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Implications of Contractual Variation Orders on Building Construction Projects

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ABSTRACT: The study aimed at assessing the contractual implications of variation orders on building construction project. Two objectives were set to guide the study and it ranges from factors influencing variations in the construction industry, also to the exploration of the perspectives of the employer/client and the contractor on variation clauses with recourse to current cases on variations in the Malaysian construction industry. The data for this study were gathered qualitatively and it involved ten Malaysian cases spanning between 2009 to 2019.The findings revealed that variation clauses are not unduly working in favour of any party, but for any party who can abide by variation clause or substantiate its claims at proceeding. Consequently, the provision of the variation clauses will favour the parties on the ground that contract administrators know the scope and limits of their job and the extent of authorities they possessed. The study recommended that the contractors should be advised to make sure that all instructions are clearly documented.

KEY WORDS: Variation order, Variation clause, Construction industry, Employer, Contractor.

1. INTRODUCTION

The aim of the employer and his professional consultants in any construction industry is to achieve an optimum value of his project by having the project completed within the estimated contract sum and the speculated contract duration. However, building design practice [1] is a complex interaction of skill, judgment, information and time which has its goal at satisfying the clients' demand. Occasionally, an ugly situation for variation arises with attendant results of higher variation order on a certain project. The greater the possibility that time is consumed, and the costlier the construction projects. The issuance of variation order by the architect in each of these construction projects is inevitable and that the resultant effect is that it impacts the project performance negatively. In Malaysia, Pertubuhan Arkitek Malaysia (PAM) is an organization that came to existence in order to promote, enlarge the knowledge, study and the practice of architecture among themselves. PAM equally brings into place the central organization for architecture and qualification of the profession itself in Malaysia. Though, (PAM) happen to be one among many options that are available in relative to construction works. However, in clause 11 of the PAM, variation order is defined to be an alteration or modification of the design, with the inclusion of the quantity or quality of the works as shown in the contract drawing and as described and referred to in contract bills. The statement of the requirements for the contractor in other to submit all the necessary detail for the claims made by the contractor is stipulated in the order. At the occurrence of variation, the contractor, consultant, and the client may be impacted. In addition, in a typical construction contract-variation order clause allows the administrator of the contract to add, omit, substitute and modify component of the works. The benefit of variation clause is advantageous to the employers in Malaysia as they have a very wide authority.

II. ISSUES AND RESEARCH AIM

In every construction project, variation order is not an uncommon syndrome as work progresses. It is discovered that at the beginning of any contract, the cost of the contract (contract sum) is prepared by the cost engineer or the quantity

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surveyor, while at the completion of the contract there could be a varied amount of money (final account), which may make the contract sum increased or decreased, with an attendant consequence on the improvement of the project. At the occurrence of variation, the contractor, consultant, and the client may be impacted, either positively or negatively. Therefore, it becomes imperative to identify the sources of variation in construction industry and the implication of variation on the contract parties based on the occurring current cases between (2009-2019) in Malaysia construction industry. A better perceptive of these issues by the contract administrator and contractor will lead to a more efficient system of contract administration and have the rate of disputes reduced.

III. LITERATURE SURVEY

Concept of Variation in the Construction Industry

Variation, as applied to the construction industry, means any change or deviation from the original plan or scheme of work contained in the contract drawing and described in the contract BOQ when entering into the contract by the parties involved, namely the client/employer and the contractor. It leads to project delays which bring about loss and expense claims which also had significant effect on cost overrun and thus imparts significantly on the complete cost of a project.

In most of the cases, the contracts are signed with a definite timeframe of completion and the extent of this time target met is frequently seen as a major condition of project success. According to[2], it was illustrated that project managers cannot foresee the future, but precisely gauging the extent of uncertainty inbuilt in the project can facilitate them quickly to adjust it. However, there has been an almost universe critic of failures of the building industry to deliver projects in a timely manner. this opposition was defending by [3], stating that many things may occur on a construction site to increase the time of performance of the project. Moreover, [4], remarked that contractors handling project in a developing country faces several problems causing variation which affect the duration of a project. Variation, however, excludes nomination of a subcontractor to supply and fix materials, goods and also to execute work which the measured quantities had set out and been priced by the contractor in the contracting bills for supply and fixing or execution by the contractor.

Functions of Variation

The function of a variation in a contract is to empower architects (or any employer's agent) to instruct changes to works involved in projects. In the absence of variations, a contractor cannot be compelled to succumb to a client' instructions for works scope outside the original main contract. In a large construction contract, it is not possible not to have any changes to works and materials. Although variation clauses as stated in standard forms seem to grant architects power to instruct variations, these are not without restrictions such as not allowing all variations (Muniandy 2014).

It is fundamental that parties are only bound to perform what is stipulated in the contract agreement signed. Unless there is a written terms or provision that gives room for alterations to take effect in the course of the contract, the contractor is not under any obligation and cannot be forced to carry out any additional works, and likewise the employer cannot omit any works agreed upon without breaching of contract except it is expressly provided for in the contract. Variation clauses brings in much basic flexibility into a bit rigid regulations that otherwise manage the parties' obligations arising under building contracts [5].

Factors Responsible for Variation in Building Projects

The alteration of the specification that leads to the variation which affects the completion cost and the duration of the project is due to some principal aspect apart from the provision according to the standard form of building contract (PAM 2006). These are identified by Ayeni (1991) and [6]. The factors are:

i. The origin of the project (the employers).
ii. Handling by the design team (the consultant).
iii. Handling by the contractor.
iv. Act of God.
v. Government policy.

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Impacts of Variation Order

Cost overruns

However, most construction project will incur cost overruns as a result of a variation order. Variation orders have both direct and indirect effect on cost. However, [7] identified the following direct cost associated with variation orders. i. Time and material charges related to immediately affected tasks, ii. Recalculation of network increased time-related charges and overheads. iii. Reworks and standing time. iv. Timing effects, for example winter time. v. Inflation change to cash flow and loss of earnings. vi. Management time, head office and site charges. This direct cost is easier to calculate compared to indirect cost. Moreover, [7] identifies various of the indirect cost to be as follows: i. Rework and making good on affected trades other than the actual variation order. ii. Change in cash flow as a result of the effect on inflation and financial charges. iii. Loss of productivity as a result of interruption in the course of parties getting familiarise with new working condition, tools, and materials. iv. Cost for redesign and administration of the variation order v. Litigation-related costs in case of disputes arises from the variation order

Time overruns

[8] state that variation order that arises during various stages in the construction project will negatively affect both the completion time and costs of the project. Clients want their projects to be done within the time-constrained. Contractors will be penalized if they exceed the original project delivery date and this penalty imposed is usually used to cover the damages suffered by the client regarding the prolonged delivery report.

Quality degradation

Contract with a considerable degree of risk for unidentified variables such as lump sum, the contractor may influence the quality and quantity to maximize their profits. Quality may be altered as contractors try to balance for losses they are not optimistic about. However, variations, if frequent, may affect the quality of work adversely Williams and Olofinsawe, 2016). The quality of work was usually poor because of frequent variations as contractors tended to compensate for the losses by cutting corners.

Health and Safety

The Occupational Health and Safety says that Clause 5.3 (e) stipulates that where the changes are introduced about, sufficient health and safety information and sufficient resources are to be readily available to the contractor to carry out the work safely. [9] Equally state that change in construction process, materials and equipment may necessitate supplementary health and safety measures. This shows that variation orders can result to the revision of health and safety considerations.

Professional Relations

A dispute may arise as a result of variation orders. Misunderstanding will surface when contractors are not quite satisfied with the determination of the variation orders by the client's consultant. [7] states that tension among parties as the contractor constantly pushes the client to settle claims for additional costs while perpetually feeling that the reimbursement has been inadequate. This can be very destructive to the relationship among the parties.

Process of variation based on P.A.M Contract 2006 (With Quantities)

Clause 11.1 of terms and conditions in P.A.M Contract 2006 explained about the definition of variation and these have been discussed previously. According to [10], in this contract form, there are total of five broad areas of term of variation for the purpose of the contract, and they are; Clause 11.1(d), stated that, variation is also considered when there are any changes to the provision of the contract in the situation of any limitation on working hours, working space, access to or utilization of any specific part of the site and also the execution and completion of the work in any specific order.

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As stated in Clause 11.2 of P.A.M Contract 2006, when there is variation, an Architect may issue an AI ordering that variation or sanctioning any variation made by the contractor in the construction project. The variation order instructed will not vitiate the original contract between the Client and the Contractor. In addition, the clause also enhances the contractor not to delay the execution of the variation order's works. If there is any pending in valuation of variation, the contractor needs to carry out with due diligence and expedition of all variations that have been instructed. These are supported by [10] that, the contractor needs to immediately execute and complete the variation order works, notwithstanding any agreement as to its pricing or valuation one the valid A.I have been received by the Contractor.

The issuance of variation must be made in writing by the Architect. The Architect may issue the instructions at any time that may necessary before the issuance of the Certificate of Practical Completion. [10] mentioned that the variation order still can be issued even if the Contractor is in liable of delay and a Certificate of Non-Completion have been issued before. [10] added that any variation order instructed after the achievement of the completion milestone will not be contractually valid and the Contractor is not compliant to such instruction unless there is an express clause in the contract permitting the issuance of such variation order. Furthermore, if there is any variation instructed in AI, it needs to be necessitated by obligation or compliance with the requirement of any Appropriate Authority and Service Provider.

All of these conditions have been stated clearly under Clause 11.3 of the Contract Form. There are several valuation rules being explained in P.A.M Contract 2006 and they are all under Clause 11.6. The valuations of variations in this contract are based on Bill of Quantities' rate, fair adjustment rate, fair market rate, and daywork rate. The classification and the conditions of these rules are summarised as in Table 1.

Table 1: Rules of Valuation of Variation by P.A.M Contract 2006

Rules	Conditions	Rules
Variation works that can be measured and valued		
Bill of quantities' rate	The variation work is of similar character and executed under similar conditions and does not significantly change the quantity of the work as stated in the contract document	11.6(a)
	When there is item omitted, the rate and prices in the contract document will be used as the valuation. If omissions are not as the same in the conditions under which remaining items of works are carried out, the price of such remaining items shall be valued under Clause 11.6(a), (b) and (c).	11.6(c)
Fair adjustment rate	The variation work is of a similar character but is not executed under the same conditions, or is executed under the same conditions but there is any significant change in the quantity of work carried out.	11.6(b)
Fair market rate	The variation work is not of a similar character to work as stated in the contract document, the Quantity Surveyor need to determine the price.	11.6(c)
Variation works that cannot be measured and valued		
Daywork rate	The contractor can use the daywork rate stated in the contract document or if there is no such day work rate available, the following rules need to apply; Value the actual cost of materials, additional construction plants, and scaffolding, transport, and labour for the work concerned which incur by the Contractor, plus fifteen percent (15%) that include the usage of all tools, standing plant, standing scaffolding, supervision, overhead, and profits. The site agent must sign the vouchers specifying the time spend to execute the works daily, the workers' name, materials, additional construction plant, scaffolding, and transport used, and must also verified by site staff. Then, those particulars documents need to be submitted to the Architect and Quantity Surveyor at weekly intervals with the final records delivered not later than fourteen (14) days after the works have been executed.	11.6(d) i ii

Employer's Perspectives of Variation

As quoted by [11]the ability to adapt to change is Intelligence. In construction contracts, this 'change' is relatable to variation of works. Variation, which undeniably is part and parcel of construction contracts, is an illustration of the employer's business-acumen, and at times dilemma, to adapt to the ever-changing need of the project and thus to provide appropriate additional instructions (Memon et al, 2014). According to studies conducted by [13], it revealed that the existence of variations is common in construction projects and the main cause of variations was due to an

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employer's demand. To the employer or its agents, the primary problems pertaining to variations are the scope of change, its limitation and subsequently the valuation of addition or omission of works.

Stated by Robinson [14], the power to vary the scope of work obligation is probably the most controversial issue arising from the list of architect's powers and it is usually the subject of a separate and comprehensive clause in the contract. Problems also arise when the variations result in prolongation of time and additional expenses. Based on these facts, it is no surprise that variation could be perceived as being advantageous to the employer. These are measured as follows:

Employer's rights to order variation of works

The variation power of the employer is dependent on the contractual terms, i.e. Employers are not entitled as of right to order variation if the variation clauses are absence in the contract, in essence, the employer may not be able to instruct the contractor to perform any variation except with the agreement of both parties *(Stockport Metropolitan Borough Council v O'Reilly [1978*]). Nonetheless, once been empowered and subject to the terms of the contract, the employer generally has an extensive power to order variation of works [15]. An employer's right to vary can also be found in the commonly used standard forms of contract in Malaysia namely, Pertubuhan Akitek Malaysia Standard Form of Building Contract (PAM contract 2006), which is normally adopted by private sectors. The presence of variation clause in the standard forms is clear evidence of an employer's right to vary in this country (Malaysia). The employer may activate its right to vary for various reasons, for instance, to comply with the changes demanded by the relevant authorities, to make necessary adjustments due to site constraints, to make good discrepancies and ambiguities as well as to repair incomplete and inadequate drawings and designs
.
[1] opined that although variation clauses are always interpreted as an all-embracing provision, construction contracts tend to treat the many causes of variations all the same. To protect the employer's rights to vary, it is very common for a contract to contain variation clauses. In Malaysia nonetheless, it is arguable that in the area of construction law, employers generally have the upper hand in dictating terms of the contract, and thus have a wide power to add a strong and all-embracing variation clause in the contract,[1].

Limit to the employer's power to vary

Variation clauses conferred the employer with a wide power to vary. This power, however, is not absolute, and definitely not without its limitation. Nonetheless, as it is commonly included in the contract that variations will not vitiate the contract, setting the parameters of the limitation might be quite problematic. The general limitation of variations can be seen in the Privy Council case of *Molloy v Liebe ,with the interpretation that* i. There is an implied obligation to perform indispensably necessary work with no additional payment when the contractor had previously quoted the contract sum based on drawings and specifications; ii. The general exception to this rule is when the scope of the work is specifically defined and itemized and thus the extra work can be clearly distinguished; iii. Normally, a valid instruction which is outside the scope of the original work amounts to a variation; and iv. Nonetheless if the instruction gave rise to a totally new work which is outside the ambit of the original work, it may amount to a new and separate contract which needs to be agreed upon by both parties or alternatively it may give rise for quantum meruit.
Employers may also find limitation to its power to vary as there is a need to establish a nexus between the original work and the variations. At times, variations instructed by the employers may be outside the scope of work. The case of *Blue Circle Industries plc v Holland Dredging Co (UK) Ltd* illustrates the difference between a variation and a change to the scope of the works.

No any additional payment by the employer if the work is necessary and can be implied.

According to which has long been an ideal reading in the area of construction law, to be effective, it is not necessary for the employer to include a detailed variation clause stipulating the employer's power to vary. This suggestion is further strengthened by case-law decisions which, inter alia, confirmed that the variation work can be considered as implied or forms part of the necessary works of the contract. [16]works which necessitate variation, even though is not stipulated expressly as part of the contractual terms, are still considered as implied, or it can form as necessary works of the contract. The frequently quoted case of *Williams v Fitzmaurice* was used to support this proposition. Amongst others, it

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was held that under a lump sum contract, 'indispensably necessary' work which is required to complete the project is not regarded as variation and the court will infer work as is included in the contract price.

The employers' right to value the variation.

Employers generally have the advantage to dictate the adjustment of pricing or the valuation of variation as stipulated in the terms of the contract. To ensure that the contract leaves little to be the subject of negotiations (or disputes) nearly all of the standard forms of contract provide a mechanism for evaluating variations and changes (Knowles, 2005). Normally, the rates for the valuation of variation will be included in the bill of quantities. If not, a schedule of rates will be included as part of the contract documents. Hence, variation will be valued in accordance with the bill of quantities or schedule of rates so far as applicable or, in the absence of agreement, by determining a reasonable rate.
[18] noted that the rules for the valuation of variations are usually found to be in fairly general terms and open to some interpretation and judgment as a result. Depending on the situation, variations concerning an increase or decrease of material quantity may be a boon or a bane to the employer. If the material is under-valued and the employer's variations result in the increase of the quantity of the material, the employer will enjoy the consequential benefit as the same rate will apply throughout the performance of the contract, and not what the contractor now deems fair. In contrast, if the price of the material is over-valued, the employer will then suffer further losses.
Legal precedents have long-established, for instance in the case of *Dudley Corporation v Parsons* and *Henry Boot Construction Ltd v Alstom Combined Cycles Ltd*, that courts will not interfere to rectify this pricing error. Judge Lloyd in *Henry Boot* stressed the importance of the contract rates and held that the rates cannot be avoided simply because one party is dissatisfied with them. The author further stressed that the contract rates were sacrosanct, immutable and not subject to correction. The only exceptions to this rule, wherein the contract rate may be departed from area where they are being used to value variations for works which are not executed under similar conditions, or where there are substantial changes in quantities which render the rate inapplicable.

Contractor's Perspectives of Variation

The potential effect of variations in construction projects can be additional payments for the contractor. Variations are significant can be a common source of additional works for the contractor Memon et al.,(2014) Due to additional payments, the contractor looks forward to variations in the construction project because contractor benefits from the additional profit on variations. However, the disputes over variations and claims are unavoidable between the contractor and the variation clauses in standard form of contract are usually being used as the source to overcome the project disputes Jaspal & Hussin, (2010) In fact, some variation order requires omission works. It may be because the works are no longer essential or are no longer within the budget of a project. However, such omissions are significant in nature or being constructed, contractors frequently debate that they should be allowed to claim the loss of profit that they would have earned on such works. This is because the contractor needs to consider the labour, machinery as well as the material cost that have been allocated to the work done where omission is required, Love et al (2009).
There is also the issue of whether it is the duty or power of an architect to instruct variations. In the former, it is argued that only the architect can order a variation while the latter simply means the architect has power to delegate variations instruction to consultant engineer or even site representative as long as there are proper delegations of power guidelines. It is generally accepted that it is the latter which is correct as delegated instructions can be accepted as a valid variation order.

V. METHODOLOGY

Data collection involves documentation, archival records, direct observation, interviews, and reviews.
To achieve the objective of the study, the data source mostly came from the documentation and archival records. The source was divided into two which is primary data and secondary data. Primary data was used to analyze objective two through the instrument of Variation cases and disputes in relation to the contracting parties as well as Reported cases in LexisNexis and World Wide Web (WWW), between 2009 and 2019. While the secondary data was complementing data for objective 0ne to improve the understanding of the problem which was gathered from extensive literature review, such as journal, publications, books, articles, internet files. Also from cases review, views and opinions, and Google search. The profile of the parties involved in the contract and dispute were analyzed to get the percentage of the involvement of each party, the number of cases involved, and the percentage of cases that favoured each party.

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Data Analysis

Table 2: Summary of the analyzed law cases

No	Law Cases	Types of Parties/ Project	Issues of the case	Judgment	Variation Clauses/Principles
1	Syarikat Binaan Utara Jaya (a firm) v Koperasi Serbaguna Sungai Glugor bhd. [2009] 2 MLJ 546	Employer versus the main contractor	whether the contractor is entitled to payment in respect to variation without a written order from the employer or his agent	Contractor not entitled to payment	Variation works which the contractor decides to do without having received a valid instruction from the architect/engineer (as required by the contract) will not be counted as a valid variation and will not be paid for.
2	Tidalmarie Engineering Sdn Bhd v Kerajaan Malaysia (Jabatan Kerja Raya Malaysia) [2011] 2MLJ 400	Employer versus the main contractor (Private)	Whether given that termination was wrongful, can the defendant retains the performance bond amount, Refuse to compensate the plaintiff for the work done and/or make payment for loss of profit? ii. Whether arbitrator may impose liquidated damages on the plaintiff when no such claim was made by the defendant and when no CNC was issued? And iii. what should be the measure of damages as a result of the wrongful termination of the agreement	The employer must compensate the contractor for the work done	The defendant having unlawfully terminated the contract which resulted in the dismissal of its counterclaim must compensate the plaintiff for the work carried out and must return the performance bond. The utilization of the Performance Bond is not tied to the termination of the employment of the Contract.
3	Sykt Pembangunan Setia Jaya v Peremba Construction Sdn Bhd & Anor [2012] MLJU 1768	Main contractor versus subcontractor (Private)	Whether orally or evidenced request for variation through the amended drawings, etc (though the defendants had never issued any written variation) is entitle to variation claims.	The sub-contractor is entitled to claim of all the extra works from the main contractor	If there is an imputed or implied promise on the part of the employer to pay for the work which has not been ordered in accordance with the formalities or any other express conditions for payment of such work
4	Pembinaan Perwira Harta Sdn Bhd v Letrikon Jaya Bina Sdn Bhd [2013] 2 MLJ 620	Main contractor versus subcontractor (Public)	Whether a variation clause can be utilized to omit works to be given to others	The termination was invalid and the variation clause was improperly used by the appellant (main contractor).	A clause for omission cannot be relied upon to remove works from a contractor in order to give to another contractor.
5	Hasrat Idaman Sdn Bhd v Mersing Construction Sdn Bhd [2015]11MLJ 464	Main contractor versus subcontractor. (Private)	Whether variation claim without instruction or variation order and inconsistent evidence is valid	The subcontractor's claim against the main contractor was dismissed.	On the basis that it had failed to prove that the variation works were duly instructed.
6	Sungai Lui Construction & Development Sdn Bhd lwn Jati Estetika Sdn Bhd [2017]1 CIDB-CLR 159	Main contractor versus subcontractor. (Private)	Whether there was a contract between the parties and if yes, was the contract determined wrongfully by the Defendant?	There was a wrongful termination of the contract, also the Plaintiff had been officially appointed to carry out the said works and hence entitled to payment.	The conduct by the Defendant (main contractor) amounted to a breach of the contract and it was clearly evidenced that there was a contract that had come into existence. Work done must be duly compensated.
7	Iso Technic Electrical Sdn Bhd v Calibre M&E Sdn Bhd [2017] MLJU 47	Sub-contractor versus Non subcontractor) (Private)	To know if the plaintiff can claim for the balance sum due for original works and the additional variation works.	The plaintiff (non- sub-contractor) was able to show that the variation works were ordered by the defendant, and the judgment was given in favour of the plaintiff	The variation works must be duly authorized before a claim could be made.
8	Goldiant Development Sdn Bhd v Fan Boon	Employer versus the main	Whether the termination of the plaintiff's engagement under the Project by the defendant was	It was held that the notice of termination had been wrongly issued by the defendant, and is	A party cannot benefit from his own wrong or default. parties to a contract do not

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No	Law Cases	Types of Parties/ Project	Issues of the case	Judgment	Variation Clauses/Principles
	Heng [2018] MLJU 324	contractor (Private)	wrongful; Whether the plaintiff is entitled to progress claim for work completed and loss of profit; Whether there was overpayment by the defendant for the extent of the work carried out and completed by the plaintiff; and Whether the defendant is entitled to his counterclaim.	without a valid basis. An award of nominal damages for loss and profit. in given the finding that the termination was unlawful, all claims of the Defendant are dismissed.	intend that either party should be able to rely on its own breach of obligations to avoid a contract or obtain any benefit under it unless the contrary is clearly provided for by the contract.
9	R Tharmarajah a/l Ramasamy (berniaga di bawah nama dan gaya Ultra Ray Enterprise) v SSL Dev Sdn Bhd (dahulunya dikenali sebagai Syarikat Sumber Letrik Sdn Bhd) [2019]MLJU 104	Main contractor versus sub-contractor (Private)	Whether Plaintiff claims for the construction work carried out for the Project as mentioned in the Statement of Claim disclose a reasonable cause of action against the Defendant.	It was held that there is no reasonable cause of action by the Plaintiff, and the Session Judge was not wrong in law in striking out the Plaintiff's Writ and Statement of Claim after having evaluated the parties' pleadings, affidavits, and evidence adduced by the Defendant to which the legal burden has been discharged by the *Defendant*	Parties to a dispute must plead with clarity and parties are bound by their pleadings. The contractor is required under cl 11.7(b) of the PAM 2006 Contract to substantiate their claim.
10	Poratha Corp Sdn Bhd v Technofit Sdn Bhd - [2018] MLJU 470 - 15 March 2018	Main contractor versus subcontractor	Whether the Defendant had failed to pay the balance sum in the invoices issued by the Plaintiff for Work done and for Additional Work done, Whether the Defendant is entitled to claim for the cost of rectifying the defective works of the Plaintiff, Whether the Defendant had lawfully terminated the Sub-Contract, Whether the Plaintiff is entitled to claim for losses for workers left idle, direct and indirect expenses for loss of profit equivalent to 20% of the unfinished works due to the termination of the Sub-Contract by the Defendant, Whether the Defendant is entitled to and has proved the cost of completing the unfinished work.	i Valid and lawful termination, ii The Defendant shall be entitled to a sum equivalent to 20% of the value of those parts of the Works not executed at the date of the termination. iii The costs of the repair works are more than the retention sum retained for this purpose of RM437,838.17 and so this retention sum stands forfeited to the Defendant to cover for all costs incurred by the Defendant for the repair works.	Payment upon termination After termination, the Subcontractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and Plant reasonable delivered to the Site. ii If the Contractor has terminated under Sub-Clause 12.1 or 12.3, the Contractor shall be entitled to a sum equivalent to 20% of the value of those parts of the Works not executed at the date of the termination.

V. FINDINGS AND RESULTS

Profile of the analyzed cases of the employer and contractor

Table 3: Summary of Case Laws

S/N	Parties involved in the project	No of cases	%
1	Employer versus main contractor	3	30
2	Main contractor Vs sub- contractor	6	60
3	Sub-contractor Vs Non-sub-contractor	1	10
	Total	10	100

Table 3 shows a summary of the parties involved in the analyzed law cases on variations. Three distinct parties consisting of the employer and the main contractor (3 cases), main contractor and sub-contractor (6 cases), sub-contractor and nominated sub-contractor (1 case).

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Table 4 shows a summary of the analyzed law cases on variations between the employer and the contractor.

Table 4: Cases between Employer and Contractor

S/N	Parties	No of favoured Cases	Percentage
1	Employer	2	67
2	Contractor	1	33

Table 5 shows a summary of the analyzed law cases on variations between the main contractor and sub-contractor.

Table 5: Cases between Main Contractor and Sub-Contractor

S/N	Parties	No of favoured Cases	Percentage
1	Main contractor	3	50
2	Sub-contractor	3	50

Table 6 shows the summary of the analyzed law cases on variations between the sub-contractor and non-sub-contractor.

Table 6: Cases between Sub-Contractor and Non-Sub-Contractor

S/N	Parties	No of favoured Cases	Percentage
1	Sub-contractor	0	0
2	Non sub-contractor	1	100

Based on the outcome of the analysed work of this research (67% Employer v Main contractor, 50% Main contractor v Subcontractor, and 0% Subcontractor v Nominated subcontractor), It can be critically analysed therefore that once empowered by variation clauses in the contract, which is normally stipulated as a strong 'catch-all' provision, the power to vary is a boon to the employer as the employer has a very wide authority to exercise its power to vary. If the variation is indispensably necessary or it can be implied as part of the agreed work, the contractor has an obligation to comply with the instruction of variation, and they are not entitled to any additional payment. The variation clause thus has a very strong effect in favour of the employer. It also confers the employer the unilateral right to vary work. It comes as no surprise, therefore, that variation clauses are usually inserted into construction contracts for the benefit of the employer. Legal precedents also established that the employer has power to instruct variations in lump sum contract. Furthermore, it can be examined that employers have the power to order extensive variations, and the doctrine of frustration will not trigger as long as the variations do not go to the root of the contract. Employers are also allowed to omit works which are not required in the contract if the terms of the contract allowed it to do so. Nonetheless in the absence of such variation clause, the contractor arguably has a better position than the employer, as the contractor has the right to refuse to perform the variation work and the employer has no power to insist. This situation, in turn, will be a bane to the employer. Hence, it can be summed up that the insertion of variation clauses into the contract is quintessential to protect the employer's right to vary. It can also be summed up that the benefit of variation clause is well taken as advantage by employers in Malaysia, as evidenced by numerous case-laws decided thus far.

On the other way, the implications of variation clauses to contractors were determined. The effect of allowing variations to a building contract is to give an employer (subject to limitations}, the power to order changes to the work. From the case analysed, (33% Employer v Main contractor, 50% Main contractor v Subcontractor and 100% Subcontractor v Nominated subcontractor) from the cases which have been discussed and quoted throughout this research, it can be summarised that despite many's view that a variation clause provided in construction contracts is a bane for contractor, legal precedents concluded to the contrary. A construction contract therefore with the express insertion of a variation clause is a benefit to the contractor. Variation clause stands to strike a balance in order to not jeopardize and safeguard the position of the contractor. The provisions contained in the PAM 2006 Contract in actual fact provides for the need of the contractor. There exist strict rules in accordance to the variation clauses on how much can employers vary on the project and failure of an employer to comply and adhere to these rules shall provide an opportunity to the contractor to bring an action to claim for compensation. Therefore, accessing and evaluating the variation clause on an overall scope provides a clear determination that variation clauses has brought upon benefits to contractors and thereby it shall be concluded that variations are in fact an advantage for the contractors in the recent years

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VI. CONCLUSION

Based on this research work, it was discovered that contrary to the view of most people that variation clause is for the employer, recent cases were able to prove that variation clauses were actually meant to strike a balance between the parties provided that each party is able to meet and perform its obligations. There are variation rules stated in the PAM contract 2006 which have to be followed strictly, but unfortunately, these clauses were misused due to lack of understanding or unawareness of the parties involved in most cases. Therefore, it requires the parties to perfectly understand the rules of variation clause as well as its relation to the scope of works. Even when the contract conditions have been drafted effectively to embrace all aspects of the validity of a variation work, it will still be subject to common law principles to include the scope of change. This research was able to show that some of the contractors were entitled to variation claims if they produce evidence for any instruction to order variation.

Conclusively, it is believed that the variation clause has a very strong effect in favour of the employer, if he failed to abide by the terms in the contract by not checking his excesses, it will work against him. Therefore, this research is able to establish the fact that the variation clause is not working in favour of any party partially but in favour of any party who can substantiate its claims.

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