VALUATION OF VARIATION CLAUSES IN LUMP SUM CONTRACTS

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ABSTRACT

بنود الأوامر التغييرية هامة في عقود البناء لأنها تمكن المالك من طلب اي تغيير على الأعمال محل العقد. بنود تقييم الأوامر التغييرية تكاد تكون على نفس درجة الاهمية لأنها تبين كيف يمكن احتساب قيمة اي أمر تغييري صادر بموجب العقد. من المفترض أن يعمل بند تقييم الأوامر التغييرية بشكل متجانس مع اي امر تغييري يطرأ خلال مدة العقد. هذه الرسالة تناقش اشكاليات عمل بنود تقييم الأوامر التغييرية الدارج استخدامها (أطلق عليها هادسون بنود الـ shopping list) و عدم وجوب استخدامها في العقود ذات القيمة المقطوعة .

Variation clauses in construction contracts are necessary to enable the employer initiate any change in the agreed contracted scope. Valuation of variations clauses are almost equally important as those describe how any properly initiated variation can be calculated. The valuation of variations clause should work consistently with any possible variation that may occur during the course of the contract. This dissertation discusses how commonly used valuation of variation clauses (the shopping list clauses as called by Hudson) do not work and should not be used with lump sum contracts.

PREFACE

Standard forms of construction contracts have certainly made a huge contribution to the development of the construction business all over the world. Starting with the ICE[1], and FIDIC[2], reaching to the JCT[3] and the NEC[4] in UK, and the AIA[5] in the United States, these forms of contract have provided guidance and help to developers all over the world on how to contract and build.

With time, standard forms became a basic part of construction business and the approach that any standard form have in respect to a particular matter in construction became the approach of construction specialists themselves. In other words, standard forms have formed and standardized the professional conciseness in the countries / regions they are issued or spread in. If you speak to a practitioner in the Middle East, you will likely find him / her much aware of the FIDIC forms of contract and his / her opinion in respect to any question in construction will be affected with FIDIC's approach to the same. In UK, JCT and NEC have the same effect and in USA, the AIA have the same as well.

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[1]The ICE Conditions of Contract (CoC) were published by Thomas Telford on behalf of the Institution of Civil Engineers (ICE), the Association of Consulting Engineers (ACE) and the Civil Engineering Contractors Association (CECA). The first edition was published in 1945 and the seventh and final edition was published in 2001, https://www.ice.org.uk/about-us/our-history accessed on 13 June 2016.

[2]FIDIC is an acronym for Fédération Internationale Des Ingénieurs Conseils - i.e. the French for the International Federation of Consulting Engineers). The organisation was founded in 1913 by three countries each wholly or partly francophone (being Belgium, France and Switzerland).
http://fidic.org/about-fidic/federation/fidic-history accessed on 13 June 2016

[3]The Joint Contracts Tribunal, also known as the JCT established in 1931. The current operational structure comprises 7 members who approve and authorise publications. They were listed by the JCT in 2014 as the British Property Federation, the Contractors Legal Grp Limited, the Local Government Association, the National Specialist Contractors Council, the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors and the Scottish Building Contract Committee. In 1998 the JCT became a limited company.
http://corporate.jctltd.co.uk/about-us/ accessed on 13 June 2016

[4]The first NEC contract – then known as the 'New Engineering Contract' – was published in 1993. It was a radical departure from existing building and engineering contracts, The second edition, called the NEC Engineering and Construction Contract, appeared two years later. A decade of extensive international use followed, culminating in the development and launch of the NEC3 contract suite in 2005. The suite was updated and enlarged to 39 documents in April 2013.
https://www.neccontract.com/About-NEC/History accessed on 13 June 2016

[5]http://www.aia.org/about/history/AIAB028819 accessed on 13 June 2016

Considering that standard forms are mostly drafted by professionals or even scholars in their fields of expertise, practitioners usually rely on these forms and comfortably contract using them. However, in some cases, those standard forms may need fine-tuning to cater to the exact intentions of the parties in contract. This fine-tuning is mostly carried out by practitioners and not by the issuing bodies / institutions. With time, these bodies and institutions like FIDIC found themselves in need to issue guides, memoranda, supplements to their various forms of contracts to provide assistance to practitioners in amending the general conditions of the standard forms. Nevertheless, disputes continue to arise as a result of improper amendments to the general conditions.

As perfection is fiction, standard forms have their own flaws as well, and FIDIC forms of contract – like other standard forms – have been subject to heavy criticism[6] for many of its clauses over its various editions. Such criticism even came from well-connected icons to FIDIC like Dr Nael Bunni[7]. In some occasions, FIDIC found itself forced to attend to a specific matter that caused lots of controversy worldwide like the enforceability of the DAB decision as set out in Sub-Clause 20.7 of its 1999 Red Book where FIDIC issued its 2013 Memorandum[8] in response to the decision of the famous case of Persero[9] in Singapore.

In UAE, and as a matter of law, a judge would first examine what has the parties agreed upon first before opening the merits of a case. If for example a party has expressly agreed to waive a specific right in contract, then a dispute has arisen in respect to that right, then, unless such waiver breaches a mandatory rule of law, the judge would most likely just enforce the contract agreement. Similarly, if the parties have agreed on a specific mechanism to value variations in their contract and that mechanism turned out unsatisfactory to either parties, and a dispute has arisen and reached to a judge, the judge would most likely make sure that any disputed valuation

[6]John Uff, The Clause 12 Nightmare, New Civil Engineer, 6 July 1989 (as an example)
[7]Nael Bunni, The FIDIC Forms of Contract, Blackwell Publishing, Third Edition, 538
[8]FIDIC Guidance Memorandum to Users of the 1999 Conditions of Contract dated 1 April 2013
[9]PT Perusahaan Gas Negara (Persero) TBK v CRW Joint Operation [2010]

has been carried out in good faith in accordance with the mechanism set out in the contract. In other words, it is – generally – not the role of the court to correct any irregularities in the conditions of any contract; furthermore, it could be the role of the court to enforce such irregular conditions of contract so long as they do not contradict with any mandatory rule of law or public policy or custom.

Evidently, the possible flaws in any standard form of contract will not be corrected in courts simply because these standard forms have acquired the power of contract and regardless being standard, and have been considered to be the express choice and intention of the parties. That is why these flaws take years to be heard and remedied.

Nevertheless, the more developed the legal system gets, the more developed and rectified the standard forms get too. The development the UK has experienced in the nineties[10] of the last century with enacting the Housing Grants and Construction Regeneration Act 1996 has caused the evolution of the JCT, the NEC, and the introduction of the statutory adjudication. The development of the UK's case law has provided a solid back to the construction practice there.

In UAE, which is a leading construction market, the local legislation has indeed provided a safe haven to assets within the MENA region; however, the construction business in UAE has developed in a far faster pace than the development of its civil code[11]. The civil code only recognizes an employer, architect, contractor contract and has no regard till now to the role of the project manager. The civil code does not give regard to the various documents forming the construction contract (like the bill of quantities and the soil report) and therefore not able to precisely address the real questions the construction business may have like the enforceability of a DAB's decision or the valuation of variations in lump sum contracts.

If the law in UAE gave regard to the various contract documents and parties' roles in today's construction business, the practice will just evolve and disputants will receive

[10] Sir Michael Latham, Constructing the Team, Final Report for the Government / Industry Review of Procurement And Contractual Arrangements in the UK Construction Industry, July 1994

[11] UAE Federal Law No. 5 of 1985, Civil Transactions Law

more convenient decisions based on real understandings to the questions brought forward to the court.

It is the aim of this dissertation to highlight a misuse of the valuation clause in one of the famous standard forms of contract; FIDIC and the relevant rules of law in UAE and how proper drafting of such clauses, and collaboration between people of law and people of practice in construction is highly required.

INTRODUCTION

Any construction contract whether standard or bespoken includes a set of various documents that builds up the parties' agreement; the basics are conditions of contract, specifications, bill of quantities, drawings and soil report. There may be other documents like employer requirements (in design and build contracts) or special codes of execution practices in special types of contracts.

During construction, the effect of each and every contract document reveals and materializes, however, the clearest effect the contract documents may have is when the parties discuss variations. The process of valuing the varied works done by practitioners in the construction field mainly depends on the procedures prescribed in the contract documents.

It is a matter of fact that every contract document has a certain purpose, forms part of the parties' obligations, and differentiates between their default and relief. Therefore, the architect's / engineer's choice to use a certain contract document and not the other (perhaps to abide to the hierarchy of documents set out in the contract) for the purpose of valuating variations may have significant effects on the parties' rights.

If a contract is based on a standard form, the parties should make sure that the general conditions of such form do not contradict with their intentions. Basically if a standard form is a re-measured contract, the parties should carefully amend some clauses if they want to contract on lump sum basis. Simple deletions and alterations may not suffice in this respect. If such conversion is carried out in a superficial manner not giving thorough consideration to all relevant aspects may result in irregular results of clauses application. A very clear example on such irregularities may appear from the application of the valuation of variations clause in such case.

In this dissertation, the drafting of valuation clauses in lump sum contracts will be discussed and contrasted with practice. I will discuss how incorrect application of a valuation clause of a standard form of contract may result in an adverse effect on the

parties' rights if such incorrect application is applied to value an omission in a lump sum contract; and how the law in UAE addresses valuation of variations and further suggestions in this regard.

In writing this dissertation, it has been seen required to first provide an introduction about the various contract documents and a view on their legal relevance. Such introduction would be very important for readers from a more legal background with relatively little knowledge about the construction business. The dissertation then discusses the principle of lump sum and its application on construction contracts which is very important to be regarded in considering valuation of variations and especially omissions in lump sum contracts. The dissertation then addresses the variation provision in construction contracts in general; why a variation clause is required and the common problems in its drafting, also addressing the fundamental differences between additions and omissions and the extent to which an employer may instruct variations. The dissertation then discusses the adverse implications resulting from applying badly drafted valuation of variation clauses considering valuing of omissions as a case study. Finally the dissertation gives an opinion on the correct valuation method of omissions in lump sum contracts and accordingly how valuation of variation clauses should be drafted in such contracts. Finally, the dissertation concludes the matters above mentioned and suggestions are given on how to develop the local law in the UAE to overcome the related disputes to the subject matter.

Considering that the jurisdiction considered in this dissertation is the UAE, the standard form of contract considered herein is the 1999 FIDIC red book due to its popularity in UAE.

1. CHAPTER ONE: CONTRACT DOCUMENTS

1.1. MUQAWALA CONTRACT

UAE law recognizes construction contracts as nominate contracts whereby one of the parties thereto undertakes to make a thing or to perform work in consideration which the other party undertakes to provide. It also requires that a construction contract is to include a description of the subject matter of the contract, and particulars must be given of the type and amount thereof, the manner of performance, and the period over which it is to be performed, and the consideration must be specified.[12]

In other words, law requires that contract documents to cover five main issues:

What is the scope of work (description of the subject matter),

What is the project's type and importance (the type and amount thereof),

What is the agreed method of construction (the manner of performance),

What is the construction program (the period over which it is to be performed) and,

What is the contract price (and the consideration must be specified).

It is most likely that the legislator – in drafting the above requirements – has been thinking of what logically should be the minimum requirement of details to be included in a construction contract in a country like the UAE which is remarkably advanced in the real estate sector.

These special requirements of law for any construction contract are not always possible to be concluded verbally, therefore, these requirements may be considered

[12] Articles 872 and 874 of the UAE Civil Transactions Law

exceptional[13] from the general law of contract in UAE that commercial contracts can be concluded verbally[14] and that draws our attention to the special importance the legislator has considered for construction contracts as a special case.

1.2. BIDDING DOCUMENTS

Technically speaking, construction contract documents start to form as early as the bidding stage when the employer actually decides to build its project, so he assigns an engineering expert – usually called the architect / engineer – to prepare the relevant documents. It is said that bidding documents are the means by which a designer's intentions are conveyed to the employer, the statutory authorities, the contractor and its subcontractors[15].

An engineer aims in issuing the tender / bidding documents – in the form and volume it is issued – at being able to bind the successful tenderer with the mere reply it issues in response to these tender documents. The reply itself i.e. the tender; will accordingly be construed as an offer that if accepted by the employer, shall immediately create a legally binding contract[16].

Tendering process takes place in phases[17]. It is notable that only the last phase of such is concluding the contract. Therefore, it is of major importance that the documents issued by the employer – via the engineer – to the competing tenderers during the various tender stages do not include any express or implied legal obligation on the part of the employer for any aspect of the tender. For example, the costs incurred in

[13]Article 128 of the UAE Civil Code permits nominate contracts to have different provisions from those provided for the general rules of contract law
[14]Article3 132 and 133 of the UAE Civil Code
[15]John Murdoch & William Hughes, Construction Contracts Law and Management, Fourth Edition, Taylor &Francis, 2008, page 142
[16]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 412.
[17]Eric Teo, Tendering Tips and Traps, Construction and Engineering, March 2009

producing tenders, risks associated with a site visit; promise to accept the cheapest tender … etc.

1.2.1. INSTRUCTIONS TO BIDDERS

As mentioned above, the bidding / bid documents – at large – are usually produced in a manner that automatically bounds the preferred tenderer to carry out all of the obligations so mentioned in the bid documents the moment its tender becomes selected. The document titled "instructions to tenderers" is a document that sets out the guidelines on which any tenderer should abide to for its tender to be considered for selection. Should a tender becomes selected, the selected tenderer will be bound to these instructions whether or not its offer has allowed for such or otherwise.

An example on the outmost importance of the instructions to bidders document[18] is the guidelines for pricing. Most of these instructions provide that any item in the bills of quantities that is left without a unit rate shall be considered as included elsewhere in the tender offer. If a tenderer did not consider such provision and left an item – or more – without rates, then, if its tender became selected, it would be bound to carry out this item / these items without extra cost, and the method of certification and payment thereof shall depend on the type of the contract whether lump sum or re-measured. If that tenderer realized such error – after its tender became selected – and refused to execute a contract agreement with the employer on this basis, then, its tender bond may be exposed to confiscation.

Another example of the importance of the instructions to bidders document is the site visit clause. Most instruction to bidders provide that the tenderers should visit the proposed site or cause such visit by a professional person for the purpose of satisfying itself with any physical condition on site, ease of access, extent of completed work (if

[18]Simon Tolson, Look before you leap - pre-contract safeguards, Annual Review 2010/2011, Fenwick Elliott, http://www.fenwickelliott.com/research-insight/annual-review/2010/pre-contract-safeguards accessed on 2nd August 2016.

any) … etc. This clause usually mentions that the successful tenderer shall not be entitled to any extension of time or additional cost as a result of any delay / difficulty resulting from the existing conditions that the successful tenderer should have satisfied itself with at the time of tender.

1.2.2. TENDER DRAWINGS

The importance of the tender drawings or drawings in general in construction is that they tell what any other contract document cannot tell. For example, you cannot describe the dimensions of a curved shape on a building's façade in the specifications or the bills. In fact, if you do, it would be very confusing. In the drawings, the designer can freely draw what it envisages for any item of work to look like.

A contractor – while carrying out the works – should actually make sure that what it builds is a mirror to what is in the drawings in all respects.

Nevertheless, at the time of tender, the designer's view / manifestation of the project's design may be incomplete or not detailed enough to be actually built. In practice, this does not prevent employers from inviting tenderers to bid; however, the risk of variations here is very high, and the precision of taken-off quantities may become questionable – except for mere mistakes – which are considered to be a real problem in lump sum contracts. In addition to variations, if the procurement method is design, bid, build, much confusion may occur as the designer may discover – as the work is going on – that parts of the design needs to change fundamentally.

It is a matter of fact that the more complete the tender drawings are, the more accurately the tenderer can price the works, and the less likelihood for variations to come up. Drawings are categorized into many types like structural drawings that show the structural system on which a project stands and are very relevant when a

question under article 880[19] relating to decennial liability arises; architectural drawings show the expected shape of the project when it is finished i.e. the elevations, the facades, the types of wall and floor finishes, etc.; electrical drawings show how the project should be connected to electricity; plumbing drawingsshow the water supply and drainage system of pipes and inspection chambers that serve the project; and HVAC drawings (Heating, Ventilation and Air Conditioning Drawings)show the system of ventilation and air conditioning for the project. In projects in the gulf area, usage of the whole of the project may depend on the correct design and execution of this system and consequently affect the beneficiary occupation.

1.2.3. SPECIFICATIONS

As it is practically impossible to provide all information required for every element of work in the drawings in respect of quality and method of construction, Specifications are said to be a supplement to the drawings[22]. They describe in words the nature of works required, the quality of materials and workmanship to be used, and methods of testing to be adopted to ensure compliance. The specification usually starts with a general description of the works to be constructed, general requirements for submittals' procedures, testing and samples, followed by all relevant data concerning the materials and systems to be incorporated in the works. The general requirements may also set out the formats and procedures of any submittal to be made by the contractor. General requirements may also state the format in which the contractor submits its program, and method by which a contractor can submit a claim for extension of time whether in time impact analysis or otherwise (if a different method is mentioned in the conditions of contract, then hierarchy of documents will decide).

[19] Article 880 of UAE Federal Law No. 5 of 1985

[22] I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 424

Specifications – being supplemental to the drawings – should be read in conjunction with the drawings. It is important to note here that; where it is expressly stated in the instructions to tenderers / conditions of contract that the specifications and the drawings are to be read in conjunction with each other, the absence of any necessary information from the drawings does not provide entitlement for variation if the same is provided in the specifications and vice versa. Hierarchy of contract documents plays a major role here as will be seen later herein.

Specifications sections are usually organized according to standard format of categorization similar to that the Bills of Quantities.

1.2.4. BILLS OF QUANTITIES / SCHEDULES OF RATES

The use of these depends mainly on the type of contract whether lump sum or re-measured. In lump sum contracts, the usage of such schedules is basically for the purpose of valuation of variations and they are mostly called – in this case – "schedule of rates". In re-measured contracts, the quantities become of major relevance and the description of the items as well. In re-measured contracts, these are actually called "bills of quantities"[23] and provide a basis for measuring the work and evaluating the contactor's dues based on comparing the quantities mentioned in the bills with those actually carried out.

Schedules of rates or bills of quantities are itemized lists covering the works to be constructed, against each item of which the tenderer (proposed contractor) has to quote a price. They show the quantity of each item, its unit of measurement, the rate per unit of quantity quoted by the tenderer, and the consequent total price for that item. Some bills contain many hundreds of items, classified by trade or according to a standard method of measurement; other bills for smaller projects contain a less number of items.

[23] I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995

A well drafted schedule of rates / bill of quantities should impose that the rate provided for any / each item is inclusive of any material, manpower, equipment, accessory, compliance with all relevant regulation, overheads and profit which are necessary to carry out the mentioned item in full accordance with the bid / contract documents.

A well drafted schedule of rates / bill of quantities should relate to the extensive description the specifications provide for the items listed thereto and also to the drawing (s) that show the item being listed.

Whether a contract is lump sum or re-measured; the more precise and clear a schedule of rates / bill of quantities is; the more clear the obligation and liability on each party of the contract becomes.

Considering lump sum contracts, it is not uncommon that these include provisional sums. These are specific packages that either their design is not complete at the time of tender / contract, or that the employer is not yet sure if it wants to carry it out or not. It is clear that the nature of such category of items makes them subject to re-measurement; therefore, their inclusion in a lump sum contract actually makes it a "mixed contract"[24] instead of merely a lump sum contract. However, in practice and in the context of this dissertation, lump sum contracts that include provisional sums are still called "lump sum" contracts.

It is worth mentioning that the origin of the term "provisional sum" came from the corruption of the term "provide a sum of ### amount"[25] which better explains its purpose.

Practically, the standard method used to classify the bills as well as the specifications is the CSI masterformat, which categorizes all building activities into divisions.

[24]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995

[25]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995

1.2.5. CONDITIONS OF CONTRACT

Considering the automatic inclusion of the provisions of supplementary rules of law (articles of law that start with "unless agreed otherwise ...") in any construction contract where the contract is silent on such provisions, it is crucial for the parties of any construction contract to list out – in the conditions of contract – as much details as possible of their agreement.

In UAE, if a contractor entered into a contract with an employer and they wrote down the contract price but did not ascertain any payment terms in the conditions of their contract, the consideration of such contract will be – pursuant to Article 885 of the civil code – only payable upon the full completion of the works absent any custom that provides for the contrary. The parties of a construction contract can agree against the provision of this rule of law if they so write in their agreement because this article states that "unless there is an agreement or a custom to the contrary". The same issue was discussed in UK in the case of Hoenig v Isaacs[27] where Lord Denning referred to the conditions of the contract in question to determine on the matter of the payment terms.

Also in UAE, decennial liability is known to be a matter of public policy, however, if two parties are engaged in a construction contract in the form of the FIDIC yellow book, it is arguable[28] that unless stated in the particular conditions of contract, the contractor may escape decennial liability as the prerequisites of article 880 of the civil code will not apply on the contractor as provided in the FIDIC yellow book.

Although being part of the construction contract, the conditions of contract represents the main and primary document of the contract. In most contracts, the conditions form volume 1 of the overall documents.

[27] Hoenig v Isaacs [1952]

[28] Decennial Liability in Construction: Law and Practice in the United Arab Emirates, Ayman Masadeh

1.2.6. CONTRACT DOCUMENTS – CONCLUSION

As described above, each and every document of a construction contract has its own purpose. While valuating a variation, the impact of interpreting or misinterpreting any contract document will certainly affect the parties' legal rights. Particularly in valuing omissions, the contractor's rate build up should be examined before determining the variation. This should involve examining the involved requirements set out in all of the contract documents in respect of the works being omitted.

Variation clauses are the key to set out the parties' legal rights when variation triggers, however, disputes related to variations still arise regardless the presence of such variation and valuation clauses. In many cases – as will be seen later herein – such disputes arise because the parties did not expect a certain situation to occur when agreeing on the valuation of variations clause.

2. CHAPTER TWO: MEANING OF LUMP SUM

2.1. FIXED PRICE

The term "fixed price" is sometimes considered synonymous with the term "lump sum". In fact, a fixed price contract may not necessarily be lump sum, it could be a re-measured contract where the rates are fixed against rise and fall of various material prices, fluctuations resulting from change in inflation … etc. This does not make these contracts lump sum[29].

From the words, this term relates to merely fixing the "price". However, the word "price" herein should not be confused with the whole contract price as it just relates to the rates. This leaves the quantities out of question and that's where the difference between the mere terminology of "fixed price" and "lump sum" comes from. It is to be noted that a lump sum contract is not just a contract under which the errors in quantities are the contractor's risk. It will be seen later herein that the term "lump sum" includes even more provisions than just that.

2.2. ENTIRE CONTRACT

Article 885 of the UAE civil code as well as the decision in Hoenig v Isaacs referred to in Section 1.2.5confirm that construction contracts are recognized as "entire contracts". The term "entire contract" simply means a contract under which the performance must be completed in its entirety before the entitlement for consideration arises. It is contrasted with the term "severable contract" which means that there are mutual obligations on either party of the contract that must be fulfilled simultaneously[30].

[29] I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 420

[30] Ditto, page 475

Entire contracts can be rescinded by any of the following options

Entire completion: where the performance is entirely carried out, and the consideration thereto is fully paid.

Agreement: where both parties agree to terminate the contract before the obligations thereunder are completed.

Court order: A judge – in UAE – is given the power to terminate a contract[31] in special cases if he deems appropriate.

Law: In cases of force majeure[32], or other incapability for which the contractor has no role in[33] law provides for automatic cancellation of a contract so experiencing.

The conditions above mentioned – though more than one – are limited and do not provide a back door for either parties to escape their respective obligations under a contract which is in fact a matter of public policy where people are required to abide to their agreements.

On examining the provisions of Article 885 above mentioned, one would wonder how it could be possible for a contractor to finance a job – that could be extremely costly – and become entitled for the consideration only upon completion? If a contractor actually has such financing abilities, why it doesn't build projects for its own instead of working for employers? What would happen if such provision was not there, and any contractor could terminate its construction contract with more ease?

To answer the above questions, we have to imagine contractors starting with excavations and concrete works and then deciding not to complete their performance for any reason. We would be left with numerous abandoned projects with only standing concrete structures of huge cost but without any value. What would be the value or the need for a concrete structure that costs10 million dirhams for a proposed

[31]Articles 893 and 272, Para [2] of the UAE Civil Code
[32]Article 273, para [1] of the UAE Civil Code
[33]Article 893 of the UAE Civil Code

shopping mall project if it is just concrete? These millions would be just a waste. Therefore, the provision of law to categorize construction contracts as entire contracts is clearly understandable.

However, practically, this is not the case. Even the smallest construction contract nowadays has provisions for interim payments. Such provisions make these contracts automatically subject to mutual fulfilment of obligations (performance and consideration)[34] i.e. if an employer – under such contracts – stops or delays a due payment, the contractor is automatically entitled – in a FIDIC contract for example – to either slow down the work or suspend it or even terminate it[35]. This is certainly a departure from the principle of entire contract. Does this make such construction contracts severable? In fact yes, however, the principle of entire contract may still apply to the last payment of such contracts. Some construction contracts that include provisions for interim payments provide that the final payment should not be less than 10% of the total contract price (other than retention) and that in order to make use of the principle of entire contract to the maximum extent. An employer – under such contracts – has the right not to release the whole of the final payment if there is any defect in the works regardless the relation between the cost of remedying these defects and the amount of the final payment. It is to be noted that an employer's such usage of the principle of entire contract on the last payment is subject to its acceptance of the works perhaps by occupation, or its application of delay damages if any. If an employer elects to apply delay damages on a contractor[36] or actually occupies the works[37], its right not to release the final payment (minus the amount of the delay damages) may cease to exist as such would be unjust enrichment[38].

[34]Article 247 of the UAE Civil Code
[35]Sub-Clauses 16.1 and 16.2 of the FIDIC new Red Book
[36]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 476
[37]Hoenig v Isaacs [1952]
[38]Ben McFarlane and Robert Stevens, In defence of Sumpter v. Hedges, Law Quarterly Review, 2002

The above described departure or perhaps development of the principle of entire contract into the doctrine of substantial completion is quite similar to the development of the principle of privity to the contractual rights of third parties[39].

Notwithstanding the above, the principle of entire contract can still be made use of even if provisions of interim payments are included in a construction contract. This can be done by introducing milestones or sections whereas payments of specified portions of the contract sum become due only upon the contractor's successful completion of such milestones or sections of the works. Here the principle of entire contract can apply on these milestones or sections of the work and the employer can avoid being exposed to the substantial completion principle.

The term "entire contract" is more of a legal expression than a technical one. Saying that a contract is just lump sum would amount to technical characteristics relating to quantities and certifications, however, saying that a contract is entire will attract the related legal rights and obligations of the parties under such. Nevertheless, practically speaking, an entire contract should be a lump sum contract as will be explained in the next Section.

If two parties agree to enter into a contract that has an entire nature as above explained, the need to list down each and every item of work in the bill of quantities may be of less or no importance as the contractor would – in anyway – be required to complete the works as shown in the drawings and all the other contract documents in return of the lump sum payment. For the purposes of valuation of variations and especially omissions, poorly drafted bill of quantities may be a big problem.

[39]Cambridge Law Journal, Privity of contract: the impact of the Contracts (Rights of Third Parties) Act 1999, 2001 and Article 254 of the UAE Civil Code

2.3. LUMP SUM CONTRACT

A lump sum contract is a one in which the difference – if any – between the contract quantities and actual quantities carried out is not addressed[40]. Under a lump sum contract, the contractor will be paid for the contract works as required by all of the contract documents according to the price mentioned therein whether or not the contractor had to expend extra cost than that prescribed in the contract to fulfil any of its provisions. The contractor will also be paid according to the price mentioned in the contract even if the contractor has expended less cost than estimated to fulfil its obligations under a lump sum contract.

Considering the above definitions of entire contract and lump sum contract, it is noticed that an entire contract should be a lump sum contract but a lump sum contract may not necessarily be an entire contract[41].

A lump sum contract may provide that interim payments are due to the contractor on monthly basis against claimed work done under the same. This is not an entire contract; it is a severable contract but is a lump sum contract.

However, and considering the explanation made in Section2.2, a severable lump sum contract may still have some entire contract power in respect to the last payment if sufficient wording is provided in the contract.

When to decide to go for a lump sum contract? FIDIC advises[42] that a lump sum contract is suitable for projects where the design has been developed by the employer to a sufficiently complete stage that, from the information supplied in the tender documents, the contractor can prepare all drawings and details necessary for construction without having to refer back to the engineer for clarification.

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[40] Dr.Haris Deen, The Lump Sum Construction Contract What seems to be the problem?, January 2011, http://harisdeen.com/blog/legal/the-lump-sum-construction-contract-what-seems-to-be-the-problem/ accessed on 1st August 2016.

[41] Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, page 101

[42] FIDIC, Supplement to Fourth Edition 1987 of Conditions of Contract for Works of Civil Engineering Construction Reprinted 1992 with further amendments, Section B, Payment on Lump Sum Basis.

In UAE, although most construction contracts are entered into on lump sum basis, it is rare that the original contract price is what the employer pays at completion. Numerous variations are usually involved which revise the original contract price. Such is defined in Keating as "bills of quantities contracts"[43]. Bills of quantities contracts are not re-measured contracts as it may sound, they are indeed lump sum contracts in which variations are measured and the true value of their amount added to, or deducted from, as the case may be, the lump sum but that does not necessitate the whole of the quantities being opened up so as to make it a measure and value contract[44].

The status of the bill of quantities in the contract documents can be very tricky. Although – as will be seen in Section 4.2 – Sub-Clause 1.5 of the 1999 FIDIC red book gives the schedules (inclusive of the bills of quantities) the least priority, the bill of quantities still forms part of the contract documents and all information included therein may – to the extent allowed by priority of documents – affect the works.

Where the bill of quantities clearly does not form part of a lump sum contract (or lies at the bottom of the priority of documents list), the contractor's obligation to perform the whole work for the lump sum will disentitle him from claiming additional payment for increases in the quantities. However, absence such priority restriction, if the contractor can show that the bill was expressly or impliedly incorporated into the contract to define the works, then he may be entitled to be paid for increases in the quantities as extra work. The contract in Patman and Fotheringham Limited v. Pilditch[45] provided that the work was to be done for a lump sum "according to the plans, invitations to tender, specification and bills of quantities." It was held that, on the proper construction of the contract, the quantities were to be regarded as defining the amount of work included in the price so that if the contractor was required, in order to complete the work, to do more work than was in the quantities, he was

[43]Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, 4-031, page 128
[44]John Dorter, Variations, Construction Law Journal, 1991
[45]Gold v Patman& Fotheringham Ltd [1958]

entitled to be paid therefore an amount additional to the lump sum. The decision of this case is very alarming to parties who establish their lump sum contract price on the bill of quantities and give a high priority to such document whether expressly or impliedly. In this case, the identity of such contract whether lump sum or re-measured would be vague and a judge may elect to set this question aside and investigate the true intention of the parties in respect to the status of the bill of quantities and rule accordingly.

Some lump sum contracts in UAE state that the bill of quantities do form part of the contract documents, however, the quantities recorded therein do not form part of the contract. This is in fact a very good practice.

Considering the above, valuing omissions is indeed not an easy job in a lump sum contract as what is required to be done in omission is in fact opening up what has been agreed to be closed and locked. In order to properly value an omission, the value of the item subject to omission contributes to the contract price should be ascertained. In case of lump sum, where the initial intention of the parties was to agree on a single figure consideration with little or no regard to how it has been arrived at, such mission could be sometimes challenging. However, sophisticated contracts always provide a breakdown of how the lump sum has been arrived at in the bill of quantities (without however giving such breakdown an overwhelming priority), nevertheless, even if such breakdown is provided, the mechanism set out in the conditions of contract – if not properly drafted to consider a lump sum contract – may drive the parties to problematic results as will be seen later herein.

3. CHAPTER THREE: OMISSIONS

3.1. DEFINITION OF VARIATION

The term "variation" is quite controversial in construction business. The reason for such controversy is that some work may not be actually mentioned in any of the contract documents – as highlighted in Chapter One herein – and still is required to be done by the contractor without any entitlement for time and / or cost[46]. In other words, the definition that variation is work to be done that is merely not mentioned in any of the contract documents is at least not precise[47].

The clearest example on this misunderstanding is the execution of temporary works (like cranage or falsework) that is required for the permanent works but not necessarily mentioned in the contract documents. A contractor should carry out various temporary works in order to enable the execution of the permanent works. Some sophisticated contracts do include somehow detailed provisions for these temporary works, however, it is highly doubtful that any contract would include each and every screw the contractor is to purchase and the location in which it should insert. This fact does not at all entitle a contractor to additional time and / or cost for carrying out such work.

The decision on the case of Williams's v Fitzmaurice[48] confirms the above meaning where in that case, the contractor undertook to "provide the whole of the material mentioned or otherwise in the foregoing particulars necessary for the completion of the work and 'to perform all works of every kind mentioned and contained in the foregoing specifications for the sum of 100.00 pounds". Flooring was not specifically

[46]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 883
[47]Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, 4-023
[48]Williams v Fitzmaurice [1858]

mentioned and the issue was whether it was included in the contract. The court held that it was.

It is safe to define variations in lump sum contracts as being "work not expressly or impliedly included in the work for which the lump sum is payable"[49]. This definition, however, may not help if the parties are actually not sure whether or not the works in question are impliedly included in the contract. This depends on the sophistication and the general level of detail provided in the contract in question. For example; "price quoted by a jobbing builder for supplying new doors for a house in a small contract might be held to include hinges and door handles, but if a carefully drawn bill of quantities prepared by an employer's adviser omitted to make mention of these items, a different view might be taken" [50]

FIDIC new red book defines the term "variation" in its sub-clause 1.1.6.9 to be "any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments]".

FIDIC's sub-clause 13.1 introduces an important aspect in defining the term "variation" which is linking it with the necessity of the same to the execution of the permanent works. The engineer cannot issue instructions under this clause for additional works unless such is necessary for the permanent works as per sub-clause 13.1(e). If the employer wants the contractor to carry out work which changes the scope of the works then he must negotiate a change to the contract[53].

[49]Cf. Kemp v Rose [1858] Giff. 258 at 268
[50]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 885
[53]Brian W. Totterdill, FIDIC user's guide A practical guide to the 1999 red and yellow books (Thomas Telford Publishing, London 2006) 222

3.2. EXTENT OF INSTRUCTING VARIATIONS

Apart from the above arguments relating to the correct definition of the term "Variation", it is worth exploring the extent of such in construction contracts; i.e. to what extent can an employer – through the engineer – instruct a contractor to vary the contract?

Again considering sub-clause 13.1 of the FIDIC 1999 red book, there seems to be no limit to what an engineer can instruct a contractor to vary. In fact the list of variation actions provided by the said sub-clause is not even exhaustive due to its wording "each variation *may* include …" meaning that an engineer is at liberty to instruct a contractor – under this sub-clause – to vary the contract in any manner it requires but for the restrictions mentioned in the previous Section.

There is a bottom borderline to such unilateral discretion as the employer cannot – unless otherwise agreed – simply omit the whole of the works[54] especially for the purpose of awarding the omitted work to other contractors or to the employer to carry it out by itself. As for the top borderline; till date, there is no clear borderline beyond which an engineer cannot instruct additions. Although para 'e' of sub-clause 13.1 provides that any additions to be instructed should be for the purpose of the permanent works, it is still possible that major additions are instructed for the purpose of the permanent works also. Unfortunately, this issue has not been subject of much research[55] and is still clearly unanswered. Even considering that an employer cannot omit the whole of the works, nothing seems to prevent it from omitting a major part of such.

However, the United States of America has somehow developed this principle of unilateral discretion to order variations and produced the doctrine of "cardinal change" which is defined to be a drastic modification beyond the scope of the

[54]Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, 4-032

[55]Christof Fischer, Unilateral variations in construction contracts, Construction law journal, 2013.

contract[56]. In further elaboration, an American court explained "the basic standard … is whether the modified job was essentially the same work as the parties bargained for when the contract was awarded. Plaintiff has no right to complain if the project it ultimately constructed was essentially the same as the one it contracted to construct. Conversely there is a cardinal change if the ordered deviations altered the nature of the thing to be constructed". Cardinal change is a breach of contract in the United States[57].

In the English law, however, the remedy of instructing such "cardinal change" appears to be less sharp than that of the Unites States. The decision in Thorn v Mayor and Commonalty of London[58]draws the English attitude in such cases as Lord Carins said "If it is the kind of additional or varied work contemplated by the contract, he [the contractor] must be paid for it, and will be paid for it, according to the prices regulated by the contract. If on the other hand, it was additional or varied work, so peculiar so unexpected, and so different from what any person reckoned or calculated upon, that it is not within the contract at all; then, it appears to me, one of two courses might have been open to him; he might have said: I entirely refuse to go on with the contract, I have never intended to construct this work …. Or he might have said, I will go on with this, but this is not the kind of extra work contemplated by the contract, and if I do it, I must be paid a quantum meruit for it".

It seems from the above approach that an English contractor's entitlement in the occurrence of a "cardinal change" depends on its immediate response to such instruction in either way as Lord Carins stated. If an English contractor kept silent on such instruction and actually worked the instructed additional works that drastically change the contract, it may lose its right in claiming any other sum than that prescribed under the relevant variation clause in its contract i.e. no regard would be

[56] Air-A-Plane Corporation v United States (1969) 408 F 2d 1030 (United States Court of Claims) 1030, 1033.
[57]Allied Materials and Equipment Company v United States (1978) 569 F 25 562 (United States Court of Claims) 563f.
[58]Thorn v Mayor [1876] 1 A.C 120 (HL) 127.

given to disruption or price difference claims unless permitted by the contract. In this context, it should be noted that the absence of a principle of good faith and the absence of any theory of abuse of rights in the English law in construction contracts means that a party to a contract may exercise any right created by the contract – whether under an express contract term or by the law – freely and without reference to his motive or any consequential fairness to the other party[59]. It is worth mentioning that such is contrasted in the UAE where the illegality of the abuse of rights[60] and bad faith apply on construction contracts.

Practically speaking, a cardinal change as defined by the American jurisprudence in the case above mentioned can occur either by means of one instruction that construes a total deviation from the agreed scope of contract, or by means of too many variation instructions that are themselves within the scope of the contract but cumulatively drastically change the contract.

Again contrasting the English with the American legal approaches on this matter, the American approach towards cumulative changes seems to be more developed than the English one however, the said American approach is not as clear as its approach on the single cardinal change doctrine. Also considering the decision in the interesting case of Air-A-Plane Corporation v United States, it was held that "each case must be analysed on its own facts and in light of its own circumstances, giving just consideration to the magnitude and quality of the changes ordered and their cumulative effect upon the project as a whole"

The doctrine of "cumulative change" is unfortunately not yet well defined by the American courts and tribunals, and some American courts and tribunals held that to prevail with a cumulative impact claim, the claimant must demonstrate cumulative impact to the level of a cardinal change.

[59] Simon Whittaker, Price variation clauses, Etudes offertes a Genevieve Viney (2008) LGDJ 891, 894 in Christof Fischer, Unilateral variations in construction contracts

[60] Article 106 of the UAE Federal Law No. 5 of 1985, Civil Transactions Code

In the English law, a series of variations will not constitute a fundamental change[61]. The court of Appeal in the case of Mc Alpine Humberoak v McDermott International[62] wherein the construction of four massive steel pallets was reduced by means of variations to constructing only two however such reductions caused substantial additional costs; held that "the contract remained a contract for the construction of pallets and thus the contract had not been transformed into a different one or distorted substance and identity"

The above cases and legal approaches show that – except for the United States – till date, there is no clear definition to what could amount to an illegal variation other than omission of the whole of the works, or part thereof for the purpose of awarding it to a third party, or instructing additions that do not relate to the agreed scope of work at large. Whatever between these very broad borderlines remains subject to thousands of cases in arbitration /litigation. It is noted that the United States has remarkably developed a good understanding at least to the doctrine of "cardinal change". It managed to give a descriptive and effective definition to this subject that actually covers a very broad spectrum of cases and possibilities, and moreover put it in its very right place as a breach of contract.

3.3. OMISSIONS - GENERALLY

An omission is actually a type of variation; as variation – as described by sub-clause 13.1 of the FIDIC 1999 red book – may be an omission of any work unless it is to be carried out by others. Under the said FIDIC contract, an engineer's practice of omitting "any" work is not restricted by anything except by sub-clause 12.4 [Omissions] which requires the contractor to opt to the engineer seeking its determination should an instructed omission affects other parts of the works, and the relevant provisions of sub-clause 12.3 [Evaluation] as well.

[61] Miller and Cohen, "One change too many, Construction Law Journal, 2002
[62] Mc Alpine Humberoak v McDermott International No. 1 [1992]

Considering the FIDIC 1999 red book is basically a re-measured contract, parties willing to contract based on it as a lump sum contract should at least amend its clause 12 [Measurement and Evaluation]. However, sub-clause 12.3 [Evaluation] gives a general idea on how the FIDIC drafting committee envisaged the procedure of valuation in general and valuation of variations in particular[63].

Although both additions and omissions have the same origin "variation", both are in fact fundamentally different; as additions are foreign to the original scope of work, and do not form part of the estimates and calculations made by the contractor prior award, they are – therefore – considerably uncomplicated in their valuation. On the other hand, omissions are work that used to form part of the original scope of work, and perhaps also connected / related to other work that may not be subject to omission[64] which required the FIDIC drafting committee to create an entry for the engineer's determination in such cases vide sub-clause 12.4 [Omissions].

It is sometimes really challenging to; just ascertain the exact scope to be omitted. Such exercise basically relies on the expertise of the involved quantity surveyors, however, in some cases as will be seen later herein, quantity surveyors' involvement could be sometimes limited in lump sum contracts where there are differences in the quantities between various contract documents. They may become cornered by inevitable variations contract clauses, bills' preambles and common sense.

Considering the American development of the doctrine of cardinal change referred to in the previous Section, the principle itself can apply on omissions in the same manner it applies on additions as the test in the end reviews whether the modified job was essentially the same work as the parties agreed on when the contract was awarded or not. That test can apply upwards or downwards too. With the expected development of this doctrine, it could be held that omissions that drastically change what was originally contemplated to be built construe breach of contract. However, it could be confusing if the motive of an employer in instructing such omissions is its

[63]Nael Bunni, The FIDIC Forms of Contract, Blackwell Publishing, Third Edition, 546
[64]Rachel Chaplin, The value of work not carried out, Construction Law, 2014.

subsequent inability to pay the contractor the subject consideration of such omitted works perhaps due to a global economic crisis like the one that hit in late 2008[65].Such issues should either be dealt with on case by case basis or perhaps by developing a new doctrine similar to that of the cardinal change but addressing the special character of varying by omissions.

3.4. WORDINGOF A VARIATION CLAUSE

We can comfortably say that variations are almost inevitable in any construction contract in the world[66]. It would be quite surprising if a project even as small as a villa has been carried out with zero variations. Therefore, properly drafting variation clauses is crucial for both parties of a construction contract.

Basically, we need a variation clause in the contract to grant the employer a unilateral right to instruct variations through an engineer[67]. In case no variation clause is incorporated in the contract, and the employer wishes to apply any variation, such would only be through a new contract or an amendment to the original contract where the contractor may be able to exert pricing or other pressures on the employer. Another reason for the importance of including a variation clause in the contract is to formalize any engineer's instruction to a contractor to carry out a variation. The engineer is not a party to the construction contract and is not allowed to change any of the parties' obligations under the contract, therefore, a variation clause that obliges an employer to abide to whatever its engineer instructs the contractor is necessary to secure the contractor's rights in abiding to engineer's instructions to vary.

[65]Heba Osman, Descoping in construction contracts in the UAE, Annual Review 2015/2016, Fenwick Elliott, November 2016.
[66] Wolfgang Breyer, "Fair and reasonable": the determination of prices for variations in FIDIC contracts, Construction Law Journal, 2013
[67]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 880, 7-005

The structure of the great majority of the English variation valuation clauses is based on the so called "shopping list" principle[68] in which a list of options is set out for the engineer to pick the appropriate one by which a variation can best be valued. Some bespoken contracts starts with the option that the parties to the contract agree a lump sum amount to value the variation. If a lump sum is not agreed for any reason, applicable rate (s) in the contract should be used to value the variation. If no contract rate is applicable, a somehow analogous rate from the contract is to be used subject to some adjustments to match with the varied works. If no analogous rates are found in the contract, the contractor is to provide three external quotes from the market for the review and choice of the employer / engineer. In some contracts, the last option is replaced with the engineer's power to decide on a provisional rate to value the variation which is of course subject to the contractor's further dispute.

Para 'b' of sub-clause 12.3 [Evaluations] of the FIDIC 1999 red book provides that the rates provided in the contract should be used to value any variation except where; no rate or price is specified in the contract for the subject item, and where no analogous rate or price is available in the contract because the item of work subject to variation is not of similar character, or is not executed under similar conditions, as any item in the contract. In such cases, a new rate or price shall be derived from the reasonable cost of executing the varied work, together with reasonable profit, taking account of any other relevant matters. It is important to remind that these provisions apply to all variations either additions or omissions.

However, para 'a' of the same FIDIC sub-clause does not permit the usage of the contract rate for any valuation purpose (not specifically variations) in special cases where the change in quantity results in specific effects to the contract amount at large. Although this para does not specifically refer to changes resulting from variations (considering that this version of FIDIC contract is basically a re-measured contract), Dr Nael Bunni stated that this sub-clause substitutes sub-clause 52.3 [Variations

[68] I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 946, 7-105

Exceeding 15 per cent] of that of the fourth edition[69].Sub-clause 52.3 of the FIDIC's fourth edition allows for adding to or deducting from the contract price such further sum as may be agreed / determined by the engineer having regard to the contractor's site and general overhead costs of the contract in case all varied works are in excess of 15% of the contract price. Dr Nael commented on this sub-clause saying, "There is no guidance in the Red Book as to how this sum should be calculated. It is, however, apparent that the target of such adjustment is the bill of preliminary items which forms part of the contract price"[70].

Although this adjustment provision may seem fair, in application, Hudson's comments[71] on such mechanism that "apart from the fact that that valuation clauses of these kinds based on arbitrary percentages may or may not distinguish between omitted and additional work, they pay little or no regard to the economics and pricing realities of construction contracts. They are generally likely to have an upside effect on the contract prices, and rarely if ever result in down-side reductions, which in principle should be equally possible"

Hudson's gives then a practical example "if large increases in quantities notified in good times may often be extremely profitable to the contractor, thus logically justifying a reduction of the unit price involved. Although in the last resort, every argument for a change of price must depend on the internal assumptions and weightings made by the contractor when pricing the bills of quantities. No final answer can be given until the internal make-up of the contractor's price has been ascertained".

[69]Nael Bunni, The FIDIC Forms of Contract, Blackwell Publishing, Third Edition, table 23.1, The Fourth Edition of the Red Book and the corresponding conditions in the 1999 Red Book, page 510
[70]Nael Bunni, The FIDIC Forms of Contract, Blackwell Publishing, Third Edition, page 303
[71]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 945, 7-103

Considering the usual conversion of the red book from re-measured to lump sum[72], FIDIC[73] has provided a supplement document to the fourth edition of its red book providing a thorough and clause by clause amendment from a re-measured form to a lump sum one. The supplement states in the relevant section's introduction that the lump sum form of contract maintains the essential traditions of FIDIC philosophy, without diluting the authority of the Engineer.

What the 1996 supplement has proposed included getting rid of the bill of quantities document which is not a favourable practice to contracting parties at least in the UAE. Practically, when the 1999 FIDIC red book is used as a lump sum contract, at least para 'a' of sub-clause 12.3 (providing for altering an item's rate if the total change incurred on such item affects the contract sum at large) is deleted as it refers to the works being measured. This will leave para 'b', which provides that the contract rates – if applicable – should be used to value any variations whether in excess to the threshold prescribed by para 'a' or not unless the parties draft a new valuation clause considering Hudson's comments above mentioned.

What the fourth and the 1999 editions of the FIDIC red book have done in this regard is to somehow mitigate the adversarial effects of excessive variations by virtue of clause 52.3 of the fourth edition of para "a" of sub-clause 12.3 of the 1999 edition. However, the problem in both editions – as highlighted by Hudson – is that the approach they both adopt does not address the internal assumptions and weightings of the contractor's prices and may, therefore, lead to problematic / practically irregular results. Furthermore, the 1999 version puts this provision where the works are described to be re-measured so parties in lump sum usually delete it

[72]Omar Al-Saadoon, Re-thinking Contract Price in the UAE, Al Tamimi& Company, Law Update, August 2007.

[73] FIDIC, Supplement to Fourth Edition 1987 of Conditions of Contract for Works of Civil Engineering Construction Reprinted 1992 with further amendments, Section B, Payment on Lump Sum Basis.

altogether[74]leaving only the provision of using the contract rate in valuing any variation whether in excess to the prescribed threshold by para 'a' or not.

Some practitioners in UAE follow the FIDIC guidance and delete the entire clause 12 when converting the 1999 FIDIC red book from a re-measured contract to a lump sum contract but re-draft the valuation clause in the same spirit of the deleted Sub-Clause 12.3. I have not yet come across a contract that provides different provisions for valuing additions and omissions.

3.5. POSIBLE QUANTITIES' DISCREPANCIES

The above being said, and considering the differences that are sometimes encountered between the quantities mentioned in a bill of quantities, and those that should be carried out to fulfil a contractor's contractual obligations in a lump sum construction contract, and considering the implications of the relevant FIDIC contract clauses mentioned in the previous Section; applying omissions to such items may lead to a contractual dilemma. Take the worst case scenario; if an item's quantity in a bill is "less" than that to be carried out, then, under the general principle of lump sum as explained in the previous Chapter, the contractor will be forced to carry out the quantity in excess to that mentioned in the bill of quantities against no extra cost[75]. Nobody seems to dispute this fact, however, what if the engineer decided to apply an omission variation order on such an item? What would be the outcome after valuing such omission?

[74] International Federation of Consulting Engineers, Contracts: Basic Questions Question / Answer: "We fear that this is an indication of what happens if General Conditions are modified by Special Provisions without due care", http://fidic.org/node/911, accessed on 1st August 2016.
[75]Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, 4-026

Illustration

> In a lump sum based tender, the contractor conducted a quantity take-off exercise at its own risk from the tender drawings at the tender stage. For a part of the works, the contractor, in the bill of quantities observed the inclusion of only 2 wooden doors and priced them at a rate of AED 1,500/- for a lump sum item amount of AED 3,000/-. At the time of actually carrying out the works under an amended lump sum FIDIC 1999 red book contract, the contractor found out that the relevant drawing actually shows 10 doors not 2. The contractor understands that it is obliged to carry out the work for 10 doors at a total amount of AED 3,000/- only considering the associated risks of a lump sum contract that it accepted to assume at the tender stage. However, and before the contractor commences with such work, the engineer instructed the contractor to omit 5 doors out of the 10 it is obliged to carry out. The engineer then determines such omission pursuant to para 'b' of sub-clause 12.3 [Evaluation] (that has not been deleted in converting the red book to a lump sum contract) at a negative amount of 5 (the quantity omitted) multiplied by AED 1,500/- (the relevant rate) resulting in an omission of AED 7,500/- from the item's original amount; AED 3,000/- which requires the contractor to work 5 doors and pay the employer an amount of AED 4,500/-.

Standing in the contractor's shoes, the situation herein is not at all straightforward. It may seem that the omission would help the contractor minimise the losses he would incur as a result of his mistake but the real case is not as bright as it may look.

If the unit price of the subject wooden door is AED 1,500/- including the contractor's overhead and profit, let us assume that it costs the contractor only AED 1,000/-. Basically the contractor is obliged to supply and fix 10 doors at a total price of AED 3,000/- for which; only his cost is AED 10,000/- i.e. a loss of AED 7,000/- only on this item.

The omission being instructed, the contractor would only be required to supply and fix 5 doors that would cost him AED 5,000/- and the omission of AED 4,500/- would now apply as computed by the engineer. That means that the contractor's loss on this item after instructing the omission became AED 9,500/-.

The loss or profit of the contractor is not at all a matter of concern in this dissertation, the valuation process of omissions in fact is. The problem with the method of valuation above mentioned is that if the engineer instructed a number of omissions on items of mistaken quantities, the contractor may end up obliged to build the project and yet liable to pay a sum of money to the employer.

In principle, many contractors may end up losing money in construction business and it should not be a surprise to see that a contractor would be liable to pay the employer a sum of money at the end of a project but there are some questions to be answered before an engineer applies this valuation; what is the effect of the lump sum nature of a contract on such situation? What is the effect of a mistake on a lump sum contract? Can mistakes be corrected? Has the valuation in the manner described above involved correcting a mistake? What does hierarchy of documents say on this situation? And finally, what do courts and tribunals so in these situations?

4. CHAPTER FOUR: FACTORS INFLUENCING VALUATION

4.1. MISTAKE

Basically, if one party makes a mistake in expressing the contract and the other party has no knowledge of that mistake, rectification is not granted[76].

However, if there is a mistake as to one of the conditions upon which a contract is made or as to the subject matter of the contract, the contract shall be void[77]. Considering the mistake in the illustration mentioned in Section 3.5 above, such cannot be interpreted as a condition on which the contract is made or directly affect the extent of the contract's subject matter. However, if all the quantities are mistaken to the extent that substantially affect what is required to be built, it may be held that such mistakes may result in voiding the contract.

Mistakes of the sort and extent described in the illustration above mentioned are unlikely to be remedied as a legal rectification of the terms of the contract to reflect the true intention of the parties[78]. The more likely practice is that the tender price prevails rather than a price revised to account of the error[79]

Sub-Clause 14.1 [The Contract Price] of the FIDIC 1999 red book states that "any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities either for the Works which the Contractor is required to execute, or for the purposes of Clause 12 [Measurement and Evaluation]". Although this form of contract is

[76]Riverlate Properties Ltd v Paul [1975], Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, 12-013

[77] Article 194 of the UAE Civil Code

[78]David McLauchlan, The "drastic" remedy of rectification for unilateral mistake, Law Quarterly Review, 2008

[79]ChandanaJayalath, Understanding the Generality of Variation Clauses and the Variety of Broad Interpretation that Exists under FIDIC based Contract Modalities in Gulf, Construction Management Guide, November 2012.

originally a re-measured, it still prohibits correction of quantity errors in the bills of quantities. If this red book is amended to be for a lump sum contract, then the reference to Clause 12 in the above mentioned Sub-Clause may be deleted.

Commenting on this Sub-Clause, Dr. Nael Bunni mentioned[80] that "the quantities set out in the bill of quantities are only deemed to be estimates of the actual quantities of work to be carried out". This means that the precision or non-precision of those quantities is not of any relevance or connection to the contract price. Under these provisions, the contract price will only be ascertained pursuant to Clauses 12 and 13 in case of re-measured contracts and modified only pursuant to Clause 13 in case of lump sum contracts.

The above mentioned FIDIC provision is also backed with article 887 of the UAE civil code[81] that states "if a muqawala contract is made on the basis of an agreed plan in consideration of a lump sum payment, the contractor may not demand any increase over the lump sum as may arise out of the execution of such plan". A mistake in taking off quantities set out in a contract's bills of quantities by the contractor can be categorized under the broad interpretation of the article's terms "may arise out if the execution of the plan". Abu Dhabi Court of Cassation has decided[82] that "if a muqawala contract is made and it specifies the lump sum consideration ... then the lump sum agreement ... will not be subject to variation by increase or decrease". The absolute provision set by this cassation decision necessarily include the mistakes in question.

It is also interesting to note that the court – in this decision – has prevented any decrease in the lump sum contract price in the same manner it prevented any increase.

In many tenders, those mistaken quantities may have been obtained by or on behalf of the employer and not the contractor. In this case, if the quantity of an item recorded in

[80]Dr. Nael Bunni, The FIDIC Forms of Contract, Blackwell Publishing, Third Edition, page 547
[81]Antonios Dimitracopoulos and Andrew Van Niekerk, Separated at birth, or long distant cousins?, Law Update, Al Tamimi& Company, August 2005.
[82]Abu Dhabi Court of Cassation, 573/Judicial Year 2

the bills is actually "more" than that required to carry out the works, some engineers may be tempted to instruct an omission under Sub-Clause 13.1 to adjust these mistakes. The contractor can dispute such instructions as such would not be a genuine instruction to vary rather than an attempt to rectify an error and adjust an agreed lump sum unrightfully. Besides, the quantity from which the omission is required to be applied should be taken from the document of higher precedence i.e. the drawings not the bill of quantities pursuant to Sub-Clause 1.5 of the FIDIC 1999 red book.

Nevertheless, a law update[83] provided for some prerequisites that should be provided in order prevent a contractor from requesting an increase in the contract price; one of these prerequisites is that "the muqawala must be based on a pre-agreed design which defines the parameters of the work in clear, comprehensive and precise terms i.e. a full list and description of the work requested at the time of conclusion of the muqawala". Basically the content of this law update does not contradict with the provisions of article 887 or its related decision above mentioned and in line with the 1996 FIDIC Supplement referred to earlier in this dissertation. Considering this law update, it could be said that; for a lump sum contract to be safe from legal challenge to its validity, the same should be based on reasonably clear information that enable the contractor to undertake carrying out the subject works against a lump sum consideration. This makes it arguable whether a contractor can request for an addition to the lump sum contract price if the data provided during tender was not sufficient or uncertain to the extent that led to an incorrect contract price. Here comes the role of the instructions to tenderers document. If the instructions to tenderers are well drafted, it should cover this provision. It is of ample importance for the construction business to close all back doors that may lead to revise a lump sum contract price.

A question may arise though on the existence of any duty on the employer to check the tender it has accepted for the purpose of contract. Why would an employer make benefit out of the contractor's mistake in taking off any quantities in the bills? There

[83]Hassan Arab, Extracts from "The UAE Civil Transaction Code in the light of Recent Comparative Arab Case Law" - Chapter 3 Contracts of Work, Law Update, Al Tamimi& Company, 2004

are two reasons for which an employer would justifiably and rightfully make use of such mistakes; the first reason given by Hudson[84]is "an obvious first consideration in deciding whether a contract should make any provision for this is that the contractor will have obtained the contract through attraction of his overall quoted price, and should not thereafter be permitted to steal a march on his competitors by asserting his own errors as a justification for increasing his price"

The second reason is as recorded in the cassation decision above mentioned that "Article 887 of the Civil Code is designed to protect the employer, who is usually a non-technical man with little expertise. The purpose behind that provision does not apply to the relationship between a head contractor and a sub-contractor, because they are equal in their technical knowledge and expertise. Thus, in the relationship between them, it is sufficient for the ordinary rules to apply".

From the above, the wording of the FIDIC contract, as well as the principles of the UAE law, and English case law, does not permit changing the lump sum contract price as a result of a mistake in taking off the quantities. Therefore, applying this principle on the illustration mentioned in Section 3.5 of the previous Chapter, the engineer – in valuing an omission involving an item of a mistaken quantity – is not permitted to correct such mistake.

4.2. HIERARCHY

Sub-Clause 1.5 of the FIDIC red book sets out the priority of documents to be as follows:

Highest priority given to the contract agreement (if executed), and the eighth (last) priority given to the schedules which includes the bills of quantities[85].

[84]I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 990-991

[85]Sub-Clause 1.1.1.7 [The Contract] of the FIDIC red book

Before applying the provisions of this Sub-Clause on the illustration mentioned in Section 3.5 above, it is important to examine the purpose of this Sub-Clause and consequently the extent of its application.

The FIDIC Contract Guide[86] explains that such priority of documents as described in this Sub-Clause is based on the principle that the employer's documents should have priority over the contractor's documents. It might seem unfair or incorrect for the employer to impose his requirements in circumstances where the contractor provided details of his tender proposals which are not similar to those provided by the employer, for the employer to verify. However, giving priority to the contractor's tender proposals would have exposed the employer to the possibility that such non-compliance was difficult to detect prior to award of the contract by the employer.

The above explanation made by FIDIC goes very well with Abu Dhabi's court of cassation decision on article 887 of the UAE civil code referred to in the previous Section 4.1 that the employer is not expected to verify micro technical discrepancies and anomalies between the issued tender documents and the received tender offers.

Now, applying the provisions of Sub-Clause 1.5 on the illustration mentioned in Section 3.5 above; considering the stage before instructing the omission, it is evident that the contractor has made a mistake in obtaining the quantity of the subject item, and according to the outcome of the pervious Section 4.1, it is not permissible to correct such mistake. Therefore, as the drawings is given a level seven priority and the bill of quantities is given a level eight priority, the contractor shall be obliged to carry out 10 doors as described in the drawings and not just 2 as mistakenly recorded in the bill of quantities.

Considering the stage post instructing the omission, the valuation of such is only subject to Clauses 12 (as amended) and 13 of the red book. The question of which quantity to consider as the original quantity to apply the omission on is; governed by

[86] International Federation of Consulting Engineers, The FIDIC Contracts Guide, First Edition, 2000, page 65

Sub-Clause 1.5, which gives the drawings a higher priority over the bills. Therefore, for the purposes of Clause 12, the quantity on which the omission shall be applied is 10. So, if the original quantity is 10 (not 2), then, it is possible that the engineer instructs an omission of 5 doors out of these 10. Therefore the omission shall be calculated as follows

Omission: -5 (omitted quantity) x AED 1,500 (unit price) = - AED 7,500/-

Valuation: -7,500 (amount of omission) + 3,000 (original item price) = - AED 4,500/-

The valuation above mentioned is contractually sound and there is nothing wrong with it in sense of following "what the book says". There may be a case wherein an employer carries out extensive omissions on numerous similar items i.e. with mistaken quantities and the contractor would find himself in the end building a project with a total negative statement of account without even being liable in delay damages or for any deductions in lieu of any defects. This is certainly an irregular outcome that has – surprisingly – resulted from a proper application of the conditions of contract. An opinion may say that this should be an expected result for a contractor who has mistakenly taken off the quantities of so many items in the bills. Haven't we now fallen in the prohibition[87] of correcting a mistake?

This brings us face to face with Hudson's statement about this kind of valuation clauses referred to in Section 3.4 above that "valuation clauses of these kinds ... may or may not distinguish between omitted and additional work, they pay little or no regard to the economics and pricing realities of construction contracts. They are generally likely to have an upside effect on the contract prices, and rarely if ever result in down-side reductions, which in principle should be equally possible"[88]. The result reached in the valuation above mentioned is certainly not the down-side reduction meant by Hudson as this valuation is evidently irregular and extreme. The down-side reduction meant by Hudson would be a reasonable reduction in the

[87] Refer to Section 4.1

[88] I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 945, 7-103

contract price proportional to the omitted work. Involving correcting a quantity mistake in this valuation is contrary to the legal principles as set out in Article 887 of the UAE civil code as well as to the business norms as highlighted in Hudson and Keating.

In light of the above, we can say that Hudson's comment above mentioned applies very well on Sub-Clause 12.3 of the 1999 FIDIC red book. This Sub-Clause apparently works very well for additions but it results in irregular results when used in omissions in lump sum contracts as explained above. Even if Clause 12 is entirely deleted in converting the FIDIC red book to a lump sum, parties usually[89] re-draft the valuation clause in the same spirit of para 'b' of Sub-Clause 12.3.

Considering that "every argument for a change of price must depend on the internal assumptions and weightings made by the contractor when pricing the bills of quantities"[90], the original price of AED 3,000 is based on a mistaken quantity of 2 doors. The valuation described in this Section – although contractually correct – has fallen in the prohibition of correcting a mistake as "if one party makes a mistake in expressing the contract and the other party has no knowledge of that mistake, rectification is not granted"[91].

4.3. RATE INAPPLICABILITY

Some quantity surveyors (either from the end of the contractor or the engineer) may be tempted to get out of the dilemma herein by treating the mistake with another mistake so called rate inapplicability.

[89] Practice note: I have been drafting and reviewing construction contracts since 2008 in UAE.
[90] I.N. Duncan Wallace, Hudson's Building and Engineering Contracts, Eleventh Edition, Sweet & Maxwell, London, 1995, page 945, 7-103
[91] Stephen Furst, Vivian Ramsey, Keating on Construction Contracts, Ninth Edition 2012, Sweet & Maxwell, 12-013

This incorrect approach can be summarized as follows: if correcting the mistaken quantity is prohibited, and the omission must be applied on the quantity so recorded on the drawings (due to its higher hierarchy), then why can't we say that rate of that item so mentioned in the bills is not applicable for the purposes of valuation?

Quantity surveyors opting to this solution may defend that; if the argument of enforcing the intentions of the parties contracting in a lump sum contract is introduced, we can say that the parties actually did not mean that the rate of this item should be AED 1,500/- considering that the quantities should not to be taken as correct[92] and that the more likely practice is that the contract price prevails rather than a price revised to account of the error[93].

If variations instructed by the engineer are to be valued at contract rates where applicable and reasonable, then failing that, rates agreed upon between the employer's engineer and the contractor (Sub-Clause 12.3). In the event of disagreement, the engineer fixes new rates[94]. This option is actually made available by Sub-Clause 12.3 so why can't we use it?

The engineer may determine that – considering the irregular result of using the rate in the contract – there is no applicable rate to value the omission herein. The engineer instead may use the available contract rate to derive the applicable rate for this valuation[95] as follows:

If the quantity – for the purposes of the contract and this valuation – is agreed to be 10 doors and the price agreed for carrying out these 10 doors is no more or less than AED 3,000/- then the parties are deemed to have agreed – at least for the purpose of this valuation – that the unit price is AED 300/-.

[92] Sub-Clause 14.1 of the FIDIC 1999 Red Book

[93] ChandanaJayalath, Understanding the Generality of Variation Clauses and the Variety of Broad Interpretation that Exists under FIDIC based Contract Modalities in Gulf, Construction Management Guide, November 2012.

[94] Axel-Volkmar Jaeger, Gotz-Sebastian Hok, FIDIC – A Guide for Practitioners, Springer-Verlag Berlin Heidelberg 2010, Page 299

[95] The last paragraph of Sub-Clause 12.3 of the 1999 FIDIC red book

Based on this approach, the valuation would be as follows:

Omission: -5 (omitted quantity) x AED 300 (determined unit price) = - AED 1,500/-

Valuation: -1,500 (amount of omission) + 3,000 (original item price) = AED 1,500/-

Although this tempting solution may satisfy a contractor struggling with his own mistakes and a confused employer lost between securing his own rights and not being arbitrary on the contractor, it would be interesting to note the decision in the case of Henry Boot Construction v Alston Combined Cycles[96].

The dispute subject of that case has arisen out of an ICE form of contract and it was of a very similar nature to the approach described in this Section. An arbitrator decided that the rate mentioned in the bills was not applicable to be used for valuating a variation because it was arrived at by means of mistake. Held: "the basis for valuation under [Clause 52 of the ICE form of contract]could not be displaced on the ground that the rates or prices in a bill of quantities have been inserted by mistake. If, however, work carried out pursuant to a variation to a contract differed significantly from the work covered by the bill of quantities, it would be open to the engineer to carry out a valuation of his own. The words "so far as may be reasonable" had been inserted in [Clause 52 of the ICE form of contract] to cater for that eventuality. The exceptions set out in cl.52(2) and cl.56(2) of the conditions supported the conclusion that the rates or prices contained in a bill of quantities were not subject to rectification. To hold otherwise would lead to uncertainty and disturb the basis of competitive tendering. In the instant case, the arbitrator should have disregarded the contractor's mistake and carried out a valuation on the basis of the price which the contractor had quoted". It is not a matter of concern here how the arbitrator's decision was brought to the court; however, the court decision is very useful to the context herein.

[96]Henry Boot Construction v Alstom Combined Cycles [1999]

From the above decision, it can be concluded that the engineer should not misuse the authority given to him under Sub-Clause 12.3 (b) (iii) to determine that a rate is inapplicable for the purpose of valuing a variation for any other reason than those namely provided in the same Sub-Clause i.e. the item of work is not of similar character, or is not executed under similar conditions, as any item in the contract[97]. Although questions[98] may arise to what exactly may or may not amount to "similar character / similar conditions", this decision urges engineers to be very conservative in using that discretion.

The above being said, introducing the argument of rate inapplicability to reach a "peaceful" valuation for the subject omission – though may provide a temporary relief to the contractor and perhaps the employer – is categorically incorrect and abusive to the conditions of – at least – the FIDIC contract.

[97] Andrew Hemsley, Problem, solved, Building 2004, 42, 59

[98] Dr Wolfgang Breyer, "Fair and reasonable": the determination of prices for variations in FIDIC contracts, Construction Law Journal, 2013

5. CHAPTER FIVE: THE PROBLEM WITH VALUING OMISSIONS

5.1. WHAT TO VALUE

In the illustration mentioned in Section 3.5 above, both the employer and the contractor were aware that 5 doors are required to be omitted. Nobody seems to dispute what is to be omitted; however, how much an omission is sometimes a matter of dispute. As a matter of contract application on this illustration as explained in Section 4.2 above, priority of documents Clause 1.5 determines the original quantity on which the omission is to be applied, and the valuation clause (whether 12.3 or a similarly drafted clause) determined what rate is to be used to value the same. Considering Hudson's comments referred to across this dissertation on valuation clauses, and the legal prohibition on correcting unilateral mistakes, this mechanism has proven to be problematic and results in irregular results in specific situations.

In principle, a valuation clause must have a single meaning capable of consistent application across the wide spectrum of possible circumstances in which it would need to be applied.[99]Leaving FIDIC forms of contract aside, and looking in abstract at the intention of the parties in expressing the bill of quantities, the rates inserted therein are for the contractor to be paid if the corresponding items of work are carried out, not if they are not. This means that the usage of such rates for the purpose of valuing omissions – notwithstanding any contractual agreement – is actually hypothetical because in lump sum, the contractor will carry out and complete any item of work required to fulfil the lump sum obligation whether or not the same is recorded in the bill of quantities. Therefore, the rate provided in the bill of quantities for any item of work in a lump sum contract may be used as a reference for additions considering the intention of the parties in expressing these rates. The contractual

[99] Lord Justice Christopher Clarke, in the Appeal Decision of the case of Mt Højgaard A/S v E.ON Climate & Renewables UK Robin Rigg East Limited[2013] EWHC 967 (TCC)

restrain to use the same rates to value omissions is actually incorrect and has caused numerous disputes.

Absent any contractual condition, I believe the courts would have overruled such valuations as such affects a legal principle as set out in Article 887 of the UAE civil code[100]. Although the details of the involved valuation of variations mechanisms should be left with the parties' freedom of contract to decide, however, to the threshold that the basic principles of reinstatement of mistakes and lump sum obligations should be respected and not left exposed to the freedom of contract.

5.2. THE CASE OF MT HOJGAARD V E. ON[101]

There is little case law regarding the valuation of omitted works. The case of MT Hojgaard v EON provides ample guidance to the subject being discussed herein. In this case, it was decided that; in order to make a valuation of omitted work, the engineer has to consider the contract as a whole and, in particular, the pricing risk. It may, the court said, be a matter of some difficulty for the engineer to determine the precise contribution of the omitted work to the contract price and he might need to look at any potentially relevant material, such as the way in which the contractor built up the price.[102]

E. On (the employer) had engaged MT Hojgaard (the contractor) to design, manufacture and install the foundations for 60 wind turbine generators and two substations for an offshore wind farm. The contract specified that the contractor was to provide a jack-up barge to install the foundations. After the execution of the contract, and while the works were in progress, the barge proved to be inadequate and in response; the engineer issued three variation orders requiring the substitution of a

[100] Refer to Section 4.1.
[101] Mt Højgaard A/S v E.ON Climate & Renewables UK Robin Rigg East Limited[2013] EWHC 967 (TCC)
[102] Kwok Kit Cheung, England's Court of Appeal considers how to value works omitted from a fixed price contract, Deacons, March 2015.

different vessel to do the installation work. All but two of the foundations were then installed using the substitute vessel[103].

Whereas originally the contractor had been responsible for hiring the barge and providing it for the contract at its cost, under the new arrangements pursuant to the variation orders the substitute vessel was hired directly by the employer which then provided it on a free-issue basis to the contractor. The parties agreed that there had to be an adjustment of the contract price to reflect the replacement of the barge. The contractor said that what should be omitted was the component of the original contract price included for the provision of the original barge. The employer contended that there should be a much larger deduction to reflect the fact that the contractor would have taken a very long time to install all the foundations using the original barge which had proved inadequate.

Clause 31.3 of that contract (NEC contract) provided that in the event of disagreement on adjustment of the contract price, the adjustment was to be determined in accordance with the rates specified in the schedule of rates. It was agreed that there were no directly applicable rates in the schedule of rates.

Held; in valuing the variation orders, the varied work was properly characterised as a variation, by omission and/or addition of part of the works, within the meaning of that clause 31.1. The basic scheme of the contract was that constituent elements of the works made discrete contributions to the contract price, even though the precise amount of each contribution was not itemised and the contractor had not provided its detailed price breakdown as part of the contract process.

The employer's approach, which required the engineer to adjust the contract price by reference to the time it would have taken the contractor to carry out the works if they had not been omitted, ran contrary to that basic principle and ignored the fact that the sums which the contractor would be entitled to be paid for executing parts of the

[103] Michael Sergeant, Valuing Omissions – the alternative method, Construction Law, 2013, 24(10)

works would be the same, however long it took to execute them and whether it had overpriced or under-priced them.

The employer had a powerful case for saying that the contractor had contractual responsibility for the fact that the contract fell seriously into delay, but the contract provided for the consequences of delay to be determined by application of the contractual remedies and not by adjusting the contract price as such. There was no reason why the variation orders should have the result that the additional delay which would have been incurred had the contractor continued to work with the original barge should be reflected in an adjustment to the contract price, particularly when that delay had in fact been avoided.

It was wrong in principle for the employer to benefit from a reduction in the contract price by reference to the notional costs of hiring the barge that the contractor would have incurred if the variation orders had not been issued, when those costs, if incurred, would not have affected the statement of account as between the contractor and the employer. The employer's approach also required the engineer to conduct an exercise which was at best hypothetical and at worst fictitious. The employer was attempting to achieve additional contractual remedies for breach of contract under the guise of adjustment of the contract price.

The contractor's approach had the merit of relative simplicity and conformity with the overall contract structure. It followed that, what the engineer should be seeking to achieve was an approximation to the contribution to the contract price made by those parts of the works which were omitted by the variation orders.

The key phrase in the decision of this case that links with the illustration mentioned in Section 3.5 is “The employer was attempting to achieve additional contractual remedies for breach of contract under the guise of adjustment of the contract price”. Valuing the omission in the manner prescribed in Section 4.2 above in fact includes a

correction of a mistake that is contractually[104] and legally[105] prohibited[106]. The special feature of the above case is that there was no applicable rate to be sued for valuing the omission and that enabled the court to – perhaps for the first time – explain how an omission should be valued apart from the restrains set by the standard forms of contract that the parties agree on. If there has been an applicable rate for valuing the omission in the above mentioned case, I believe the court's decision may have changed except for the involvement of the time factor in valuing the omission.

5.3. APPLICATION OF THE DECISON OF MT HOHGAARD V E. ON

Notwithstanding any contractual agreement, and applying the rationale of the decision of the above mentioned case, the precise contribution of the omitted work to the contract price should be the value of the omission. Back to the illustration in Section 3.5, the valuation should be as follows:

The original quantity of work against which the lump sum is payable = 10 doors

The omission required to be valued = 5 doors

The contribution of the omitted work to the contract price = 50% (5 is half of 10)

The value of the omission = the amount of this item i.e. AED 3,000/- x 0.5 = - AED 1,500/-

The contract price adjustment = AED 3,000/- - AED 1,500/- = AED 1,500/-

Although this result seems identical to the "rate inapplicability" approach explained in Section 4.3 above, it has to be made clear that the approach herein is not made in accordance with the 1999 FIDIC red book approach to valuation of variations but to the application of the decision of the case above mentioned. It is the opinion in this

[104]Sub-Clause 14.1 of the 1999 FIDIC Red Book
[105]Article 887 of the UAE Civil Code and the interpretation of the same by the Abu Dhabi Court of Cassation, 573/Judicial Year 2
[106]Dubai Court of Cassation, 44/2008

dissertation that the parties' use of the mechanism set out by the 1999 FIDIC red book and its guidance in using Sub-Clause 12.3 in valuing omissions in lump sum contracts is misleading and problematic.

The above valuation is the correct valuation based on the business's scholarly records and related legal principles. I have to stress that it is basically not FIDIC's shortcoming that parties misuse its standard forms.

5.4. INTENTIONS OF THE PARTIES

If the illustration mentioned in Section 3.5 was for a considerably bigger amount of money and the parties fail to agree on a valuation, and consequently, the matter elevated to become a dispute, what would be expected from the judge / arbitrator in this regard?

It is very clear that the parties intended to contract on lump sum basis, as such, the correct norms of valuing omissions in such type of contracts are as explained throughout this dissertation and valued in Section 5.3 above. However, the parties' intentions are expressed by the contract documents they have contracted on regardless how those have been arrived at, and in accordance with the priority agreed therein (except for cases of misrepresentation[107] or duress[108]).

If the conditions of contract as agreed by the parties provide for a different scheme for valuing omissions than that explained herein, such scheme shall be binding on the parties and such departure from any professional norm of valuation shall not constitute an excuse to depart the conditions of such contract. Unless the parties agree by a way of a written executed amendment to the contract that any provision in any of the contract documents is to be changed, it is not the authority of anyone including the judge to amend any of the contract documents. However, it shall be allowable to

[107] Article 187 of the UAE Civil Code
[108] Article 182 of the UAE Civil Code

the judge not to enforce a provision of the contract if such contradicts with a mandatory rule of law or public policy.

The above being said, and as explained in Section 1.2.5 above, contracting parties must be very careful in setting out the conditions of contract especially that deals with valuation because once these conditions bear their authorized signatories and stamps, they shall acquire the rights of freedom of contract and there shall be no chance to amend them except by mutual agreement between the parties.

6. CHAPTER SIX: SUGGESTED STEPS BY THE LEGISLATOR

6.1. UNDERSTANDING THE BUSINESS

What has been explained in this dissertation is simply a mistake or a misuse by the parties to one of the standard forms that has led them into a contractual dilemma. Valuation of omissions in lump sum contracts using the same mechanism of Sub-Clause 12.3 of the 1999 FIDIC red book is just an example on how the parties can lock themselves in problematic situations.

From a narrow point of view, the principle of freedom of contract should not be messed with and whatever the parties agree upon should be given effect by the court if any dispute has arisen. However, from a wider view, it is the duty of the legislator to set out fair legislation to ensure equity is achieved in all the dealings taking place in the jurisdiction. Considering that UAE is a leading real estate and construction market, it is of an ample importance that the legislator consider the special character of the construction business and address its issues in a more precise and direct approach instead of the general outline approach currently adopted in the civil code.

At this juncture of the history of the UAE, the Emirate of Dubai, and especially in light of the emergence and the development[109] of the DIFC free zone[110], it may be the best time to have a revolutionary move on the construction law to cope with the country's and the emirate's ongoing development.

One of the required moves is to simply promote awareness by holding seminars and trainings where professors and scholars lecture about the proper practice of contract

[109] Robert Karrar-Lewsley, Zane Anani, Aruna Mukherji, David Bowman, Richard Catling, and Izabella Szadkowska, United Arab Emirates: 25 Years of Change: Legal Developments in the UAE Since 1991, Al Tamimi& Co., Law Update, April 2016 AND Gareth Mills, and Georgina Munnik, DIFC: a gateway to enforcement across the GCC?, Charles Russel Speechlys, Insight, March 2016.

[110] DIFC is a global financial centre strategically located between the East and West, providing a stable and secure platform for businesses and financial institutions to tap into the emerging markets of the Middle East, Africa and South Asia. The Centre's internationally recognised and independent regulation and common law framework. https://www.difc.ae/about accessed on 19 June 2016

drafting and valuation of variations. In fact, Dubai is not short of such events, however, it is a fact that the relevant awareness has not yet sufficiently promoted.

Another move may be a legislator's interference or stepping in. It is a matter of fact that only the general conditions of standard forms are drafted by scholars and experts in the construction field. The particular conditions are drafted by practitioners who may not be well experienced to understand the consequences and effects of any improper amendment to these standard forms as explained in this dissertations. The suggested legislator's step-in will override any such irregularity and will enforce the correct practice and back it up. It would be a bold move if the legislator withdrew the valuation of variations exercise from the freedom of contract and place it with a provision of law[111]; however, the wording of such step-in may solve lots of controversies.

Moreover, the practice and presence of construction law specialists in UAE has shortened the distance between people of practice and people of law. It is very possible that – provided the intention – an approach to echo terms like "variations", "taking over certificate", "defects liability certificate", "defects liability period" … etc in the civil code. The role of the "project manager" and the "quantity surveyor" could also be included in the civil code. Updating the civil code to set out the duties and obligations of these parties will indeed attract more international names in the construction business to come and invest in UAE, besides – of course – providing a helpful legal system to manage and control the whole business.

6.2. SUGGESTED MODIFICATION TO ARTICLE 887[112]

As a mere example, if there has been a mandatory rule of law that deals with valuation of omissions in lump sum contracts, improper amendments to the standard forms would not affect the parties' rights in respect to such omissions even though

[111] Article 31 of the UAE Civil Code
[112] Of the UAE Civil Code

such improper amendments were given the power of contract. It is not the case brought herein that valuation of omissions in lump sum contracts is the first priority problem that requires the legislator's attention, it is an example among many others of areas that need to be filled and angles that need to be closed.

The above being said, examining article 887 of the UAE civil code, it is the closest article of law that deals with the subject matter of this dissertation. Its first paragraph deals with the lump sum contract if unvaried. It clearly states that the lump sum payable by an employer in exchange with carrying out of a specific design by a contractor is not subject to any increase that may be required by the contractor in carrying out the said design. The second paragraph states that in case of any modification or addition approved by the employer, the valuation of such modification or addition shall be in light of the agreed contract with the contractor.

The article does not give any specific regard to omissions and the context in which the term "modification" is mentioned in its second paragraph tends to mean a modification that leads to an increase to the contract price rather than one that leads to a decrease. It is evident that the legislator has been very cautious in approaching the variations issue and in fact he was absolutely right. There are numerous possible situations that may take place and article 887 will be required to apply on all of those in a consistent manner. However, with the development that UAE has experienced in the construction industry, it is about time the legislator takes the second step.

In light of the research carried out in this dissertation, a suggested modification to article 887 of the civil code can solve lots of disputes and will promote the practitioners awareness in respect to valuation of omissions in general. The suggested modification is provided hereunder in Arabic and English languages.

The suggested deletions are highlighted in strikeouts and the suggested additions are highlighted in bold and italics.

مادة (887)

1- إذا أبرم عقد المقاولة على أساس تصميم متفق عليه لقاء أجر إجمالي***مقطوع***[113] فليس للمقاول أن يطالب بأيه زيادة في الأجر***المقطوع***[114] يقتضيها تنفيذ هذا التصميم.

2- و إذا حدث في التصميم***المتفق عليه***[115] تعديل أو[116] ***اية*** إضافة برضى صاحب العمل يراعى الإتفاق الجاري ***تكون قيمة الأجر الإضافي بشأن هذه الإضافة على أساس الأسعار المتفق عليها*** مع المقاول .

3- و إذا حدث في التصميم حذف أي عنصر من عناصر التصميم المتفق عليه برضى صاحب العمل؛ تكون القيمة المقتطعة بشأن هذا الحذف على أساس القيمة التي يشكلها العنصر المحذوف من الأجر المقطوع.

Article (887)

1- If a muqawala contract is made on the basis of an agreed plan in consideration of a lump sum payment, the contractor ~~may~~***shall not be entitled to claim***[117] ~~not demand~~ any increase over the lump sum ~~as~~ ***that*** may arise out of the execution of such plan.

2- If any ~~variation or~~ addition is made to the ***agreed*** plan with the consent of the employer, the ***valuation of such addition must be based on the agreed rates*** ~~existing agreement~~ with the contractor ~~must be observed in connection with such variation or addition~~.

3- ***If an omission of any part of the agreed plan is made with the consent of the employer, the valuation of such omission must be based on the amount such omitted part forms from the lump sum payment.***

After implementing the suggested modifications, article 887 can read as follows:

[113] The term "مقطوع" is customarily used to describe lump sum in Arabic construction contracts. The term "إجمالي" actually means Total and does not precisely serve the meaning of lump sum.

[114] Further necessary emphasis.

[115] Further necessary emphasis.

[116] As the suggested modification to article 887 recognizes the distinction between additions and omissions, the term "variation" is now too generic.

[117] Departure from the Westlaw translation: The term "claim" is customarily used to describe such approach from a contractor rather than the term "demand".

مادة (887)

1- إذا أبرم عقد المقاولة على أساس تصميم متفق عليه لقاء أجر مقطوعفليس للمقاول أن يطالب بأيه زيادة في الأجر المقطوع يقتضيها تنفيذ هذا التصميم.
2- و إذا حدث في التصميمالمتفق عليهأية إضافة برضى صاحب العمل تكون قيمة الأجر الإضافي بشأن هذه الإضافة على أساس الأسعار المتفق عليهامع المقاول.
3- و إذا حدث في التصميم حذف أي عنصر من عناصر التصميم المتفق عليه برضى صاحب العمل؛ تكون القيمة المقتطعة بشأن هذا الحذف على أساس القيمة التي يشكلها العنصر المحذوف من الأجر المقطوع.

Article (887)

1- If a muqawala contract is made on the basis of an agreed plan in consideration of a lump sum payment, the contractor shall not be entitled to claim any increase over the lump sum that may arise out of the execution of such plan.
2- If any addition is made to the agreed plan with the consent of the employer, the valuation of such addition must be based on the agreed rates with the contractor.
3- If an omission of any part of the agreed plan is made with the consent of the employer, the valuation of such omission must be based on the amount such omitted part forms from the lump sum payment.

6.3. RATIONALE OF THE SUGGESTED MODIFICATIONS

Although it is understood that withdrawing the valuation of variations from contract to law is very sensitive and tricky, however, the suggested wording of article 887 maintains that the valuation of additions would be based on the prices already agreed between the employer and the contractor – necessarily in the bill of quantities – and the valuation of omissions would be based on the factor that the omitted work forms

from the lump sum i.e. the contract is still given power however up to the correct norms. Implementing the above suggested modifications to article 887 of the civil code will eliminate the possibility where freedom of contract takes the parties into a contractual dilemma.

It has been explained in Section 3.3 that omissions cannot be valued in the same manner as additions because additions are of foreign nature to the scope of the contract while omissions – before being actually omitted –form part of the contract. In a perfect world, an omitted item's contribution to the lump sum contract price would be easily calculated from the bill of quantities, however, if any mistake is involved, then, any valuation of omission on such items should not regard correcting such mistakes as explained in Section 4.1. Even if there is no mistake in the bill of quantities, it has been explained herein that it is not correct practice to value the omission based on the rates mentioned in the bills as those were promised to be paid if the corresponding works are carried out and not if they are not carried out[118].

6.4. FINAL STATEMENT

The subject of this dissertation has been discussed with representatives of the FIDIC contract committee and they have stressed that FIDIC – in the guidance – has expressly advised users to omit the whole of Clause 12 in converting the 1999 Red Book to a lump sum contract, however, FIDIC has not advised how would users set out the valuation of variation clause in this case and just referred this matter to Sub-Clause 3.5 [Determinations]. I have been advised that this specific matter has been brought to the attention of newly constituted FIDIC task group that is responsible for issuing the updated Red Book by the end of 2016[119].

[118]Lord Justice Christopher Clarke, in the Appeal Decision of the case of Mt Højgaard A/S v E.ON Climate & Renewables UK Robin Rigg East Limited[2013] EWHC 967 (TCC)
[119]Siobhan Fahey, FIDIC's update of the 1999 Yellow Book, FIDIC ME Contract Users Conference, Dubai 16th February 2016.

In an attempt to interview one of the most famous writers about FIDIC forms of contract, the professor refused the interview request as similar questions to those raised in this dissertation are posed in from of him in ongoing arbitration cases. This proves that the subject matter of this dissertation is indeed controversial and involves numerous disputes.

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