law, causation is dealt with in the same way. In the Egyptian law, in the area of causation[478] between the "contractual mistake"[479] and the "damages", there is no difference between "public" and "private" contracts as the causation matter deals with facts and how these facts to be attributed or linked with a specific breach (or breaches) of the contract terms and conditions. The differentiation between the mentioned two categories of contracts[480]begins to be present and effective after the linkage has been identified by the dispute resolver. Only after this stage, and in "public contracts", the consequences may start to make a difference in relation to the resolution itself made by the dispute resolver. It may vary then according to whether or not the "contractual mistake" is made by the public body.

In the Egyptian legal system, causation is a matter which is totally left to the discretion of the dispute resolver to determine based on the facts of the disputes. The appeal court cannot re-examine the approach adopted by a judge while building the causation logic.

[477] Judgement in the case number 883 of judicial year 69 judgement date 18/1/2001
[478]termed within the legal system as the "linkage"
[479]i.e. : the breach of the contract
[480]i.e. public contracts and private contracts

This applies to the judge as well as the arbitrator (Elkaliopi 2001: p.237).[481] According to the Egyptian Arbitration Act no. 27 of 1994, the arbitrator has to make his own discretion to reach the conclusion according to the law chosen (by the parties of the dispute). This includes the causation issue. According to the mentioned Act,[482] the court of which the arbitration award has been challenged before, or brought before in order to be enforced, cannot re-examine the approach taken by the arbitrator including that taken in relation to causation.[483]

Finally in this regard, in the Egyptian legal system, there is a substantial legal rule that the judge (and subsequently the dispute resolver) is the "supreme expert" in the case before him or her. This rule opens the door for the judges to dismiss the expert witness views even in the complicated matters of the delay analysis disputes. Similar to the Scottish legal system, there is no specialized court for the construction industry whether within the "ordinary" courts[484] or within the courts[485] of the "*Conseild'État*".[486] In the absence of such specialized court, this rule (of the judge being the supreme expert) might hold a degree of danger given that the judgment at the end in relation to causation and analyzing the facts might not be accurate.[487]

4.9 SUMMARY

In this chapter, the issue of causation has been analyzed. The fundamental legal framework regarding causation within the context of construction law has also been identified. A number of specific issues, relating to causation were raised in this chapter,

[481] In the Egyptian legal system, there is no counterpart of the dispute resolution system of "Adjudication".
[482] This is a tacit rule implicitly derived from article no 53of the Egyptian Arbitration Act
[483] In article number 53,re-examining the resolution (including the causation logic adopted) is not one of the 7 situations of which the state court is entitled to intervene and turn the arbitration award into a void one
[484] Headed by the "Court of Cassation"
[485] Headed by the "Supreme Administrative Court"
[486] See section titled: The establishment of a counterpart of the French "Conseild'État" in chapter 2
[487] In the absence of specialized court, judges may approach one or more of the dispute points in a way which is not accurate while dealing with a construction dispute.

which are necessary to build on in the ensuing chapters of this work. Such points can be summarized as follows:

1. Because of its complexity, analyzing the "Concurrent Delay" situation in relation to causation requires adopting specific causation approaches rather than other general approaches.
2. Analyzing delay in construction projects differs in its difficulty according to the complexity of the causes of the delay in the construction project pursuant to the different permutations.
3. Analyzing the delay in construction projects differs according to the specific scenario in which the situation of "Concurrent Delay" arises.
4. The causative potency should vary according to the facts of the situation of the "Concurrent Delay" and according to the number of causes arising from each side of the dispute. This should also be analyzed together with the issue of "what was the cause itself" as in "public works construction contracts" in some jurisdictions such as Egypt; specific delay cause on the employer side is comparatively accepted due to the specific nature of these contracts within this jurisdiction.
5. Understanding where exactly each effect of each delay cause occurred in the construction programme helps in identifying the consequences of the situation of "Concurrent Delay" in relation to the "time" issue and the "money" issue. Therefore an accurate programme for the construction works and the accurate update of such are of utmost importance in resolving "Concurrent Delay" disputes.
6. This research suggests that, to deal with the "Concurrent Delay" situation, a combination between the application of the "but for" test (in a way that the test becomes positive in examining or investigating the causes of the delay caused by both of the parties as well as the neutral event) and the application of the "dominant cause"

test (in a negative way which leads to a conclusion that no cause is dominant based on an investigation for whether or not none of the causes of the delay was dominant).

7. Causation for "public contract" in the Egyptian civil law jurisdiction is dealt with by using the same logic while the differentiation[488] with private contracts arises at a later stage does not affect the causation.

The following chapter discusses and analyses the specific cases relating to "Concurrent Delay" in the two common law jurisdictions of this research study. This includes *Malmaison* (England) and *City Inn* (Scotland). The chapter later analyses the judicial position in the Egyptian legal system in relation to "Concurrent Delay" in "public works construction disputes" and how the special nature of construction delay disputes may interact with the special concept of the "public contracts" in this jurisdiction. The chapter finally identifies the relationship and the differences between the three jurisdictions in approaching the matter.

[488] This perspective is partially based on codified rules of Civil Code of 1948 and Public Tenders and Auctions Act no. 89 of 1998 which give extra power to the government body as discussed in chapter two.

CHAPTER 5: JUDICIAL AND NON-JUDICIAL GUIDANCE TO CONCURRENT DELAY [WITH REFERENCE TO PUBLIC WORKS CONSTRUCTION DISPUTES]

5.1 INTRODUCTION

Moving from the previous chapters and after determining what is meant by concurrent delay and outlining that public works construction disputes are being dealt with differently, in this chapter the research investigates how different judicial and non-judicial attempts have dealt with the matter. This is outlined as a preliminary stage prior to the research's attempt to approach the matter. Regarding the judicial guidance, such investigation is made taking into consideration that two of the three jurisdictions of this research study are common law jurisdictions while the third is a civil law one. Preliminary, there are some main features of distinguishing the common law legal system from the civil law one. They are, within the research context[489], the civil law legal system is mainly inquisitorial and mainly based on codified sets of rules with judicial precedents normally playing a limited rule. On the other hand, the common law legal system is mainly adversarial and mainly based on judicial precedents (Leiter 2010). However, although the Egyptian legal system is a civil law one, the area of "public contracts" approach in particular(including construction delay disputes) and the area of concurrent causation relevant rules are based mainly on judicial precedents.[490] On the other hand, the situation of "Concurrent Delay" within the first two jurisdictions (England

[489] i.e. Contractual Construction Delay Disputes

[490] These judicial precedents have been issued, in this context, by both the "Supreme Administrative Court" and the "Court of the Administrative Judiciary". However, in this regard, unlike the situation in both common law jurisdictions of this research study, judicial precedents are not "source" for contract law in the Egyptian civil law jurisdiction this is due to the separation of powers of which the legal system relies on. Judicial precedents from supreme courts in the Egyptian civil law legal system have a high degree of respect but (although it does not happen so much) lower courts and the same supreme courts can depart from them.

and Scotland) is also based on case law developments.[491] Therefore, because of the absence of any form of codified legislations related to the issue of "Concurrent Delay" in construction disputes in these three jurisdictions in particular, the case law should be investigated.

Within the very limited body of case law in England, Scotland and Egypt, this chapter aims to analyze the few cases related to "Concurrent Delay" in the three jurisdictions of this research study. There is more than one option or approach that has been adopted regarding "Concurrent Delay". With taking minority view into consideration, the main and the most important judicial guidance are represented in cases analyzed. This chapter will attempt to ascertain what can be considered as the 'correct' position on how "Concurrent Delay" 'should' be dealt with in the view of the researcher under the law in England and Scotland as well as Egypt.[492]

Regarding the non-judicial guidance, because of the absence of any form of codified legislations and the very limited body of case law, the regulation of the problem of "Concurrent Delay" that exists seems to take the form of entirely voluntary guidelines on how the issue should be dealt with after the dispute arises and how the issue should be considered contractually from the beginning. The relevant section of the thesis looks for how other non-judicial attempts managed to give guidance to regulate the dispute of "Concurrent Delay". The SCL protocol has been considered in the analysis of this research because although it has been developed in England, it can be used as a whole or part in construction

[491]Regarding the Scottish legal system, although Scotland is technically a "mixed" legal system, within the context of this research, it can be considered as a common law jurisdiction for practical reasons. For example, it has for some time viewed judicial precedents as a valid source of law similar to the English "common law" legal system

[492] For Egypt in particular, developing what can be considered as the correct position will be done in terms of the consistency with recognised law and precedents as there is an absence of a judicial case on concurrent delay. This will be done via analysing the cases related to "Concurrent Delay" within the construction delay disputes.

contracts in the other two jurisdictions of this research (i. e. Scotland and Egypt).[493] The same thing dictated the consideration for the standard forms of construction contracts. The research, in the relevant section of this chapter, has considered a number of other standard forms of construction contracts which have been developed in other jurisdictions as nothing prevent them from being used in any of the three jurisdictions of this research after changing a limited number of words in the introduction or preamble of the contract. Dealing with the matter of "Concurrent Delay" in a way which deserves to be addressed and analyzed was the criteria to consider such specific contracts included in the relevant section of this research study.

5.2 THE JUDICIAL GUIDANCE

5.2.1 The judicial guidance of the English and the Scottish common law legal systems

There are a number of differences between the Scottish legal system and the English legal system. Many of which have to do with the roots of the legal systems and the historical background. Historically, the Scottish legal system is based on the Roman law.[494] It also has been influenced later by Europian continental legal systems including European civil law

[493]The SCL abbreviation refers to the "Society of Construction Law" founded in 1983(Uff 2002) - According to paragraph "D" (page 3) of the protocol, it is intended from the protocol that most contracts to adopt the protocols guidance. (SCL 2002)

[494] The roman law in particular has a historical influence on the Scottish legal system (Watson, 1974:46). See subsection titled as "the transplantabililty debate" on chapter 6. The roman law in general has also an influence on civil law family of legal systems (McFadzean, 2007: P. 3). However, the influence of Roman law started to be less influential in a certain aspects during the development of the Scottish legal system (the reformation of mind sixteenth century) (Walker, 2001: p. 139 and p. 194). There are evidence that there was a French influence on the structure of the law related judicial bodies in Scotland in an early stage (Walker, 2001: p. 130). Such influence has to do also with the introduction of the Roman law via French connections (Walker, 2001: p. 133).

legal systems.[495] Since the treaty of union 1707, the legal system of Scotland has its own independence. However, there are a number of similarities with the legal system in England. The contract law is among the areas which the differences between the Scottish and the English legal systems are limited. This research focus is on construction contracts and when it comes to the research point of whether or not the legal system makes a degree of distinction between the private contracts and the public contracts in terms of the substantial dispute resolution, there is no difference between the Scottish and the English legal system as both legal systems do not make a distinction.

As the common law legal systems in both England and Scotland do not differentiate in the substantive resolution of the dispute between "public" and "private" construction contracts, the research has considered the cases which have dealt with the situation of "Concurrent Delay" regardless of whether or not these cases were about a private or public works construction disputes as the same precedents will apply anyway for "Concurrent Delay" in the relation to the research scope of the "public works construction disputes". This analysis will start with an outline of whether or not each of the "Concurrent Delay" related cases was about a dispute which arises from a standard form of construction contract which is normally used in the public works construction projects such as the NEC[496], JCT[497] and FIDIC.[498]

[495] The author has attended two courses at the Scottish Judicial Institute in Edinburgh on the 20 of Sep. 2013 and on the 20 of Sep. 2013 on (contract law) and (case management) respectively. During the course, there was an outline made by Sheriff T. Welsh QC (director of the Judicial Institute for Scotland) on some historical aspects about the Scottish legal system. He stated various issues on the historical background including that the Scottish legal system tend to be influenced by the Dutch legal system. This is due to various reasons including that many Scottish scholars have studies in Netherland (in Leiden and Utrecht). This has been referred to by David M. Walker too (Walker, 2001: p. 163).

[496] This abbreviation refers to the contract of the "New Engineering Contract"

[497] This abbreviation refers to the contract of the "Joint Contracts Tribunal"

[498] This abbreviation refers to the contract of the "International Federation of Consulting Engineers".

5.2.1.1 The list of cases in relation to the contract used

It is relevant within this context to outline in light of which standard form of construction contract the "Concurrent Delay" approach has been taken. This is because standard forms of construction contracts slightly vary in relation to the delay mechanism incorporated therefore slightly different remedies for delay may apply and finally some (very few)[499] standard forms of construction contracts include a clause particularly for the situation of the "Concurrent Delay".[500]

This section identifies the type of the standard forms of construction contracts used in the relevant cases, although the position of the standard forms of contracts is the same in the area of this research (Brawn 2012). This section aims to outline that the cases analysed are concerning a dispute arises from a contract which is based on a "standard form" of construction contract that can be used in the public works construction projects.[501] The relevance of this section is that some standard forms of contracts are designed for either public works construction projects or for private works construction projects while some other standard forms of construction contracts can be used for both.[502]

In the case of Balfour Beatty v. Chestermount Properties[503], the contract used for the project was the **JCT** standard form of construction contract (the version of **1980**) (Dunbar & Thomas 1995).

[499] Such as the Australian standard form of construction contract "standard general conditions of contract AS2124" and the Abu Dhabi government standard form of construction contract

[500] This will be outlined later with further details in chapter 6 titled "non-judicial guidance for concurrent delay" which includes a section for the standard forms of construction contracts and a section for the protocol of the Society of Construction Law

[501] As the limitations of this research

[502] Such as the JCT, NEC3 and FIDIC

[503] Balfour Beatty Building Ltd v Chestermount Properties Ltd. (1993) 62 BLR 12

In the case of Henry Boot Construction v. Malmaison Hotels[504], the contract used for the project was the **JCT** standard form of construction contract, the edition of **1980**"Private edition with Quantities" (TCC 2001).

In the case of Royal Brompton Hospital NHS Trust v. Hammond[505], the contract used for the project was the **JCT** standard form of construction contract, the edition of **1980** (Reporter 2000).[506]

This section shows that all of the English cases related to the "Concurrent Delay" are based on the JCT standard forms of construction contracts. This includes the JCT 1998 contract conditions.There is no difference between the different versions of the JCT standard forms of construction contracts mentioned above in the area of "Concurrent Delay" related cases. This is because the set of terms and clauses which are related to the situation of "Concurrent Delay" are the same from the legal perspective of the substantive dispute resolution for the delay disputes. Such terms and conditions of the JCT 1980 in particular (which are related to the situation of "Concurrent Delay") are mentioned in point 2 of the appendix in the end of this thesis.These terms and conditions form the substantial part of the delay mechanism which has been outlined in chapter two. These terms are not different from the legal point of view from their counterparts in the other main standard forms of contracts.

On the other hand and within the Scottish common law jurisdiction, two cases related to the issue of "Concurrent Delay" in construction contracts have arisen. These are *John*

[504] Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd (1999) 70 Con LR 32
[505] Royal Brompton Hospital NHS Trust v. Hammond and Others (2001) 66 Con LR 42
[506] See paragraph 2 of the judgement

Doyle Construction Ltd v Laing Management[507] and *City Inn Ltd v Shepherd Construction.*[508]

In both of the above cases, the contract used for the project was an amended version of the JCT 1980 Private with Quantities Contract (McAdam 2009) and this contract can be used in public works construction projects.

The importance of outlining the contractual wider frame[509] of which the judge took his approach in England for "Concurrent Delay" is to examine whether or not it was the same contractual frame of which the Scottish judge took his approach in the same situation.

5.2.1.2The English robust case on "Concurrent Delay" (Malmaison)

The most robust authority applicable to "Concurrent Delay" dispute in the English legal system is the case of *Henry Boot v. Malmaison*.[510] However, the first judicial approach adopted in the English courts particularly referred to the issue of "Concurrent Delay" in construction industry was the case of *Henry Boot v. Malmaison*. This case is commonly known as the *Malmaison* approach (Burr & Palles-clark 2005). In its approach, once a "Concurrent Delay" situation has been identified, the contractor has an entitlement for the full extension of time. On the other hand, the contractor will not be granted any loss or expense (i. e. cost of prolongation) which means that the employer is exempted from compensating the

[507] The case John Doyle Construction v Laing Management (*John Doyle Construction Ltd v Laing Management (Scotland) Ltd* [2004] BLR 295) relates more to the "global claims issue, however it is informative regarding the "Concurrent Delay" dispute too as the Court of Session held that its view will not deny the contractor a remedy taking into consideration the conduct of the employer (or his agent) was found culpable and has clearly caused damage to the contractor. The court concluded that in such cases, "the contractor should be able to recover for part of his loss and expense, and the court was not persuaded that the practical difficulties of carrying out the exercise should prevent from doing so (see paragraph 17 of the inner house's decision of the case)

[508] City Inn Ltd v Shepherd Construction Ltd (2007) CSOH CA101/00

[509] Normally in construction studies, the approach taken is mentioned together with "under what standard form of construction"

[510]Henry Boot construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd (1999)70 Con L.R. 32

contractor for the additional cost suffered by the contractor because of the delay.

The "*Malmaison*" case[511] was the only robust judicial approach to deal with the "Concurrent Delay" situation in the UK until the case of *City Inn* (Barry 2011a).[512] Currently, the *Malmasion* approach is forming the established law in England for the situation of "Concurrent Delay" in the construction industry. This case has been followed or succeeded by a number of English cases such as *Adyard Abu Dhabi v SDS Marine Services* case[513] and the English case of *Walter Lilly & Company Ltd v Mackay*[514] which all remained with the *Malmaison* approach in spite of existence of the Scottish case of *City Inn* case.[515]

In the case of *Henry Boot v. Malmaison*, the project concerned was governed by the standard form of contract JCT80 as stated above.[516] In this case, it was decided that, in assessing the delay, the architect should or may take into consideration all events not only the relevant events. It was stated that, where two concurrent causes for delays exist during the work at one point in time, one of these causes is a "relevant event" and the other is not, the contractor is entitled then to an extension of time relative to the relevant event notwithstanding the concurrent effect of the other event.[517]

The construction works involved in this case were completing the design of a portion of the works and carrying out and completing the construction of the Malmaison Hotel, Piccadilly in, Manchester. The construction works were supposed to be finished on the 21st of

[511] *Henry Boot construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd (*1999) 70 Con L.R. 32
[512] The approach taken in the "*City Inn*" case is outlined later in this chapter
[513] *Adyard Abu Dhabi v SDS Marine Services* [2011] EWHC 848 (Comm)
[514] *Walter Lilly & Company Ltd v Mackay and another* [2012] EWHC 1773 (TCC) (11 July 2012)
[515] *City Inn Ltd v Shepherd Construction Ltd*[2010] ScotCS CSIH68 (will be discussed in a separate section in this chapter)
[516] *Henry Boot Construction (UK)Ltd v Malmaison Hotel (Manchester) Ltd* (1999) 70 Con LR 32
[517]The relevant event here refers to the relevant events of the JCT standard form of construction contract of 1980

November 1997. The works did not actually finish until the 13th of March 1998. The architect granted the contractor an extension of time until the 6th of January 1998 as outlined below.

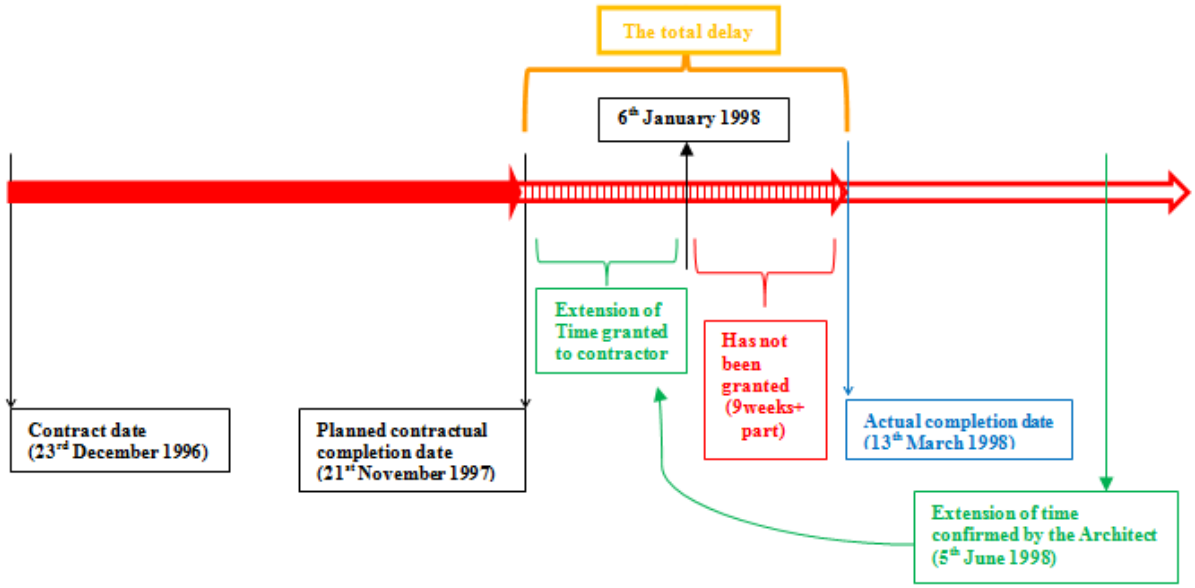

Figure 23: The English case [facts of the case (1)]

The dispute started by a letter issued by the contractor to the employer on the 30th of April asking for referral of the dispute to an arbitrator according to the clause 41.1 of the contract as outlined below:

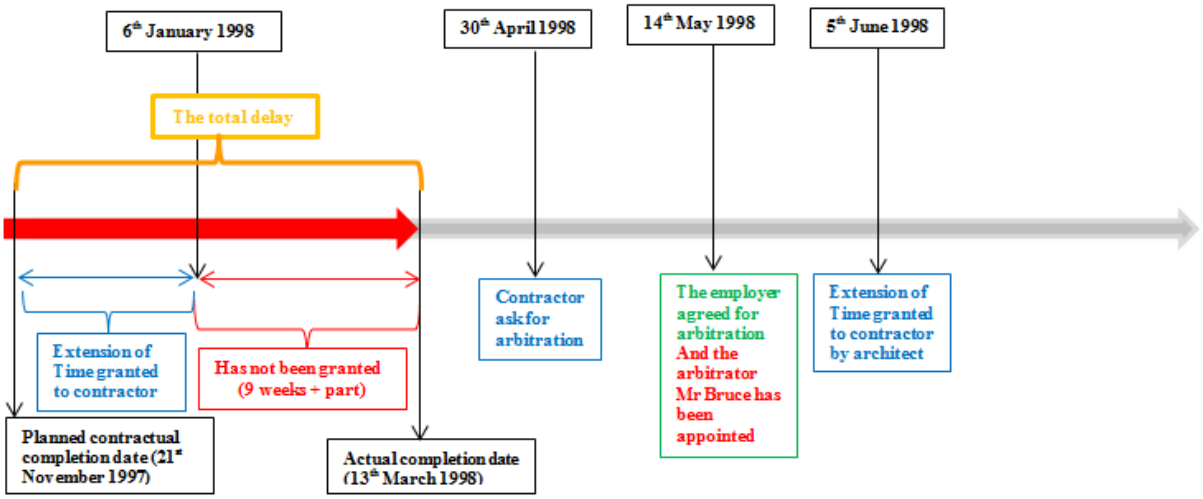

Figure 24: The English case [Facts of the case (2)]

The dispute included two claims in this case raised by the contractor (Henry Boot). Both of them related to an extension of time claim. The first[518]claim focused on the period beyond 13th March 1998 on the basis that the sub-contractor delayed the works. Meanwhile, the second claim[519] was focused on the period beyond the 6th of January 1998. This case includes a point related to arbitration (the scope of the arbitrator's jurisdiction) which is a different area and out of the scope of this research.

Regarding the "delay" point of the case which was about the extension of time, the mutual alleged delaying events of the case were one that fell on the responsibility of the contractor and the other which was the responsibility of the employer. The contractor's "Henry Boot" responsibility delaying cause was the delay caused by the sub-contractor "Cameron plc" due to the contractor's failure to provide access to the sub-contractor's works. The responsibility of the employer *Malmaison* arose from the delay caused due to the employer's architect's failure to provide the contractor with the provision of information and variations to the contract drawings.

The Judge Dyson stated that, "it is agreed that if there are two concurrent causes of delay, one of which is a relevant event, and the other is not, then the contractor is entitled to an extension of time for the period of delay caused by the relevant event notwithstanding the concurrent effect of the other event".[520] Later in the judgment he stated that: "In my view, the respondent[521] is entitled to advance these other matters by way of defence to the EOT/I claim. It is entitled to say (a) the alleged relevant event was not likely to or did not cause delay e.g. because the items of work affected were not on the critical path, and (b) the true cause of the

[518]Referred to in the judgement as the "Cameron" claim after the name of the sub-contractor "Cameron plc"
[519] Referred to in the judgement as the "EOT/I"
[520] Paragraph 13 of the judgement
[521]i.e. the employer (Malmaison)

admitted delay in respect of which the claim for an extension of time is advanced was something else. The positive case in (b) supports and fortifies the denial in (a). The respondent could limit its defence to the claim by relying on (a), but in my view there is nothing in clause 25 which obliges it to do so".[522] The analysis of the reason behind this approach is that the court in the English legal system tends to adopt the "all or nothing way" approach in contractual disputes (Adams 2007: p.5). The subsequent decision in England was the case of *Royal Brompton Hospital NHS Trust v Hammond and Others*[523] which was under the spotlight after the "Malmaison" one. In the "Royal Brompton" case, the issue of "Concurrent Delay" was one of the dispute points. In this case, Judge Richard Seymour QC reinforced the "Malmaison" approach and held that the contractor "would be entitled to extensions of time by reason of the occurrence of the relevant events notwithstanding its own defaults".[524]

The "Malmaison" case remained as a milestone and the most robust case for the "Concurrent Delay" situation as it particularly considers and deals with the "Concurrent Delay" situation and gives a particular resolution. Since then, the way the court has dealt with the situation of "Concurrent Delay" in construction industry became known as the "Malmaison" approach. The English traditional law when "Concurrent Delay" exists in construction industry became [to grant the contractor an extension of time regardless of the concurrent effect of the other causes of delay caused by the contractor himself]. This approach since its establishment in the last mentioned case has been cited and followed in a number of other English cases.

Finally in this point, the judge in the "Malmaison" case cited an example for the

[522]Paragraph 15 of the judgement
[523] (No. 7) [2001] 76 ConLR 148
[524] Page 50 of the judgement paragraph 85

"Concurrent Delay" situation. He stated that: "Thus to take a simple example, if no work is possible on site for a week, not only because of exceptionally inclement weather (a relevant event), but also because the contractor has a shortage of labour (not a relevant event), and if the failure to work during that week is likely to delay the works beyond the completion date by one week, then if he considers it fair and reasonable to do so, the architect is required to grant an extension of time of one week".[525] In this example, it is clear that the judge is mentioning a simple example of the "Concurrent Delay" where the contractor's culpable delay overlaps with an exceptionally adverse weather which is a "neutral" delay event. This simple example shows a simplified understanding for the situation of "Concurrent Delay" as this example does not reflect the complexity that might exist. This example does not produce much difficulty as, according to the nature of the construction business, the employer normally does not bear the responsibility of the financial consequences of the "neutral" events. Some commentators argue that the full judgment of the "Malmasion" may give a meaning of acceptance for the approach of the apportionment (Cocklin 2013). However, this has been approached under a logic that "*silence*" on whether or not the architect can take into consideration the "contractor" caused delaying event when there is a relevant event or events[526] while granting the extension of time.

5.2.1.3 The Scottish robust case on "Concurrent Delay" (City Inn)

The most robust[527] authority applicable to "Concurrent Delay" dispute in the Scottish legal system is the case of City *Inn v Shepherd*[528] (issued in the 22nd of July 2010) which

[525] Paragraph 13 of the judgement *Henry Boot construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd* (1999) 70 Con L.R. 32

[526] i.e. delaying events caused by the employer plus the neutral events

[527] Robust, in this context, means the most clear case (among construction delay cases) where the situation of concurrent delay has been identified by the judge

[528] *City Inn Ltd v Shepherd Construction Ltd* [2010] Scot CS CSIH68

placed the issue of "Concurrent Delay" in construction industry firmly in the spot light.

After the issue of this case, two clear approaches were identified and distinguished from each other to deal with the "Concurrent Delay" problem. These are the "time but no money" which is driven from the "Malmaison" case and the "apportionment" which is driven from the "City Inn" case which has raised questions more than giving answers to the understanding of "Concurrent Delay" problem in construction law. This research suggests that this case can be regarded as a continuation of the approach of apportionment which has been adopted in the John Doyle v Laing case[529] where the dispute was a "global claim"[530] which may include partially a mutual contractual mistakes situation which is similar to what is found in the "Concurrent Delay" one.

There has been no other Scottish case dealing with the "Concurrent Delay" problem in construction projects since the "City Inn" case. This is partially because of the limited number of construction contracts and disputes in the Scottish jurisdiction compared with England. The dearth of cases is also because of a tendency to take away construction disputes from the judiciary to arbitration or adjudication. In arbitration for example (before the recent increase in adjudication), the arbitrator in Scotland has the option to choose to adopt either the English authorities and law or the Scottish one or even another law subject to the disputing parties' agreement whether pre or post the arbitration agreement itself. Such choice may vary for the core of the dispute according to the agreement of the parties whether this

[529] *John Doyle Construction Ltd v Laing Management* (Scotland) Ltd [2004] BLR 295

[530] A "global claim" is a type of claim in construction industry which can be defined as : "those where a global or composite sum, however computed, is put forward as the measure of damages or contractual compensation where there are two or more separate matters of claim or complaint, and where it is said to be impractical or impossible to provide a breakdown or sub-division of the sum claimed between those matters."(Hudson & Wallace 2004) paragraph 8.200. Global claims is referred to by the protocol of the 2002 of the Society of Construction Law as: "the composite claims made by the contractor without substantive cause and effect"

has been stated in the contract or after the inception of the dispute. This is why studying the difference between the Scottish and the English approaches for concurrent delay is relevant as, in arbitration in particular, the approach of one of these two jurisdictions mat be applied in the other one and vice versa.

In the "City Inn" case and after taking the English traditional approach as a starting point, the Scottish Court of Session has dealt with "Concurrent Delay" problem in a different way. After analyzing the facts of the case, and the approach taken by the Scottish court, whether or not the situation which was in front of the court was a real "Concurrent Delay" situation is addressed in the following section.

"City Inn Hotels" contracted with "Shepherd Construction" for the purpose of constructing a hotel in Bristol in 1998. There was nine weeks delay in the actual hand over date of the project. The dispute has been raised in front of the "Outer House" (the court of first instance). The point of the dispute in the first instance was that the employer (City Inn) did not see that the contractor deserves to be granted any extension of time which the architect and the adjudicator had previously granted.[531] On the other hand, the contractor replied with a counterclaim seeking not only the nine weeks' time extension but another two weeks constitute together an eleven week time. The liquidated damages were £30,000 per week in addition to the claim for the cost of the prolongation.[532] The judge (Lord Drummond Young) identified 13 delaying events, 11 of which were deemed relevant events all of which were caused by the employer.[533] The delaying events arising from the facts of the disputes were:

[531] The architect awarded the contractor four weeks as an extension of time and later the adjudicator awarded the contractor five weeks as an extension of time.

[532] £27,069.10, inclusive of value added tax (paragraph 162 of the judgement)

[533] See *City Inn case: City Inn Limited v Shepherd Construction Limited* [2008] BLR 269 (Court of Session, Outer House) and [2010] BLR 473 (Court of Session, Inner House) 2008 BLR 269 at 160

A: relevant events (i.e. the responsibility of the employer): The court considered that two of the employer's risk delays which were not on the critical path and occurred sequentially as among the delaying events justifying the extension of time to be granted to the contractor (Pickavance et al. 2010: p. 1038)[534]

1- Late instructions[535] (roof steel work and cladding) for 5 weeks on weeks 27 to 32
2- Late instructions (en-suite fittings in bedrooms)
3- Late instructions (bed head lighting)
4- Late instructions (trouser presses)
5- Late instructions (central atrium beam encasement (late)
6- Late instructions (fiber optic lighting)
7- Late instructions (external mounted floodlights)
8- Late instructions (cooling to refuse room)
9- Late instructions (trees)
10- Late instructions (external render)
11- Additional works (gas venting scheme) for 3 weeks on weeks 6,7 and 8

B: not relevant events (i.e. "culpable delays" of the responsibility of the contractor)

1- The lifts had been installed late and
2- Stair balustrades had been installed late

Some commentators such as Richard Anderson have partially supported this approach (Anderson 2008). On the other hand and because of the criticism for the "City Inn" approach, Brodie McAdam suggests not to adopt this approach in England (McAdam 2009). Some

[534]Paragraph 18-005
[535] By the architect

other commentators describe the approach adopted by the court in the "City Inn" case as an "irrational decision" (Pickavance 2011).[536]

5.2.1.4 The analysis

Regarding the programming, it is important to mention here that the English courts, in general, held a reliance on the programming and the "critical path" of construction works and shed light on its importance in resolving the "Concurrent Delay" disputes. This reflects an awareness of the importance of the "critical path" for the resolution of such disputes. For example, judge Seymour held[537] in this regard that: "In order to make an assessment of whether a particular occurrence has affected the ultimate completion of the work, rather than just a particular operation it is desirable to consider what operations, at the time the event with one is concerned happens, are *critical* to the forward progress of the work as a whole".[538]

In the English jurisdiction, the system of "expert witnesses" that currently exists is likely to lead, in the dispute of "Concurrent Delay", to the existence of two different identifications for the critical path.[539] Each of the two identifications supports the allegations of each of the two disputing parties. Therefore, the multiple different periods of delay may overlap in different ways and the linkage of causes and effects may vary according to the existence of two different identifications for the critical path. This probability to have two different

[536] Paragraph Const. L.J. 638
[537] In the case of *Royal Brompton Hospital NHS Trust v Hammond and Others* (No. 7) [2001] 76 ConLR 148
[538] Page 19 of the judgement paragraph 32
[539] Given that the critical path has *not* been agreed between the two parties in advance in a separate agreement or as part of the construction contract which is not always the case. The determination of the issue of the critical path may arise normally after or simultaneously when a delay dispute started to develop. Normally, the identification of the critical path is not regarded as contractual matter (unless the contract states so). The identification of the critical path can be regarded as an internal matter within the sphere of the contractor as it is normally a matter between the contractor and his project manager. What the other party (i. e. the employer) is keen about is the handover date.

identifications for the critical path is because the identification of the critical path is one of the most typical controversial maters in modern construction industry which may accept different views. This is possible to happen in the delay disputes including the "Concurrent Delay" dispute. This issue is comparatively less problematic in the English legal system as both the two identification of the facts of the disputes will be presented before a specialized judge of the specialized court of the "TCC".[540] The judges in this court are comparatively more familiar with the typical facts of the delay disputes compared with the current situation in both the Egyptian civil law legal system and the Scottish legal system where there is a lack of specialism within the judicial court structure for the construction works and building related disputes.[541] In general, specialized judges are able to recognize the specific terms and terminologies of the technical matters and their indications in the construction industry.[542]

One of the ways of developing specialism in the Scottish legal system is the "tribunals". There are two scenarios might be suggested in this regard. A tribunal dedicated to the public works construction disputes can be developed within the Scottish structure of judiciary to deal with "public works construction disputes". Alternatively, a tribunal for construction disputes in general can be developed within the Scottish structure of judiciary to deal with such disputes. Such suggested tribunals might be created by an Act of the Scottish parliament. There are similar precedents as of the Housing and Property Chamber and the land tribunal (Scotcourts.gov 2017).[543]

[540]This court started as a specialized division of the Queen's bench under the name "the Official's referees Court" and under name "the Technology and Construction Court" termed as TCC Court starting from 1998

[541] In the case of the "expert witness" system in Scotland, this can be added to other problems in the "expert witness" system in Scotland such as "the growth in experts' fees". See report of the Scottish civil courts review by the Lord Justice Clerk 2009 (Gill and Clark, 2009: p. 27).

[542] This includes the technical matters related to the programming and the identification of the critical path

[543] From 1 December 2016 First Tier Tribunal for Scotland, Housing and Property Chamber replaced the private rented housing panel

On the other side regarding the Scottish case, the court in this case established that it is not necessary for the dispute resolver to rely on a critical path analysis[544] as the dispute resolver can make his or her discretion based on any evidence which he can see as sound. This research agrees to some extent on this in principle only regarding that the dispute resolver is free to make his or her own discretion. However, in the modern construction industry, construction projects tend to be much more complicated. Therefore the critical path analysis, prepared by experts in "construction management" while preparing for the construction works, should be substantially considered by the judges. It is correct that the judge can make his or her discretion on the basis of any evidence he can see sound and relevant. However in a complicated construction disputes like "Concurrent Delay" and in a jurisdiction where there is no specialized courts or judges for this particular types of disputes[545], the judge should not refuse to have sufficient regard to the "construction programme" based on critical path analysis. Such programme typically is served later by both expert witnesses of both of the parties. Based on such programmes and building on them, the judge can indulge into his or her own analysis. Otherwise, this may lead to mistakes because of his or her misunderstanding for some technical issues of managing the construction works while being progressed.

The court did not establish enough reliance on the programming and the critical path analysis made by expert witnesses of both parties in this dispute. This has resulted into using

[544] All the three judges agreed that a critical path analysis was not essential to carry out the exercise (although it may be relevant).
[545] As the case in the Scottish judicial system

the common sense to deal with technical "construction management" related facts.[546] This led the court in this case to make mistakes regarding what is concurrent and what is not. Pickavance highlights that the court wrongly regarded the "late instruction relating to the gas venting scheme" and the "late instruction relating to the roof steel work" were delaying events to the completion date (i.e. on the critical path) while they were "none critical" delaying events (Pickavance et al. 2010).[547] Therefore these two delaying events were not part of the situation of "Concurrent Delay" as identified in chapter three.[548]

The court cannot generalize a rule or an approach of ignoring the expert opinion in a particular type of dispute (such as "Concurrent Delay") to be adopted in general because this should take into consideration the possible cases or scenarios in the same particular type of disputes that may arise. In many construction delay disputes, there is a complicated set of activities and tasks included in a construction programme which significantly vary from a dispute to another. For disputes that might arise from this complicated contractual relationship, it will be difficult to be dealt with in isolation of the programme and in a way other than a case by case basis. Therefore the ignorance of the expert opinion should be dependent on the complexity of the dispute. This research suggests that in complicated construction disputes such as "Concurrent Delay", the expert opinion (based on the programme) should not be left without precise judicial consideration.

In the Scottish jurisdiction, the system of "expert witness" that currently exists most

[546] The situation is nearly the same in the Egyptian jurisdiction. Supreme judicial authorities (such as judgment in case number 27 of judicial year 67 judgment date 6th November 1997) which gave the judges the power to ignore the expert opinion according to article 156 of the civil proof Act no. 25 of 1968. Therefore it is a common practice that the judges state in their judgments which include "expert opinion" that "the court is the supreme expert". However, this research argue that this policy should be revisited especially with some areas of disputes including construction complicated disputes so a detailed explanation should be outlined in the by the court in the judgment itself if the final conclusion of the judgment contradicts with part or all of the expert opinion in the technical issues

[547] Page 1038 paragraph 18-005

[548] See section titled: Concurrent Delay in chapter 3

likely will lead, in the dispute of "Concurrent Delay", to two different identifications for the facts of the dispute as the case in the English legal system (as mentioned above). This is because the identification of the duration of each critical activity is based on the construction physical logic and the availability of the material, labor or plants in a specific time during the programme and there is a variety of circumstances and scenarios that might be possible in every material, labor or plants in terms of the availability of each especially in the large complicated construction projects where the number of construction activities or tasks is relatively large. Each of the two identifications supports the allegations of each of the disputing parties. This issue might be relatively problematic in the Scottish legal system as both the two identifications of the facts of the disputes will be presented before a non-specialized judge in a non-specialized court of generalized jurisdiction. The judges in this jurisdiction may be comparatively less familiar with the technical matters normally existing in the delay disputes in construction industry compared with the English counterpart jurisdiction.

One of the options to deal with "Concurrent Delay" situations is to apportion the loss and expense between both the employer and the contractor. This enables parties to have fair resolution in regard to the loss and expenses[549] and to benefit from the mistake of the other party. This is what was adopted in the "City Inn" case as a majority opinion. Lord Osborne (majority opinion)[550] set out a point regarding the application of clause 25: "Where there are two causes operating to cause delay, neither of which is dominant, and only one of which is a relevant event, a contractor's claim for an extension of time will not necessarily fail. Rather, it is for the decision maker approaching the issue in a fair and reasonable way, to *apportion*

[549] This also enables parties to benefit from the mistake of the other party the issue which relates to the allocation of the risks involved in the construction industry.

[550] The majority opinion consists of Lord Osborne and Lord Kingarth (the later agreed with the Opinion of Lord Osborne "lordship in the chair").

the delay in completion of the works as between the relevant event and the other event".[551] Lord Carloway (minority opinion) considered that: "The architect's sole task is to decide whether the relevant event is going to, or has, caused delay according to the wording of the contract (clause 25 of the JCT 1980 contract).[552] If the architect considers that it has, then he should award an extension of time that is fair and reasonable.[553] If a relevant event occurs, then the fact that the works would have been delayed because of a contractor culpable delay is irrelevant". Lord Carloway distanced himself from Lord Osborne's comments on "Concurrent Delay" issue. Lord Carloway rejected the concept of apportionment outside the remit of the exact wording of the contract however he concurred in the overall result of the City Inn judgement by following a different reasoning. He considered that apportionment was not the correct method of awarding extensions within the wording of the contract in time of concurrent causes of delay. The opinion of Lord Carloway was a minority opinion however he has concurred in the overall result of the judgement under the logic of the "common sense". The final suggested approach recommended by this research to govern the situation of "Concurrent Delay" which will be outlined in a later chapter[554] will take this option as a starting point from which to build an appropriate suggested resolution for the matter.

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[551] Paragraph 42 of the judgement of the inner house issued in 22 July 210.

[552] Clause 25.2.1.1 of the JCT 1980 states that: "If and whenever it becomes reasonably apparent that the progress of the Works is being or is likely to be delayed the Contractor shall forthwith give written notice to the Architect of the material circumstances including the cause or causes of the delay and identify in such notice any event which in his opinion is a Relevant Event."
Clause 25.3.1 states that: "If, in the opinion of the Architect, upon receipt of any notice, particulars and estimate under clauses 25.2.1.1 and 25.2.2
1.1 any of the events which are stated by the Contractor to be the cause of the delay is a Relevant Event, and
1.2 the completion of the Works is likely to be delayed thereby beyond the Completion Date the Architect shall in writing to the Contractor give an extension of time by fixing such later date as the Completion Date as he then estimates to be fair and reasonable. The Architect shall, in fixing such new Completion Date, state:
1.3 which of the Relevant Events he has taken into account and
1.4 the extent, if any, to which he has had regard to any instruction under clause 13.2 requiring as a Variation the omission of any work issued since the fixing of the previous Completion Date".

[553] Paragraph 105 of the judgement of the inner house issued in 22 July 210.

[554] See section titled: THE MODEL CLAUSE in chapter 6

5.2.2 The guidance from the Egyptian civil law legal system

In this section, the research analyses the different relevant judicial approaches in relation to delay disputes. This is to be able to suggest and predict, within "public works construction contracts", what approach might suits the Egyptian jurisdiction in the situation of "Concurrent Delay" once a court identified that it exists in a future dispute. There have been relatively few cases about delay in "public works construction disputes" in the Egyptian administrative courts. This is because of the tendency in the Egyptian legal system to take such disputes to arbitration[555] whether before the litigation process or immediately after its inception.[556] All the cases found relevant in this section have been arisen from bespoke contracts. Therefore, different from the case with both the English and the Scottish cases, the JCT was not the contract governing such cases.

5.2.2.1 Tendency in dealing with time

This analysis should start with the case no. 2623 of the judicial year 37(judgement date 28/11/1995). In this case, the Egyptian administrative Supreme Court issued a judgment concerning a situation where the contracting government body delayed the construction

[555] There is no Adjudication in the Egyptian legal system in construction industry

[556] Since the amendment of the Egyptian Arbitration Act[556] issued in 1997[556], there has been a legislative clear possibility to take the public contractual disputes (including public works construction contractual disputes) away from the administrative courts (Riad 1997). Even before that amendment, the majority of public works construction disputes used to be taken away from the judiciary to arbitration. The ambiguity in the Arbitration Act of 1994 in relation to whether or not arbitration is possible in public works construction contracts in addition to the advisory decision of file 54/1/339 of the session dated 18/12/1996 to deny arbitration, were in fact the reason behind the mentioned amendment of 1997 which was served to the parliament by the government. This policy of the government was part of a larger general policy to allow arbitration to attract foreign investment in different sectors of the economy including public contracts which includes "public construction activities by making arbitration possible in this type of contracts as this is one of the typical requirements demanded normally by foreign investments in particular. The Egyptian government in this regard followed[556] the French government policy to allow arbitration in some "public contracts". This policy started in action with the Euro-Disney contract[556] which has led to the French Act of 19th August 1986 (Sary 1999: p.203).

works by its failure to deliver the drawings at the time when it was supposed to be delivered. During the suspension of the works because of the lateness of handing over the drawings, the cost of a number of materials and the cost of labor increased. Although identifying it as a public contract, which normally entitles the judge to involve a relatively harsher approach against the contracting party[557] with the government body, the court judgment dictated that the contractor is bound to restore the difference of the cost of the material and the labor in full. This cannot be understood unless it is recognized that the court relied on the fact that this reason (the failure to deliver the drawings on time) has no link with theory of the public interest to receive the public services in a continuous manner.[558]The typical default approach in similar circumstances is to relief the government body from part or all of the responsibility based on the mentioned theory. The research finds that, based on this judgment, it can be implied that, within construction disputes, every cause of the delay should be judged on a "cause by cause" basis to examine whether or not the delay cause was just a fault of the government body or the delay cause can be justified by a matter related to the theory of the interest of the public to receive the public services in a continuous manner.

In 2000, the "advisory department"[559] of the Egyptian *Conseild'État* (Council of State) issued a relevant judicial advice[560]concerning a situation where a government body (a local health authority) while acting as an employer in a traditional construction contract for building an extension of the public hospital of the city of Desouk[561], ordered the contractor to undertake extra construction works. The main question which led the local authority to

[557] Which is either a person or a private entity

[558]See section titled the logic behind the differentiation in chapter 2 and section titled: THE MODEL CLAUSE in chapter 7

[559] The advisory department is one of the judicial departments of the administrative judiciary – see section titled: The establishment of a counterpart of the French "Conseild'État" in chapter 2

[560]The judicial opinion issued from the "advisory department" of the Egyptian*Conseild'État*(Council of State) is regarded within the Egyptian legal system as an authority for the government bodies

[561] A medium side city located in the north west of the Egyptian Nile delta the second largest city of the governorate of "Kafr-el-shekh"

bring[562] this case to the advisory department was that given that there was no extension of time clause in the contract[563], should the government body grant the contractor an extension of time for the extra construction works or should the contractor remain bound by the original handover date since it is in the capacity of the contractor to execute all the works including the extra works in the original date? The "judicial advice"[564] (issued on the 21st of June 2000) stated that the contractor should be granted an extension of time for the extra works even in the absence of an extension of time clause in the contract. The advisory section dictated how "the duration of period of time to be granted" should be calculated. It has stated that it should be equal to the *average* of the percentage of the *quantity* of the "extra works" in relation to the "original works" and regarding the additional price, it should be equal to the percentage of the *price* of the "extra works" compared with the price of the "original works" of the construction contract.[565] The typical default approach in similar circumstances as mentioned earlier is to relieve the government body from part or all of its responsibility based on the theory of the public interest to receive the public services in a continuous manner. The research finds that, based on this judicial advise, it can be implied that, within construction disputes, even in the absence of a contractual clause, the advisory section is keen to grant the contractor the accurately full time extension and monetary compensation as if the theory of "the interest of the public to receive the public services in a continuous manner" has been frozen in such area of governmental contractual disputes.

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[562] According to article number 58 of the Egyptian *Conseild'État*(Council of State) Act no. 47 of 1971, any government body of any level can bring a legal question to the "advisory department" of the Egyptian *Conseild'État*(Council of State). The philosophy of granting the public bodies this opportunity is to help reducing the number of the "public law" related disputes that such government body may encounter as well as the reducing the number of cases brought to the different courts of the*Conseild'État* (Council of State). In the meanwhile, the "advisory" judicial opinion (or decision) has a persuasive authority within the Egyptian legal system for the future judicial disputes

[563] The contract in this case was a bespoke construction contract

[564] The "judicial advice" is a legal report made by the advisory section of the Egyptian *Conseild'État* (Council of State)

[565] Judicial opinion number 342 file number 87/2/48 dated in 21 June 2000 – It should be taken into consideration here that extra works does not necessary involve additional payment. This depends on the nature and the value of the £extra works" as well as the contract being used (Chappel 2002, p. 177)

In 2001, the Egyptian Administrative Supreme Court has issued a judgment focusing on the issue of time. In the judgment of case no. 5959 of the judicial year 44 judgment date 26th January 2001, the court repeated the same approach in the last mentioned judicial advice. The court clarified in clear terms that, in public works construction, the issue of *time* in construction industry, including public construction works, should be identified and treated separately from the other points (including money) governed by the terms and conditions of the construction contract. In this judgment, the court held that in relation to the issue of *time*, the contractor should receive the full time extension. Such time should be suitable and sufficient to the exact time needed for the execution of the construction works including the extra works. This research sees this as an additional clue that, in relation to "public works construction contracts", the legal system is keen to grant the contractor the exact time needed for the job as if is a private law legal relationship (i.e. "private works construction contracts") in spite of the existence of the mentioned theory in the legal system.

In 2005, once again, the advisory department of the Egyptian *Conseild'État* (Council of State) issued a second related judicial advice[566] related to the issue of time. However, the facts of the dispute concerned a contractor seeking an extension of time based on *multiple* causes. In this case, the employer was the ministry of water resources and irrigation (department of water reserve and aqueducts) for the construction of an additional "water lock" navigation system for the city of "Esna" on the "Nile" river based on a contract dated (1 June 2002) at a value of 160 million Egyptian pounds.[567] The causes of delay were "delay

[566]Issued in the 15th of September 2005 and published in the formal law report of the Egyptian *Conseild'État* (Council of State) dedicated for the advisory section for judicial advices which have been issued by "Committee 3". The mentioned report covers the judicial advices for the period between 1st October 2002 to end of March 2011

[567] "Esna" is a city in upper Egypt located in the governorate of "Qena". The amount of money mentioned is equal to nearly "16 million sterling pounds" (YahooCurrency n.d.)

in handing over the construction site", "delay in interim payments" and delay caused by "floating or liberalizing the exchange rate of the Egyptian pound"[568]which was an economic governmental decision at that time. The advisory sub-division[569]in charge authorized the contractor to be granted an extension of time (one month) for the first cause (which was "delay in handing over the construction site") and referred the two other causes to the main judicial body of advisory department to decide. The main advisory section authorized the contractor to be granted an extension of time (four months and thirteen days) for the second cause (delay in interim payments). This approach can be understood in conjunction with the legal point discussed and outlined in chapter two that, within disputes of public contracts, the contractor cannot use the contractual defense of "none performance" to suspend the works because the employer delayed the interim payments or did not pay the interim payments.[570] Therefore the research analysis in this point is that although the well-established judicial approach in "public contracts disputes" that the contractor cannot cease the works on the basis of the employer's failure to fulfill the obligation of paying the interim payment or payments on time, within the context of "construction industry" as an exception, the contractor still can be granted an extension of time to compensate towards the delay that might result from such failure of the employer's responsibility to pay the interim payments. The research argues that the practical meaning is that as an exception from "public contracts", the contractor in a "public works construction contracts" can use the defense of "non-performance.

Regarding the third cause (floating or liberalizing the exchange rate of the Egyptian pound), the advisory department authorized the contractor to be granted an extension of time

[568] Occurred in 29 Jan 2003 (as outlined in the report of the "African Development Bank" titled "Arab Republic of Egypt: 2007-2011 country strategy paper" at page 4)

[569] The advisory department at the Egyptian *Conseild'État* (Council of State) is divided to a number of subdivisions each of which is for one (sometimes more than one) of the government ministries

[570]See section titled: *2.5.5.2.3 The defence to "non-performance"* in chapter 2

(nine and a half months).The advisory department did that although neither of these two causes was mentioned in the contract as a relevant event (which entitle the contractor for an extension of time). The advisory department established this judicial important opinion on a number of legal pillars[571] and on the legal concept of justice which are out of the precise terms and conditions of the contract.[572]

From the above mentioned judicial advice and the judgment of the Egyptian supreme administrative court, and as a conclusion, we can imply that the Egyptian administrative judiciary is keen on dealing with the time issue of the public construction works dispute within two logics. The first of which is that "time issue" has been dealt with separately from the other issues of the dispute even if there are no relevant terms and conditions in the contract that justify this separation. The second of which is that the approach taken above is also keen on providing the contractor with enough time for the execution of the project. The tendency to deal with the time issue is that the extension of time (claimed for by the contractor) to be given to the contractor in a sufficient way which is equivalent to the time needed for the execution of the works.

There is an additional recent practical proof that within the Egyptian legal system there is a tendency to grant the contractor sufficient time for the execution of construction works. After the Egyptian revolution in January 2011, the Egyptian government issued an administrative decision on the 25th of May 2011 to extend the execution time of the

[571] The principle of practicing rights and obligations in a good faith and manner and the principle of prohibiting the abuse of rights

[572] This comes as part of a wider notion in the Egyptian civil law legal system (and many other civil law countries as well) of giving the power to the judge to intervene in the contractual relationship and make little changes if this is the only way to achieve fairness between the parties especially if there is an unbalanced term or condition in the contract. This is not common in common law countries.

governmental "construction works" for three months.[573]This period was extended later for another three months on the 28th of August 2011 so the total period of this decision became six months. According to this decision the handover date was extended for three months (each time) in all construction works contracts. The limit of this decision applies to a slightly wider scope of "public works construction disputes" as it applies once a government body is one of the two parties to the construction contract regardless of the existence of the other two criteria.[574]However, this decision has been applied as a general governmental decision without differentiation on the basis of the uniqueness of the circumstances of every project in terms of whether or not the progress of the execution of the construction works of the project has been actually affected by the revolution events.

The application of this decision has raised difficulties as some government bodies did not apply it claiming that its wording is not clear in granting every contractor an "extension of time" under the meaning of extension of time in the construction contract. In April 2013, the issue was again raised by the Egyptian association for construction contractors to the Egyptian cabinet of ministers to clarify the situation. After the issue has been put under investigation by the legal committee of the cabinet, it has been decided that the above-mentioned decision of the cabinet is a general principle and regarded as a starting base for granting a full extension of time on a case by case basis (Elfagr 2013). However this problem of applying this decision with some government bodies does not affect the importance of the issuance of this decision by the Egyptian cabinet in outlining to what extent the legal system, including the head of the administrative authority (i. e. the Egyptian Cabinet), tends to grant the construction contractor the sufficient time extension to execute the construction works even if in some particular project, the contractor might not be legally entitled to or even

[573] This decision of the "Egyptian cabinet of ministers" was issued in session number 12 of 2011

[574]The criteria are (one of the parties is a public body), (public interest), (abnormal term or condition). See the criteria in section titled: Criteria for Public Contracts in chapter 2

actually need that.

5.2.2.2Tendency in dealing with money

As there is no case particularly on "Concurrent Delay" in "public works construction disputes" in this jurisdiction, there is no indication on how the courts will deal with the matter. However, it is widely accepted within this jurisdiction to apportion the consequences of the mutual breach of the contracts. This is outlined later in this chapter.[575]

5.2.2.3The programming

As "Concurrent Delay" dispute is one of the complicated ones in modern construction industry in terms of "schedule forensic analysis", this research raises the issue of the "expert witness" system in the three jurisdictions (i.e. Egypt, England and Scotland) which found different. This is because this type of disputes typically requires a relatively developed degree of knowledge about the process of executing the "construction works" and programming in relation to proofing matters while analyzing the overlap of the delays in terms of the direct causes, indirect causes, when and how they affected each other and finally illustrating the mutual acts or negligence from both sides which caused the delay.

The system of expert witness in the Egyptian legal system is built entirely from its foundations in a different way compared with its counterpart in both the English and the Scottish legal systems. Such system in Egypt is built in a way which adopts the governmental institutional framework for the idea of "expert witness" as part of the bigger framework of

[575] See section titled: The apportionment principle in this chapter

the organization of neutrality within the judiciary for any type of cases.[576] In the Egyptian civil law legal system, the primary mechanism of which the involvement of "expert witness" in any type of case should go through is a "governmental" institutional mechanism. In 1820[577], the governmental department of "experts" has been established to provide the judicial system with the required expert opinion in different types of disputes. The substantial role of the establishment of this department was to assist mainly in the criminal law related cases and also in the civil disputes (as a "secondary" role). In 1934, a separate department has been established to deal with civil disputes in particular.[578]

Since their establishment, these two departments have contributed to the accuracy of the judgments. The two departments are attached to the ministry of justice; however they have an independence from the minister of justice in relation to the technical work. The system hence is designed in a way that if the judge finds it necessity to refer a particular matter within the details or facts of a dispute, the judge then can refer it to the "expert witnesses" department. The referral itself is subject to the judge's discretion regardless of whether or not both or any of the parties want to refer the matter to an expert.[579] The judge in a civil dispute can refer the matter to any of the two departments according to the nature of fact needs to be proven.[580] After the department presents its report, any or both of the parties can challenge the findings of the report. While doing this, any or both of the parties can ask

[576]This has been the case for a long time until this has been supported recently by a constitutional term in 2012 which regarded the mentioned institutional "expert witness" system as one of the constitutional components of the judiciary in the country. See article 182 of the constitution of 2012 and article 199 of the 2013 constitution

[577] In 1928, there has been a significant re-structure and re-organization for this department by the British scientist Sir Sydney Alfred Smith (the former rector of the University of Edinburgh) as the Egyptian government employed him for then this mission

[578]The "civil disputes" separate department also deals with administrative public law related disputes which are referred mainly from the different courts of the Council of State

[579]See case number 29 judgement date 9th April 1978 issued by Court of Cassation and case number 1972 (33) judgement date 24 November 1991 issued by the Supreme Administrative Court – this falls within the tendency in most of civil law systems to grant judges more inquisitorial role in the dispute and more control on the judicial procedures (Jolowicz 2003)

[580]This referral is based on article 135 of the Civil and Commercial Proof Act no. 25 of 1968

the court for appointing another external "expert witness".[581] This is different from the counterpart system in both Scotland and England where any or both of the parties can employ their "expert witness" from the beginning.

The justification behind adopting such an "institutional" system in the Egyptian civil law legal system is to increase the potential level of neutrality in investigating the facts of the dispute in the civil matters. This is because of the fact that the expert, while performs is duty, works for the state and therefore should be paid by the state. This aims to make the expert witness in a position of being relatively more immune from the probability of being less impartial or less neutral.

In contrast with this, in both the two legal systems of England and Scotland, the "private" expert witness is the default and the only mechanism in the civil matters which include disputes of the construction industry. Such is paid by the parties of the dispute. Although the legal system in the last mentioned two jurisdictions considers the "expert witness" as a neutral person[582] and expect that the expert witness to act impartially to assist the court (Edis 2007), this research argues that best outcome in terms of neutrality cannot be expected from the "expert witness" system in these two jurisdictions since the "expert witness" is paid by one of the parties. This is the case especially in the dispute of "Concurrent Delay". This is because for facts and issues typically investigated by the "expert witness" in this dispute[583], there can be two views and sometimes both of them can be accepted as correct. This may lead the "expert witness" while examining the different possible analyses to

[581] Called within the judiciary judgements as "the private expert witness" for the purpose of distinguishing this from the institutional "expert witness" of the Ministry of Justice

[582] See the Scottish case of Whitehouse v. Jordan, [1981] 1 W.L.R. 246 at p. 256, per Lord Wilberforce

[583] Examples of such facts and issues include how the critical path is supposed to be (or should be) and what exactly the effect of the delay cause on the progress of the construction works and how the overlap of delays occurred.

generate outcomes, hypothesis or conclusions that support the allegations of the party of which this "expert witness" has been appointed by.

In addition to stipulating the "institutional" based "expert witness" system to enhance the degree of neutrality, the judge in the Egyptian civil law legal system has the "full control" over the proof related issues throughout the dispute including the work of the expert witness.[584] The judges can decline the findings of the report of the expert witness partially or entirely as long as he or she is not convinced by the findings.[585] This led to the *dictum*[586] of "the judge is the supreme expert in the case".[587] This *dictum* is frequently stated in the judgment when there is an expert witness report involved in the dispute involves a matter of disagreement. Leaving it entirely to the judges with such a wide degree of full control might be accepted in other types of disputes. However, this research argues that for delay disputes of modern construction industry (including "Concurrent Delay" dispute) this logic might not be suitable as this area is heavily depends on particular expertise skills especially in a legal system such as the Egyptian civil law legal system where there is no specialized courts or specialized judges to deal with disputes of construction industry in particular and also giving the fact that the area of "construction law" within the Egyptian legal system, in general, has

[584]This applies to both the default "institutional" expert witness system and the "private" expert witness system, see for example in this regard cases such as case no. 3063 of judicial year 31 judgement date 20 February 1988 and case no. 3714 of judicial year 42 judgement date 18 January 1997 Supreme Administrative Court - The term "full control" refers to the fact that as a civil law jurisdiction, Egyptian legal system adopts an inquisitorial system within which the judge or the dispute resolver acts

[585] See for example case no. 4842 of judicial year 43 judgement date 23June2001 Supreme Administrative Court

[586] A "*dictum*" (plural *dicta*) is term of a saying or statement, usually judicial

[587] See case number "33" judicial year 33, issued in 11 June 1967 Court of Cassation reports volume 18 page 956. This *dictum* in practical sense means that after the expert witness develops or presents the expert witness report to the court, the judge in general still free to make up his or her mind in regarding to the core of the disputing matter according to his or her own discretion. The justification of this is that in the end, the judge, within the Egyptian judicial tradition, is the one who is responsible for bringing justice to the disputing parties. So he or she should do this duty according to what he sees fair and logic based on his or her own discretion. However, if the judge will depart from the expert witness's report while making *avizandum* of the case, normally the judge provides justification (or justifications) in the judgement to why he or she has departed from the opinion or findings of the report of the expert witness. The judge also, within the Egyptian judicial tradition, can refuse the request of any of the parties to refer a particular matter to an expert witness if the judge sees the facts are clear to him or her (see case number "106" judicial year 26, issued in 7 De. 1961 Court of Cassation reports volume 12 page 752).

not been developed yet.[588]

5.3 THE APPORTIONMENT PRINCIPLE OR APPROACH

Within the context of contractual disputes this research defines the apportionment as "to distribute the consequences resulting from the dispute in case there was a mutual mistake, negligence or blame caused by both of the parties". The apportionment principle for the construction "Concurrent Delay" situation has been dealt with differently in different jurisdictions.

5.3.1 Apportionment principle in the law (Tort v. Contracts)

The theory of which this research falls within is that the apportionment principle is applicable in the negligence cases but does "apportionment" apply in contractual disputes and in precisely in construction contractual disputes??

Regarding "Tort", in England, under "apportionment of liability in case of contributory negligence", the law reform (Contributory Negligence) Act 1945 states in section one that: "Where any person suffers damage as the result partly of his own fault and partly of the fault of any other person or persons, a claim in respect of that damage shall not be defeated by reason of the fault of the person suffering the damage, but the damages recoverable in respect thereof shall be *reduced* to such extent as the court thinks just and equitable having regard to the share of the claimant in the responsibility for the damage:

[588] In Egypt, there is a few legal writers who started to recognize construction law as a separately identified area of law and a very few number of books related to construction law has been written so far. These books do not cover the different topics of the matter in a sufficient way. Also, there is still no society for construction law in the country yet.

Provided that (a) This subsection shall not operate to defeat any defence arising under a contract; (b) Where any contract or enactment providing for the limitation of liability is applicable to the claim, the amount of damages recoverable by the claimant by virtue of this subsection shall not exceed the maximum limit so applicable".

Regarding the position in contracts, it is clear from article one of the (Contributory Negligence) Act of 1945 which is mentioned above that the apportionment stipulated by the Act in the situation of the damages caused partly by both the claimant and the defendant is not applicable for the contractual disputes. However, this research argues that this needs to be re-considered within "construction contracts" context.

5.3.2 Apportionment principle in the Construction Law

5.3.2.1 Apportionment in the English context

Unlike the situation in tort[589], the English context tends to adopt the approach of "all or nothing" when it comes to disputes of contractual breach of contracts. Within the context of the English legal system, this has been recalled in the background while the decision for the "Concurrent Delay" is made. In cases such as the *Malmaison* case, it may be seen that judges tend to apportion the consequence of the existence of the "Concurrent Delay" situation on the basis of the elements of the dispute. The judge has apportioned the elements of the dispute in a way that the time has been given to the contractor while the employer has been exempted from the contractor's additional cost of the prolongation. The judge did not apply the apportionment logic in each element of the construction "Concurrent Delay" situation or dispute (i.e. the time and the money). The background for this is that the English contract law

[589] According to section one of the Contributory Negligence Act 1945

tends to adopt the "all or nothing" approach which allocates the consequences of a breach of the contract to one of the parties rather than dividing them between the parties if there are any reasons for division. It can be implied that the approach of "all or nothing" dictated and affected the approach adopted by the English courts in relation to the "Concurrent Delay" situation in construction law.

John Marin recommends the *Malmaison* approach for dealing with the "Concurrent Delay" situation (Marrin 2002). Although referring to the opposite approaches in some other jurisdictions[590], he remains recommending the English approach *Malmaison* for the apportionment of the consequences in the situation of "Concurrent Delay" (Marrin 2013a). This is in the context of a comparison with the Scottish approach "City Inn" for apportionment which is discussed in the following section. Opposite to that, Burr (2005) finds that the apportionment approach of the *Malmaison* case[591] may not achieve justice between the parties within the context of such a contractual construction relationship(Burr & Palles-clark 2005). However, this research argues that it is worth noting that the approach adopted by the judge in *Malmaison* case has been adopted within a context of a *defense* presented by the lawyer acting on behalf of the contractor claiming that the architect or the contract administrator under clause 25 of the contract[592] cannot consider other events while deciding on the matter of granting an extension of time because of a relevant event. This affects the starting point (and the perspective) of which the judge started to deal with and tackle the matter. This point should be taken into consideration while making an assessment for the apportionment approach of the *Malmaison* case.

[590] Such as Canada, Hong Kong
[591] Which constitutes the English traditional position for "Concurrent Delay"
[592] The contract that has been used in this project was JCT 98

5.3.2.2Scottish approach for apportionment

The apportionment approach has been adopted by courts in Scotland in the *John Dolye* case[593] and the *City Inn* case respectively.[594] The Scottish approach for apportionment depended on apportioning each of the two elements of the dispute which are the time element and the monetary one.

In the *City Inn* case, the apportionment approach made by the judge "Drummond Young" has adopted the logic that the apportionment between the two parties of the dispute starts with the time and therefore the apportionment for the monetary element (i.e. cost of prolongation or the loss and expense of the prolongation) is the same as a consequence of the apportionment of the time. The apportionment may refer to adopting the logic of 50% basis.

This logic may be seen as not accurate although it has been recognized that the fact that the issue of time is different from the issue of money. The "time" and "cost of prolongation" are close to some extent as both resulted from the same situation (i. e. Concurrent Delay) but they should not necessarily be treated the same way. This is because the issue of the money, in particular, is based on the two points of (the contractor's responsibility) and (the employer's responsibility) in relation to the delaying events. However, the issue of time in addition to the last mentioned two points may include a third point which is (the neutral delay). Therefore it is not necessary to apportion the money automatically the same way and in the same percentage as the apportionment is made in relation to the "time". They can be the same in some cases or disputes according to the unique facts of each but they should not be always the same. The judge in the *City Inn* case did not go in-depth in the issue to outline

[593]Laing Management (Scotland) Limited v John Doyle Construction Limited [2004] BLR 295 (Court of Session, Inner House)

[594]*City Inn case: City Inn Limited v Shepherd Construction Limited* [2008] BLR 269 (Court of Session, Outer House) and [2010] BLR 473 (Court of Session, Inner House)

this. His wording gives the meaning that within "apportionment", they should be dealt with the same. This issue highlights the absence of a full understanding of the precise nature of the situation of "Concurrent Delay" in construction disputes. The issue which may be attributed partially to that there is no specialized court for construction disputes in Scotland.

The issue of establishing specialized courts in the Scottish legal system has been touched in the last judicial report[595] which stated that: "A system should be introduced whereby a number of sheriffs in each sheriffdom[596] will be designated as specialists in particular areas of practice" (Gill & Clark 2009).[597] However, the report did not focus on construction law disputes.[598] This can be attributed, in practice, the number of cases are limited in particular areas of disputes (such as construction projects disputes) to the extent that it is not efficient (from justice management perspective) to dedicate a judge or a number of judges for this specific area of disputes.[599] In addition to this, there are a comparatively bigger number of criminal cases and other civil cases which involve the effort of a large number of Sheriffs to handle.[600]

The situation is different in England as there is a court specialized in the construction

[595] The report of Rt Hon Lord Gill: Report of the Scottish Civil Courts Review (issued on the 30th of September 2009)

[596] The Scottish Judiciary is divided into six sheriffdoms, based on the former local government regions. Each sheriffdom (except Glasgow and Strathkelvin) is divided into several Sheriff Court Districts, giving 49 Sheriff Courts in all (White, Willock and MacQueen, 2013: p.93).

[597] Page 245 of volume 1 of the report in conjunction with page 17

[598] The report mainly focussed within the context of specialism on matters such as family cases, commercial work and personal injury cases (Gill and Clark, 2009a: p. 23).

[599] Courts in Scotland can in general be considered as "jack of all trades" as the court of session for example can be dealing with divorce case one day and contractual dispute the next (McFadzean, 2007: p. 214). However, the author has attended two courses at the Scottish Judicial Institute in Edinburgh on the 20 of Sep. 2013 and on the 20 of Sep. 2013 on (contract law) and (case management) respectively. During the course, the research met and had a chat with Sheriff Vinit Khurana who originally was a doctor and he stated that cases and disputes related to injuries medical related cases or disputes are frequently are passed to him to deal with. This can be a form of an indirect specialism within the judicial work.

[600] In addition to this, according to the Courts Reform (Scotland) Act 2014 which came into force on the 22 September 2015, cases less than £100k can no longer be raised in the Court of Session(Hendry 2016).

disputes.[601] Judges of this court, because of being specialized, have a comparatively a deeper understanding for the practical issues of the construction industry.[602] The increased number of cases in the technology and construction disputes in England led to the establishment of this court in 1998 (Davis & Akenhead 2006). The continuing increase led to the establishment of a number of "court centres" in Birmingham, Liverpool, Salford (Manchester) and other cities (Newman 2008). In addition to this the acceleration in the procedures in construction disputes, in relation to the case management, has been improved as a result of the reform initiated by Latham Report (1994) and Lord Woolf's report "Access to Justice" (1995) and the Civil Procedure Rules (1999) (Farrow 2001).[603] However, in relation to "Concurrent Delay" situation in particular, the court seems to abide itself (in relation to the apportionment approach) with the English approach of "all or nothing" which includes refusing to apportion the consequences in contributory breach of the contract as discussed above.

5.3.2.3 Apportionment in the Egyptian civil law legal system

In contrast to the English approach of "all or nothing", the Egyptian legal systems as well as other civil law countries go to the other side. It is widely accepted to apportion the consequences of the mutual breach of the contracts. The concept of apportionment in such a case is accepted and a familiar part of the Egyptian legal system without deficiencies that have been noted as a result of that. This applies unless the terms and the conditions of the contract are strictly clear about stipulating specific definite consequences which dictates the amount or the rate of the apportionment each side will get. In the presence of a term or a condition in the contract which stipulates a specific position, the law gives the judge the right

[601] i. e. The TCC Court (see the "list of abbreviations" in the end of this thesis)
[602] For example, the TC court judges Vivian Ramsey is a former civil engineer.
[603] The Civil Procedure Rules (1999) came into effect on the 26 April 1999

to reduce the level of the remedy of which the term or the condition stated if it has been seen imposing an extreme hardship and unfair position on one of the parties.[604] The judge then has the power to relieve the party which suffers the hardship from all or some of it and approach the matter on the basis of apportionment that the judge sees fair.[605] The doctrine of the sovereignty of the will of the parties within the contractual context applies in the mentioned jurisdiction. However, the above mentioned civil law approach which allows the judge to intervene aims deal only with the extreme cases the matter which in practice does not happen quite often. The availability of "the judge to intervene in the contract terms and conditions" itself reflects the significant different angle that the legal system deals with the relationship between the parties of a contract which secures legal grounds for the application of the apportionment approach.

5.4 DISSATISFACTION TO THE CURRENT POSITION OF LAW

There is a degree of dissatisfaction within the construction industry to the current position of the law relating to "Concurrent Delay" disputes. This is first because the current position of law in England is seen by some commentators as an unfair solution for the employer and favors the contractor to some extent.[606] They contend that the *Malmaison* approach does not provide with an authoritative guidance (Kauser& Crowder 2002). It is contended that such concerns are well founded and additionally it can be said by this research that the *Malmaison*

[604] This right (or power) has been given to the judges in article 127/2 of the Egyptian civil code of 1948. The contract parties cannot agree together while drafting the contract to prevent the judge from using this power. This is one of the rules of the "public order" within the legal system (i. e. public policy). However, the judges' actual usage for this right (or power) does not happen quite often in practice. This right does not mean that the judge can disregards the wording of the contract.

[605] According to article 127/2, the parties cannot agree together while drafting the contract to prevent the judge from using this power. This is one of the rules of the "public order" within the legal system (i. e. public policy)

[606] This has been implied by different authors in relation to the current position of law. For example, Adams Scott sees the "all or nothing" approach in relation to the "monetary compensation" is "the more uncertain"(Adams 2007: page5).

approach does not fully match with the logic of justice which should exist in a situation like this where both of the parties are blamed to some extent in the context of this particular construction contractual relationship.[607] There are a number of reasons for this.

The *first* reason is that the nature of the *contractual* relationship assumes that there should be an equal share or allocation of the risks and consequences arising from different situations and different types of disputes that may arise as a result of the application or performance of the contract. This allocation should be understood within the broader concept of the contract as a tool to meet the demands of each of its two parties. The demand of the employer - from entering into this contractual relationship - is to have his building or infrastructure built. Meanwhile the demand of the contractor - from entering into this contractual relationship - is to earn money and build add to his reputation in the market among the other different construction companies. These demands are reflected in the contract terms and conditions which develop a balanced share of risks. In the light of these demands, the risks should be assessed and allocated within the remedies of different disputes as well.

The *second* reason is that the *business* angle of the project assumes that there should be a fair equal allocation of the costs which might be lost and ended up in a dispute that has arisen as a result of the project. This should be the case because both of the parties are concurrently blamed for their concurrent contractual faults. This should be understood within the broader concept of the business matter that the construction works can be regarded as a tool to enhance the monetary profit each of the parties are seeking as an outcome of the project. The gain versus the loss which the *employer* will achieve or lose by having its building or infrastructure built on a particular time or date should be taken into consideration while the

[607] The meaning of the "logic of justice" within this context of construction contractual relationship will be investigated with further details in the "concept of justice" section in chapter 7

dispute resolver is developing a decision in relation to any delay dispute. Meanwhile, and on the other hand, the aim of the *contractor* from entering into this contractual relationship is to get a monetary profit from this business. This is also to involve the company's capability for undertaking construction works which already exist anyway and already cost the contractor (as a company) regular and constant amount[608] of money every month, week or day.

The *third* reason is *uncertainty*. There should be a degree of certainty between the parties on how thing will be resolved in case a particular dispute has been arisen. This should be linked again with the allocation of the risks of the contract which dictates the cost of the process of executing the "construction works" for both of the parties. This applies to the "City Inn" approach. There is a similar degree of dissatisfaction within the construction industry in relation to the current position in Scotland as it is seen by some commentators as an unfair solution which produces uncertainty. This research agrees with this point to some extent and adds that, for example, the *City Inn* approach did not precisely outline what will happen if the respective degree of culpability between the contractor and the employer was 51 percent and 49 percent? (i. e. was not based on exactly half and half basis)

5.5 THE LEVEL OF GUIDANCE OFFERED BY THE JUDICIARY

There have been a number of comments on the two judicial approaches for the "Concurrent Delay" problem in the UK. Such comments aimed to assess the level of guidance offered by the judiciary on the matter of "Concurrent Delay". The main criticism for the Scottish judiciary guidance represented by the City Inn approach was the lack of

[608] This includes costs such as the salaries and wages in addition to the cost of expertise or consultants who are already there according to the relevant contract. This includes also cost of the rent of the construction company offices or premises as well as other services the construction company pay on a regular basis any way.

certainty. Vivian Ramsey (2005) contended that the approach adopted by the Scottish court conducts a large degree of uncertainty which should exist in a contractual relationship of this nature (i.e. construction contract).

In a general assessment for the apportionment principle adopted in the "City Inn" approach, Keating 2010 does not recommend the apportionment in general as a general application.[609] The level of judicial guidance for the "Concurrent Delay" situation cannot be considered enough. Such situation needs more judicial clarification. This is to meet the expected, relatively, increase in this type of disputes. This is because the more the complex the project is, the more likely we are to encounter a "Concurrent Delay" situation(Gibson 2011: p.2). This should be understood with the modern trend in construction industry that projects tend to be larger and much more complicated.

In the "City Inn" case the court did not regard the importance of the "programming" side of the construction dispute especially in respect of the delay matter (including the "Concurrent Delay"). This adds to the ambiguity which already exists in the construction industry regarding whether or not programming is a critical issue in dispute resolution for this type of disputes or whether the common sense approach should take priority. The research finds the English approach in this regard much more accurate and matches current practice in the modern construction industry. Although the research submits that the project programme can bear some changes by the project planner throughout the life of the project even on the critical path without affecting the handover date,[610] the research does not agree to depart from

[609] Keating 2010 page 357

[610] In some limited cases the project manager can make some limited changes in the critical path which is made by changing the links between some tasks and or the amount or the size of each in a way which is slightly different from the original programme. This is to be able to encounter a sudden shortage of labour or material for example to enable the project progress to return back to the proposed stage it should reach at a later stage of the life of the project. This is to meet the final handover time on time.

relying heavily on the importance of the programming as approached in the *City Inn* case. At the same time the research submits that, especially where the programme is not well developed or there is no programme at all, the dispute resolver can intervene in the determination of the critical path itself if this achieves relatively more accurate fairness and if he or she has the skills[611] to accurately intervene in this arrangement and sequence of critical activities without wrongly destroying or disturbing the structure of the programme of the project.

The research argues that it is in the capacity of the dispute resolver to intervene in how the critical path is arranged in the construction programme. This applies based on the fact that the dispute resolver's *duty* is to achieve justice. The legal ground varies in this regard as discussed in the following paragraphs however these grounds are all based on the last mentioned duty.

The *judge* can alter or change the critical path of the construction programme based on his or her duty of achieving justice. The *arbitrator* can alter or change the critical path based on the arbitration related legislation in each of the three jurisdictions of this study. In the Arbitration Act of England and Wales of 1996, in section 1 and section 33, the arbitrator is obliged to achieve fairness. The same in the new Arbitration Act of Scotland[612], the arbitrator is in the same position and has the same obligation under section 1 and section 47 of the Act. In the Egyptian jurisdiction, the arbitrator has the same duty under sections 16 and 39 in of the Arbitration Act 27 of 1994. The *adjudicator* has the same right to alter or change the critical path if this helps in achieving the justice

[611] Skills such as training for using construction management software programmes such as "Oracle Premavera p6", "MS Project" and "ASTA Power project" and the ability to make and track changes according to what events happened which consists the facts of the concurrent delay dispute

[612] Arbitration (Scotland) Act 2010

Finally, at this point, it is worth mentioning that the NEC3 standard form of construction contract has properly organized the issue of the construction programme from the beginning to accurately give the dispute resolver, in case a delay dispute occurred, a detailed proper programme to assist effectively in the decision to be made. This may limits in practice the possible interference of the dispute resolver since there is a contractual developed way of organizing the programming and its update from the inception of the construction works and the throughout the execution.

5.6 THE NON-JUDICIAL GUIDANCE

The vast majority of the standard forms of construction contracts do not provide an answer for the problem of "Concurrent Delay" leaving the matter up to the discretion of the dispute resolver. This leaves the parties in a doubt about this situation. It is not clear from the related literature why the various organisations involved in contract drafting over the years, have avoided the development and insertion of a specific 'clause' on "Concurrent Delay". This research attributes this partially to the fact that the "Concurrent Delay" dispute, although exists, does not happen that much. Also, this can be partially attributed the fact that the various organisations involved in contract drafting, tend to make the Standard form of construction contract less controversial and wider in terms of the acceptance for the contract for both contractors and employers across the industry both locally and internationally. However, clauses to deal with the "Concurrent Delay" dispute found in some of the latest standard forms of contracts.[613]

[613] such as the "CIOB complex projects" contract as outlined in this chapter

From a legal perspective, a standard form of construction contract is not more than a contract where parties still can make changes in its beginning and during the course of its performance as long as both parties agree to include a new rule which was not included in the contract while being formed. Parties can even selectively take different remedies (for particular types of disputes or situations) from different standard forms of construction contracts (or from a protocol) and include them together to form their own contract. In spite of that "Standard Forms of Construction Contracts" can be considered as *guidance* for parties which are about to form a new construction contract, it is important to shed light on remedies developed by the standard forms of construction contracts already exist to have an idea on how the drafters think in relation to the different problems and the possible different remedies. This applies to the SCL protocol.

5.6.1 Relevant standard forms of construction contracts

The idea of standardisation in drafting the construction contracts goes back to 1871 by the Society of Builders (the predecessor of the CIOB)[614] and the RIBA[615] where basic forms of construction contract started to develop (Pickavance 2013).[616] Standard forms of contracts and model conditions for contracts do not exist only in construction industry; they exist in a number of other industries where there is a repetition of the contractual legal rights, obligations or actions of the same nature and where there is a degree of technical side of the work (Boyce 1996).[617] However, the construction contract is a complicated contract compared with other types of contracts. This complication is because such contract is

[614] CIOB is the Chartered Institute of Building
[615] RIBA is the Royal Institute of British Architects
[616] Standardization in construction contracts started simultaneously with industrialization (Hendry 2016). Starting from 1903 onward, standard forms of construction contracts has taken the form of a systematic process made by relevant institutions (Chappel 2002, p.1)
[617] Page 107

connected with a complicated process which includes a number of time dependent activities which take place physically on the construction site. Such activities take a relatively long time (which makes the process exposed to unexpected circumstances) and involve other different types of industrial activities.[618] In many cases, such activities involve the work of machinery as well as a number of the other human activities which makes the process of executing the construction works exposed to all factors that might affect the human activities. For a contract of this nature, time constitutes the core of the contract as time is a very important matter in the construction business, controlling and is being affected by many aspects of this industry. Time-related obligations in such process cannot be granted to be fulfilled by the contracting parties as such obligations are not dependent on a systematic automated process as huge amount of humane activities are involved in such construction process. This makes it appropriate to take advantage of the character of the contract, as a legal tool for setting up rules,[619] of the possibility to keep the contract open for the parties to renegotiate or re-adjust certain time-related rules of this particular contract. This allows the parties to fill the gaps arise while the construction work are being progressed. It also might be useful that the parties re-adjust the rules governs their mutual relationship if things went wrong opposite to what has been planned to bring a much more fairer position for both of the parties.

In construction industry, standard forms of construction contracts have a unique position

[618] Such as bricks fabrication, glass and glazing fabrication, wood fabrication, precast reinforced concrete fabrication, fibre cement fabrication, pipes fabrication, cladding panels and curtain walls fabrication, joints and steels parts fabrication, Mechanical Parts fabrication and electrical parts fabrication. Regarding these products which are typically produced by an external party in relation to the contractor, there may be: (1- a delay in delivering these products into the construction site which in turn delay the project if the following tasks or activities of the critical path are dependent on fixing or installing one of these products) (2- manufacturing defects in one or more of these products which requires them to be replaced and this in turn will delay the project if the following tasks or activities of the critical path are dependent on fixing or installing one of these products). However, this remains within the contractors risk zone.

[619] This is in contrast with the legislations and the judicial precedents as other tools for imposing or setting up rules for different matters within a specific industry like the construction industry

compared to other industries. Although the Banwell Report (1964), the Latham Report (1994) and the Egan Report (1996) suggested the use of a single form of contract for the construction industry, the industry ended up with a large number of forms(Ashworth 2001, p.60).[620]The need to have standardisation of contracts in the construction industry is due to the lack of the required legal background between professionals of the industry and the contractual complexities involved in the process (Murdoch & Hughes 1992: p.55). Some forms are being developed throughout the time according to problem that arise on-site and in practice from the application of the previous version (Davison 2006, p.13).The common practice in the construction industry is to use one of the standard forms of construction contracts which best suits the intended project and some minor bespoke amendments may then be made to the contract if required. The application itself of the same standard form of construction contract and the types of provisions may be required to be added is governed to a large extent by the particular domestic legislation and practices (Wallace 1986: p.485). Therefore the application of any of the standard forms of construction contracts used for public works construction projects in Egypt will be slightly different from the application of the same standard form of construction contract when it is used in the public construction works in England or Scotland due to the special approach outlined in chapter 2.

Within the context of this research, it is important to indicate that, in any of the three jurisdictions, a "public works construction contract" can be a normal bespoke contract (written specifically for the job) and it can also be a standard form of construction contract.[621] It also can be a combination of these two as when a standard form of construction contract is

[620]This reflects the diversity of the projects within the construction industry and resulted in another problem of how to choose the right contract for the intended construction project to meet its demands (Cox & Clamp 2007)

[621] The "Concurrent Delay" related side of a number of standard forms of construction contracts will be analysed in the second half of chapter 6 proposing that each of these forms have been identified as a "public Contract" by the dispute resolver who deals with the dispute

chosen and a number of significant amendments are included in the standard form of contract. The only difference within the three jurisdictions in the context of the standard forms of construction contracts is that once a contract has been made using a "standard form of construction contract", it can be regarded as a "public contract" in both the Scottish or the English jurisdictions according to the above definitions in both of the mentioned legislations[622] once a public authority is one of the contracting bodies. While any contract made by using a "standard form of construction contract" can be regarded as a "public contract" from the perspective of the Egyptian legal system only if the three criteria[623] found existing.[624] It is up to the judge, who deals with the dispute, then to decide whether or not the construction contract (which is based on one of the standard forms of construction contracts) of which the dispute arises is a "public contract" therefore a public works construction contract[625]and this will bring the special approach for such to be applied.

This section of the chapter focuses, in its analysis, on the latest standard forms of construction contracts which can be used for "public works construction projects" in relation to the issue of "Concurrent Delay".[626] Unlike the SCL protocol, the standard forms of construction contracts are documents which are intended to be immediately legally binding once the two parties have chosen to use the contract. Primarily, in contractual disputes, the dispute resolver has to look first in all and every condition of the contract to see whether or not there is an express provision governs the dispute issue (or issues). Once such a term or condition exists, which deals with the dispute point, the dispute resolver should follow such

[622] i.e. the [Public Contracts Regulations 2006/5 act] for England and the [Public Contracts (Scotland) Regulations 2012/88 act] for Scotland

[623] See section titled: Criteria for Public Contracts in chapter 2

[624] The criteria are (one of the parties is a public body), (public interest), (abnormal term or condition)

[625] This is mainly if the judge or the dispute resolver regarded one of the terms and conditions of the standard form is abnormal compared with the similar private counterpart contracts.

[626] The family of standard forms of construction contracts includes contracts other than those mentioned in this chapter such as IMech/IEE

term or condition. There is a slightly difference in this regard between civil law countries and the common law countries. Such difference is that, although it does not happen quite often, the dispute resolver in civil law countries has certain degree of freedom to deny applying a specific part of a condition or a whole condition if he or she finds it unfair to a great extent.[627]

In the absence of a term or condition or mutual correspondence between the two parties of the contract (or in the traditions and customs of the industry), the dispute resolver starts to make up his or her discretion on how to reach a fair resolution for the dispute point. The mentioned judicial approaches for "Concurrent Delay" outlined in chapter 5 have been adopted by courts in the absence of a term or condition which deals with "Concurrent Delay" disputes. This section of the thesis looks on for how to regulate the dispute of "Concurrent Delay" from the beginning (i.e. from the contract stage)

5.6.1.1 The NEC contract

The NEC series of standard forms of construction contracts started with a version in March 1993 which was shortly succeed with a second edition in November 1995 (Gould 2007).[628] The most recent edition is the NEC3 form of construction contracts which has been launched in 2005[629] for the purpose of replacing the NEC previous version.[630] The reason why this contract has been chosen for analysis in this research study in relation to "Concurrent Delay" is that this new version of NEC standard form of construction contract in particular has been advised to be used for the public works construction projects.

[627] This right (or power) has been given to the judges in article 127/2 of the Egyptian civil code of 1948. The contract parties cannot agree together while drafting the contract to prevent the judge from using this power. This is one of the rules of the "public order" within the legal system (i. e. public policy). However, the judges' actual usage for this right (or power) does not happen quite often in practice. This right does not mean that the judge can disregards the wording of the contract.

[628] This abbreviation refers to the contract of the "New Engineering Contract"

[629] The industry has widely accepted this new version of contract.

[630] A NEC4 standard form of construction contracts has been released in 22nd of June 2017.

The latest version of this contract "NEC3"[631] has been recommended by the UK government for public works construction projects (NECContract.com 2014).[632] As an application for this, it has been adopted for a number of public works recently in the UK such as the London 2011 games, the NHS procure21 and the decommissioning of nuclear power stations (Barlow 2011). Also a previous version of the NEC it has been recommended for the public sector by Sir Michael Latham in 1994 (Latham 1994)

Regarding the "Concurrent Delay" relevant terms and conditions, there is no term or condition in the NEC3 standard form of construction contract that states a specific rule or remedy when a "Concurrent Delay" occurs. As part of the well-designed construction programme management side of the contract, the NEC3 contract only provide a prospective mechanism for the evaluation of the additional time and money (Lowsley& Sadler 2012). In this regard, the notices timing in this contract plays an important role in the way the *delay mechanism* of this contract has been designed (Patterson 2010).[633]

Under the NEC3 contract, the employer has to appoint a "Project Management" professional according to the relevant contract (option F of the contract). The "Project Management" professional acts within specific rules included in the contract and can be replaced by the employer (see clauses from 14.1 to 14.4 of the core clauses). This reflects that this contract has been designed to suit the large construction projects. This also helps in reducing the possibility for the project to encounter a delay dispute (including "concurrent

[631] The NEC3 has two versions. One of which is the June 2005 version (the NEC3 red version) and the other is the April 2013 version (the NEC3 black version).

[632] See also report sent from the Department of Energy & Climate Change on the 23rd of July 2014 with reference number (FOI 14/15502) as an indication on the wide acceptance for using the NEC standard forms of construction contracts by different governmental departments.(Department of Energy & Climate Change, 2014)

[633] This applies to the FIDIC as well

delay" dispute) and once such dispute occurs, the existence of such professional[634] will help in resolving the dispute immediately before parties start to think of taking it to adjudication or litigation. However, in construction projects of medium and small size, the employer, most probably, may not appoint such professional because this will be an additional cost which the "economics" of the project might not be able to bear.

NEC3 April 2013 version (the blue version) clause 61.3 states:[635] "The Contractor notifies the Project Manager of an event which has happened or which he expects to happen as a compensation event[636] if

1- The Contractor believes that the event is a compensation event and

2- The Project Manager has not notified the event to the Contractor.

If the Contractor does not notify a compensation event within eight weeks of becoming aware of the event, he is not entitled to a change in the Prices, the Completion Date or a Key Date unless the event arises from the Project Manager or the supervisor giving an instruction , issuing a certificate, changing an earlier decision or correct an assumption."[637]

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[634] (i. e. the "Project Management" professional)

[635] NEC3 June 2005 version (the black version) clause 61.3 used to states: "The Contractor notifies the Project Manager of an event which has happened or which he expects to happen as a compensation event if

1- The Contractor believes that the event is a compensation event and
2- The Project Manager has not notified the event to the Contractor.

If the Contractor does not notify a compensation event within eight weeks of becoming aware of the event, he is not entitled to a change in the Prices, the Completion Date or a Key Date unless the Project Manager should have notified the event to the Contractor but did not"

The new version of the NEC (NEC4) which has been issued on the 22nd June 2017 states that: "The Contractor notifies the Project Manager of an event which has happened or which is expected to happen as a compensation event if

1- The Contractor believes that the event is a compensation event and
2- The Project Manager has not notified the event to the Contractor.

If the Contractor does not notify a compensation event within eight weeks of becoming aware that the event has stopped, the Prices, the Completion Date or a Key Date are not changed unless the event arises from the Project Manager or the supervisor giving an instruction or notification, issuing a certificate or changing an earlier decision."

[636] The "compensation event" is the term used in the NEC3 contract for the "relevant event"

[637] See page 16 of the June 2005 version of the NEC3 main contract and page 16 of the April 2013 of the NEC3 main contract.

NEC3 clause 63.3 states: "A delay to the completion date is assessed as the length of time that, due to the compensation event, planned completion is later than planned completion as shown on the accepted programme. A delay to a key date is assessed as the length of time that, due to the compensation event, the planned date when the condition started for a key date will be met is later than the date shown on the accepted programme."

Regarding the appraisal for the NEC3 policy, as implied from the clauses above, the NEC3 standard form of construction contract adopts a mechanism of "early warning system". This mechanism allows, while the construction works is being progressed, the "contract administrator" to develop agreement between the parties on the consequences of the "compensation events" caused by any or both. This is supposed to happen while the "delaying events" occurring and before their effect actually happen and therefore before the completion date is pushed forward compared to the planned contractual date for completion and the hand over. The prospective approach came as a positive reply in the NEC3 for what has been called as (to analyze the delay in a prospective approach) by both the SCL protocol and the CIOB[638] guide to good practice in the management of time in complex projects.

This policy which has been adopted by the NEC3 form of contract has been criticized on the basis that it may depart sometimes from what actually happened on the construction site (i.e. artificial approach divorced from what actually happened) (Weihtmans 2012). This can be understood by the heavy reliance the contract made on the idea of the construction proramme and the mutual notices. The ambiguity on the issue whether or the not the analysis of the "Concurrent Delay" should be a prospective or a retrospective analysis is another point of criticism for the NEC3's policy on the "Concurrent Delay" situation and there is no case

[638] Chartered Institute of Building

law about this issue yet (Robinson 2012). The contract did not give a specific remedy for the situation of "Concurrent Delay". However, the contract focused on the prospective approach in order to limit the probability that delay disputes arise, which is good for the parties and the project to reduce the disputes from the beginning, and this applies too to the "Concurrent Delay" dispute. The problem is when this prospective mechanism fails for some reason and a "Concurrent Delay" dispute arises, the parties still need a remedy for such dispute.

5.6.1.2 The FIDIC 2005 contract

The same as the NEC3, the FIDIC2005 standard form of construction contract is widely being used in public works construction projects in different parts of the world. This includes Egypt because there is no equivalent Egyptian standard form of construction contract whether for the public construction works or private ones (Sarie-Eldin 1994).[639] This is due partially to that the area of "construction law" in Egypt is not a developed area compared to other areas of legal studies.

Regarding "Concurrent Delay" relevant clauses, clause 20.1 of FIDIC states that: "If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Employer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the contractor became aware, or should have become aware, of the event or circumstance ……. If the Contractor fails to give notice of a

[639] One of the future goals of the researcher after this PhD is to prepare two contract drafts for both public and private construction works in Arabic and give it to the Egyptian ministry of housing as a voluntary work. See www.arabiccontract.com . These expected two contracts can be applicable in some other Arabic "civil law" jurisdictions.

claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment and the Employer shall be discharged from all liability in connection with the claim …"

The contract sets up the traditional delay mechanism of the normal contractual relationship aiming to govern the execution of a construction works. Again in this standard form of contract, there is no clause on "concurrent delay" in particular. This seems to be because of the tendency of this contract in particular to be applicable in different parts of the world therefore the drafter found it better not to go in depth in a number of points which may vary from a jurisdiction to another.

5.6.1.3 The "UAE-Abu Dhabi" governmental form of construction contract

There are few contracts which have dealt with the "Concurrent Delay" problem. One of these contracts is the "UAE-Abu Dhabi" government form of construction contract – Clause EOT/ sub-clause (g). Such clause states that "Any such delay which is concurrent with another delay for which the Contractor is responsible shall not be taken into account". In this contract, the contract adopted a specific approach which gives all the consequences to the advantage of the government body by making any delays caused by the employer (the government body) as if it did not happen. Such approach does not give the contractor an extension of time or money in the cause of the "Concurrent Delay". This approach ignores the fact that the employer's caused delay might itself result in extending the contractor's delay. The adoption of such approach can be understood as the party which is in control of preparing and drafting its contract can impose its will in the contract's terms and conditions. This is normally associated with a logic that exists sometimes among employers that it is up

the contractors who are interested to work with us to accept this contract or not. Within this logic sometimes "fairness" is absent. This depends also on to what extend the employer thinks that the construction different jobs the employer announces from time to time is attractive for the contractors in the construction business. However this business environment may do not achieve fairness.

Some of the few contracts which have a clause on "Concurrent Delay" tend to represent the view of the side which drafted and issued the standard form of construction contract. Section 5.6.1.3 of the standard form of construction contract for Public Works of the government of Abu Dhabi stipulated is an example.[640] This approach has been taken because the drafter of this contract is the employer himself (i. e. the government of Abu Dhabi). This research argues that this reflects the fact that the employer (which is the government of Abu Dhabi) is in a better stronger position as it can impose its own views since this standard form of construction contract has been drafted by this employer. This raises the issue of whether the fairness or the interest of the employer was in the focus of the contract. However, it is necessary for drafters to abide by the concept of justice and fairness even if the drafter will be one of the contracting parties.[641] Although this eliminates the uncertainty, this leaves one of the contracting parties in an unfair situation as the contract adopts solely the view and the interest of one of the parties. Therefore, there is a need for a neutral academic attempt to approach the matter.

[640] Section 5.6.1.3 stipulates in sub clause (G) that the time and the money to be given to the employer. This sub clause states that: "Any such delay which is concurrent with another delay for which the Contractor is responsible shall not be taken into account".This reflects the fact that the employer (which is the government of Abu Dhabi) is in a better stronger position as it can impose its own views since this standard form of construction contract has been drafted by this employer.

[641] Another example is the Australian standard form of construction contract of "AS2124" in clause 35.5 which states that once a "Concurrent Delay" has been identifies, does not entitle the contractor an extension of time at all. The clause states that: "Where more than one event causes "Concurrent Delays" and the cause of at least one of those events, but not all of them, is not a cause referred to in the preceding paragraph, then to the extent that the delays are concurrent, the Contractor shall not be entitled to an extension of time for Practical Completion". This means that the mentioned contract takes the employer's position.

5.6.1.4The new "CIOB complex projects" contract

This is a new contract issued by the Chartered Institute of Building in the 23th of April 2013(Ho 2013). This contract in relation to the "Concurrent Delay" problem has adopted the following approach stated in article 40 of the contract which states that:

41.1 For the purposes of the contract, concurrent causation occurs when

> 41.1.1 A delay to progress of an Activity is caused by two or more occurrences, at least one of which is the Contractor's liability and at least one of which is an Event, or
> 41.1.2 A delay to progress of an Activity is caused by one or more occurrences at the risk of the Contractor and, over the same period of delay to progress in whole or in part, a delay to progress is caused to another Activity by one or more Events, and in the absence of the occurrence which is the Contractor's liability or the Event, the same delay to progress would have occurred.

41.2 When, at the date upon which the delay to progress occurs, the delayed Activity is (or, in the case of concurrent causation as described in Clause 41.1.2, both delayed Activities are) on a Critical Path to a Relevant Date for Completion, the likely delay to the Relevant Date for Completion so caused shall, subject to Clauses 42, 43, 44 and/or 45[642], be deemed to be one for which the Contractor

> 41.2.1 is entitled to an extension of time calculated in accordance with Clause 40, but
> 41.2.2 is not entitled to financial compensation.

41.3 Where any delay to progress referred to in Clause 41.1.2 is caused solely by an Employer's Cost Risk Event, the Contractor shall be entitled to compensation calculated in accordance with Clause 39[643].

41.4 To the extent that the Contractor is unable to demonstrate that the loss and/or expense for which compensation is claimed was not caused wholly by an Employer's Cost Risk

[642]Clauses42, 43, 44 are attached in the Appendix at the end of the thesis
[643] Clause 39 is attached in the Appendix at the end of the thesis

Event, the Contractor shall not be entitled to recover compensation from the Employer."

According to this article, this contract in relation to the "Concurrent Delay" problem has adopted the Malmaison approach. The research argues that this is a typical attempt to deal with the matter from only the professional perspective where the issue of justice is not in the center of the focus of such perspective and partially absent from the whole picture when it comes to the issue of "Concurrent Delay".

5.6.2 The SCL[644] protocol

5.6.2.1 Overview

Construction industry depends on "guess work" in terms of promised duration of the tasks that will be involved in the construction process. Corbin states that the time is the essence clause in the construction process means that "One who does not perform in full the promised performance, within the exact time specified in the contract, cannot maintain any action at law for the enforcement of the return promise" (Corbin 1999:). Because of such "guess work" of time, the construction industry found that there is a need for a protocol to deal with the delay issues in particular. In 2000, a group of the SCL's members have gathered in London to discuss the delay related issues in the construction industry to make it much more predicted (Pickavance 2009). This has led to issuing of the SCL protocol in 2002.[645] A second edition has been drafted in June 2016.

[644] The SCL abbreviation refers to the "Society of Construction Law" founded in 1983 (Uff 2002)
[645] Published in October 2002

The SCL protocol aimed to give *guidance* on delay and disruption in general so that the parties can refer to it in the contract (i.e. the contract stage) or in the post dispute stage as the parties are still able to refer to the SCL protocol to be adopted then.[646] The SCL protocol does not have the power of the law. The SCL protocol is not a binding document in itself. It is no more than guidance for both the professionals of the industry and the dispute resolvers. From a legal perspective, the SCL protocol means nothing for a particular contractual term or condition unless the parties refer to the SCL protocol in the contract.[647] The SCL protocol has been established as an attempt to help the dispute resolvers to find clear approaches to be adopted in a number of different types of complicated construction disputes as possible. The SCL protocol means nothing in any agreements whether while the dispute arises or during the dispute resolution process. In the absence of clear terms and conditions on the disputing matters, the dispute resolver is under a duty to achieve justice so he or she has the right to adopt parts of this protocol if he finds it reasonable for the specific disputing matter which is being dealt with.

However the authoritativeness of the SCL protocol varies slightly between the industry's professionals in different jurisdictions. For example, in the US the SCL protocol has a higher degree of respect and dealt with as an authority between the industry professional on a large scale.[648] This is not exactly the case in the UK. The SCL protocol has also a degree of respect in Hong Kong (Cocklin 2013).

[646]See the introduction of the SCL protocol in page 3

[647] The parties of a construction contract can adopt all or any specific part of the protocol in their contractual relationship. They also can agree together to adopt a specific part to be applied for a specific dispute once such a dispute has been risen. So the parties can adopt it all or bits of it on a selective basis.

[648]This was statement made by Douglas Oles (the American College of Construction Lawyers) in his presentation given during the fourth international construction law conference in Melbourne (May 2012)

5.6.2.2 The "Concurrent Delay" situation in the protocol

In Core Principle 9 of the protocol under the heading "Concurrent delay – its effect on entitlement to extension of time", it is stated that "Where Contractor Delay to Completion occurs or has effect concurrently with Employer Delay to Completion; the Contractor's "Concurrent Delay" should not reduce any extension of time due". In Guidance Section 1.4.1, it is asserted, "Where Contractor Delay to Completion occurs concurrently with Employer Delay to Completion, the Contractor's "Concurrent Delay" should not reduce any Extension of Time".

Guidance Section 1.4.7 states, "Where Employer Risk Events and Contractor Risk Events occur sequentially but have concurrent effects, here again any Contractor Delay should not reduce the amount of Extension of Time due to the Contractor as a result of the Employer delay".

The following principle (number 10), under the heading "Concurrent delay – its effect on entitlement to compensation for prolongation", asserts the following: "If the Contractor incurs additional costs that are caused both by Employer's delay and the concurrent Contractor's delay, then the Contractor should only recover compensation to the extent it is able to separately identify the additional costs caused by the Employer Delay from those caused by the Contractor Delay. If it would have incurred the additional costs in any event as a result of Contractor Delay, the Contractor will not be entitled to recover those additional costs".

Guidance 1.10.1 states, "If the Contractor incurs additional costs that are caused both by Employer Delay and Contractor Delay, then the Contractor should only recover

compensation if it is able to separate the additional costs caused by the Employer Delay from those caused by the Contractor Delay".

In Guidance 1.10.4, it is asserted: Where an Employer Risk Event and a Contractor Risk Event have concurrent effect; the Contractor may not recover compensation in respect of the Employer Risk Event unless it can separate the loss and/or expense that flows from the Employer Risk Event from that which flows from the Contractor Risk Event. If it would have incurred the additional costs in any event as a result of Contractor Delays, the Contractor will not be entitled to recover those additional costs. In most cases, this will mean that the Contractor will be entitled to compensation only for any period by which the Employer Delay exceeds the duration of the Contractor Delay.

From these sections, the Construction Law Society's delay and disruption protocol makes a distinction between concurrency as it relates to extensions of time, and concurrency as it relates to compensation for the cost of prolongation. According to the protocol, if the effect leads to the same delay to completion whether caused by the contractor or by the employer, the contractor's delay cannot result in any reduction of the extension of time due. "Concurrent Delay" is dealt with differently regarding entitlement to the cost of prolongation. According to the protocol, the contractor is entitled to compensation only to the extent that it is possible to identify separately any additional cost of which the employer's fault was the cause. So if the contractor was responsible for the additional cost in any of the delaying events, there should be no entitlement for the contractor to be compensated.

According to this approach adopted by the protocol, we can say that the protocol adopts the English *Malmaison* approach. It seems that this adoption was because the *Malmaison*

approach was a newly developed approach at the time when the SCL protocol was being drafted. This might have affected the drafters to follow the *Malmaison* approach without any further deep analysis for the matter of "Concurrent Delay" other than the identification of what is "Concurrent Delay". This applies in particular to the cost of prolongation rather than the extension of time part of the resolution. The SCL protocol has adopted the *Malmaison* approach ignoring that such approach was dealing with the matter within the context of the meaning of clause 25 of the JCT version of standard forms of construction contract of which the dispute in *Malmaison* case has been raised from. Unlike the situation in this particular case, the SCL protocol deemed to help regulating the matter of "Concurrent Delay" (among the list of other points discussed in the protocol) for any future dispute in the industry whether it was during the application of all standard forms of construction contracts other than the JCT or even any other "Concurrent Delay" dispute arises outside the standard forms of construction contracts (i.e. bespoke contracts).

This research contends that the drafters of the SCL protocol, in relation to the situation of "Concurrent Delay", has relatively taken the view of the contractors more than the view of the employers. In addition to that at the time of drafting the SCL protocol the "Malmaison" approach was a newly developed judicial approach which may have been seen the correct developed legal position for the situation of "Concurrent Delay" at that time.

This shows that in either attempt whether on the contractual level or on the SCL protocol, the attempts were not achieving the balance between the two parties as a starting point for the situation of "Concurrent Delay". This makes it necessary to intervene via an academic attempt to regulate the matter and providing the industry with an attempt of a balanced model contractual clause for the situation of "Concurrent Delay" which can be

adopted also by the parties or the dispute resolver in the absence of a relevant contractual clause or term on "Concurrent Delay" in the contract.

5.7 SUMMARY

Within the existing different judicial attempts, there was a lack of consensus and a lack of an overall view taking into consideration the "construction management" perspective. Such situation raises the potentiality that a future "higher court" judgment may be issued to appropriately deal with the matter. The situation of "Concurrent Delay" has some different scenarios and permutations as analyzed in chapter four however it still constitutes one situation which is a mutual delay caused by both of the contracting parties, so the question arises is why it has been dealt with differently? This chapter only focused on examining the approaches which have been taken in the main case in England (Malmaison), Scotland (City Inn) and the main related cases in Egypt in the light of the unique details and facts of each of these cases.

As outlined, different court decisions and judgments has varied significantly when dealing with "Concurrent Delay". This research sees these contradictions owe to the complexity of this type of dispute and the lack of the understanding of the nature of construction works. Courts by their nature are not familiar with complicated disputes such as this, nor are judges well prepared to deal with such matters when the parties and the expert witnesses take them to a relatively[649]large amount of complicated detailed "construction management" related technical facts where the results may differ if the overlap (between

[649] Compared with other typical contractual disputes

mutual delays) occurs at different times. Judges might depend on expert witnesses to come to a decision, but ultimately the decision taken will be that of the judge. Judges should be aware of the expert's understanding of the facts of the case from their perspective. However, they have no obligation to adopt the expert's opinion in the matter[650]. This increases the judges' level of responsibility in such complicated disputes.

There should be a legal illustration system to be developed to illustrate the "Concurrent Delay" situation from the legal perspective in relation to dispute resolution in a way that illustrates the mistakes of each of the parties in relation to the contractual obligations of each. Such a legal illustration system should show how these mutual mistakes have link (or links) with each other.[651] The suggested legal illustration system is different from the illustration system made by the construction computer software programmes designed to meet the "construction management" needs as they focus on the management side of the issue while they do not give enough illustration or outline for the legal side in relation to connecting the contractual bonds and contractual obligations with the different construction activities or tasks on the construction programme. The suggested legal illustration system should be based initially on the "construction management" software programmes but with the required requirements needed for the purpose of resolving the disputes. Although such suggested legal illustration system can be based on the normal "construction management" programmes, it should focus on the period of the dispute itself and link it directly with the contractual obligations. The suggested legal illustration system should use simplified relevant illustration figure (or figures) which represent the breach of a particular legal obligation (or obligations)

[650] For example within the Egyptian judiciary it is common in the judgement to state "and as the judge is the supreme expert in this case" following to description of the finding of the report of the expert witness if there is any

[651] This includes showing how the effect (or effects) of these mutual mistakes have link (or links) with each other.

of the contract.[652] This suggested legal illustration system helps the dispute resolver who has less understanding about the detailed technical "construction management" related issues to take into consideration "what is necessary to be considered" in relation to resolving the dispute from the perspective of the "contractual obligations". This suggested legal illustration system can be considered a shortcut from the main construction programme with unnecessary "construction management" related detail to give a quick "contractual bonds" related illustration. This suggested legal illustration system can be incorporated into the traditional software programmes used for the "construction management" and it can be tailored according to the different main standard forms of construction contracts. Alternatively, this suggested legal illustration system can become an independent "dispute resolution" construction programme on its own. This will be useful to bridge the gap between the lawyers (including judges) who are not specialized in construction industry on one side and the construction management side.

The case where the "Concurrent Delay" has been examined in the English jurisdiction, the point under the question was focusing more on the meaning of the terms and conditions of the contract in the case and how to apply them. While the starting point in the Scottish "City Inn" case was that the judge has reached a conclusion that this is "Concurrent Delay" situation and he started to think what achieves justice in this situation. This focus was more than paying the attention and focus on the terms and conditions of the contract. The last mentioned approach is similar to the approaches adopted in a civil law legal system like the Egyptian one where the judge tends to make "achieving justice" as a priority on top of "what exactly was the meaning of the terms and conditions of the contract itself". This serves and feeds into the allegations that the Scottish legal system tends in some points to be closer to

[652] This applies to any other related source of obligations.

the civil law system and depart from the logic of the common law system.

Regardless of the accuracy[653] of the judgments on "Concurrent Delay" in both the English and Scottish jurisdiction in relation to the facts of the dispute, these two judgments reveal a particular judicial logic or approach on dealing with the problem of "Concurrent Delay" once this problem has been identified.

The "Concurrent Delay" dispute relies heavily on the role of the "expert witness" in outlining the core of the dispute and the various matters attached to programming. The point of the "to what extend" each of the "expert witness system" in the three jurisdictions of this research is efficient for this type of disputes in particular has been considered. From the relevant analysis related to this point throughout the research, this research found that:

The expert witness in England and Scotland is employed by the parties on the advice of their legal advisers while, in the Egyptian civil law legal system, the expert witness is appointed by the state and the judge refers the matters to expertise attached to an institutional "Expert Witness Department". The expert witness is paid by the parties in England and Scotland while the expert witness is paid by the mentioned government body which is attached to the ministry of justice[654] in Egypt therefore paid by the state. The expert witness in Egypt may be a slightly better approach in terms of neutrality and impartiality issue however there is lack of experience among relevant experts of the mentioned government body in relation to the knowledge required for the modern construction management issues. This lack of experience negatively affects the courts' ability to better address this area of

[653] In terms of the consideration of the different parts of delays attributed to the contractor or the employer

[654] Typically the mentioned government department is managed by former judges. In the same time the chairman of this "experts department", although the department is attached to the ministry of justice, has a wide degree of independence from such ministry while performing his or her work duties

disputes. To tackle this issue, this research suggests raising the level of experts of the governmental institutional "Experts Witness Department" by extensive trainings. This can be jointly done with the establishment of a specialized court for construction industry where judges can have a better insight into the technical issues of such industry.[655]

On the contrary, experts in England and Scotland in this area of disputes although there is an issue which can be seen from external perspective with the impartiality and neutrality side of the matter since the expert witness is paid by his or her party in the first instance, expert witnesses normally have comparatively better and advanced experience in modern construction management and programming technical issues. This is in addition to the problem of the possibility of having two perspectives of identifications for the critical path and how things went wrong with the executed construction works compared with what were planned. The problem is comparatively feasible within the Scottish jurisdiction as there is no specialized court for disputes of the construction industry.[656] To tackle this issue in Scotland and England, this research recommends using of the method of "single expert witness" in "Concurrent Delay" disputes in England. And for Scotland, developing and expanding the specialization in the Sheriff Courts "Shrieval Specialisation" to include construction industry related disputes is advised by this research. Finally there are a number of points regarding apportionment. They are necessary to build on the next parts of this research. Such points can be summarized as follows:

1- The analysis shows that, it appears from the judicial precedents within "public works construction disputes" that, in general, the judiciary is keen to give the full time to the contractor.

[655] The transfer of jurisdiction from generalist courts to specialized ones can produce fundamental changes in judicial policy (Abadinsky, 1995: P. 162).

[656] In addition to this, according to the Courts Reform (Scotland) Act 2014 which came into force on the 22 September 2015, cases less than £100k can no longer be raised in the Court of Session(Hendry 2016).

2- The apportionment principle is not accepted in the English law the same way it is in the Scottish jurisdiction and the Egyptian one. And the English legal system differentiates in this regard between the "contributory wrongdoings" in tort law rather than the contract law.
3- Although both English and Scottish legal systems are from the family of "common law" systems, they have substantial different in way the apportionment approach is made in the situation of a mutual breach of the contract in the situation of "Concurrent Delay" within construction law.
4- Apportionment within contracts in the Egyptian civil law jurisdiction is dealt with is the same logic in tort and this perspective is partially based on the codified rules (civil code of 1948) and it is not clear when it comes to the relatively extra power the government body has, how the apportionment would be in the "public works construction contracts".

Regarding the non-judicial guidance, the aim of this section is to provide a critical evaluation of the provisions and conditions in the main standard forms of construction contracts relevant to the "Concurrent Delay" dispute as well as the articles in the protocol that were designed to address the issue of "Concurrent Delay". Regarding the contracts, the reason behind establishing premade forms of contracts in construction industry is the lack of legal knowledge between professionals who are involved in the construction industry and actually lead it. In the same time, this is also to meet the lack of legal and technical knowledge that most of the employers normally have. Non-lawyers involved in the construction industry put relatively reliance on the standard forms of construction contracts taking into consideration the comparative approaches each of these standard forms of construction contracts has taken in relation to the main points and sections of the contract.However,although there is a heavy regard to the standard forms of construction contracts within the construction industry,the

majority of the standard forms of construction contracts avoided dealing with the concurrent delay situation and few contracts dedicated a rule for the "Concurrent Delay" situation. This seems to be due to the complicated nature of such dispute and the tendency of these standard forms of construction contracts to be globally accepted by avoiding the controversial issues which different legal systems may approach them differently.

For the protocol, this research has found that the drafters of the protocol have chosen the straight forward resolution which has been recently (at that time) developed by the "Malmaison" English approach together with the burden of proof test for the cost of prolongation which allows the contractor to ask for a compensation once he could separately segregate the additional money he incurred by a reason solely attributed to the fault of the employer which means that for the other part of the "Concurrent Delay" of which both of them are to blame, the contractor will not be entitled for a compensation for the "cost of prolongation".

For any particular given type of dispute, the comparative analysis of the standard forms of construction contracts as well as the protocol gives the two contracting parties the opportunity to choose between varieties of options for this particular type of dispute even if the two contracting parties have not dictated the matter from the beginning in their original contract. However, these standard contracts or the protocols might not be accurately fair.

The analysis of the non-judicial attempts to approach the "Concurrent Delay" problem shows that there is a few numbers of attempts to approach the matter of "Concurrent Delay" and the attempts normally reflect the position or the opinion of one of the two sides of the problem which is in a comparatively stronger position allows to impose a resolution which

reflect his perspective. This can be accepted as long as the other party agrees, however a neural attempt to approach the matter will remain outstanding. This is what the next chapter attempts to do. This is required especially for a relationship like the public contractual relationship where the public body is on the side which has much more power[657] compared with the construction company which is a private body (or the individual contractor) on the other side. This is because the notion of justice should not be based on how successful each side is in imposing how it sees things rather than finding the middle point of where the fairness actually is. In the next chapter, this research suggests a model clause to be incorporated into the construction contracts to deal with the problem of "Concurrent Delay".

[657] See to section titled: "logic behind the differentiation" in chapter 2

CHAPTER 6: THE DEVELOPMENT OF A MODEL CLAUSE FOR CONCURRENT DELAY WITH RESPECT TO PUBLIC CONSTRUCTION DISPUTES

6.1 INTRODUCTION

Sections of the previous chapters focused on the special nature of the dispute of "Concurrent Delay" and the non-judicial methods of dealing with it as well the comparative judicial approaches of dealing with the incorporated time and money issues including the outline of the special "Public Contracts" approach of the Egyptian civil law jurisdiction. In this chapter, it is appropriate to now re-focus on developing an approach from a neutral perspective. This suggested neutral approach, which is outlined in section 6.3, is *not* only designed to be incorporated in the contract level[658] (whether a standard form or a bespoke one). It can be adopted in more than one level. Such adoption can be done either via the *level* of the legislative tool or the *level* of a judicial decision to be taken by one of the supreme courts in each of the three jurisdictions of this research.[659] It also can be adopted via the *level* of the dispute resolver once a "Concurrent Delay" situation has been identified.

Within the contractual *level* in particular, the model clause can be adopted in a number of *stages* outlined in section 6.4. In the absence of a contractual term on "Concurrent Delay", it can be considered while (or after) the dispute is being raised. Regarding the contracting parties themselves, this model clause can also be adopted by them while drafting their bespoke construction contract. They also together can add this model clause to an existing construction contract that is already being performed. It also can be incorporated within

[658] This contractual level includes the pre-contract stage as parties to an expected contract, within tender documents, can mention this model as a suggested resolution for the concurrent delay situation.

[659] However, in the Egyptian jurisdiction, the authoritativeness of such judgment is less binding for other courts.In the Egyptian civil law jurisdiction; the common law doctrine of judicial precedent does not exist. Although it does not happen often, different courts can depart from the approaches taken by the supreme courts for the same matter. In this case the lower court should spend extra explanation in the justification for its own approach

standard forms of construction contract by their drafting body. However, contracts, including the consensus of the two parties for making amendments, are the most flexible tool for regulating a matter compared with the legislations and bye laws or even the protocols or the standard forms of contracts which might be issued by the professional bodies.

6.2 THE IMPORTANCE OF DEVELOPING A MODEL CLAUSE

Developing a model clause is important for the situation of "Concurrent Delay" for a number of reasons. Such reasons outline the real need for developing such clause, approach or resolution.

Reducing the opportunity that a dispute arises:

Basically, one of the aims and objectives of developing regulations in the legal system is to reduce the disputes and to get them resolved once they occur. One of the causes of the rise of the disputes is that, in absence of related contractual terms or conditions, parties sometimes do not know what their rights are in the different situations they face. The absence or the "imprecise" clear terms and conditions leads sometimes to disputes.[660] Each of the parties of a construction contract may approach the matter of "Concurrent Delay" differently once they believe that it exists as each of them starts to think that the resolution should be according to its view. This is in itself raises the opportunity that a dispute arises. The existence of a model resolution may help in preventing the rise of such dispute from the beginning. The presence of a clear model clause for the "Concurrent Delay" not only will assist the "dispute resolver" to resolve the dispute accordingly; it will also make it clear for the parties themselves in terms of how the consequences of this situation will be allocated once a "Concurrent Delay"

[660] as the case in employment agreements in construction industry before efforts has been spent on precisely regulating these relationships (Ryley 2008: p.36)

situation has been identified. This in itself might lead the parties to adopt it and to resolve their dispute accordingly[661]without referring the matter to a dispute resolver. The aim is to achieve the minimum number of "Concurrent Delay" disputes as much as possible.

Certainty

Certainty in any business or industry is important to avoid committing mistakes in both micro and strategic decisions. This applies to construction industry. The aim of developing a contractual model clause for the situation of "Concurrent Delay" is to reduce the uncertainty in this point. Primarily, in addition to regarding the construction contract as a tool for allocating risks,[662] accuracy and tackling all situations which are possible to predict is one of the objectives of drafting a construction contract (Boyce 1996). In the absence of an explicit or implied contractual clause in the contract[663], it becomes open to the dispute resolver to develop his or her own resolution. This may lead to a situation that different dispute resolvers may develop different approaches for the same type of dispute the issue that contradicts with the *certainty* which should exist in the construction industry.[664] The vast majority of the standard forms of construction contracts do not provide an answer for the problem of "Concurrent Delay" leaving the matter up to the discretion of the dispute resolver.[665] This leaves the parties in a doubt about this situation. In the same time, the few contracts which have attempted to approach the "Concurrent Delay" situation tend to represent the view of the

[661] This is normally the case if both of the parties have a degree of "good relationship" and both of them is keen on keeping a good relationship for further projects especially from the contractor side in the case "public works construction projects"

[662]From the construction industry perspective, the construction contract can be seen as a tool for allocating the different risks in construction industry (Bunni 2001: p524)

[663]This applies to the contractor any related recognized correspondence

[664]This applies to any other contractual relationship of this nature(i.e.: the subject of the contract is something which has not been made yet at the time of the contracting. such as "Information Technology" industry and the industry of "ships building" which in particular has many characteristics which are similar to the construction industry)

[665]There is no clear reason from the literature for why the various organizations involved in contract drafting over the years, have avoided the development and insertion of a specific 'clause'. This research argues that this may be attributed to the motivation of making the contract more accepted by the contractors and employers both locally and internationally in addition to make the contract simpler and less controversial.

side which drafted and issued the standard form of construction contract.[666] This research argues that the prevailing view in relation to the drafting of the most of the standard forms of construction contracts may be dictated more by the will of professional bodies.[667] Although imposing the will of the strong and organized party may eliminate the uncertainty which may be seen as a good point, this may leave one of the parties in an unfair situation.[668] However, it is necessary and more appropriate for them to abide by the concept of justice and fairness and take it as a starting point. This raises the issue of was it the fairness or was it the interest of one of the parties the one in the focus while an attempt is being made to achieve certainty? Therefore, there is a need for a neutral academic attempt to approach the matter. There is a real need for a model clause rather than a perceived need as the current situation lacks the certainty that should exist in different situations within an industry like the construction one.

Partial help in promoting construction industry

As outlined above, construction industry (especially public works construction projects) is important and has a connection with the broader economy of the three jurisdictions of this research as well as any other state. Dispute resolution for the different types of disputes is *important* for the sound performance of the construction industry itself. Developing pre-made resolutions, which matches the nature of the industry, for different types of disputes is also

[666] For example, section 5.6.1.3 of the standard form of construction contract for public works construction projects of the government of Abu Dhabi. Another example is the Australian standard form of construction contract of "AS2124" in clause 35.5

[667] For example, from the perspective of the contractual relations of a contractor v. an employer, the number of the associations or professional bodies that can be categorized under the "contractor" side found multiple bodies in the UK. These include the seven major chartered bodies (CIOB, CIBSE, ICE, IStruct, RIBA, RICS and RTPI) and include other bodies. However, what represents the interest of the employer found only one body (the construction employer association) (Ashworth 2001, p.217). In practical sense, the vast majority of employers may not enter into a construction contractual relationship after the existing one has been executed while the other party (the contractor) continuously finish a project to start another one and that makes the contractors become more interested in lopping towards associations or professional bodies regulating the industry (including the draft of the standard forms of construction contracts) in the way that does not contradict their interest.

[668] As this may leave the contractor sometimes in an unfair situation as the approach taken adopts solely the employer's view or, if we look at the matter the other way around, this may leave the employer sometimes in an unfair situation as the approach taken is the approach that adopts solely the contractors' view

important because the rules for justice which should prevail in construction contractual disputes are connected to the nature of the construction industry itself. The later in turn has a connection with how the execution of the construction works is being managed. Therefore, an effort should be spent on developing pre-made resolutions which match the specific nature of such industry to avoid negative effects to the economy that might result from a delayed process in the resolution or from the unexpected resolution developed in the absence of a definite resolution.[669]

Unification of a rule in a number of jurisdictions

The unification for a rule has two perspectives. From the legal perspective, it is useful to examine whether or not a unified resolution for the a particular subject matter within "public works construction industry" can be developed to be applicable in one or more jurisdictions which one of them is a common law jurisdiction and one of them is a civilian one. The matter of the "Concurrent Delay" is a good example for such examination. This is because such a situation incorporates common features regardless of the differences that the three jurisdictions have.[670] From the practical perspective, construction industry is a cross-jurisdiction industry as the market of construction industry shares a large number of characteristics across different jurisdiction. The market of construction industry is one of early industries that tend to go global (Shutt 1997). This tendency is confirmed by the growth of multinational companies in this cross boarding industry (Morton 2006, p.45).[671] With taking the little social, political and economic differences into consideration, this tendency is motivated by the similarities in the industry in different countries. As a proof, UK

[669] For example in the "City Inn" case, the judge took a year to reach a resolution to the dispute

[670] See section titled: The "Legal Transplantability" of the model clause in the three jurisdictions in chapter 6

[671] An overview of the UK large firm sector (such as Amiec, Bovis Lend lease, Balfour Beatty and Skanska) shows that there is a long lasting tendency for such construction firms to go global in a form of multinational companies that involve other nationalities other countries such as the France, Canada, USA and the Sweden.

construction industry for example has been always regarded as an exporter (Naughton 1989). This research argues that construction industry related rules, within the context of this research, can be partially transplanted from a jurisdiction to another.[672] This is reflected in a need to unify the rules across different jurisdictions. Making an attempt to unify a legal rule in an industry like the construction industry helps in facilitating the cross-jurisdictions investments connected with construction industry. The real need for making such an attempt of unification comes from that there are different approaches have been adopted by different jurisdictions, the SCL protocol and different standard forms of contracts while there is a fact that cross-jurisdictions investments connected with construction industry will be more than it used to be in the future.

6.3 THE MODEL CLAUSE OR APPROACH

While being developed, this model has taken into consideration the specific nature of this industry and the objectives each party has behind entering into such relationship as well as the differences between the three jurisdictions of this research. This research suggests that the model clause or approach to deal with the "Concurrent Delay" dispute is outlined in the following headlines.

6.3.1 In England and Scotland:

In these two common law jurisdictions, the public works construction disputes do not have specific special category, approach or nature within the legal system in terms of the substantive dispute resolution. Therefore the suggested model clause or approach is:

[672] A further outline for the argument is that the construction industry within the context of this research can accept the unification of the rules in different jurisdictions is outlined later in this chapter (See section titled legal transplantability debate)

MODEL 1A

"England and Scotland"

If the "Concurrent Delay" situation occurred immediately at the very beginning of the start of the construction works or while the works are expected to start and both of the parties were in a complete culpable delay and both of them are aware of the other party's delay, then the whole project period should be shifted to start at the earliest party's delay to stop operating. [Unless the contractor or the employer has contracted with a third party for a specific task (or tasks) to be carried out in specific point in time within the time shifted on the critical path of the original programme]

MODEL 1B

"England and Scotland"

If the "Concurrent Delay" situation occurred in the middle of the progress of the works

1B-T: The contractor receives a full extension of time

1B-M1: The cost of prolongation should be apportioned on the basis of a "percentage" or an "allocation" of portions which is exactly the same as the *assessment* of the dispute resolver for the "degree of the culpability"[673] between both of the parties in relation to the obligations[674] have been breached by each of the parties.

[673]See section titled: Permutations in chapter 4and section titled: The concept of justice within the context of "Concurrent Delay" dispute in chapter 6 on the degree of culpability

[674]The breach here refers to not only the contractual breach but also to the breach of any other obligation drives from the customs and the norms of the construction industry for this region and for the particular type of construction project of which the "Concurrent Delay" dispute arises.

1B-M2: If the effects of these causes of delay have been overlapped with an effect of a neutral cause of delay, this effect of the neutral cause should not affect the "percentage" or the "allocation" of portions which has been apportioned as described above in **1B-M1**.

6.3.2 In the Egyptian civil law legal system

In civil law countries like the Egyptian one where there is a special approach for "public contracts" including the "public works construction contracts"[675] that resulted in a special approach for "Public Works Construction Disputes" which have specific category and nature in the legal system in terms of the substantive dispute resolution. Therefore the suggested model clause or approach is:

MODEL 2A

"Egypt"

If the "Concurrent Delay" situation occurred immediately at the very beginning of the start of the construction works or while the works are expected to start and both of the parties were in a complete culpable delay and both of them are aware of the other party's delay, then the whole project period should be shifted to start at the earliest party's delay to stop operating. [Unless the contractor or the employer has contracted with a third party for a specific task (or tasks) to be carried out in specific point in time within the time shifted on the critical path of the original programme]

MODEL 2B

"Egypt"

[675]See the criteria in section titled: Criteria for Public Contracts in chapter 2

If the "Concurrent Delay" situation occurred in the middle of the progress of the works

2B-T: The contractor receives a full extension of time

2B-M1: The cost of prolongation should be apportioned on the basis of a percentage or an "allocation" of portions which is exactly the same as the *assessment* of the "dispute resolver" for the "degree of the culpability" between both of the parties in relation to the obligations[676] have been breached by each of the parties.

2B-M2: If the effects of these causes of delay have been overlapped with an effect of a neutral cause of delay, this effect of the neutral cause should not affect the percentage or the "allocation" of portions which has been apportioned as described above in **2B-M1**.

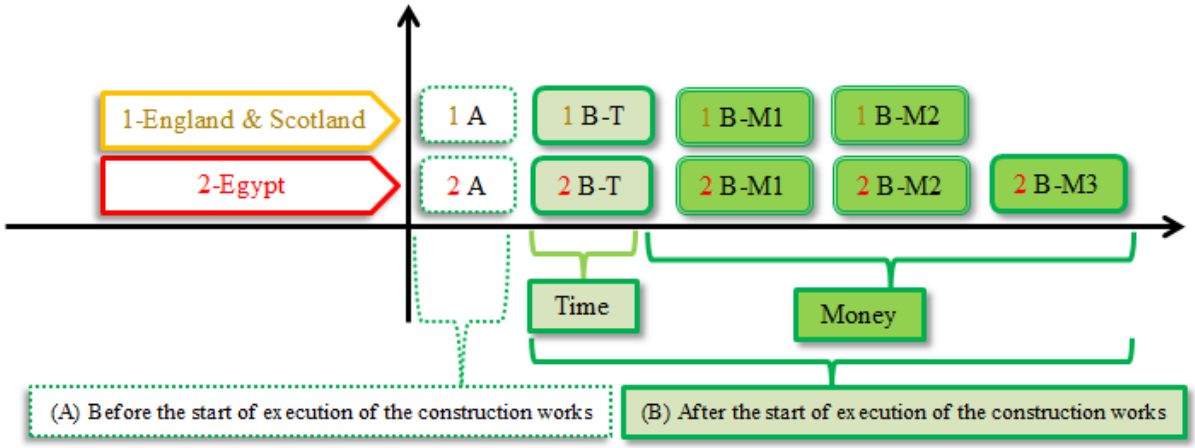
2B-M3: While doing the *assessment* mentioned in 2B-M1, the government body should be exempted from a portion (or portions) of its part of the cost of prolongation if the cause or causes of the delay on the side of the government body has a link with (or could be justified by) the "interest of the public" and the theory of the "continuity of the operation of the public services".[677]

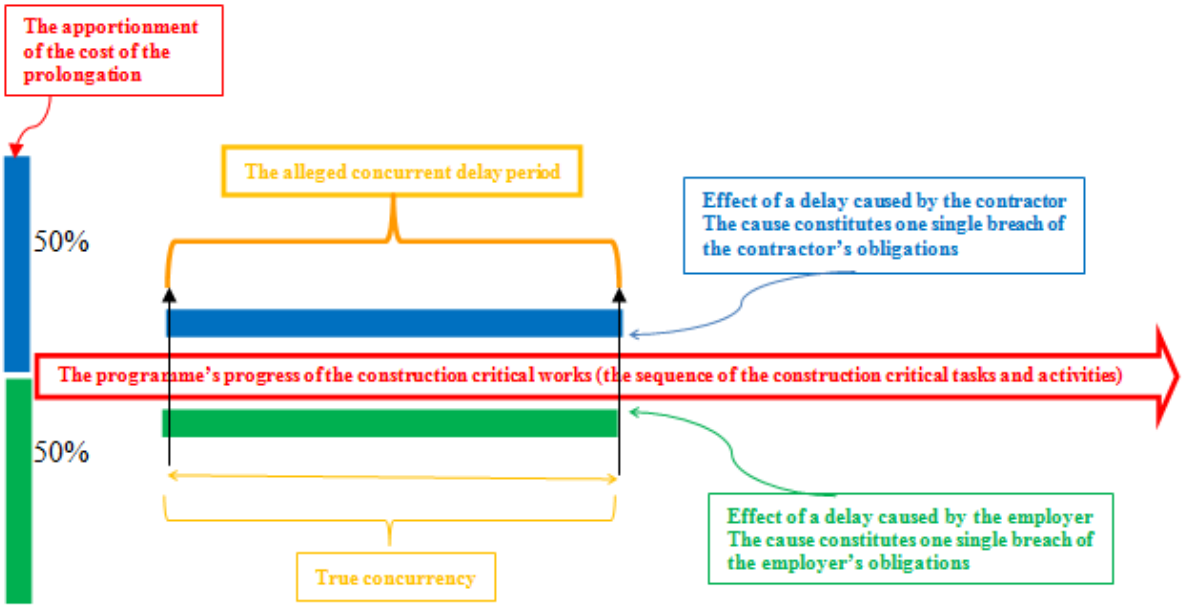
The following figure illustrates the apportionment for the cost of the prolongation according to the [Model 1(B) - M1] and [Model 2(B) - M1] of the suggested model clause which is the case that there is no neutral cause overlaps with the "Concurrent Delay" situation

[676]The breach here refers to not only the contractual breach but also to the breach of any other obligation drives from the customs and the norms of the construction industry for this region and for the particular type of construction project of which the "Concurrent Delay" dispute arises.

[677] This is in aaccordance to its requirements and pre-conditions. See section titled: The logic behind the differentiation in chapter 2

and also, but within Egypt only, in the case that none of the delays caused by the employer can be justified by the "continuity of the operation of the public services" and/or the "interest of the public".





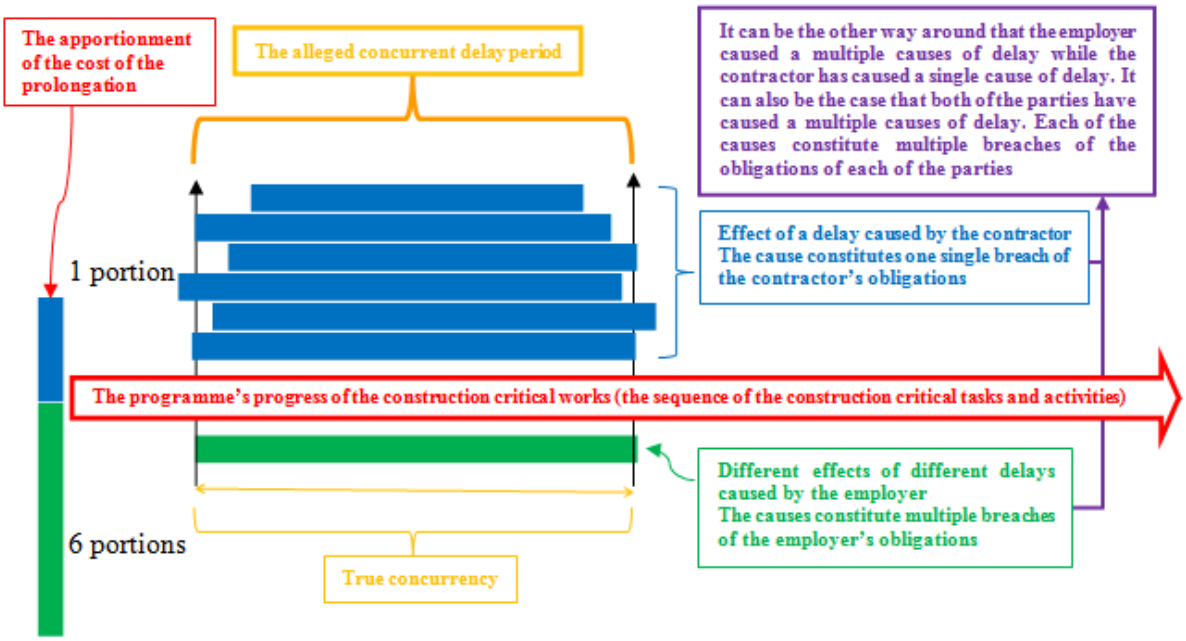


Figure 25: Illustration of all model clauses in general and for the [Model 1B - M1 and 2B-M1] and [Model 1B-M2, 2B-M2 and 2B-M3] in particular

6.4 STAGES OF WHICH THE MODEL CLAUSE IS APPLICABLE

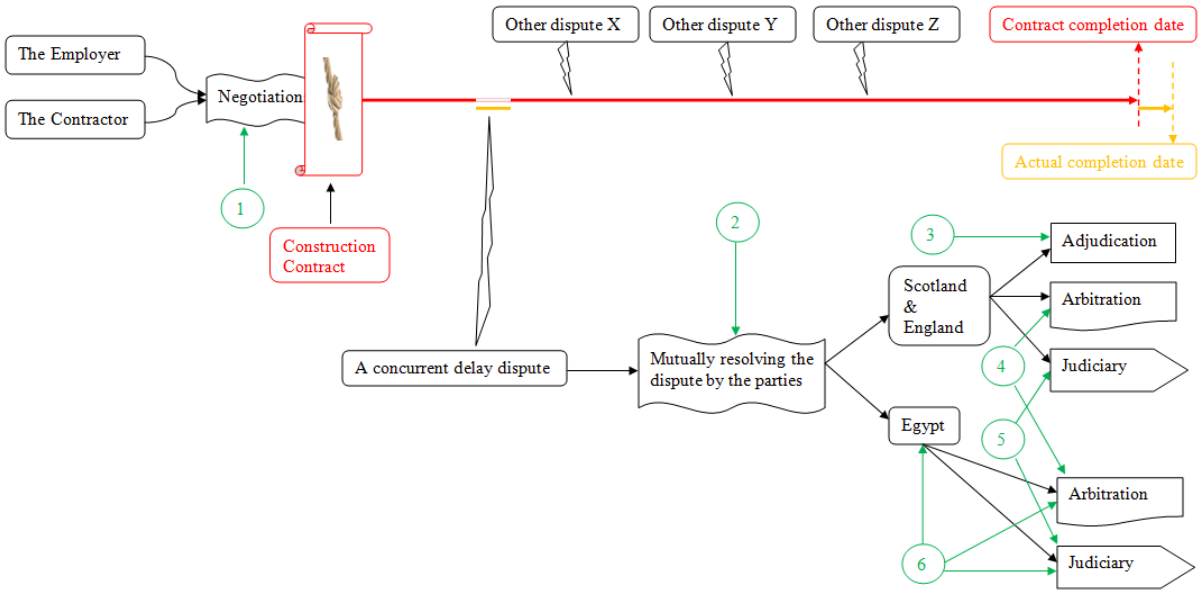


Figure 26: Stages 1,2,3,4,5 and 6 of which the suggested model clause can be considered

In **stage 1**, model clause sections1 (A), 2 (A), 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1, 2B-M2, 2B-M3are applicable (i.e. all of sections of the model clause are applicable). While in **stage**

2, model clause sections1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1, 2B-M2, 2B-M3 are applicable. In **stage 3**, model clause sections 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1 and 2B-M2 are applicable. In **stage 4**, model clause sections 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1 and 2B-M2 are applicable. In **stage 5**, model clause sections 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1, 2B-M2 are applicable. In **stage 6**, sections1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1, 2B-M2 and 2B-M3 of the model clause are applicable

These stages are different in terms of the sequences of the progress of the process of executing the "construction works" which is the wider frame for the limited scope of the construction contract itself. As an outline for this, the following is an analysis for the stages. Stage 1 is the stage where the parties start to outline the scope of the works and what construction works is required to be made. There are a variety of procurement techniques in this stage including choosing between multiple tenders. However, this stage can collectively be termed as the negotiation stage as the situation in this stage is liquid and this is no firm binding obligations yet. At this stage, among other points that parties may discuss in this early stage, parties can discuss the matter of "Concurrent Delay" the case of which this model clause or approach can be adopted. Such adoption can be oral or written in any form of correspondence which can be incorporated later in the contract in an implied or explicit way. In this stage, all sections of the model clause can be incorporated.

In the meanwhile, stage 2 is the stage where the parties have already started a contractual binding relationship and during the course of executing the construction works a "Concurrent Delay" situation occurred. Within this stage, there are a variety of levels of which the "Concurrent Delay" situation can be resolved. Such levels include the architect, the contract administrator, the project manager and the direct contact between the two parties. The matter

of which of these level will be authorized or effective depends on the wording of the contract and the role of each of the mentioned professions. However, this stage can collectively be termed as the stage of "mutually resolving the dispute". This is to identify it from pre-litigation and litigation stage where the situation of "Concurrent Delay" turns to be the "Concurrent Delay" dispute. At this stage, among other approaches for dealing with the situation of "Concurrent Delay", parties can choose this model clause or approach to be adopted. In this stage, all sections of the model clause can be incorporated except section 1A and 2A.

Stages3, 4, 5 and 6are the stages where the parties have already started to deal with the matter of "Concurrent Delay" as a dispute in a "pre-litigation and litigation" phase. While there is no adjudication in the Egyptian civil law legal system, Scotland and England have such additional step for resolving construction disputes which is stage 3 where sections 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1 and 2B-M2 are applicable. In stage 4 and 5, sections 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1 and 2B-M2 are applicable which section **2B-M3** is applicable only if the applicable law for the dispute is the Egyptian law and the three criteria for the "public contracts" found existing. Lastly, in stage 6, sections 1B-T, 1B-M1, 1B-M2, 2B-T, 2B-M1, 2B-M2 and **2B-M3** of the model clause or approach are applicable.

6.5 TESTING THE MODEL CLAUSE

Justice is one of the issues which have been linked with the humans since the beginning of the humanity. In ancient Egypt for example, where they used to have a number of Gods and Goddess for different things and social values, there was one of these for the

value of justice[678]. Justice has been always attached to the humane way of thinking. In this section, the research will give a justification for this model clause from the justice point of view in relation to the basis of justice in general and with the perspective of the research's contractual context of which the "Concurrent Delay" type of dispute arises from.

6.5.1 The concept of justice within the context of "Concurrent Delay" dispute[679]

There is no one definite identification for the notion of justice applicable for all cases. The *concept* of justice is not a constant notion. This *concept* may slightly vary according to the different areas of law or the industry in which it is being investigated. For example, the concept of justice in the area of constitutional law or criminal law is slightly different from the concept of justice in the contractual relationships.[680] It varies also within the contractual relationships themselves depending on the industry of which the contract falls within. It varies within the same area of contractual relationship such as the insurance industry where what constitutes justice may slightly vary whether the rules are for a life insurance, cars

[678] The value of justice used to be represented by a woman with a feather of truth (Goddess "Ma'at"). This notion of a woman represents the value of justice has been transferred to ancient Greece (Themis) and ancient Rome (Justitia) and later to the rest of the world forming the notion of "Lady Justice". This has been transferred together with the notion of "blindfolded justice" which has driven from a tradition in ancient Egypt as when the judge is told before the hearings that, regarding the two disputing parties waiting for their turn outside of the court room, that there is a well noticed difference between them in terms of the appearance which reflects that one of them is coming from a high social class while the other is not. The tradition then is that the judge orders the doors and the windows of the court room to be closed so that the court room becomes dark and the judge then intentionally do not look towards the parties and only focus on *hearing* their arguments to avoid being influenced by the difference in their appearance.

[679] The "Concurrent Delay" dispute is driven from a contractual situation. Therefore, it should be dealt with within a contractual context

[680] The main concerns govern the way justice logic works in constitutional area relates to how to achieve and keep the balance between the powers of the public authorities for the interest of the individuals and the interest of the society as a whole. The main concerns govern the way justice logic works in criminal area relates to how to bring the criminal back to be a good person to the community in additions to provide the victim and the public with a satisfactory decision in the light of the right of the public to have a safe society. This also includes the necessity sometimes to provide the accused person with the legal assistance if the criteria apply (i. e. the financial eligibility and he interest of justice) (White, Willock and MacQueen, 2013: p. 236). While in contractual context, the main concerns govern the way justice logic works is how to bring the two parties of the contract back to a balanced situation in the light of the nature of the industry and the original objectives of the contract.

insurance, fire insurance, shipping insurance and construction insurance.[681] It varies also according to the relevant accepted social norms as well as the relevant accepted "industry" related norms that prevail within the industry. However, the normal typical rule for justice in the context of the contractual disputes is to bring the parties to the position of which each of the parties looks for as if breach has not occurred.

The resolutions and remedies for different types of disputes are changeable according to the grounds of which every party start the matter from. The *concept* of justice stipulates that to apply the same resolution or position on all of the parties, they should stand on the same relevant grounds. Such grounds vary according to the factors that affect the type of the dispute subject to the analysis.[682] Within the contractual context, the obligations which drive from the free will of the parties play the key role. In the case of a breach, justice is dictated by how to bring the two parties of the contract back to a balanced situation in the light of the original obligations which drive from their will in the light of the nature of the contract. While doing this, parties may stand on the same grounds for a particular type of contract or for a specific type of dispute. Parties also may not stand on the same grounds. This is because of the fact that the objectives of both of the parties to enter into any given legally contractual relationship may be the same or they might be different. For example, a middle contract in a supply chain of goods involves the same ground of monetary losses when one of the parties fails to fulfil his duties under the contract. Both are "a seller and a buyer" in the same time.

[681] For each of these subdivisions, there are special circumstances affect the regulations which govern each one. The difference in dealing with each of these subdivisions is attributed to the different concerns that govern the matter.

[682] These relevant grounds can be the fact that both of the parties are human beings for a dispute related to receiving basic human rights or medical treatments in a society which includes non-citizens residents. These relevant grounds can be the fact that both of the parties are citizens for a dispute related to a specific political right. These relevant grounds can be that both of the parties are involved in the same type of a particular industry which is governed by special sets of rules, customs and traditions.

The loss of both is the same which is "a monetary profit".[683] The loss for the wholesaler or the retailer in this situation constitutes a ground of the "same nature".[684] Such ground dictates the dispute resolver while taking a decision such as the apportionment of the monetary losses.

On the other hand, the grounds which are relevant for a specific contract or dispute may be different for each of the parties. An example for that is the contract for playing a music or drawing an oil painting or doing a house internal decorations where one of the parties gain monetary profit while the other gains a value of a different nature. The nature of the contract and the nature of the dispute dictate whether both of the parties stand on the same or similar relevant grounds or not.

Within the context of the research issue of "Concurrent Delay" dispute, the parties' similar ground is that both of the parties are involved in a construction contract. Both parties are keen to have the building or the infrastructure being built. The contractor is keen on obtaining a monetary profit in addition to build a good reputation as a contractor in the local construction industry. The employer is also keen to have his building or infrastructure being built on time most probably in order to start gaining a specific monetary income or to meet a social need. The similar ground is also that both of the parties are involved in a "time-related contract" within the construction industry. Therefore, although in a construction industry, parties seem to have slightly similar objectives in part of the matter, they both have different original objectives. This has to be taken into consideration while analyzing a construction concurrent delay dispute.

[683]The wholesaler sells goods to the retailer for a particular monetary profit and the retailer aims to get these goods to be sold again to the final customers aiming to achieve also a particular monetary profit.

[684] the "same nature" refers to that both of the parties encounters a financial loss as a result of the parties fail to fulfil their duties and commitments under the contract

Based on grounds similarity, justice logic and both practical and philosophical reasons may accept that once no harm has occurred yet, both parties may accept a change to their obligations once they are of the same nature. This point justifies a time-related obligation which is the start time for the execution of the construction works. This justifies the approach adopted in sections 1A and 2A of the model clause. It is recognized that there will be no harm will result in this scenario.[685] This is regardless of the case if the contractor or the employer has contracted with a third party for a specific task (or tasks) to be carried out in specific point in time within the time shifted on the critical path of the original programm". This section of the model may be applicable to all types of construction projects whether the construction project is a simple one or not and whether the construction project is a private or "public works construction project".

The parties' relevant grounds start to be different when "Concurrent Delay" occurs in the middle of the construction works. Each of the parties stands in a relatively different ground as each has slightly different aims and objectives from entering into a legally binding construction contractual relationship.

Delay in construction has severe negative consequences (Leishman 1991). This applies to the employer, the contractor and the project itself. The employer is exposed to bearing considerable financial consequences due to the delay. The amount of the financial consequences varies depending on the nature of the project and the number of delay days. The employer might have reasons to have the project finished within a specific time frame. For example, the employer might want to meet the high consumption of electricity during a particular forthcoming season in case of an "electric power house" or wish to control the

[685] That is the case of a "Concurrent Delay" that has been caused by both of the parties in the beginning of the start of the construction works

following potential water flood of a river for the next year in a case of building a "dam". The employer might also want his new building to be ready before the beginning of the new academic year in the case of a school or an educational or academic-related building.

On the other side, the contractor also has reasons to pay significant regard to the time issues. The contractor might bear considerable financial consequences too. Again the amount of the financial consequences varies depending on the size of the project and the number of delay days. From the beginning, in the construction tendering process, the duration of the project (and the delay possibilities), which will typically be stated in the contract, will significantly influence the contractor's strategic decision whether to bid for the job or not. In conjunction with the cost of every element in the bill of quantities, the contractor's calculations for the expected cost are based on the time limit for every element. So, time affects the calculations for the *profitability* for the contractor to bid for any specific job. The cost may also vary depending on whether the duration and the time limit of the rent or employ such elements. Even in case that the contractor uses his own plants and labor, the contractor also might be involved in another project or projects following or parallel to the intended project which will affect the availability of the use of his own resources. In such case, the contractor needs to finish the project or a specific phase of it within a specific time to be able to transfer his plants or labor to the other construction project (or projects) in a specific time. Otherwise, the contractor might encounter a delay in his other project or projects. The contractor's overhead permanent cost is also affected by the time and the delay.

The time frame limit is also important for the project itself on the level of the strategic decisions. For example, depending on it, the architect will take important and changing

decisions regarding the material which will be used in the structure.[686] Steel is suitable for "limited time frame" projects (compared with reinforced concrete) and therefore the time limit in the tenders should be based on that. This has implications on the cost due to labor and plants related arrangements. In some projects, the season or the time of the year in which the works are intended to be carried out sometimes affect the cost very much. The cost of some material, some specialized labor or certain equipment and plants varies from time to time and from a season to another during the year. Delay sometimes becomes dangerous for the project itself, as it might turn into a complicated dispute threatening the continuity of the works and leads the project to a complete stop (Iyer et al. 2008). For this reason, once they occur, it is important to resolve delay disputes as soon as possible. The dispute resolution involves that both the contract administrator[687] and the project administrator[688] should strive to avoid the circumstances that might result in delay related disputes. Also, the adjudicator or the "dispute review board"[689] should resolve the dispute once it starts as soon as possible. Additionally, trained experts (who assist in resolving such disputes) in "delay analysis" should involve as much care as deemed necessary, for the same reasons.

The time issue:

Within the context of the research issue of "Concurrent Delay", in order to restore the balance between the two parties, a distinction should be made between the investigation of

[686] This applies to situation where the contractor has the option to suggest the material to be used after the appropriate discussion and arrangements with the employer. In some other cases, the employer after consultation with the architect states the details regarding the material being used in the construction in the bill of quantities during the "briefing" or "sketch plan" stages prior the process of receiving the bids from the contractors

[687] The contract administrator is the professional whose duty is to make sure that the terms and conditions of the contract are enforced accurately within the time each clause is due to be effective

[688] The "project administrator" is the professional whose duty is to make sure that the progress of the works of the project is abide by the planed programme and overcome the expected or unexpected circumstance and the difficulties that the project may encounter [sometimes referred to as "agency" contract(Levy 2010 - Chapter 4)]

[689] The review board is a dispute resolution mechanism adopted in FIDIC standard form of construction contracts

the issue of the "extension of time" and the issue of the "cost of prolongation".[690] Such distinction is because the "extension of time" aims to tackle a different point of the responsibilities and risks between the two parties of the construction contract. What achieves justice for the time issue is not necessary to be the same as what achieves justice for the financial consequences of the situation of "Concurrent Delay". The "extension of time" point is different in its characteristics from the monetary issue as time cannot be reimbursed. When it comes to "time" the aims and objectives of the two parties is nearly the same. Time is critical for the "execution" of the construction works which is important for both of the parties.

The normal typical rule for justice, in the context of contractual disputes, is bringing the parties to the position that would exist if the breach has not occurred. Taking this into consideration, for determining the concept of justice in the time issue, the rules for justice in construction contractual disputes are connected with the nature of the construction industry itself. Such nature, in turn, is connected with the construction process, construction different material, machinery, labor, different building techniques involved, project management requirements and constraints, and the other construction related circumstances and conditions which might affect the progress of the works.[691] These circumstances may encounter bringing the parties back to their position prior to the contractual breach.

[690]For the extension of time and for the cost of prolongation see section titled: Delay mechanism in public works construction disputes in chapter 3

[691] Sometimes, the physical circumstances of the building material itself takes part as a cause for the delay and basically building material plays a role in determining the duration that the execution of the construction works will take. For example the steel structure takes normally shorter time that the concrete structure of the building and also some types of claddings takes more time to be fixed compared with others and sometimes the cladding panels needs to be manufactured specifically for this particular jobs the issue which may take more time for fabrications and being delivered to the site compared with the ready-made cladding panels with standard specifications that already exist in the market. Variation regarding one of these matters, whether because of the employer request or because of a technical problem, may result in a significant impact on the delay.

Typically, in contracts, there is a difference between the parties in terms of what is required to be done by each of the two parties. Contracts are there to reply to a specific demand (or demands) of one of the parties. This applies to the construction industry. The employers demand is to have a building or an infrastructure being built. The "need" that motivates the employer to contract with the contractor is a need that the employer cannot do it himself. The activities of which the contractors came to reply are the demand of the employers to have the "construction works" accomplished within a certain period of time. In the same time, construction contract replies to the demand of the contractors to achieve a monetary profit which is the objective of setting up this business. To have the "construction works" accomplished is referred to sometimes as "the mission of the business" (Hillebrandt 2000: p.91). Hence in other words, in construction contracts, there are two beneficiaries who are the employer and the contractor. Both form together two sides of an equation. In public works construction projects, there is an "*additional beneficiary*" who is "the public".[692] In the public works construction contracts, the demand of the public is an additional third dimension of the equation which does not exist in the "private" works construction projects.

In addition to the public as a final beneficiary of the intended "public works construction project", in many cases the public benefits exceeds that to taking part of the construction works in the form of supplying the project with the labor and material and logistic facilities required for executing the construction works. This applies to both the local community and the country's population at large.[693] However, this depends on the jurisdiction's political, economic and culture factors. (Devas & Rakodi 1993, p.222)

[692] Whether to be the wider "public" or the local community which will be benefited directly by the execution of the construction public works

[693] See the examples of projects in Lusaka, El Salvador and Kenya where the public participated in the different stages of the projects other than the actual construction works including the decision making and the design.

The time issue is important for the employer as well as it is important for the contractor and in public works construction contracts, time is important for the public too. However, for the contractor, time is crucial in order to be able to execute the works. Therefore a contractor is always sensitive regarding losing any part of the period of time allocated to him by the contract to execute the construction works. This research argues that, within "Concurrent Delay" situation, the time allocated to the contractor to achieve the works is in fact owned neither by the contractor nor to the employer but by the project itself. Otherwise the threat of deducting time from the contractor in the situation of "Concurrent Delay" might push contractor in the aftermath of the occurrence of the concurrent delay situation to accelerate the works in a way which may be harmful to the project itself. In the case of "public works construction projects" negatively affecting the execution of the project will not only affect the employer but also will affect the "*additional beneficiary*" which is "the public". This is because the contractor is the party which executes the works while the employer represents the public and the employer's role typically is to wait for the construction works to be executed with some limited duties to do sometimes exist in some projects.[694] Building on this, the full time in the situation of "Concurrent Delay" should be given to the contractor. This feeds in the other beneficiaries, taking into consideration that the employer has contributed to the same delay and would have suffered the same time of the delay anyway in the absence of the contractor's "Concurrent Delay". Such argument applies to the Egyptian, the English and the Scottish jurisdictions.

This applies to the "Concurrent Delay" situation when it occurs in a "public works

[694] In some projects, since handing over the construction site, the employer has no duties (other than paying the interim payments on time) until the handover of the complete construction works after being executed while in some other projects there are a number of duties for the employer to do from time to time while the execution of the construction works is being progressed such as instructions and handing over certain drawings for certain sections of the construction works in particular times within the construction programme

construction project" in the Egyptian civil law legal system. Although the above-outlined approach for "public works construction disputes" that exist in the last mentioned jurisdictions relies on the theory of "providing the public with the public services in a continuous manner" which "time" is an element of this theory, giving the contractor the sufficient time still serves or maintains this theory. This is because giving the contractor the sufficient time helps in raising the probability of having construction works which has been made in the best possible proper way which again serves or maintains the theory of "providing the public with the public services in a continuous manner" on the long run. Also and in the same time, when the government body causes a delay, it acts on behalf of the public in this regard and for the interest of them. The public have the right to question those who are responsible for the government body as well as both local and central government's politicians (who have overall control on how these government bodies operate) according to the appropriate legal or political mechanism. In addition to that, it appears from chapter five that the judicial precedents within "public works construction disputes" that the judiciary is keen to give the full time to the contractor.[695]

Giving the time to the contractor in the situation of "Concurrent Delay" is not an approach of favoring the contractor over the employer but an approach of favoring the project itself. In other words, it is about favoring increasing the opportunities of having the construction project to be executed in the best possible correct way. The construction industry should always manage the time-related issues in a way which becomes positive to the projects themselves[696]. This has led to adopting sections 1B-T and 2B-T of the model clause or approach. "Giving the time to the contractor" is consistent with the mutual interest of the parties of the "sound execution" for the construction works by the contractor. It is also

[695] As outlined in chapter 5

[696] Similar notion has been followed regarding the issue of who owns the "float time" of the construction programme

consistent with the nature of time within the construction industry. Such nature includes that it is not possible to bring the parties back to their position prior to their mutual breaches and that the employer would have suffered the same delay because of his fault.

The "Cost of Prolongation" issue:

The "cost of prolongation" is different from the time issue. The "cost of prolongation" issue deals with the direct financial consequences of the situation of "Concurrent Delay". Such "financial consequences" is typically a matter of conflict of interest between the two parties alike. There are grounds of nearly the same nature of each of the parties in relation to the "cost of prolongation" issue; however there is a contradiction in the monetary concerns of each. In order to understand the middle point of the matter which achieves justice and balance between the contractor and the employer, an analysis of the position of both of them should be made.

The contractor's position:

From the beginning of a construction contractual relationship, the contractor aims to achieve economic monetary profit as well as to add to its reputation within the local[697] construction industry.[698] The motive and objective to achieve a monetary profit is normally what pushes contractors, whether new to the business or not, to look for "construction jobs" whether locally or overseas and do what is necessary to win the job. Once a job has been secured, the contractor focuses in the next stage on finishing the job on time within the

[697] This applies also to the international construction industry if the contractor is a construction company which operates in more than one country.

[698] This applied whether the contract is a sole trader contractor or a construction company. However the case of a company shows the monetary goal of the works in a systematic way and the head office cost is added to the monetary equation(Foster 1990, p.71). The profit gained from the execution of the construction works affects also the rapid growth of the newly established construction companies as well as the sudden collapse of the existing construction companies.(Morton 2006)

employer's allocated budget to get his expenses back in addition to his monetary profit.

Regarding the objective of making a "monetary profit", the contract being a "Public" or "Private" construction contract does not make a difference in relation to this motive or objective of the contractor. It is also the same motive and objective whether the contractor is a main contractor or a subcontractor. It is also the same motive whether the contractor is an individual in the form of a self-employed "sole trader" contractor or the contractor is a large construction company.[699] The different between being a self-employed or working within a construction company is only an internal matter within the term of "the contractor" as a contract party in this context. However, construction business enterprise remains the same in both cases[700] in terms of the objectives. The difference relates to the cost of running the business itself (Myers 2004). This constant motive of achieving a monetary profit has to be regarded while analyzing and deciding over the "cost of prolongation" issue of the situation of "Concurrent Delay".

The employer's position:

On the other side, the motive and the objectives of the employer for entering into the construction contract is slightly different from that of the contractor. The employer aims to have the "construction works" accomplished or executed. However the employer's final aim and objective is to start making use of the building or the infrastructure for a particular matter which is the original purpose of the project.[701]

[699] "Working as an individual construction contractor" or "establishing a company to work as a construction contractor" is the same as both are ways of setting up a business enterprise in construction industry

[700] Both cases here refers to (whether the contractor is an individual in the form of a self-employed "sole trader" contractor or the contractor is a large construction company)

[701] This applies whether these construction works were civil engineering works or for dwellings or for building an infrastructure construction works

As an owner for the project, the employer's motives and objectives are to get his building, infrastructure or "construction works" built on *time* with the appropriate *quality* within the allocated *cost*. The time, budget and quality issues differ from a project to another. The time and money issues are relevant issues to the situation of "Concurrent Delay" while the quality issue is not relevant.

The "cost related" responsibility of the employer is one of the main issues in the negotiation stage prior to the contract and remains an important issue during the execution of the construction works. According to Turner, the function of the employer within the construction process is mainly to pay the interim payments during the progress of the construction works and final payment when advised to do so and to take certain actions in emergencies (Turner & Turner 1999, p. 60). However, the function of the employer in this context may vary according to the nature of the project and the terms and conditions of the contract.[702]

In this point, there is a little difference in the position of the employer according to "who is the employer". The triangle of time, quality and cost becomes important according to the nature of the employer himself.[703] A government body working on a social housing scheme, for example, will be keen on reducing the cost more than the other two factors in order for the targeted customers to be affordable. In spite of these little variations, "money" issue constitutes the main objective for the employer. The "cost" is a substantial part of the employer's objectives. Therefore, the common similar objective for the contractor and the

[702] The advance payment and the interim payments vary from a project to another. They vary from a standard form of construction contract to another. They vary from a turnkey contract to design and build contract. They also vary from a fixed price contract (lamp sum contract) to a cost plus contract.

[703] For an individual wealthy employer who builds his luxury home, quality might be a priority compared with the other two factors. A commercial enterprise acting as an employer which is looking to open a new branch before a particular season will be keen on time more than the other two factors.

employer too is the monetary issue. This makes that the only difference is in the terms being used to describe the same thing as we consider it as the "monetary profit" for the contractor and the "cost" for the employer.

As long as the mutual interests of both the parties relate to the money then this model clause suggested that for the "Concurrent Delay" situation, as a situation driven from a construction contract where the core of the dispute is of a monetary nature, the monetary consequences of the "Concurrent Delay" situation (i.e. the "cost of prolongation") should be apportioned.[704] The apportionment is the option which should be adopted for the two parties in principle. This should be adopted on equal basis if the "Concurrent Delay" situation constitutes a mutual contractual mistake of a nearly equal degree from both of the parties. The approach of apportionment is adopted by this model based on the ground of fairness taking into consideration the relevant "business related" position of each of the two parties. The "economic efficiency" in construction industry, in general, constitutes an additional ground for such approach because "delay disputes" is an important part of the disputes of such industry. "Fairness" is the dominant ground for such adoption for the apportionment approach. The "economic efficiency" for each construction project when examined one by one is relevant in particular as the apportionment approach can relief the contractor from half or part of the monetary consequences (i.e. cost of the prolongation) that result from the situation of "Concurrent Delay" in case it happens. This may help the contractor to perform in a more economically efficient way towards the progress of the construction works by helping him not to adopt "construction management" acceleration techniques that may be harmful for the sound and proper execution of the construction works. This will increase the probability to have a construction works that have been done in the best possible "economic

[704] (i. e. sections 1B-M1 and 2B-M1 of the model clause)

efficient" way in spite of the occurrence of the "Concurrent Delay" situation.

This research argues that the issue of the "cost of prolongation" in particular should be dealt with in a separate notion of justice within the construction contractual context as it is similar, to some extent, to the context of the contributory negligence in tort law where the victim contributed to the occurrence of the accident and the damage. The issue of the "cost of prolongation", in particular, should be handled in the same manner. The sources of obligations in the two cases are nearly similar.[705] Taking into account the similar monetary interest, the apportionment of the "cost of prolongation" may be the logic resolution. This has resulted in adopting the apportionment in sections 1B-M1 and 2B-M1 of the model clause or approach. The apportionment is consistent with how to deal with the situation of the contributory wrong doers whether in tort or contract that involves multiple responsibilities. Apportionment renders practical solution on how to bring the contract's parties back to their position prior to their mutual breaches in terms of the monetary consequences.

Regarding the apportionment approach for the employer, according to the apportionment approach suggested by this model clause[706], the employer will bear part of the monetary consequences resulted of the prolongation. The employer will also lose the opportunity to apply the liquidated damages clause because time has been granted to the contractor according to this suggested model clause.[707] This ostensibly may appear to be as unfair for the employer and may not be fully accepted by some of the readers. However, since the "Concurrent Delay" dispute is a complicated and controversial one, the attempts of developing a fair resolution may not be accepted by all. The views regarding fairness may

[705] Although the research submits that the legislative source of obligations (or the basis of liability) are much more prevailing in the case of the contributory negligence in tort compared with the contractual counterpart situation

[706] According to sections **1B-M1** and **2B-M1** of this suggested model clause

[707] According to sections **1B-T** and **2B-T** of this suggested model clause

vary.[708] The model clause suggested by (**1B-M1** and **2B-M1**) in this research is the point of view of the researcher.[709] In this model clause, a full extension of time has been granted to the contractor to avoid the probability that the contractor[710] do any harmful action (harmful to the project) while performing the acceleration of the actual execution of the construction works compared with the programme in order to overcome the gap in time (i.e. the delay). *Avoiding* the potential harmful acceleration for the construction works of the project is an advantage for the employer and helps keeping or maintaining one of the interests of the employer which is to have his project properly executed. The employer will not be able to apply the liquidated damages clause because of his own delay within the "Concurrent Delay" situation any way. When it comes to the employer bears part of the cost of prolongation under the apportionment approach (**1B-M1** and **2B-M1**), the logic behind this is slightly different. In the absence of this model clause rule, that employer shares part of the cost of the prolongation, the contractor will then bear all of the monetary consequences result of prolongation. This may not be fair, in the view of the researcher, since the "delay period"[711] will happen anyway because of the "employer's delay". The employer's delay which contributes to the delay period and makes the delay period happen any way cannot be ignored whether within the "prevention principle" rule or within the "Concurrent Delay" situation. It may not be fair for the contractor to bear all of the monetary consequences which result from the prolongation. In the same time, this also has to do with the risk allocation and risk sharing

[708] The views of what achieves justice may vary even within the same 3 judges' court; this is why the Egyptian legislators included an article for the situation when there are different views between the judges of the same court or the same bench of a court regarding "what constitutes fairness and justice" for any particular dispute. This has been outlined in article number 169 of the Egyptian procedural law number 13 of the year 1968. In this article if the views of what constitute justice and fairness vary, the matter should be re-examined by the judges of the court or the bench. If the difference of the views remained the view of the majority will apply however the minority can state their concerns and reservations in the judgement. This particular article does not apply if the court or the bench has only one judge which is common in courts or benches of minor disputes or cases.

[709] Views regarding fairness may vary but this should not stop the researcher from suggesting what the researcher sees fair as there should be a freedom of expressing views within academia.

[710] Or the project manager who acts on behalf of the contractor

[711] The delay period: i. e. the matter of the dispute

within the construction industry which should be dealt with within a dynamic approach.

When there is a difference in the causative potency and the culpability degree:

The initial understanding of the apportionment in the "Concurrent Delay" situation is that both of the parties caused the delay in the same time with nearly the same degree. However as outlined above,[712] the degree of culpability may vary from the contractor to the employer. In the first situation (where the degree of culpability is nearly the same) the apportionment should be apportioned on the basis of half and half. However, when there is a noticed difference in the degree of culpability, there is no justification to make the apportionment of the mentioned basis of half and half. If a risk is carried by a party to the contract, he is motivated to minimize its effect (Barnes 1989 p.131). Therefore both parties should know that the allocation of the monetary consequences will depend on the risks each has. What achieves justice for the monetary consequences of the situation of the "Concurrent Delay" is that the *assessment* should vary according to the degree of the causative potency[713] and the degree of obedience of each of the parties for its obligations under the contract and under the traditional norms of the industry (i.e. the culpability degree).

Within the "Concurrent Delay" dispute, when a contractor (or an employer) causes a delay by multiple causes each of which form an act (or omission) which contradicts with the contract's obligations in a way which makes the *probability* of the occurrence of the same delay[714] to be much higher to occur in the absence of other party's single delay. Such higher *probability* and higher degree of carelessness in the obedience of the contract's terms and

[712] In the different scenarios outlined in section titled: SCENARIOS in chapter 4
[713] When there is still difference in the causative potency but not to the extent that one of the competing causes can be regarded as the dominant cause for the delay
[714] i. e. the same delay "under examination" within a "Concurrent Delay" dispute

conditions justifies putting this party to a position of being exposed to a higher risk of bearing a larger portion of the "prolongation cost" apportioned compared with the other party which caused a one single "delay cause" or was significantly less mistaken. Again as outlined above,[715] the degree of culpability may vary from a "Concurrent Delay" dispute to another. Therefore the *assessment* should be made on a case by case base. When we put this beside the fact that there is a wide array of types of construction project, we hence should recognize how unique every "Concurrent Delay" dispute is. The issue that turns the approach adopted in section "**1B-M1**"to be a concept while making the *assessment* rather than definite resolution. This notion logically requires that the neutral cause will not be taken into consideration within the application of this notion of *assessment* because it is the responsibility of neither the contractor nor the employer the issue that resulted in section "1B-M2" of the model to be added.

The case when the employer is a public body:

The employer's aims and objectives slightly vary from an employer to another. They vary from the individuals or "private law" entities compared to government body when it acts as an employer. In the case of the government body acting as an employer, the situation may differ according to the nature of the broader legal system of which the government body operates within. In principle, the above-mentioned motives and objectives on the employer's side apply to the employer regardless of whether the employer is a government body or a private one. However, the circumstances of the employer as a party to a construction contract may slightly vary according to nature of the employer. Employers in construction industry can be categorized into three. There are the individual employer, private body employer and government body employer. The circumstances, priorities and restrictions vary within each

[715] In the different scenarios outlined in section title: SCENARIOS in chapter 4

category of these three categories. As this research focuses on the "Public Works Construction Disputes", the research in this point is limited on the last mentioned category of construction industry employers in terms of its circumstances, priorities and restrictions.

Regulations that govern the way government bodies operate in the society differ from a jurisdiction to another according to the constitutional rules mainly. When it comes to construction industry, regulations related to the procurement systems in different countries may vary according to the relevant legislative regulations and judicial application as well as the nature of the economic system adopted in the country. However when it comes to the core of what the government body provides the society with, the core of the job is nearly the same which is providing the society with the necessary public buildings and public infrastructure which are necessary for the society (as a one unit) including the local communities. This precise job is the responsibility of the public bodies within its broader responsibilities[716] towards the society or the public. Within this context, there is no different in this particular job between a government body in Scotland, England or Egypt.

Although what a government body is doing is the same job in the society, the three jurisdictions dealt with the matter from a different angle. Two of them seem to have considered the government body while doing this job as if it is a private body or an individual in terms of the substantial resolution for the disputes that may arise. While the third one (the Egyptian jurisdiction) found its way to a justification to differentiate between public bodies on one side and both private entities and individuals on the other side (in terms of the substantial resolution for the disputes).[717] The public body while acting as an employer represents the public which is a "*beneficiary*" to be taken into consideration in regard to the

[716] The broader responsibilities include responsibilities such as representing the public and setting up regulations and criteria for different relevant legal "private law" relationships within the society

[717] As outlined in section titled: The logic behind the differentiation in chapter 2

culpability degree in Egypt in public works construction disputes. When this concept is brought to the suggested model clause, different approach may be more appropriate to the matter in the Egyptian jurisdiction in one side in contrast with the other two jurisdictions (i.e. England and Scotland). This variation is stipulated by the prevailing relevant legal rules and approach already exist in the Egyptian legal system concerning the notion of "public contracts". Although this is external to the situation of "Concurrent Delay" itself in relation to its analysis, the "public contract" approach in the Egyptian legal system should partly reshape the model clause when it comes to apportionment in the Egyptian jurisdiction.[718]This is in order for the model clause to be compatible with the Egyptian civil law legal system. Finally, in this point, there is no contradiction between the logic of fairness and exempting the government body from an estimated portion (or more) of the apportionment of the "cost of prolongation". This is because the justification depends on the public interest which is compatible with the mentioned "public contracts" approach. What supports this justification is that, in the Egyptian jurisdiction, local contractors are normally aware from the beginning that the contractor bears the risks that the government body has a "degree of superiority" in relation to the powers, rights and obligations before and during the performance of the contract for a reason related to the "interest of the public".[719]

6.5.2 The "Legal Transplantability" of the model clause in the three jurisdictions

In this section, the research will give a justification for this model clause from the "Legal

[718]This is due to the "public contract" approach within the Egyptian civil law legal system which is outlined in section titled The differentiation between private and public contracts in chapter 2

[719] In spite of the contractors be aware of this additional risk compared to the private construction contracts, they are keen to bid for public works construction contracts because of a variety of reasons including that the advance payment and the interim payments together with the final payment are guaranteed (by law) to be paid compared by the government while the contractor may have difficulties in this regard for the same matters in private contracts. This explains the reason why contractors still keen to bin for jobs of public contracts while a slightly harsh approach exists in relation to the "public contracts" in the Egyptian legal system.

Transplantability" perspective in general within the research's contractual context of which the "Concurrent Delay" dispute. This section starts with an outline of the "Legal Transplantability" debate and this is followed by the applicability of the suggested model clause.

6.5.2.1 The "Legal Transplantability" debate

This research informs over the debate about the legal transplantability from a jurisdiction to another. There are two approaches in this regard. According to Ibn Khaldoun,[720] civilizations, societies and states are like the alive creatures as they go through stages of growing and flourishing until they slowly relatively decline at a later stage.[721] One of his main conclusions was that the law issued in any society should reflect the criteria this society sees and adopts for what he called as "the truth" according to the culture and norms of the society. Therefore we should not only refer to the current laws of our society but also it will be useful to see the previous laws of *our* society as well as the laws in different stages and points in time of the *other* societies around us and take them into our consideration (Darweesh 2004).[722]

After outlining that the terms "society" applies in different scales and levels,[723] Ibn

[720] A Tunisian born philosopher lived from 1332 to 1406 (his family is originally from Sevilla, Spain) who was raised in Tunisia. He spent part of his life in Spain and spent the last stage of his life as a judge in Cairo, Egypt

[721] This has been translated from text number 6 of the book of titled: "The Introduction" of Ibn Khaldoun translated by the researcher. Ibn Khaldoun has identified five stages for the society, the city, the state or the empire and considered that the periods of these stages are dependent on to what extend justice is developed in the society. He has fitted this perspective within his "law of causality".

[722] He justified this on his argument that the main features of the human brain is nearly the same in any country and people tend to simulate on different levels

[723] What can be implied from the work of Ibn Khaldoun is that the society can be divided into a number of internal societies some of which relates to specific crafts or industries. In this sense the society of a specific craft or industry in a specific country together with the counterpart society of the same craft or industry can form together one society even if they are physically located in different countries and even they speak different languages.

Khaldoun philosophy for the issue of transplantability of the legal "sets of rules" is that they can be transferred as they are from a society to another. However, this should be preceded by pre-conditional criteria which mainly relate to that there should be similarities between the societies of which the set of legal rules are transferred. He used his logic to justify his argument that the rules for the merchants should be nearly the same as he considered that the societies of the merchants in different states are similar. This is because the way and the environment of which merchants is nearly the same in the majority of the different societies. Ibn Khaldoon used these ideas to justify his argument that trade from a country to another should be free. He argued that this can be done by forming a kind of unification for the related legal rules.[724] This was an early attempt of calling for a global free trade before the work of the Scottish economist Adam Smith.[725] He also incorporated the above mentioned logic into his wider approach of simulations between societies as he argued that simulations between societies in different fields push human societies to be better and be developed.[726] This is the *first approach* of the legal transplantability.

The *second approach* in relation to this "legal transplantability" debate is the one of the Scottish jurist Alan Watson. After stating that: "the phenomena of transplantation is not restricted to the modern world", he took Egypt under the Roman law as an example. He argued that the Roman law which used to be applied by Romans after they occupied Egypt [30 B.C.] started later to have its own Egyptian characteristics differing from the original

[724] It is implied from the context of the work of Ibn Khaldoon that such argument of the necessity to form a kind of unification for the cross-border legal rules that this should be done even if the societies are governed by different political systems, different languages, different religions and different culture.

[725] This was part of Ibn khaldoun'sexplanation to the link between the economy and the sate (which includes the laws) and in particular the behaviour of the politicians which affects the ability of the individuals in the state being able to produce products therefore enhances the trade. He finally argued in this regard that the "speed" itself in the exchange of the goods compacts the recession in both countries of which the trade is moving in between.

[726] One of the significant matters in the work of Ibn Khaldoun is that part of his ideas can be summarized as an attempt to establish a form of globalization in a very early stage at a time where there was no internet, telecommunications or rapid transportation in the world.

Roman law applied by Romans in Italy (Watson 1974: 31). The influence of the Roman law on the Scottish legal system was more or less the same as it has been interacted with the Scottish legal environment of which the establishment of the Court of Session[727] played a significant role in this regard (Watson 1974: 46). The roman influence succeeded the feudal period and preceded the English influence by the establishment of the House of Lords as a final appeal court for the Scottish judiciary after the union in 1707.[728] Watson contended also that where a written statutory law is the same within two countries, its judicial interpretation may well differ because of the local traditions and ways of legal thinking(Watson 2001: 16). This logic is consistent with the previous statement made by jurist Al-shafi'i.[729] However, Watson put a focus on the judicial approaches in relation to the written statutory. Al-shafi'i was one of the most important four jurists in the Muslim world across all decades. In 817 AC, after spending years as a judge in Iraq, Al-shafi'i moved to Egypt for the post of the chief judge of Egypt. He made a number of changes for his judicial approaches previously developed by him while issuing judgments in Iraq. He made changes to the same types of disputes.[730] He justified such changes by the differences he noticed in the Egyptian society compared to other Muslim societies.[731] He later spent the rest of his life writing a number of legal text books in which he changed many of his legal views.[732]

This research argues that each of these two approaches[733] is a correct approach. It is correct to develop a degree of unification for the legal rules in some areas of law and it is

[727] Established in 1532 by King James V

[728] The Roman invasion of Britain led by Julius Caesar began in 55 BC (Shutt 1997, p.44). However the influence of the Roman law related principles remained feeding legal studies for large parts of Europe including Scotland.

[729] A jurist who died 820 AC and spent the last three years of his life as the chief judge of Egypt

[730] Most of his changed views were in the personal status matters

[731] The historian Abdelrahman Elsharkawy attributed this to the fact that, unlike Iraq, the background of the Egyptian society is a combination between Pharaonic, Greek, Roman, Coptic and Islamic culture which interacted with each other forming a separate society slightly different from other neighbouring societies.

[732] This is known in the related literature as the "Egyptian legal approaches ofAl-shafi'i"

[733]The above mentioned two approaches can be summarized as: 1- It might be useful to effectively transplant a set of rules from a society to another if there are similarities between them and: 2- The same set of rules may give different meaning or result if it has been transplanted into another jurisdiction because of the social and/or historical context

correct to develop a justified difference between the legal rules in different societies for the same matter. However it depends on which area of law and the matter we investigate. The set of legal rules, which aims to regulate a specific area of law in any given society, may have its own characteristics in a particular jurisdiction due to the nature of the society. Such uniqueness may turn it to be unable to be transplanted into the counterpart area of law in another society without amendments. And in case it has been transplanted to another jurisdiction, this may result in partially or completely negative results.[734] This normally includes areas of the law which are very much connected deeply with the society's culture, social norms, politics, history, linguistic, geographic, education and religious issues in some cases some.[735] However, the research submits that human societies are dynamic; therefore it is possible that the attitude of the people themselves be gradually changed to accept a newly transplanted set of rules.[736]This is not always the case as the degree of the acceptability to change varies from an area of law to another and from a society to another. This relationship can be reciprocal in the sense that the changing and dynamic societies may make their legal

[734]For example, some mechanisms of the western forms of democracy did not work in the Egyptian constitutional system recently. Egyptians are familiar with the "majoritarian of single members" voting electoral system since 1924. The "party list proportional representation" voting electoral system has been transplanted to govern the election of the Egyptian new parliament in 2011 by decree no. 120 year 2011. This transplanted system is mainly developed in Germany and its early form has been firstly adopted in Belgium in 1898 (Chryssogonos & Stratilatis 2012). It has transplanted by the mentioned decree in an attempt to strengthen the role of the political parties in the Egyptian political life. This transplanted system has been seen by the Egyptian supreme constitutional court as unfair and does not secure equal opportunities as it discriminates against those who are independent versus the members of the political parties (case no. 20 of the judicial year 34 issued on the 20th of June 2012). The court has ordered a judicial dissolve accordingly. In the same time, many politicians in the society criticized the new transplanted system in addition to the shallow understanding and shallow awareness about the public issues among MPs of the parties lists the issue which led to an increasing degree of frustration among the public. Opposite to the German political and historical context which justifies the adoption of this transplanted system as it used to be connected with the unification of Germany in 1871(Aroney 2010: p. 670), this is not the case in Egypt which is a united central state since 3500 B.C. What is concluded from this example is that a rule can be suitable for a particular society while the same rule may not be suitable for another.

[735]From "religion neutral" secular perspective, religious issues sometimes cannot be ignored.This has been the case also with some legal aspects and expressions within English law(Hanson 2003, p.12).

[736]The consumer's attitude for example within trade related regulations may change because of a newly imported rule. A recent research highlighted a related example that in china where the normal attitude of the consumers of the furniture is to buy readymade furniture has been changed after the Swedish company IKEA entered the market with a new rule of "buy your furniture in pieces and fix them together at home". Although a newly imported rule contradicts with a long lasting consumption norm, people have adapted themselves to the new rule(Michaels 2013).

rules changeable as well.

In the same time, in some other areas of law, the set of legal rules can be universal in its application such as the fundamental basic rights[737] of human rights and some in some industries and types trades. According to Kahn Freund, industry, commerce and public service are almost indistinguishable from one country to another (Knieper 2010).[738] Therefore, legal rules of other societies should be investigated to while regulating these areas of law in these particular societies. This research argues that in the majority of the issues of construction industry which include some of the contractual issues, rules can be universal. In such issues, the *effect* of the internal social factors affecting the transplantability of the same rule from a jurisdiction to another is limited. Such *effect* does not disappear at all but this *effect* is limited as the construction industry shares its common features and characteristics across the different jurisdictions in most of its issues. This is because of the similar concerns, priorities and technical matters of the same nature in construction industry. Because of the wide degree of similarities within the construction industry, professionals act according to nearly the same logic across different jurisdictions. This is also because the objectives of each of the parties in this industry across the different jurisdictions are nearly the same.[739] Similar to the construction industry in this regard is the maritime law, shipping law, the industry of building ships, vessels and airplanes as well as the aviation law. There are some exceptions for this in construction industry where there may be some variations from a jurisdiction to another due to social factors such as the area of noise caused by construction works, health and safety, the area of employment as well as the insurance issue. These areas of exceptions

[737] The human rights differ from a country to another according to rules driven explicitly or implicitly from the constitutional rules. However, the basic rights exists in all constitutions forming a global rights (Engelbrekt & Nergelius 2009)

[738] H.J.R.L. 120

[739] The objectives of the contractors across different jurisdictions are the same. This applies as well to the employers in construction industry in general.

in construction industry overlap also with the social norms and traditions in the society in relation to what is accepted and what is not.

This research sheds light on the transplantability of the legal rules in the research issue of "Concurrent Delay" within its wider area of construction industry related rules. It also examines within the three jurisdictions, the possibility of the legal transplantability of the approach adopted in this model clause in relation to the "Concurrent Delay" in the context of the "public works construction disputes". This analysis will be outlined in the following section in more details while justifying the model clause for the situation of "Concurrent Delay".

6.5.2.2 The applicability of the model clause and its transplantability

The solutions suggested by courts in the Scottish and the English legal system for the dispute of "Concurrent Delay" may be transplanted to the Egyptian civil law legal system. While examining the suitability of transplanting one of the two approaches of Scotland and England into the Egyptian civil law legal system, the research made an attempt to develop a model clause to be a neutral accepted approach in the three jurisdictions of this study.

This attempt relies on the above research argument that, within construction industry, the nature of the issue of "Concurrent Delay" and the nature of the industry characteristics are nearly the same across the three jurisdictions therefore one unified approach can be adopted and transplanted in more than one jurisdiction of the research's three jurisdictions.

Regarding time, the time-related English approach of *Malmaison* which gives the full time to the contractor matches the tendency already exists in the Egyptian legal system as

analyzed in chapter five. This tendency is stated in more than one judgment in the Egyptian legal system in case there is a fault caused by the employer with a partially contribution from the contractor. This leads to suggesting the application of the time-related part of the *Malmaison* approach to be transplanted in the Egyptian legal system once a "Concurrent Delay" situation has been identified. The dispute resolver in Egypt can easily rationalize the adoption of the *Malmaison* approach, regarding time, based on the above-mentioned tendency.

Regarding the "cost of prolongation", the analysis of the transplantability of the Scottish approach of *City Inn* into the Egyptian legal system depends on the analysis made in chapter five,[740] as the judicial approach already exists in the Egyptian legal system tends to apportion the monetary consequences in the case of that both parties have contributed to the causes of the contractual dispute. This leads to that for the cost of prolongation of "Concurrent Delay" within the Egyptian civil law legal system; the apportionment of the Scottish approach of *City Inn* may be an accepted approach.

On the other hand, according to the analysis made by Cocklin, the apportionment may be an accepted within the English legal system (Cocklin 2013). Therefore the "apportionment" part adopted by the Scottish court in the "City Inn" case which has been suggested in the model to be adopted also for the English jurisdiction has the support of opinion of other commentators. However, Cocklin's opinion relies only on the fact driven from his analysis that the majority of jurisdictions he analyzed[741] tend to adopt the apportionment while this research justifies the matter based on fairness logic in relation to both legal and business point of view. Therefore, according to this research apportionment for the "cost of

[740]See section titled: Apportionment in the Egyptian civil law legal system in chapter 5
[741] He included a number of jurisdictions which did not include the Egyptian civil law legal system

prolongation" is recommended for the three jurisdictions of this research. Therefore an apportionment for the situation of "Concurrent Delay" has been incorporated in part **"2B-M1"** of the model clause suggested by this research.

In relation to the transplantability of the last part of "**2B-M3**" of the model clause, this takes the matter back to the approach of dealing with "Public Contracts" differently which relies on the fact that the Egyptian legal system has been influenced[742] by the French legal system as outlined in chapter 2. In relation to the relatively wider scope of the issue of the legal transplantation, this research argues that it may be also useful for both the English legal system and the Scottish one to consider the adoption a degree of a differentiatin between public and private contracts in particular in the area of public works construction disputes. This might be useful for avoiding some problems in some important public construction projects as the mentioned differentiation has been developed to stipulate slightly harsh resolutions against the contracting party with the public body to protect the "interest of the public" as a priority within the legal system according to the theory of "the continuity of the operation of the public services". Within "public contracts", the concept of justice is not affected by these resolutions being slightly "harsher" as the one who contracts with a government body knows this from the beginning. Also within "public works construction disputes", the concept of justice is not affected by these resolutions being slightly "harsher" as the courts tend to make it less harsh in "public works construction contracts".[743] The "public contracts" special approach led to a rule within "public works construction contracts", the contractor should pay a deposit before the commencement of the construction

[742] Such influence can be summarized by "historical" and "educational" links that facilitated the legal transplantation for different rules

[743] This has been outlined in section titled "Implications of the Egyptian approach to public contracts on public works construction disputes" in chapter 2

works (according to article 17[744] of the Public Tenders and Auctions Act no. 89 of 1998) which is refundable once the job is completely done. This is to make sure that contractor will be very serious about finishing the project within time, cost and quality. This is also useful as well to grant the government body with a flexible tool to combat or confront any mistake[745] from the contractor's side. In the same time, in the procurement level, there is already some criticism for the current "public procurement system" in the UK as it has been found 20% more expensive and 50% longer in time compared to the EU countries (Pike 2012). Therefore it may be appropriate to take this comparative study within any future reform. Adopting the above mentioned Egyptian approach, which has been driven originally from France, can be part of the suggestions for a reform for the public works construction system in the UK. In short, the applicability of the model clause **2B-M3** cannot be incorporated into the two common law jurisdictions of England and Scotland because it requires a deeper public law related conceptual framework in relation to the special notion of "public contracts".

The last issue in relation to the legal transplantation is the specialized court[746] for construction disputes. For the importance of the construction industry as a leading sector of the economy as outlined in chapter one and for the special nature of the construction industry it might be useful for the legal system to have a court which is specialized in disputes of construction industry. When a potential plan of reconsidering the "structure of the judiciary into specialized courts" is put in place, supporting the economy should be one of the priorities. Therefore this research argues that the structure of the judiciary should be reconsidered to reflect the importance of construction industry in the economy as a leading sector. The difficulty for the Scottish legal system in this regard will be the small number of

[744] The initial deposit starts with a 2 % of the contract according to article 17 which increases later when the bidder wins the job to 5 % of the contract according to following article 18 of the mentioned act

[745] Such as culpable delay

[746] This court started as a specialized division of the Queen's bench under the name "the Official's referees Court" and under name "the Technology and Construction Court" termed as TCC Court starting from 1998

"construction works" related disputes against the big number of other cases mainly criminal cases. This will result in less productivity if a number of judges have been assigned to a new specialized court for construction disputes. On the other hand, the difficulty for the Egyptian legal system in this regard will be that there should be two specialized courts for construction disputes. Since the structure of the judiciary is divided into two judicial bodies,[747] there should be one for the "private works contracts" and one for the "public works construction contracts". This is because the Egyptian constitution is clear[748] about attaching any "public law" related disputes to the Egyptian *Conseild'État* (or Council of State) which is an independent judicial body from the rest of the structure of judicial body.[749]

6.5.3 Applicability of the model clause outside the research's main limitation

The research's main limitation is "public works construction disputes". In this regard, the suggested model can also be the same as mentioned above with the "private works construction disputes". This applies to the disputes of the private construction contracts in the three countries of this research study. However, the employer in private works construction projects does not represent any public interest. This result in, within the Egyptian civil law jurisdiction, a suspension for part "**2B-M3**"[750] of the model will be made. In the meanwhile, within the English and the Scottish two jurisdictions, such suspension for part "**2B-M3**" already exists whether the "Concurrent Delay" dispute occurred within a "public works construction disputes" or within a "private works construction works" since the legal system

[747] The structure of the judiciary is divided into two judicial bodies by the Egyptian constitution (Article no. 190) which are the *Conseild'État* (council of state) for public law related matters and what is called the "ordinary judiciary" for the private law related disputes.

[748] Article 174

[749] i.e. : the "Ordinary Courts" see section 3.1 of chapter two

[750] which states that the government body should be exempted from a portion (or portions) of its part of the cost of prolongation if the cause or causes of the delay of the responsibility of the side of the government body has a link with the theory of "the continuity of the operation of the public services" (according to its requirements and pre-conditions) and can be justified by the "interest of the public"

in both jurisdictions do not make a distinction between private and public contracts in relation to the substantive dispute resolution that is based on the recognition the theory of "the continuity of the operation of the public services".

6.6 SUMMARY

This chapter's suggested model clause is an approach to be adopted in the dispute of "Concurrent Delay". This model clause may be regarded as a hybrid of the *Malmaison* approach and the "City Inn" approach. This is because, the grant of the full extension of time can be considered as a part of the approach of *Malmaison* in relation to the time issue. However, for the cost of the prolongation, the suggested model approach is building on the "City Inn" approach and takes it to a further outline as in most of the cases there is a difference of the degree of contractual mistake that each of the parties should bear monetary loss accordingly. This stipulates that the financial consequences in relation to the cost of prolongation should be apportioned in a way which reflects the degree of blame that each party of the contract bears in a variation of a percentage rate to be decided on a case by case basis. Such percentage of the degree of contractual blame will be reflected as it is in the allocation of the shares of the "cost of prolongation".

Regarding the model clause suggested by this research, it helps a more realistic and applicable allocation of risks in construction contracts in more than one jurisdiction including "public works construction contracts" in Egypt. This can apply whether it is a standard form of construction contract or a bespoke one (written specifically for the job). According to this model clause, the apportionment should not be constant (i.e. on the basis of 50/50 as the City Inn case may lead to) but on the basis of a variable percentage which is the same percentage

of the evaluation of the degree of the culpability and contractual blame which reflects the position of each party's culpability in relation to his obligations. The number of the obligations has been breached by each of the parties is an indicator for the overall "degree of culpability" of each of the parties in the situation of "Concurrent Delay". The meaning of the obligations in this regard is not limited to the contract only. It should include other obligations according to the norms and the traditions which are known in the construction industry for this specific type of projects. Such norms and the traditions should be taken into consideration, even if they have not been mentioned in the contract, while making the evaluation for the "degree of culpability". In this point, there might be difference in what is binding and what is not within the construction industry from a jurisdiction to another and from a type of construction projects to another therefore the evaluation of this is left to the dispute resolver to decide on a case by case basis. It is generally the responsibility of the dispute resolver to accurately estimate the apportionment percentage.

The suggested model clause for the Egyptian civil law legal system has taken into consideration the approach that this legal system has incorporated, developed and adopted in relation to the position of the state in public contracts. The logic[751] behind the differentiation between the public contracts and the private contracts resulted in making distinction between the same dispute once the dispute is in a public contract the matter which partially dictates section **2B-M3** of the model.

This model clause may be seen, to some extent, that it takes parts of the *Malmaison* approach and the *City Inn* approach but in fact this may not be accurate. This model clause is

[751] This logic finds its justification in the idea that the government body act on behalf of the public and for the benefit and the interest of them so the grounds for a contractual dispute between a public body and a "private law" body is not exactly the same. See section titled: "The logic behind the differentiation" in chapter 2

actually based on the prevention principle and the apportionment principle which has been seen a much fairer approach for the "Concurrent Delay" dispute. The aim of this model is to provide the parties with a balanced resolution for this contractual construction relationship. In the same time, after the recent development in the construction software programmes, it became relatively easier to evaluate, regarding the evaluation of the compensation, between the amount of loss depending on the "at what point in time" the progress of the works has been encountered by the employer's mistake or the contractor's mistake or the neutral one. The justification of this model clause relies on the nature of the situation "construction management" perspective and the business nature of the contractual relationship of which the "Concurrent Delay" situation emerges out of taking into consideration the priorities and objectives of both of the parties. Within the context of the cross jurisdictional construction industry, this model clause relies on the argument that construction industry for this type of disputes may accept unified resolutions which feeds into increasing the certainty This model clause although it does not make both of the parties 100% certain about the exact monetary outcome of the resolution once a "Concurrent Delay" situation occurs, but it reduces the degree of the uncertainty to its lowest possible level within the apportionment logic. This model clause also aims to provide developed mechanism on how the apportionment will be carried out to limit the vague estimation which largely may differ from a standard form of construction contract to another and from a legislative body to another and from a professional body to another and leave the evaluation to the discretion of the dispute resolver on a case by case bases.[752] This model clause provides the dispute resolver with a mechanism of allocation of the loss that each party will incur. This mechanism tackles the criticism of the absence of the certainty that may exist in the apportionment approach at large. Finally, this model clause takes into consideration that such model clause can be applicable within more

[752] The dispute resolver within this statement includes judges, arbitrator, adjudicator, mediators, the architect and the parties themselves when they set together to resolve the dispute.

than one jurisdiction from different family of jurisdictions with only one reservation within civil law jurisdictions (i.e. section **2B-M3**) which is to do with the case when the "construction contract" has been identified as a "public contract" according to its criteria.[753] However, the reservation then is due to the governing legal system which includes a prevailing notion for "public contracts" within the Egyptian civil law legal system rather than the nature of the situation of "Concurrent Delay" itself.

[753] See section titled: "Criteria for Public Contracts" in chapter 2

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This chapter should be read in conjunction with the research's other chapters from chapter one to chapter six. Starting points, arguments, analysis and hypothesis leading to this chapter are distributed throughout the mentioned chapters. However, this chapter makes explicit its findings and the research's contribution towards knowledge. First, it presents an overview of the research objectives within the limitations and findings as well as the contributions of the study to its wider research. The findings and implications include the academic and practical implications and finally recommendations for the matter of this research and for future research are outlined in the last sections of this chapter.

7.2 OVERVIEW OF THE RESEARCH

This study is one of a limited number of studies to examine the adoption, implementation and implications of "delay analysis" in the situation of "Concurrent Delay" regarding the substantial dispute resolution.[754] The process through which the thesis was developed and verified is reported in six chapters and divided into three main parts. Part one, consisting of three chapters (2, 3 and 4) is aimed to present the overall analytical background of the related subject of both the *nature* of "public works construction disputes" in the three jurisdictions and the *nature* of the situation of "Concurrent Delay". The following part, which consists of chapter 5, aims at presenting the attempts to approach the dispute of "Concurrent Delay".[755] The final part (chapter 6) is concerned with the research's suggested model of policy to deal

[754] The limited number of resources on concurrent delay was one of the research limitations. (see literature review in chapter one)

[755] The judicial attempts and the attempts of the protocol and the attempts made by the standard form of construction contracts

with the dispute of "Concurrent Delay" in the "public works construction disputes" within the three jurisdictions of this research.

The main aim of this research was to develop a framework to explain the "Concurrent Delay" dispute and its legal and management analysis to identify its nature and to understand its complexity regarding dispute resolution in the mentioned dispute. This is to establish foundations enable to make suggestions for dealing with the matter in a more appropriate approach. To achieve this aim towards analyzing the issue of "Concurrent Delay", this research has carried out a comprehensive investigation using a multidisciplinary approach. This research has paid particular attention to various arguments and logics that underpin the research issue into its both "legal side" of the "Concurrent Delay" situation as well as the "construction management" side of such situation. This also has been examined in the light of the relevant matters of the notion of "public contracts" in the Egyptian civil law legal system when it is brought to interact with the modern characteristics of construction industry.

7.3 LIMITATION OF THE RESEARCH STUDY

As the case in other research studies, this study also has a number of limitations, the mentioning of which can be valuable to future research. These limitations are mainly related to the broadness of the topic under investigation, lack of homogeneous organizational experience, measurement, time constraint.[756] It was, hence, necessary to consider these limitations. However, the limitations of this research *did not affect* the soundness of its results in relation to "Concurrent Delay" within Construction Law studies at large. This is because, although it is limited to three jurisdictions, two of the jurisdictions represent the main

[756] These limitations include work commitments of the researcher back in his country. See the first limitation in chapter 1.

different jurisdictions within the common law legal systems which dealt with the matter of "Concurrent Delay". What may happen if we try to fit this within a civil law country, of which the concept or the notion of "public contracts" including "public works construction disputes" exists, Egypt is a robust Example thought.[757] However, it is worth mentioning that although the focus of the research is on "Concurrent Delay" in England, Scotland and Egypt, the findings of the research shall be useful for the potential future studies about "Concurrent Delay" in other jurisdictions. It is worth mentioning too that although the focus of the research is on "Concurrent Delay", the findings of the research shall be useful for the potential future studies about other "delay analysis" controversial issues[758] when a similar analysis is made within the same common-law versus civil law context of "public works construction disputes". Finally, it is worth mentioning also that although the focus of the research is on "public works construction disputes", the findings of the research shall inform the debate over "Concurrent Delay" in "private works construction disputes" as well.

7.4 CONTRIBUTION OF THE RESEARCH

It is hoped that the research contributes in some way to the knowledge in the field of construction law. This study makes kind of contribution towards research on "delay analysis" in construction industry as a relatively new field of knowledge within the legal studies.[759] This is a contribution as "delay analysis", within the legal perspective, is still not well developed and fragmented. This study can also be considered as a step towards building a better understanding for the situation of "Concurrent Delay" when it arises as a dispute in a

[757] Due to technical, practical and historical reasons as outlined in chapter 2
[758] Such as ownership of float time, global claims and the analysis methodology
[759] Delay analysis is one of the areas of research which requires a good knowledge and understanding across a number of disciplines.

construction project.[760] This research also contributes to the knowledge of the public law perspective for "Construction Law" as it gives a better understanding for the notion or the concept of the "public works construction contracts" by having a look on how civil law jurisdictions may deal with various types of disputes in such contracts. This research also contributes to the knowledge of by providing a suggested model clause that can be considered in resolving "Concurrent Delay" dispute in the three jurisdictions of this research.

7.5 RESEARCH FINDINGS

The findings are divided into "substantial" findings and "secondary" ones as follows:

7.5.1 Substantial findings:

As outlined in chapters 3 and 4, "Concurrent Delay" analysis is a complicated subject. Its difficulty becomes obvious when the professionals brought in to deal with the dispute do not have a sufficient legal background or lawyers brought in to deal with the dispute with no sufficient "construction management" related background on how the progress of the construction work actually happen before and during the execution of a construction project. There is no guarantee that only specialized professionals and lawyers are those who will be

[760] The statement "when it arises as a dispute" meant to distinguish the perspective of this research from other perspectives. It is not necessary for the parties once a "Concurrent Delay" situation appear to have occurred, to consider that they are in a dispute. The perspective of the project management deals with the matter with a substantial objective of preventing the "concurrent Delay" from negatively affecting the progress of the works and the final completion date of the project. The techniques of doing so mainly depend on making changes on the periods of construction activities and tasks and the available resources. The techniques allows the project manager to do so is a separate area of research on its own. The project manager might be successful in his or her substantial objective and the parties might not take the matter further to the stage of a dispute. The two perspectives overlap, however the research's one starts from the legal point of view which also requires a sufficient understanding on how progress of the construction works are managed from the inception of the construction works until the execution of the project.

involved in resolving construction delay disputes.[761]

The research found that it is substantial for lawyers who are involved in the field of resolving the disputes of construction delayed works that they should have sufficient understanding and background regarding the construction process and comprehension of the sequence of works from the "construction management" perspective both in theory and in practice. A lawyer should also be aware of the different types of construction projects which vary according to its complexity from the simple projects[762] to relatively complicated projects.[763] A lawyer involved in such disputes should spend much more effort to understand the sequences of events that usually occur while performing the construction works. This should be made from "construction management" perspectives including "physical logic"[764] and the linkage between construction tasks. Also, lawyer in general should have a good idea about accounting[765] related issues in construction projects.[766] This is to be able to consider the estimation of the compensation or the cost of prolongation if there is any. However, "Lawyers" are usually clueless as to how computer software is used in construction industry. However, lawyers may be able to deal with a construction industry dispute if the complicated parts of facts of the dispute have been clarified as simple legal questions each requires a legal

[761] Choosing the mediator, the adjudicator and the arbitrator normally is based on a personal trust and personal relationship between either one of the parties or both of them while appointment of judges in many cases does not lead the specialized judges who have construction management related background to work in the court which its jurisdiction includes construction disputes. This problem normally does not exist in the case of the existence of specialized courts such as the technology and construction court in London.

[762] such as pipelines, excavation of trenches or canals, highways and roads

[763] such as hospitals, power houses cement factories, petroleum refineries and fossil fuel or nuclear electricity power stations

[764] See section titled: "Physical Logic" and "Resource Logic" in chapter 3

[765] This knowledge on accounting related issues includes the cost of each task and labour and machinery related cost. This assists lawyers to understand how the calculations in relation to the damage or loss are made or being estimated in the case of the delay.

[766] This includes also the cost of these matters once acceleration is made to the execution of the works when the project is encountered by delay or concurrent delay period of time.

answer.[767] lawyers are normally keen on applying the provisions of the contract, whether it is a bespoke contract written specifically for the project or a standard form of contract. However, the analysis of the dispute becomes difficult if the dispute involves a delay analysis which is the case in many delay cases. The lawyer may depend on an expert witness to clarify the dispute, but the expert witness may not be able to analysis the facts of the delay dispute in the right way to initiate the right legal questions so it would be better if the lawyer can do this himself as this will positively affect his view of the facts and what do they mean from legal perspective. Depending on the lawyer's own analysis, he or she will accurately consider and apply the provisions of the contract and the other applicable rules of law.

On the other side, professional[768]within construction industry should be familiar with the related statutes, regulations and legal background that govern the construction process together with the frame of rules that is stipulated by the local authorities in addition to the related judicial precedents. This becomes of a critical importance when such professional embarks a career of being a "dispute resolver".[769] In the construction industry, more than one areas of law may be involved in addition to contract law. These areas of law may include international private law, international public law[770], banking law, commercial law, arbitration law; tort law,[771] health and safety regulations, ADR related legislations, mediation legislations, criminal law[772], Intellectual Property law[773]and labor law. If the chosen

[767] This can be done by expert witnesses who come from construction management background. However, the lack of related background of the lawyer may make the lawyer ask the wrong questions to the expert witness

[768]Professional within this context refers to professions such as Project Manager (normally appointed by the contractor), Quantity Survey "Construction Cost Consultant", CDM Co-ordination, Cost Management, Quality Monitoring, Site Management, Contract Administration and Employers Agent

[769] Some of the professional who embarks a career of being a "dispute resolver" start to study law from scratch

[770]where a state is party to a construction international contract

[771]or delict in Scotland - for the injuries in the construction site

[772] In case of evaluating whether the non-fulfillment of a certain rule within the procedures of the construction process constitute a crime or not

[773]for architect designs and new protectable building methods- in some countries like the US, developing a new management method of doing the same thing within a project can be solely registered as an IP

applicable law is civilian legal system like the Egyptian one and the project was based on a public works construction contract, the professional involved as a dispute resolver may need a sufficient background in the "administrative law" including the concept of "public contracts". Construction industry professionals who embark a career of being a "dispute resolver" may need a sufficient knowledge in some or all of these areas of law.

In summary, both lawyers and construction industry professionals who may work in the field of construction disputes should be trained so as to be familiar with the use of programmes in the construction industry, the different techniques used to monitor progress in the process of executing the construction works, and the record-keeping techniques as well as to be familiar with all the relevant legal backgrounds.

Following is the main substantial finding of this research which replies to the research's main question which is how to better deal with the disputes of "Concurrent Delay" in terms of the substantial dispute resolution. The research suggests the following model clause:

MODEL 1A

"England and Scotland"

If the "Concurrent Delay" situation occurred immediately at the very beginning of the start of the construction works or while the works are expected to start and both of the parties were in a complete culpable delay and both of them are aware of the other party's delay, then the whole project period should be shifted to start at the earliest party's delay to stop operating. [Unless the contractor or the employer has contracted with a third party for a specific task (or tasks) to be carried out in specific point in time within the time shifted on the critical path of the original programme]

MODEL 1B

"England and Scotland"

If the "Concurrent Delay" situation occurred in the middle of the progress of the works

1B-T: The contractor receives a full extension of time

1B-M1: The cost of prolongation should be apportioned on the basis of a "percentage" or an "allocation" of portions which is exactly the same as the *assessment* of the dispute resolver for the "degree of the culpability"[774] between both of the parties in relation to the obligations[775] have been breached by each of the parties.

1B-M2: If the effects of these causes of delay have been overlapped with an effect of a neutral cause of delay, this effect of the neutral cause should not affect the "percentage" or the "allocation" of portions which has been apportioned as described above in **1B-M1**.

MODEL 2A

"Egypt"

If the "Concurrent Delay" situation occurred immediately at the very beginning of the start of the construction works or while the works are expected to start and both of the parties were in a complete culpable delay and both of them are aware of the other party's delay, then the whole project period should be shifted to start at the earliest party's delay to stop operating.

[774]See section titled: Permutations in chapter 4and section titled: The concept of justice within the context of "Concurrent Delay" dispute in chapter 6 on the degree of culpability

[775]The breach here refers to not only the contractual breach but also to the breach of any other obligation drives from the customs and the norms of the construction industry for this region and for the particular type of construction project of which the "Concurrent Delay" dispute arises.

[Unless the contractor or the employer has contracted with a third party for a specific task (or tasks) to be carried out in specific point in time within the time shifted on the critical path of the original programme]

MODEL 2B

"Egypt"

If the "Concurrent Delay" situation occurred in the middle of the progress of the works

2B-T: The contractor receives a full extension of time

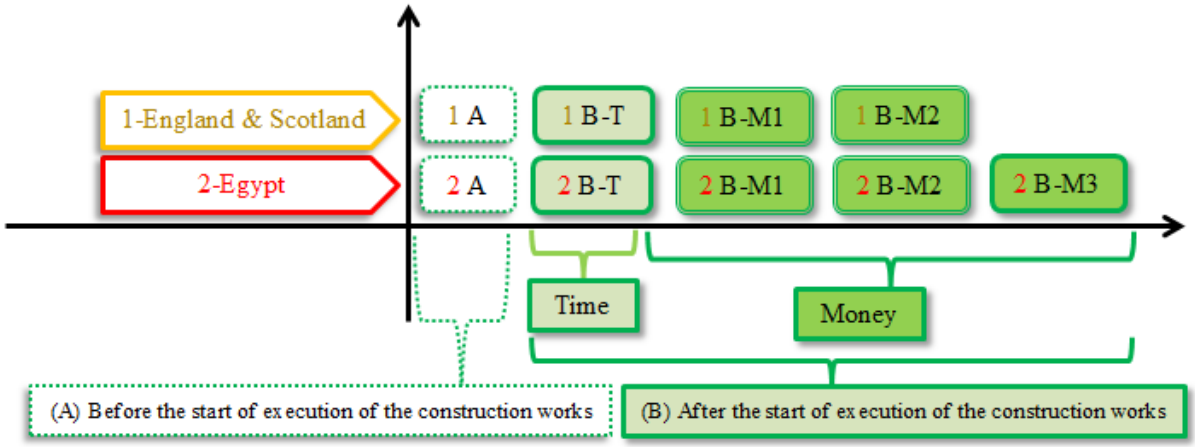
2B-M1: The cost of prolongation should be apportioned on the basis of a percentage or an "allocation" of portions which is exactly the same as the *assessment* of the "dispute resolver" for the "degree of the culpability" between both of the parties in relation to the obligations[776] have been breached by each of the parties.

2B-M2: If the effects of these causes of delay have been overlapped with an effect of a neutral cause of delay, this effect of the neutral cause should not affect the percentage or the "allocation" of portions which has been apportioned as described above in **2B-M1**.

2B-M3: While doing the *assessment* mentioned in 2B-M1, the government body should be exempted from a portion (or portions) of its part of the cost of prolongation if the cause or causes of the delay on the side of the government body has a link with (or could be justified by) the "interest of the public" and the theory of the "continuity of the operation of the public

[776]The breach here refers to not only the contractual breach but also to the breach of any other obligation drives from the customs and the norms of the construction industry for this region and for the particular type of construction project of which the "Concurrent Delay" dispute arises.

services".[777]



This research provides the literature with a justification[778] that, for the mutual breach within the context of a construction contract, the apportionment approach may be wider in terms of its acceptability within both common law jurisdictions and civil law jurisdictions.

In the absence of a precedent on "Concurrent Delay" in public works construction disputes in Egypt, within the civil law context, the "civil law" notion of making a distinction between public and private contractual disputes should operate or work or interact with the situation of "Concurrent Delay". Also, the "civil law" theory of keeping the "the continuity of the operation of the public services" (for the benefit of the members of the public) should operate or work or interact with the situation of "Concurrent Delay".

This research argues that the mentioned notion should interact with the dispute of "Concurrent Delay" in a way which leads to analyzing each cause in relation to the

[777] This is in aaccordance to its requirements and pre-conditions. See section titled: The logic behind the differentiation in chapter 2

[778] The justification of this model clause in relation to the apportionment relies on the nature of the situation "construction management" perspective and the business nature of the wider relationship of which the "Concurrent Delay" dispute relies on and the fact that construction industry for this type of dispute may accept unified resolutions which feeds into increasing the certainty within the cross jurisdictional construction industry. This is outlined earlier in chapter 6.

examination of "can the cause be justified by the interest of the public and the theory of the continuity of the operation of the public services or not". This should be done on the basis of "cause by cause". Therefore (what was the cause) and (what was the public interest associated with this particular cause and the link of the cause with the above mentioned theory) are the two key factors which dictate the evaluation matter for the apportionment when it comes to investigating the employer's delay in the situation of "Concurrent Delay" in "public works construction disputes". This is because, unlike the "global claim[779]" dispute, "Concurrent Delay" dispute can be fragmented and analyzed into a number of distinguished causes in spite of that causes overlap with each other.[780]

From the above findings, the contractor in a civil law jurisdiction which adopts the above mentioned approach or notion of "public contractual disputes" including the notion of making a distinction between public and private contracts[781] seems to have an *additional risk* more than the traditional normal risks the contractor may encounter or works within in other jurisdictions including the common law legal systems. This additional risk is the risk of losing a degree of equal evaluation of the causes of the delay as a cause (or causes) while being examined may be found justified by the interest of the public in the view of the dispute resolver.[782] This *additional risk* relates to losing the effect of such cause in the application of the apportionment rate once a "Concurrent Delay" dispute occurs. This *additional risk* can be

[779] A "global claim" is a type of claim in construction industry which can be defined as : "those where a global or composite sum, however computed, is put forward as the measure of damages or contractual compensation where there are two or more separate matters of claim or complaint, and where it is said to be impractical or impossible to provide a breakdown or sub-division of the sum claimed between those matters."(Hudson & Wallace 2004) paragraph 8.200. Global claims is referred to by the protocol of the 2002 of the Society of Construction Law as: "the composite claims made by the contractor without substantive cause and effect"

[780] This substantial finding can be a starting ground for the future research on how to deal with a global claim in public works construction disputes in the context of a civil law country.

[781] Such as the Egyptian civil law legal system

[782] This *additional risk* should be taken into consideration by the international contractors who are interested in or about to enter the Egyptian local market of construction industry

regarded as a risk driven directly as a result of the potential application of a legal concept.[783] Such risk does not exist in both of the English and Scottish jurisdictions in the same situation of "Concurrent Delay". [784] This *additional risk* can be crystallized or summarized as:

> "facing relatively harsh resolutions against the contractor in case the contractor did not show the maximum level of being abide by the time related commitments when this collide with the interest of the members of the public and the theory of the continuity of the operation of the public services" or "facing relatively harsh resolutions against the contractor in case the cause of the delay of the responsibility of the employer found justified by a cause relates to the interest of the public and the theory of the continuity of the operation of the public services".

7.5.2 Secondary findings:

There are a number of secondary findings of this research. These secondary findings can be summarized in the following points:

1- The main secondary finding of this research is that, within the public construction projects in Egypt, courts found less harsh against the contractor when they apply the "civil law" notion of making a distinction between "private" and "public" contractual disputes justified by the "civil law" theory of keeping the "continuity of the operation of the public services" for the benefit of the members of the public in Egypt compared

[783] which is the theory of "continuity of the providing the public with public services"
[784]This may give a reason or a remedy for delayed public works construction projects which are found from time to time such as the Scottish parliament or the Edinburgh tram

with the same notion in other types of contractual disputes.[785] This can be attributed to the nature of the industry or business of construction projects.[786]

2- As comparative studies always do, this research finds that the three jurisdictions of this research may learn from each other. Within this sense, in relation to the judicial structure, it is recommended to develop or create a specialized court within the judicial structure of the judiciary in both Egyptian and Scottish legal systems for the construction industry. On one hand, this is because of the importance of construction industry for the economy including "public works construction sector". [787] In the same time, one of the objectives of the structure of any judiciary is how to positively reply to the society's main demands including the "economy related demands and necessities". And on the other hand, this is because of the accuracy and speed in the judgments can be in a better situation with specialized courts especially in the complicated disputes of construction industry exemplified by "Concurrent Delay" dispute. Although the English legal system has its own specialized court, regarding "Concurrent Delay", it remained with the English traditional approach of "all or

[785] This has been outlined in chapter 2 in a section titled as "implications of the Egyptian approach to public contracts on public works construction disputes".

[786] The notion of differentiation between public contracts and private contracts which exists in Egypt and other civil law countries has been used by the author as a starting point for developing a new legal strategic technique or *procurement system* for building new cities built from scratch. This relies on a philosophical idea that we can use this legal notion of differentiation which drives from the civil law legal systems for securing a better legal infrastructure for building more developed designs for new cities built from scratch. The mentioned notion gives us a degree of control over the dispute for the interest of the public and we can use the same idea to control the process of building new cities for the interest of the city design which will in turn feed into the interest of the public again. The *new procurement system* has the advantage of being able to provide the planners of new cities with a new legal tool to build more advanced designs. While the notion of the differentiation between public and private contracts is based on judicial precedents and a limited number of legislative rules, this *new procurement system* is based on a set of contracts. This makes this *new procurement system* applicable in any jurisdiction. This *new procurement system* for building new cities built from scratch is now part of a "new method" for building zero-carbon new cities [PCT patent application number (PCT/EG2014/000019) published by WIPO under code (WO2015/188840)]. The *new procurement system* has been detailed in a set of contracts to act collectively as a legal infrastructure for the above mentioned "new method" for building zero-carbon new cities. This PCT patent application is now a national phase patent application number (BHV5772827690) in Australia, a national phase number (R20161037306) in India, a national phase number (application no.EP14894245.1-patent no.1614) in The European Patent office and a national phase number (15315352) in the United States patent office.

[787] See the last point of the practical implications outlined in this chapter

nothing". [788] Therefore, it is suggested that establishing a new specialized court should be associated with a re-examination for the traditional legal approaches to meet the special nature of the area of specialism. Nothing should prevent a traditional approach to be tailored for a specialized area of disputes of specific industry. The difficulty for the Scottish legal system in this regard will be the small number of "construction works" related disputes which may results in less productivity in case of a potential specialization. The difficulty for the Egyptian legal system in this regard will be that there should be two specialized construction courts.[789] Finally, in this point, the establishment of a specialized court for construction disputes in Scotland and Egypt may lead judges to become much more familiar with construction related aspects such as the critical path and other construction management aspects.[790] This may be useful for enhancing the quality of justice provided by courts in the judiciary system of Scotland and Egypt.

3- It may be recommended for both the Scottish and the English legal systems to take into consideration some approaches from civil law jurisdictions such as the Egyptian one in relation to the notion of "public contracts" which is driven from the concept of "public contracts" in France. The special approach of dealing with the "public contracts" deserves to be wholly or partially considered in England and Scotland. This is because in some negative examples of delayed "public works construction project" might not have happened.[791] Under this notion, the legal system tends to take relatively harsher approaches against the contractor justified by protecting the interest

[788] This has been outlined in chapter 5 in a section titled as "judicial guidance of the English and Scottish common law legal systems".

[789] There should be two specialized construction courts to meet a constitution order (article 190 of the constitution) to divide the structure of the judiciary into two main judicial bodies one for public law disputes and the other is for the private law disputes. This has been outlined in the end of section titled: The applicability of the model clause and its transplantability in chapter 6

[790] Such as the "float time", the acceleration and how to calculate the cost of the prolongation in different points on the construction programme.

[791] Such as the Scottish parliament or the Edinburgh tram

of the public especially in the vital and important projects. This justified logic pushes the contractor to avoid this by strictly abide by the rules including the handover date in particular. Adopting such approach may also act as a legal ground for further approaches which aim to protect the public fund in a contract of construction works. This has been outlined in the example of the principle of "tender priority".[792] The existence of a counterpart of the French "Conseil d'État" is not necessary for such consideration however it constitutes a framework.

4- The "expert witness" system in both the English and the Scottish legal systems may be recommended for reconsideration to increase the potential neutrality within construction disputes and within the judicial system at large. The recommendation in this regard is to consider a systematic institutional mechanism for the "expert witness" system in the mentioned two jurisdictions. Learning from the third jurisdiction of this research,[793] an institutional governmental mechanism for the work of "expert witnesses" may result in a better mechanism in terms of the neutrality. What makes this point important within the context of construction delay disputes[794] is that these types of disputes rely on the identification of the "critical path"[795] which in many cases can be identified in different ways by expert witnesses who handle the matter. This is because the identification of the duration of each critical construction activity is based on the construction physical logic and the availability of the material, labor or plants in a specific time during the programme the matter which may have different interpretations. There are different circumstances and scenarios that might happen in material, labor or plants in terms of the availability of each especially in the large complicated construction projects where the number of construction activities or tasks

[792] The "tender priority" has been outlined in chapter 2 in a section titled as "Appraisal".
[793] i.e. the Egyptian civil law legal system
[794] Delay disputes includes "Concurrent Delay" disputes which is the research matter
[795] In this context, this includes the changes that could be made on the critical path to tackle a period of delay while the construction work is being executed.

is relatively big. There are also different scenarios of the possible linkage between the construction activities or tasks as they might be in more than one option in the view of the expert witness. In many cases especially in the complicated disputes, the two identifications for the "critical path" may be correct and each of which support the point of view of one of the disputing parties. In practice, in the absence of a neutral independent institution, this may result in making every "expert witness" tend to favor the identification of the "critical path" which supports the party whom such "expert witness" has been appointed by. This may happen although the expert witness", in theory, is obliged to be neutral. On the other hand and from the perspective of the administration of justice, it is recommended for the Egyptian legal system to work more on the area of construction delay related disputes within the institutional "expert witness" department. [796] This department needs to learn from the relatively advanced way of analyzing the delay disputes of construction industry made by the "expert witnesses" in both the two common law jurisdictions of this research. Unlike a number of other "construction industry" related disputes[797], there is a lack of knowledge about the construction programming among employed expert witnesses of the Egyptian "expert witnesses department". Extensive trainings should be given to the expert witnesses of the mentioned department who are frequently involved in investigating and writing reports in construction delay disputes.

5- Regarding the legal transplanablity issue: Legal systems may be influenced by each other across the time. The Egyptian legal system has been influenced by the French legal system as outlined in chapter 2 of the thesis. The Scottish legal system has been influenced by the English and other continental European legal systems.[798] The study

[796] This has been outlined in chapter 5 in a section titled as "judicial guidance of the Egyptian civil law legal system – the programming".
[797] such as construction defects, drawings errors, material quality
[798] Such as the legal system of Netherland

of a transplanted legal rule (or set of rules) should not be made in isolation of the historical context at the time of the influence. In this regard, the educational matters should be taken into consideration. The background of the influence leading to the transplantation of a rule (or a set of rules) may vary.[799] However, this does not negatively affect the approach of this research that within construction industry some regulations can be the same in different jurisdictions. This may be the case in industries which have the same characteristics and very much connected with many technical issues. In such industries, some areas of regulations can be unified or be similar at least in different jurisdictions and this applies to many issues or areas in construction industry.

6- Regarding the legal transplantability issue within construction industry: This research argues that there are two types of areas of regulations. The *first* is a group of areas of regulations, within construction industry, where rules may vary from a country or jurisdiction to another according to the social norms and legal concerns connected with the issue which is being regulated. This group includes areas such as regulations of labor issues within construction industry, insurance, urban design, building design, building licenses from local authorities and environmental planning permissions prior to the construction works. The *second* group of areas of regulations is where the rules can be the same in different countries or jurisdictions due to the fact that these issues or areas of construction industry are nearly the same regardless of the country or the jurisdiction. In these areas, these regulations can be applied anywhere as the industry

[799] For example, the background of the influence regarding the introduction of the concept of "public contracts" is different from the background and the circumstances surrounded the French "civilian law" initial influence into the Egyptian legal system which goes back to the 19 century as outlined in chapter seven. In the meanwhile the earlier transplantation can be summarized as: The differentiation between the "public contracts" and the "private contracts" exists in the Egyptian legal system has been transferred from the French legal system via the Egyptian legal scholars who have received their legal education in France and obtained academic and judicial positions in Egypt upon their return post their French education. This has been outlined in section titled: The "Legal Transplantability" debate in chapter 6

is nearly the same worldwide. Within these issues or areas, nearly the same concerns and the same circumstances of the situations are found. This group of areas of regulations includes areas of technical issues, some contractual obligations. This research argues that the "Concurrent Delay" dispute, once considered as an area subject to be regulated, partially falls within the *second* group of issues or areas of regulations.[800]

7.6 RESEARCH IMPLICATIONS

The research implications, within the context of the body of knowledge of Construction Law, are provided in this section whereby the academic and practical implications of the research are elaborated. This section, therefore, is classified into two categories: academic and practical implications.

7.6.1 Academic implications:

In terms of the academic implications, this study has implications for the wider body of knowledge, including the parent disciplines/fields and other related fields. The findings discussed above have a number of implications for academic issues. They can be summarized as the following:

1- The findings stress the need for a balanced situation between the two disputing parties to recover the situation of "Concurrent Delay" according to the fact that the starting objectives of each of the parties of a construction contract are similar from a specific

[800]This has been outlined in the end of section titled: The applicability of the model clause and its transplantability in chapter 6

angle and are different from another angle.[801] When it comes to "public bodies", the differences in the starting objectives may be relatively wider compared with individuals and "private bodies" when they act as employers. However, the nature of the construction industry stipulates that fairness should prevail and should be taken into consideration even the contract has a public body as an employer. A clue[802] for that is that within the context of the concept of "public contracts" in the Egyptian civil law legal system, courts in "public works construction contracts" relatively tend to recognize a better position for the "public body" but less harsh compared with other "public contracts".[803]

2- The notion that the "true concurrency" is rare should be reconsidered as in each "Concurrent Delay" situation there is a period of true concurrency. In the same time, once the known typical "true concurrency" situation found in the beginning of the project, this can be a good chance to avoid the complexity of the situation of "Concurrent Delay" and regard that the start date of the project has been shifted to the end of the period of which one of the effect of the causes of the delay ceased first to operate.[804]

3- The findings of this research are also important for other civil law jurisdictions as well as other Arab Middle Eastern jurisdictions.[805] Arab jurisdictions are normally influenced by the Egyptian legal system as the current Egyptian civil code is the model for a number of civil law codes in the Arab world.[806]Academic studies in Arab

[801] This has been outlined in section titled: the concept of justice within the context of Concurrent Delay in chapter 6

[802] This has been outlined in chapter 2 in a section titled as "implications of the Egyptian approach to public contracts on public works construction disputes".

[803] This has been outlined in section titled: The applicability of the model clause and its transplantability in chapter 2

[804] This has been represented in sections 1A and 1B of the Model Clause outlined in chapter 6

[805] Many of the constitutions and the important legislations in many of the arab countries have been drafted by Egyptian jusists such as Abd El Razzaq Al Sanhouri.

[806] See Said Hanafi page 444

countries in general and in the Arab Gulf countries[807] in particular normally follow the academic studies related to the newly developing areas of law in the Egyptian legal system like this research. It is quite often that the judiciary in these countries while dealing with a dispute cites or refers to both Egyptian academic and judicial attempts to approach disputes relevant or similar to the dispute being analyzed. [808]

7.6.2 Practical implications:

In terms of the practical implications, this study has also practical implications for these disciplines/fields. The findings discussed above have a number of implications for practical issues. They can be summarized as the following:

1- This research sheds light on that there is a need for a simplified tool for illustration for the non-specialized dispute resolvers who are involved in construction delay disputes. This research finds that it would be useful for a better dispute resolution mechanism for lawyers in particular (those who have no sufficient background in construction industry) that software developers to produce simplified versions of the construction management software programmes which link the different parties' potential deficiency with the contracts terms and obligations. It is becoming increasingly important to develop such simplified versions of the programme to assist the non-specialized dispute resolver to analyze the situation of "Concurrent Delays" in general.[809] This is to make it easier for lawyers involved as dispute resolver who have limited

[807] Arab gulf countries include Kuwait, Saudi Arabia, Bahrain, Qatar, UAE and Oman

[808] Arab jurisdictions are normally influenced by the Egyptian legal system to the extent that in many cases, courts in Arab countries refer to established judicial approaches adopted by Egyptian supreme courts (the Egyptian court of cassation, the Egyptian supreme administrative court and the Egyptian constitution court). This happens in many cases once the courts in Arab countries have encountered by an absence of relevant legislations in the dispute matter.

[809] Or to assist the non-specialized dispute resolver to analyse other delay disputes too.

background about construction management to approach the dispute with a less confusion since the construction industry tends recently to be much more complicated in terms of the programme details. This is to allow lawyers to easily track and crystalize the different parts of the facts of the disputes with the obligations (whether derives from the contract or from the related legal regulations and norms of the construction industry) into legal questions. This is to allow the dispute resolver who comes from a non-specialized background to crystalize the facts of the disputes to facts within its legal framework in order to be easily linked to their remedies. This is relevant as in many cases the disputes resolver may not be specialized in construction industry disputes. In the field of construction litigation, in many cases judges are not chosen on the basis of being specialized in construction disputes or not.[810] Also in the field of construction arbitration, in many cases and in both the domestic or the international level, normally the arbitrator is not chosen on the basis of being specialized in construction disputes or not as, normally, there are other factors which affect the choice of the arbitrator such as the nationality of the arbitrator, the languages spoken by the arbitrator, parties' trust in a particular known arbitrator and in some cases the personal relationship between the disputing parties and the arbitrator.[811] In this regard, in some cases[812], the arbitration center nominates the arbitrator. The arbitration center normally applies its own internal selection criteria for allocating arbitrators on their list of theirs arbitrations. Such process may lead to that the arbitrator, although suitable for the dispute, may not be familiar with

[810] For example most judges who might be in charge of investigating and judging a construction dispute in the Scottish jurisdiction and the Egyptian jurisdiction are not specialized in construction disputes. (See summary of chapter 5)

[811] Which turn the arbitration in this case to be slightly more closer to the mediation process but with a binding decision in the end

[812] i.e. in the case of the institutional arbitration.

analyzing the construction delay periods on the construction programme. A simplified illustrated programme for non-specialist dispute resolvers might be better to be developed by the software developers[813] who already produce the construction management software rather than designing particular special software from scratch for this particular matter. This is in order to make it easy for the disputes resolver to take a step further in understanding the detailed construction programme if found necessary. These suggested simplified illustrated tools on programmes should make the delays periods clear in association with or parallel with the relevant contractual obligations and which of the parties is the one who bear the responsibility of this particular contractual obligation. This suggested part in the programme is what the non-specialized dispute resolver needs to recognize the overlap between the delays in relation the contractual obligations driven from the construction contract. The main substantial focus points of the typical construction project software programs are the tasks themselves and their relationship with each other in addition to the cost of each[814] while the substantial focus of the "matter suggested"[815] should be the legal obligations of each party driven from the contract associated with each construction activity (or group of activities) which still should state both time and total cost in short for each construction activity.

2- In the Egyptian government bodies, generally, there is no standard form of

[813] Such as Oracle which produces "Primavera P6" and Microsoft which produces the "MS Project"
[814] including the labor units and the material cost assigned for each task
[815] The "matter" here refers to a simplified tool for illustration of the construction management software programmes which link the different parties' potential deficiency with the contracts terms and obligations. This is to help the non-specialized dispute resolvers who are involved in construction delay disputes to better understand the links between the different tasks on the programme with the obligations driven from the contracts terms and conditions to accurately allocate the percentage of the apportionment in the case of the "Delay Analysis" disputes as well as other similar issues such as the "Global Claim".

construction contract.[816] The recent situation is that government bodies either draft a bespoke contract designed specifically for the job or use the appropriate FIDIC standard forms of construction contracts. The model clause and analysis made throughout this research study can be regarded as a starting corner stone for developing the first local Egyptian standard form of construction contract particularly for "public works construction projects".[817] In the meanwhile, the Egyptian government bodies can separately adopt the clause developed in this study for "Concurrent Delay" in their future bespoke public construction contracts or in the FIDIC form of contract they use.[818]

3- Outlining the approach of these three jurisdictions in relation to the "Concurrent Delay" dispute is useful as the law at the three jurisdictions can be chosen by the parties to be applied as the contractual "applicable law" in one of these jurisdictions or in another jurisdiction. This can be applicable under the general provisions exist in many jurisdiction of allowing the parties of a contract (whether a construction contract or not) to choose to apply the law of another country on their disputes arising from the contract.[819] This is also possible under the appropriate arbitration rules.[820]

4- Referring to chapter 4,[821] this research also suggests that the structure of the delay

[816] The only exception which may be regarded as an example for a standard form of construction contract is the internal construction contracts for building schools under the "General Authority for Educational Buildings" attached to the ministry of education. However this contract can be seen more as an internal pre-made draft of a construction contract rather that a robust standard form of construction contracts. This contract is frequently used for repetitive projects for building schools across the country.

[817] One of the future goals of the researcher after this PhD is to prepare two contract drafts for both public and private construction works in Arabic and give it to the Egyptian ministry of housing as a voluntary work. See www.arabiccontract.com . These expected two contracts can be applicable in some other Arabic "civil law" jurisdictions.

[818] by adding the model clause to the *general conditions* of the FIDIC standard form of construction contract they use

[819] This is possible in the Egyptian legal system unless the intended foreign law to apply does not conflict with "public order" (i. e. public policy) See Said Hanafi page 445

[820] Normally in arbitration, parties are free to choose the applicable law on the disputing matter. Furthermore, parties can choose the applicable law on the procedures of the arbitration process.

[821] See section titled: The neutral delaying events in chapter 4

mechanism of the construction contract should separately identify and distinguish the neutral delay events from the employer's risk events. They should not be included together in one list under a collective term such as "the relevant events"[822] or "compensation events".[823] Causes of delays are better to be identified from each other. This is to help the non-specialized dispute resolver to make a distinction between the remedies in case there is a neutral event caused the delay or contributed in the cause of the delay. This is also because neutral causes of delay may give different effects in the existence of causes made by the contractor or the employer while analyzing the situation of "Concurrent Delay" and its potential dependent consequences. This is to make the contractual responsibilities clear in relation to the facts of the dispute leading to the sound application of the consequences which may lead to a more accurate resolution.

5- Within the context of the risk studies in construction industry, the special approach of the Egyptian legal system for dealing with "public contracts" including the "public works construction contracts" involves a slightly additional higher degree of risk allocated to the contractor's side. Therefore an international contractor intending to enter the market of "public construction projects" in Egypt should be aware of this potential additional risk.[824]

6- The findings also stress the great role of specialism on the newly developed area of "Delay Analysis" in Construction Law including the "Concurrent Delay" for an accurate work of adjudicators, arbitrators and judges in this field. For this importance of such role the training for such professionals is important and necessary. In the light of the increasing complexity of construction delay disputes,

[822] This is the dominant term used

[823] Used by the NEC3 contract see footnote number 358 in page (119) – the relevant events are outlined in section titled: RELEVANT EVENTS (OR COMPENSATION EVENTS) in chapter 4

[824] The same additional risk applies in arbitration in case the Egyptian law has been chosen to be the applicable law on the matter of the dispute in an international arbitration.

the new generation of professionals and lawyers in such type of disputes should be highly qualified, receive interdisciplinary updated training to be able to deal with such complexity. This also calls for reshaping the recruitment, deployment, motivation, training, evaluation, and compensation standards and policies of the adjudication and arbitration nominating bodies which run arbitration.

7- The research atmosphere at the University of Strathclyde in general is very developed in a way that it encourages Ph.D. students to meet with other Ph.D. students in different disciplines as well as with university academic members of staff in different disciplines in seminars and different research and social related events. During the first two years of doing this research study at the Law School, the author had philosophical discussions with one of the academic members of staff on the "*transitional justice*" in Egypt after the Egyptian version of what is called the "Arab Spring" (Jan. 2011).[825] Part of this thesis outlines the importance and the special nature of public works construction projects. Based on this discussion and in the light of the Egyptian political dilemma in 2013, the author found it appropriate to prove that the public construction sector can also pull societies out from the economic disruption during times of the political disorder.

[825] This academic member of staff had a plan of a research project under the "Art and Humanities Research Council" on the transitional justice in the Arab Spring countries (i. e. Tunisia, Egypt, Libya, Syria and Yemen) and asked the author about who is the best person to help in Egypt. The author has outlined that there is a newly established ministry of transitional justice in Egypt. The author has spoken to the minister (Judge / Mohammed Amin Elmahdi) during the following holiday in Cairo. He apologized by saying that he cannot help in a research in a UK university since transitional justice overlaps with politics and politicians as the local political dilemma is not clear yet and any act even if it is within a research study may be miss-understood by other politicians. He added that it is easy now to find yourself misunderstood while you have a good innocent intention motivated by a good will. He added that: this time is a time of political disruption because of the tension in the political atmosphere in the country so transitional justice should be investigated within a local context. In the end of the meeting, the author has mentioned that he has a proposal of using public works construction projects to move the society forward away from the political dilemma via a proposal of building a number of new cities built from scratch. He adviced the author to be careful as the author is not a retired judge yet so neutrality is required when it comes to political issues but it will be OK to deal with government senior staff. In Dec. 2013, the author presented the proposal (published later in a book via Cairo University Press with a website www.talaatharb.com) to the Central Agency for Development in the Ministry of Housing, Utilities, and Urban Communities. The Egyptian government has positively replied later to this by a scheme of building a number of new cities built from scratch.

The author has made a written proposal[826] on the need to create a number of new public works construction projects in Egypt to help overcome the deteriorating performance of the economy results from the political disruption in 2013 which actually started few months after the Jan. 2011 revolution.[827] In 2009/2010 (i. e. before the Jan. 2011 revolution), the national GDP growth of Egypt was around 7%.[828] Later, in 2012/2013 (the middle of the political disruption), the national GDP growth was around 1.04%. The final aim of the above-mentioned proposal was to create jobs and meet the housing demand in the society which is one of the secondary problems of the Egyptian society. The government later positively replied to this proposal and a new second canal has been excavated and opened in August 2015.[829] In relation to building new cities, the government has started building a number of new cities[830] including the new proposed administrative

[826] This refers to the proposal presented in Dec. 2013 to the Central Agency for Development in the Ministry of Housing, Utilities, and Urban Communities (published later in a book with a website www.talaatharb.com). The author has presented the proposal in front of the notable engineer Mohamed Nasser the head of the Central Agency for Development in the Ministry of Housing, Utilities, and Urban Communities. The mentioned government body is the most important government department at the Ministry of Housing, Utilities, and Urban Communities.

[827] The general idea of the proposal can be summarized as building a number of new cities from scratch in Egypt together with excavation of a second canal to allow two way traffic of the Suez Canal.

[828] The national GDP growth of Egypt was around 7% in 2009/2010, however the economic module and policy the government has adopted at that time and during the few years before 2009/2010 were focusing on large companies led to that the distribution of the income generated according to this percentage was not able to positively affect the poverty level in the country. The government's economic module and policy then failed to have a positive impact on the poor layer of the poor people in the society. This should be added to the fact that there were a number of other political problems in the country (to do with a president remained in power for a very long time). This can be a direct application of the statement made by Adam Smith within his *Theory of Moral Sentiments* "if fruits of a society's economic development cannot be shared by all, it is morally unsound and risky, as it is bound to jeopardize social stability .If the wealth of a society is concentrated in the hands of a small number of people, then this is against the popular will, and the society is bound to be unstable" (Smith 2010).

[829] However, the new canal has been excavated in a different location compared to what has been suggested in the mentioned proposal. This is because there are many technical different matters overlapped here such as the smooth movement of the ships together with the ports already exist in the North Pole and the South Pole of the Suez Canal. Regardless of the difference between what has been executed compared with the location of new canal as suggested original proposal, the main aims were to create jobs via a public works construction project and to draw the attention of the society forward away from the political dilemma and in the same time to solve the long lasting problem of the one way traffic of the Suez canal.

[830] Such as New-El-Alamein, New-Port-Said, New-Ismailia, New-Suez city and New-Asyut city

capital of Egypt.[831] Although the tourism sector has collapsed in 2013 and 2014 (BBC 2014) due to safety issues or concerns and the political disruption in the manufacturing and services sectors, the national GDP growth has been risen to be around 4% in 2015/2016. This rate of growth was achieved mainly because of these new public works construction projects[832] which have been launched recently in 2014 and 2015.[833] Finally, public works construction projects do not only provide the economy with jobs and meet social demands like housing but they also, in the time of political disruption, drag the *attention* of the public within a pragmatic approach to something useful other than fighting on pointless (sometimes) matters.

7.7 RECOMMEDATIONS

In the case of a construction contract already exists and already being performed whether a bespoke contract or a standard form of construction contract, the above-mentioned model clause suggested by this research can be incorporated into such existing construction contract. Subject to their consent, parties can include any new clause, such as this model clause, at any stage whether a dispute has been arisen or not. After a dispute arises, parties are still able to include any additional clause they might find appropriate for resolving their dispute in particular or for resolving any similar future dispute. This possibility applies to the model clause suggested by this research.

[831] The government planners who work on the last mentioned city have invited the author to contribute to the strategic planning for the city in regard to the legal framework of the project.

[832] These are the large scheme of housing projects and the building of a number of new cities together with the mentioned project of the excavation of a new canal parallel to the old Suez Canal.

[833] The Egyptian housing minister argued in 27 Nov. 2015 that the above mentioned increase in the rate of growth was achieved mainly because of the new public works construction projects and large scheme of housing projects and projects of building a number of new cities the government has launched recently in the last 2 years. He said that within the recent social-political disruption in Egypt, due to these public works construction projects, the only economic sector which achieves economic growth and creates jobs is the construction and building sector (Alkaherawalnas 2015)

Following from chapter five, the possible reform for the English legal system to improve the current situation is to allow apportionment for the monetary consequences result from the situation of "Concurrent Delay". There are two options in this regard. The first one is limited to the situation of "Concurrent Delay" in the construction law context only. This option is for the judiciary to extend the limit of the meaning of the *Malmaison* approach in the future cases to include partial apportionment for the monetary consequences. The second option is that an amendment be made for the Apportionment Act to allow the apportionment in the situation of "Concurrent Delay" arising from a construction contractual relationship. This reform in case it occurs may be extended later to be applicable to all contractual cases similar to the situation of the "Concurrent Delay" in time-related contracts. In a civil law country, in which codification is the default mechanism for setting up rules for any matter and plays a key role in the legal system, the normal traditional remedy for any complex legal issue or situation is to legislate for a specific remedy for the situation after a detailed analysis is made by the legislative body.

The Egyptian approach for "public contracts" is based on a number of judicial precedents as mentioned in chapter two. Although one of the main characteristics of the civil law jurisdictions is that codification is the normal default tool when it comes to regulating a specific area of law, there is an absence of a related codification in this area of administrative law in relation to public contracts in Egypt. In spite of the existence of a limited number of legislative rules[834] related to the "public works construction contracts", the Egyptian civil law special approach for the "public contracts" is mainly characterized by the judicial precedents. The technical problem in this regard is that although courts typically follow the approaches of

[834] The Civil Code of 1948, the Tenders and Auctions Act of 1998 and the Public Private Partnership Act of 2010 – see section titled: Legislative conditions governing "public works construction disputes" in chapter 2

the supreme courts on top of the Egyptian judicial structure, courts in theory can depart from the approaches taken by these supreme courts.[835] This may result in a degree of uncertainty, in theory at least, concerning the special approach for the "public works construction contracts". In addition to that, internal judicial approaches in any legal system can be regarded hidden[836] for the foreign investments compared with codification mechanism. It is recommended by this research to simplify the legal rules concerning "public construction industry" due to the importance of construction industry for the economy. This can be considered taking advantage of the codification being the default mechanism for regulations in civil law countries. It is necessary for the growth of such important industry to have a clear path of legal rules among the larger legal system. Certainty is useful for encouraging both the locals and foreign investors. This will allow foreign investments, in particular, to move smoothly into the country especially after 2006 when the country's commitments in relation to liberating a number of services (including construction industry) have taken effect.[837] The recommendation in this regard is that there should be a legislative amendment for the Egyptian civil code of 1948 to include all the regulations related to the "public works construction contracts" driven from the judiciary to specify the limit of the notion of "public contracts" in every type of government contracts. The analysis in chapter two can be useful for such potential legislative amendment.

There may be practical difficulties that may encounter the establishment of a specialized court for construction disputes in both the Scottish and the Egyptian jurisdictions

[835] However, this does not happen often. The probability that courts depart from the approaches taken by supreme courts, within the Egyptian Council of State, led to the establishment of the unification chamber at the Supreme administrative court which is the Supreme Court in the public law related disputes in the country. However, for a number of procedural matters, it may take years for contradicting two approaches to be unified or one supported rather than the other.

[836] It is normally easy for foreign investors to get the code of the area of law of which the intended investment will be. In the same time, it needs an extensive effort of the foreign investor's lawyers to carefully investigate the rules established by courts in any given area of law the matter which is not easy and costly for new foreign investor to any country.

[837] under the WTO agreements

as mentioned earlier. Alternatively, it is recommended that some judges may be specialized in construction disputes to be involved in such cases on a regular basis. So it is recommended to have specialized judge (or judges) rather than specialized court. Consequently, it is recommended that judges whose specialization is in construction disputes be involved in such cases, owing to the unique aspects therein that may not be a feature of a standard contractual dispute.

7.8 RECOMMENDATION FOR FUTURE RESEARCH

As this study covers an issue with a number of limitations within a relatively broad area of research, there are a number of directions in which future research is needed. The study though has opened the door for potential implications for future research which pertain both to methodology employed in collecting and analyzing the data and to the substantive findings of the research effort. However, during the course of this research, some findings indicated the need for further investigation. The current study has synthesized the various critical factors that contribute towards the complexity of construction "Concurrent Delay" disputes. This raised for example the issue of the work of expert witness therefore future research might focus on studying a connected point which is how to include the legislation frame for construction industry a binding rules to make a monitored "records keeping process" an obligation for the contractor and the employer as this is *essential* for the work of the "expert witness". Authenticated record keeping mechanism helps very much in having a narrow gap in the analysis in case we have more than one expert witness. Online techniques or web platform may be useful in this regard. Other example also for future research is the focus on studying how to avoid delay disputes in construction industry by using software programmes such as Primavera and Microsoft Project by improving a kind of an online alert system which makes a real time online operating system that connects the employer and the

contractor to help avoid delay disputes or tackle them immediately once they occur.

This research focused on two common law jurisdictions together with Egypt as an example of a civil law jurisdiction.[838] A similar research can be done about the same issue of "Concurrent Delay" in other jurisdictions (other than England and Scotland) within the family of common law countries and in another civil law jurisdictions (other than Egypt) within the family of civil law countries. Additional findings and results may be found as there may be some differences in other jurisdictions in each family of these jurisdictions. These differences between jurisdictions of the same family of legal systems can be attributed to the social and historical background and developments of each jurisdiction.

This research focuses on the issue of "Concurrent Delay". A similar research can be done within the same three jurisdictions about other issues of "delay analysis" such as ownership of float time, global claims and the analysis methodologies. This can be done within construction contracts in general or within "public works construction contract". This can be done within common law jurisdiction in general or within civil law countries too. Additional findings and results may be found in such future research as there are some different concerns in each of the mentioned issues of "delay analysis" compared with the dispute of "Concurrent Delay". There are also some differences in the perspective of which

[838] This research has mentioned some other jurisdictions while just referring to particular points throughout the research theme.

each of these issues should be dealt with.[839]

7.9 CLOSING REMARKS

Based on this study on "Concurrent Delay" analysis, it is worth mentioning that for such complex disputes, avoiding claims is better than resolving them. Preventing potential "Concurrent Delay" disputes, in general, depends on the understanding of the construction law among professionals (especially project managers) involved in the construction project. This includes at least a rough understanding of litigation, arbitration and adjudication and their procedures while resolving disputes. Knowledge of possible substantial dispute resolutions for potential delay disputes is useful for avoiding delay disputes or for making an attempt to resolve them once they occur. The model resolution developed by this research for the dispute of "Concurrent Delay" helps for this to happen by providing a model resolution. It might be appropriate for project managers to have an idea about such model resolution as one of multiple options for resolving the dispute of "Concurrent Delay" in the absence of a contractual clause on this particular dispute. Hence the summary of this thesis might be useful if brought to the attention of the practitioners in construction industry especially the project managers. The industry also should spend much more effort on developing techniques for early online warning methods for the delay disputes as a way of preventing them as

[839] For example, while the concurrent delay dispute focuses on the critical path which is comparatively a straightforward delay analysis, the issue of the ownership of "float time" requires a deeper analysis from the construction management perspective (compared to the issue of "Concurrent Delay"). This is because the issue of the ownership of "float time" requires an extensive and full analysis for the position of the non-critical activities of the programme and how they can be owned by both of the parties and the effect this may cause on the extension of time and the legal implications of such. When this problem examined within the notion of "public contract" in a civil law country, the focus should be made on the scenario of the public projects when the time is of a potential criticality and there is a need to even finish the project earlier. This will require an in depth legal analysis for the "acceleration mechanism" of the execution of the construction works together with the delay mechanism of the construction contract and for the related legislations and judicial approaches.

mentioned above.[840]

7.10 FINAL REMARKS

It is relevant to stress on the importance of creating opportunities to allow different jurisdictions to learn from each other as we nearly live in a global village in terms of the communication and in terms of the interaction between legal systems too. The modern telecommunication revolution and the speed in modern transportation methods, which made the world interacts with each other quicker, made it necessary for different legal systems to learn from each other. Freedom of movements of investments and services across the world made the concerns related to the legal system matters. Such freedom does not take into consideration whether the legal system is a common law or a civil law jurisdiction. Cross-jurisdiction investments in the construction industry care about and depend on the potential monetary profit. Therefore the a need that different jurisdictions to learn from each other applies to jurisdictions from the same family of legal systems as well as jurisdiction from different families of legal systems. This research can be regarded as one of the steps in the walk down this path.

[840] The research argues that this may will be the future trend in preventing disputes in construction industry as this will allow the employer, the contractor and the project manager to interact and tackle any cause that might lead to a delay dispute (or any other dispute) once they arise and may resolve the matter immediately.

APPENDIX

1

"X7.1: The contractor pays delay damages at the rate stated in the contract data from the completion date for each day until the earlier of completion and the date on which the employer takes over the works. X7.2: If the completion date is changed to a later date after delay damages have been paid, the employer repays the overpayment of damages with interest. Interest is assessed from the date of payment to the date of repayment and the date of repayment is an assessment date" (Institution of Civil Engineers ICE 2005)

2

The terms and conditions of the JCT 1980 which govern the situation of "Concurrent Delay" are:

25.2.1.1. If and whenever it becomes reasonably apparent that the progress of the Works is being or is likely to be delayed the Contractor shall forthwith give written notice to the Architect of the material circumstances including the cause or causes of the delay and identify in such notice any event which in his opinion is a relevant Event.

25.2.2. In respect of each and every Relevant Event identified in the notice given in accordance with Clause 25.2.1.1 the Contractor shall, if practicable in such notice, or otherwise in writing as soon as possible after such notice:

.2.1.give particulars of the expected effects thereof; and

.2.2.estimate the extent, if any, of the expected delay in the completion of the Works beyond the Completion Date resulting therefrom whether or not concurrently with delay resulting from any other Relevant Event and shall give such particulars and estimate to any Nominated Sub-Contractor to whom a copy of any written notice has been given under

Clause 25.2.1.2.

25.3.1If, in the opinion of the Architect, upon receipt of any notice, particulars and estimate under Clauses 25.2.1.1 and 25.2.2.

.1.1.any of the events which are stated by the Contractor to be the cause of the delay is a Relevant Event and

.1.2.the completion of the Works is likely to be delayed thereby beyond the Completion Date the Architect shall in writing to the Contractor give an extension of time by fixing such later date as the Completion Date as he then estimates to be fair and reasonable. The Architect shall, in fixing such new Completion Date, state:

which of the Relevant Events he has taken into account and

the extent, if any to which he has had regard to any instruction under Clause 13.2 requiring as a Variation the omission of any work issued since the fixing of the previous Completion Date, and shall, if reasonably practicable having regard to the sufficiency of the aforesaid notice, particulars and estimates, fix such new Completion Date not later than 12 weeks from receipt of the notice and of reasonably sufficient particulars and estimate, or, where the period between receipt thereof and the Completion Date is less than 12 weeks, not later than the Completion Date.

25.3.3. After the Completion Date, if this occurs before the date of Practical Completion, the Architect may, and not later than the expiry of 12 weeks after the date of Practical Completion shall, in writing to the Contractor either

.3.1. fix a Completion Date later than that previously fixed if in his opinion the fixing of such later Completion Date is fair and reasonable having regard to any of the Relevant Events, whether upon reviewing a previous decision or otherwise and whether or not the Relevant Event has been specifically notified by the Contractor under Clause 25.2.1.1Provided always that

.4.1.the Contractor shall use constantly his best endeavors to prevent delay in the progress of the Works, however caused, and to prevent the completion of the Works being delayed or further delayed beyond the Completion Date,

.4.2.the Contractor shall do all that may reasonably be required to the satisfaction of the Architect to proceed with the Works."

25.4List of the Relevant Events referred to in Clause 25.

3

1- The project manager's instructions changing the works[841] (clause 60.1.1)
2- The employer does not allow access to the site (clause 60.1.2)
3- The employer does not provide something he is to provide according to the programme (clause 60.1.3)
4- The project manager's instructions to stop or "delay"[842]a task (clause 60.1.4)
5- The employer does not work within "the times of the programme" or "conditions of the work information". (clause 60.1.5/1,2)
6- The employer carries out work on site that is not stated in the work information. (clause 60.1.5/3)[843]
7- The project manager or the supervisor does not reply to a communication from the contractor (clause 60.1.6)
8- The project manager's instruction for dealing with an object of a value found in the site (clause 60.1.7)
9- The project manager or the supervisor changed a decision previously communicated to the contractor (clause 60.1.8)

[841] Except defects and provided by the contractor for his design
[842] The contract has used the term "change date" which will not affect the completion date if it has been changed to be "earlier" so the accurate wording is "delay"
[843] The reason for splitting the 3 points clause 60.1.5 into two "employer's delaying events" is that the first two points are negative actions while the third point needs a positive action from the employer.

10- The project manager withholds an acceptance for a reason[844] not stated in the contract(clause 60.1.9)

11- The supervisor instructs for defect and nothing found(clause 60.1.10)

12- Supervisor's test or inspection causes a delay(clause 60.1.11)

13- Events on the risk of the employer stated in the contract (clause 60.1.14)

14- The project manager certifies take over a part of the works (clause 60.1.15)

15- The employer does not provide material, facilities or samples stated in the work information (clause 60.1.16)

16- The project manager notifies a correction to an assumption which he has stated about a compensation event (clause 60.1.17)

17- A breach for the contract by the contractor (clause 60.1.18)(Institution of Civil Engineers. ICE 2005: p.15)

4

39. CALCULATION OF EFFECT OF EVENT ON COST

39.1 If the Draft Impacted Working Schedule prepared in accordance with Clause 38 indicates that the progress of any part of the Works, or the productivity of any resources, has been, is being, or is likely to be affected and

39.1.1 either the delay to progress or suspension has caused, is causing or is likely to cause loss and/or expense to be suffered, or

39.1.2 any part of the Works is unlikely to achieve Substantial Completion by a Due Date,

the Contractor shall, no less than 5 Business Days before the next Progress Meeting,

[844] Except "acceleration" or "defect correction"

notify the Valuer, the Contract Administrator and the Listed Persons that loss and/or expense has been, is being or is likely to be so caused.

39.2 The Contractor shall include in its notice under Clause 39.1 or as soon afterwards as the information required becomes available

39.2.1 any details provided under Clause 36.2 and the date and reference of any notice given under Clause 36.1

39.2.2 the description of the Employer's Cost Risk Event

39.2.3 the valuation of the Employer's Cost Risk Event

39.2.4 subject to Clause 28.5, the quantification of any loss and/or expense caused by the Employer's Cost Risk Event

39.2.5 the identification of any document supporting the facts relied upon, and

39.2.6 any further information, documents or statements the Contract Administrator, Valuer and/or Listed Persons may require in order to verify the occurrence of the Event, or its consequences.

39.3 If the Contractor fails to provide the information required to enable the Valuer to calculate the amount of the Contractor's entitlement to compensation for disruption and/or prolongation, the amount shall be calculated after Substantial Completion using

39.3.1 the progress records and schedules produced under Clause 25.2, or (if none)

42. CONTRACTOR'S IMPROVEMENT OF PROGRESS

42.1 If the Contractor wishes to proceed or has proceeded at a greater pace than that identified in its currently accepted Working Schedule and Planning Method Statement, or has not used the Contractor's Time Contingency periods allocated against the Contractor's risks, and the Contractor does not wish to achieve an earlier completion of any Due Date, it shall no later than 5 Business Days before the next Progress Meeting allocate in the Working

Schedule one or more

Contractor's Time Contingency periods to replace any float created.

42.2 Any intended changes to the Working Schedule and/or Planning Method Statement required as a result of the implementation of Clause 42.1 shall be submitted to the Project Time Manager for acceptance, in accordance with Clause 34.

43. EMPLOYER'S IMPROVEMENT OF PROGRESS

43.1 If the Contractor is able to proceed at a greater pace than that identified in the currently accepted Working Schedule and Planning Method Statement as a result of instructions to omit, in whole or in part, any

43.1.1 obligations, or

43.1.2 Employer's Time Contingency,

but the Employer does not wish to achieve an earlier Due Date, the Contract Administrator shall no later than 10 Business Days before the next Progress Meeting instruct the Contractor to allocate in the Working Schedule one or more Employer's Time Contingency periods to replace any total float created.

43.2 The Contractor shall publish for acceptance its Draft Revised Working Schedule and Draft Revised Planning Method Statement taking account of any instructions issued under this Clause 43.

44. INSTRUCTED RECOVERY

44.1 If, as a result of delay to progress caused other than by an Event, the Contractor publishes a Working Schedule indicating that any part of the Works is likely to be

completed later than one or more Due Dates, the Project Time Manager shall consult with the Contractor about possible ways to overcome or avoid the predicted delay to the Due Dates. The Project Time Manager shall (using its discretion, but having regard to the consultation) advise the Contract Administrator stating whether, in the Project Time Manager's opinion, the Contractor may be instructed to

44.1.1 omit (in whole or in part), amend or re-allocate one or more of the Contractor's Time Contingencies identified in accordance with Clause 27.4

44.1.2 re-schedule one or more specific Activities, or sequence of Activities, or parts of the Working Schedule, to be carried out in a different order or sequence

44.1.3 change the resources to be applied to one or more specific Activities, and/or

44.1.4 take any other action necessary so as to illustrate how the Contractor's obligation to achieve any Due Dates is intended to be achieved.

44.2 Provided always that it is the Contract Administrator's opinion that it is practicable and reasonable for the Contractor to comply with the advice given under Clause 44.1 (and such compliance shall not be regarded as impracticable or unreasonable solely by reason of the likely cost of compliance), the Contract Administrator

shall within 5 Business Days of receipt of, and in accordance with, the Project Time Manager's advice instruct the Contractor to publish for acceptance a Draft Revised

Working Schedule and Draft Revised Planning Method Statement and the Contractor shall comply with such instructions at no cost to the Employer.

44.3 For the avoidance of doubt, the Contract Administrator may not instruct the Contractor to recover progress of the Works to a date earlier than any Due Date by means of proposals made or implemented under this Clause 44.

LIST OF ABBREVIATIONS

	The Abbreviation	**Meaning**	
1	All E.R.	All England Law Reports	
2	AS2124	The Australian Standard Form of Construction Contract *FédérationInternationale Des Ingénieurs-Conseils*	
3	B.C.	Before Christ	
4	B.L.R	Building Law Reports	
5	CIOB	The Chartered Institute of Building	
6	Con L.R.	Construction Law Reports	
7	Const. L. J.	Construction Law Journal	
8	FIDIC	International Federation of Consulting Engineers	
9	HGCR	Housing grants construction and regeneration Act 1996	
10	ICE	Institute of Civil Engineers	
11	JCT	The Joint Contracts Tribunal	
12	RIBA	Royal Institute of British Architects	
13	SCL	Society of Construction Law	
14	TCC	The Technology and Construction Court	
15	W.L.R	Weekly Law Reports	

LIST OF CASES

			189, 190, 194, 196
2		John Doyle Construction Ltd v Laing Management (Scotland) Ltd [2004] BLR 295	152, 189, 195
3		Scottish Power plc v Kvaerner Construction (Regions) Ltd 1999 SLT 721 (CSOH)	142
1	Egypt	Case no 4725 of the judicial year 42 judgment date 27/2/2001	134
2		Case number "33" judicial year 33, issued in 11 June 1967 Court of Cassation reports volume 18 page 956	213
3		Case number "106" judicial year 26, issued in 7 De. 1961 Court of Cassation reports volume 12 page 752	213
4		Case no 1965/6, Judgement date: 31st May 1962	55
5		Case no 62/2, Judgement date: 13th May 1961	55
6		Case no 1059/7, Judgement date: 25th May 1963	55
7		Case no 115 / 7 , Judgement date: 28December1963	58
8		Case no. 30952/56 – 31314/56 Judgment date 14th September 2010	78
9		Case no 882 / 10 , Judgement date: 2nd of March1968	80
10		case number 1006 judicial year 42 judgement date 4th November 1998	80
11		Case no 845 / 15 , Judgement date: 13June1996	81
12		Case no 1019 / 9 , Judgement date: 10th of December1966	82
13		Case no 767/11 , Judgement date: 5th of July1969	83
14		Case no 618/40 , Judgment date: 9th of February1999	83
15		Case no 1734/39 , Judgment date: 4th of April 2000	83
16		Case no 7353/44 , Judgment date: 12th of December 2000	83
17		Court, Case no 5959/44 , Judgment date: 26th of January 2001	83
18		case no 9983/41 judgment date: 6th of May 1997	83
19		case no 741 judicial (year number 27), judgment date 28th of May 1985	133
20		case no 4725 of the judicial year 42 judgment date 27th of February 2001	134
21		case number 27 of judicial year 67 judgment date 6th November 1997	201
22		Advisory report number 443 decided in 5th of April 1989 – approved in the 30th of April 1989 – files number 43 / 112 / 306 and 44 / 112 / 30 bye- law no. 1367 of 1998	
	Canada	Ford Motor Co. v. Armstrong [1915] 31 TLR 267	125
		Tannenbaum and Downsview Meadows Ltd v. Wright-Winston Ltd [1965] 49 DLR (2d) 386	81
	Australia	CARR V. J.A. BERRIMAN PTY LTD (1953) 89 CLR 327 High Court of Australia	143
	Hong Kong	W Hing Construction Co Ltd v Boost Investments Ltd [2009] BLR 339, (High Court of Hong Kong)	30

LIST OF FIGURES

CONTRACTS REFERRED TO:

1- Abu Dhabi government form

2- FIDIC form of construction contracts

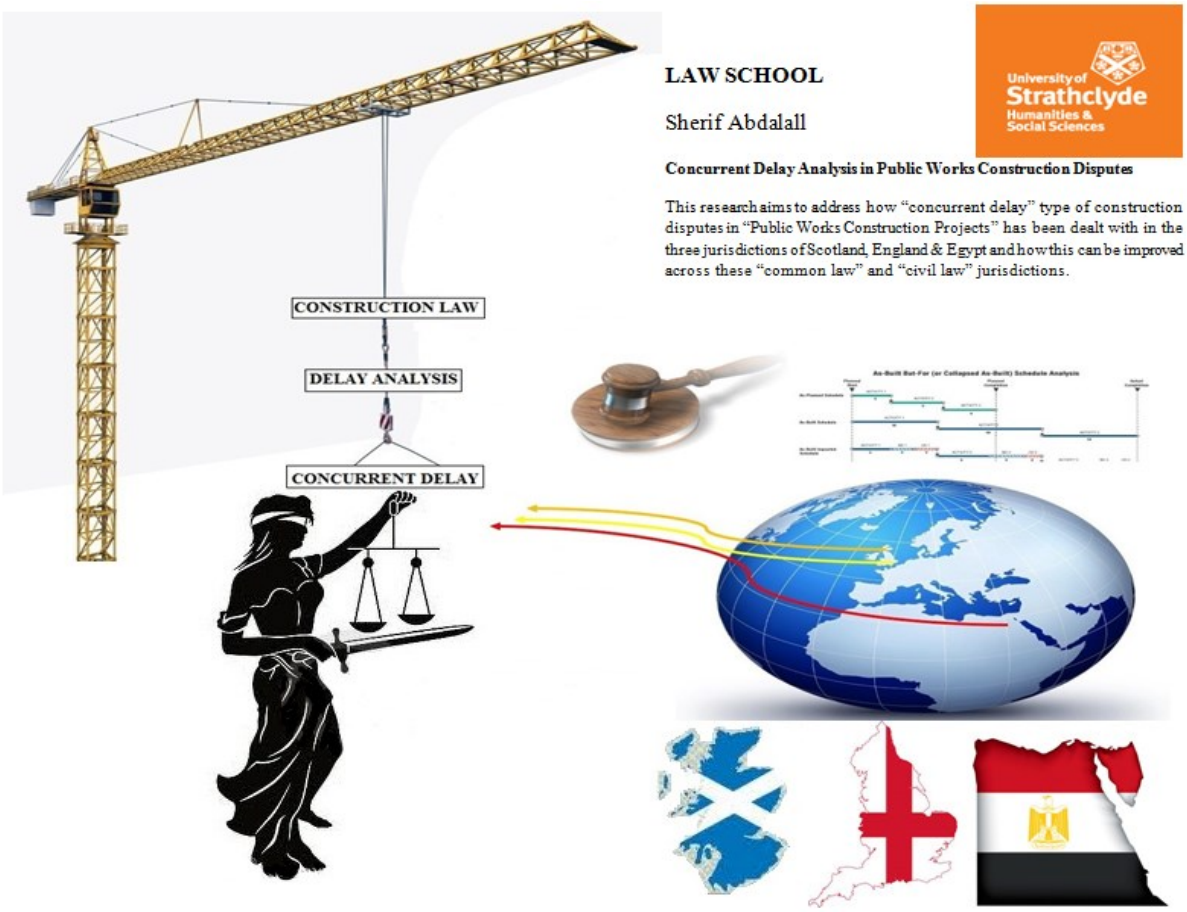
3- NEC3 form of construction contracts

4- CIOB complex project contract 2013

LEGISLATIONS REFERRED TO:

1- The Housing Grants, Construction and Regeneration Act 1996 (England)
2- The Public Contracts Regulations Act (Act no. 5 of 2006) (England)
3- Arbitration Act of 1996 (England and Wales)
4- Public Contracts Regulations (Scotland) Act (Act no. 88 of 2012)
5- Arbitration (Scotland) Act of 2010
6- Contributory Negligence Act of 1945
7- The Civil Code no. 131 of 1948 (Egypt)
8- The Public Tendering and Auctions Act no. 89 of 1998 (Egypt)
9- Act no. 48 of 2014 for amending the Public Tendering and Auctions Act no. 89 of 1998 (Egypt)
10- The bye-law of the Public Auctions and Tenders Act no. 89 of 1998 which has been issued by executive decision no. 1367 of 1998 issued by Egyptian ministry of treasury (i. e. Egyptian Chancellor of the Exchequer) issued in 6th Sept. 1998
11- Public Private Partnership (PPP) Act no. 67 of 2010 (Egypt)
12- The Egyptian Arbitration Act no. 27 of 1994
13- Act no. 9 of 1997 (an amendment to the Egyptian Arbitration Act no. 27 of 1994)
14- Building Act no. 119 of 2008 and its bye law no. 114 of 2009
15- The civil proof Act no. 25 of 1968
16- Local Governorates Administration Act no. 43 of 1979
17- The New Urban Communities Act no. 59 of 1979
18- The "Council of State" Act no. 47 of 1972
19- The Egyptian Environmental Act (Act no. 4 of 1992)
20- The United Nations International Convention on the Law of the Sea 1982

RESEARCH IMAGE



The "research image" of this research has been chosen as well as other images from a number of "research images" submitted from all departments at the University of Strathclyde to be shown at the "IMAGES OF RESEARCH 2012: AN EXHIBITION OF STRATHCLYDE'S IMPACT" at the "Paisley Art Centre" from 3rd to 17th December 2012. The research image of this research has been published at the university booklet for the event (last page). It also has been presented at the "HaSS PGR Research Day" of the faculty of Humanities and Social Science in the 30th of April 2013.

This is one of the posters on the board of the PhD student's room in Graham Hills Building during the first year of this research

THE AUTHOR PAGE

CURRICULUM VITAE for the PhD VIVA

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POSITION

Judge
At the "Contracts Bench" of the "Court of the Administrative judiciary" in Alexandria, Council of State
(1st October 2016-Current Position)

Judge
At the "Government Personnel Bench" of the "Court of the Administrative judiciary" in Ismailia, Council of State
(1st October 2014-30th Sep. 2016)

Junior Judge
At the Disciplinary Court, Cairo, Council of State
(1st October 2009 – 30 Sep. 2011)

Judicial Commissioner
At the "Contracts Bench" of the "Court of the Administrative Judiciary", Cairo, Council of State
(1st October 2000 – 30 Sep. 2009)

QUALIFICATIONS

2013 ILM - Level "2" Certificate in Enterprise - The British Institute of Leadership & Management (UK)
2008 Master degree in "Construction Law" (UK)
2001 Master degree in "Public Law & Arbitration" (Egypt)
1999 Bachelor degree in Law with "honour" degree ranked 1st of the batch in the first two years and 2nd of the batch in the four years altogether of the LLB degree (Egypt)
1995 Graduated at the Egyptian prestigious secondary school for the most gifted students
(Only 72 students are accepted every year based on a national IQ exam. Since its establishment in 1954, the school used to be *the only* school of this kind in Egypt until the establishment of a second similar school in 2011 by the late Prof. Ahmed Zewail.)

AWARDS

2013 "Certificate of Merit" runner up in the Enterprise Academy final competition 2013 which was organized by the Business School of the University of Strathclyde Glasgow
2006 Chevening Scholarship to study for a Master degree at a British university from the British "Foreign & Commonwealth Office"
2005 A Prize from the Egyptian Council of State together with the United Nations (UN-DP) for obtaining the fifth place among the judges in an internal competition organized for the judges of the Egyptian Council of State on Human Fundamental Rights matters
2001 Prize of Scientific Excellence from the Egyptian "International Law" Society
2000 Prize of the late Professor Raouf Ebeid from his trustees (in Criminal Law)
1999 Medal of Excellency from the Egyptian Presidency (for being one of the best graduates in the country in 1999)
1997 Certificate of Merit from the Egyptian Ministry of "Endowments"
1994 Certificate of Merit from the Egyptian secondary school for the most gifted students for building a 120 cm tall robot from scratch which was able to perform "multi-tasks" other than

walking (Physics, mechanical engineering and robotics was an the favourite area of study before making a major switch in 1994 to study Law)

CONFERENCES (presentation)

Urban Ecologies Doctoral Seminar
(Presentation on 'How to use the legal system to better build cities from scratch')
13-15 June 2013 (Copenhagen, Denmark)
British Society of Legal Scholars conference
(Presentation on 'Concurrent Delay Analysis in Public Works Construction Disputes: A cross-jurisdictional study of Egypt, Scotland and England')
3 – 5 September 2013 (Edinburgh, UK)
Fourth International Construction Law conference
(Presentation on 'Public Works Construction Disputes: The Egyptian civil law approach')
6 May 2012 (Melbourne Australia)

CONFERENCES (attendance without presentation)

British Society of Legal Scholars conference
1 – 4 September 2015 (York, UK)
Opportunities for Analytics in Future Cities Research,
16 September 2014 (Glasgow, UK)
Enterprise, Creativity and Entrepreneurship Doctoral training course
19-21 March (Glasgow, UK)
Design in Action Doctoral training course "A Creative Enlightenment"
20-21 November 2013 (Aberdeen, UK)
Design in Action Legal Chiasma Doctoral training course
6-7 December 2013 (Dundee, UK)
The Comparative Urban Law Conference of the "Fordham Urban Law Centre"
30 June 2014 (London UK)
The Postgraduate Colloquium on Environmental Law and Governance
6 June 2013 (Glasgow UK)
A conference on the United Nations Treaty on the international Sale of Goods
14 – 15 September 2005 (Cairo Egypt)
A conference on the UNICETRAL Model Arbitration Law
12 – 13 December 2004 (Cairo Egypt)
A conference on the new trends of the transactions of the online electronic commerce
17 – 19 Jan. 2004 (Cairo Egypt)
A conference on the "WTO conventions" effect on developing countries
20 December 2003 (Cairo Egypt)

Courses

Course on "Contract Law" for the Scottish Judges and Sheriffs at the Judicial Institute for Scotland
20 September 2013 (Edinburgh UK)
Course on "Case Management" for the Scottish Judges and Sheriffs at the Judicial Institute for Scotland
9-10 December 2013 (Edinburgh UK)
GRAD School Training Programme
27 - 29 June 2012 (Glasgow, UK)
A training course on the "Construction Contracts – the legal aspects and the practical issues"
17 – 21 December 2005 (Cairo Egypt)
A training course on "Human Right and the Human Fundamental Rights"
12 – 14 June 2005 (Cairo Egypt)
A training course on "Crimes of the public money within the remit of the transactions within the banking system"

13 – 22 March 2004 (Cairo Egypt)
A training course on "Judicial Procedures and Judicial traditions"
24 October – 22 December 2004 (Cairo Egypt)
Seminar on Intellectual Property Protection and the role of the Administrative Judge in enforcing protection
10 - 14 October 2004 (Cairo, Egypt)
Pathways to Higher Education Cairo University Training Program
17 April – 3 June 2004 (Cairo, Egypt)
Negotiation and Contracting Skills training programme of the Egyptian ministry of foreign trade
29 Feb. – 4 March 2004 (Cairo, Egypt)
Conference on the protection of Intellectual Property in the digital age
Jan 2004 (Cairo, Egypt)
A training course on the Egyptian New Labour Law
3 – 11 March 2004 (Cairo Egypt)
A training course on "Money Laundry"
6 - 11 December 2003 (Cairo Egypt)
A training course on the legislative and contractual framework for the "Infrastructure Construction Projects" financially managed by the private sector (BOT-BOOT)
20 December 2001 (Cairo Egypt)
A training course on the "International Construction Contracts"
31 March – 8 April 2001 (Cairo Egypt)
A training course on "The Judiciary and the Law"
17 - 25 March 2001 (Cairo Egypt)

Other matters

Sherif Abdalall has been invited by the British Electoral Commission to act as an "Observer" during the Scottish Referendum on Wednesday the 17th of September 2014.

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