Revisiting UK Delay and Disruption Protocol: Its Distinguished Features for Contract Drafting

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Abstract
Delay and Disruption Protocol was published by Society of Construction Law in 2002, United Kingdom. It has been well received by construction professionals for its guidance in solving delay and disruption issues. This research attempts (a) to compare the Protocol’s core features with the existing references for the contracting parties, and (b) to determine the feasible use of the Protocol’s distinguished features into Malaysian construction industry as a case study. The distinguished features were identified after reviewing and comparing the local contract forms and the Protocol. Subsequently, the questionnaire survey was carried out with local developers, contractors, and consultants based on an inductive reasoning approach. Statistical and variance analyses were conducted to determine the acceptance level of the Protocol’s features. The results show that most of the features were agreed to by the respondents, for instance, the guidelines on float identification, concurrency identification, proper procedures on work program, and so on. The findings render useful information for future contract drafting by incorporating the guidelines into the local contract forms, particularly for commonwealth countries.

Key words: Delay time, Project delivery, Contract administration/Contract management, Claims, Variance analysis, Malaysia.
Introduction

In October 2002, Delay and Disruption Protocol was published by the Society of Construction Law and also contributed by other major professional bodies in the United Kingdom (UK). The Protocol has been designed as a code of practice and provides use guidance to common issues related to delay and compensation. The Protocol is not a contract document or meant to take precedent over the terms of a contract, but it rather recommends that the contracting parties consider adopting the procedures and guidelines while drafting the contract (Society of Construction Law 2002). The contracting parties should appreciate the principles of the Protocol and ensure the compatibility of the principles with other provisions in the contract.

Although some areas of the Protocol might be not well explained or are unclear (Scott et al. 2004; Ward 2011), the Protocol has received wide interest since 2002. In Australia, previous studies show that most of the principles of the Protocol are suitable for adoption in the construction industry (Ward 2005) and beneficial to contract administration (Ward et al. 2007). Moreover, most of the philosophies are also consistent with Americans’ established practices in dealing delay and disruption claims (Carmichael and Murray 2006; Lowe et al. 2006). The Protocol is a comprehensive tool that is able to solve many delay and disruption issues that arise in construction contracts, especially for recovering an extension of time and/or compensation (Knowles 2002; Rochester and Robertson 2003).

Nevertheless, delay is still a global phenomenon in all types of construction projects (Hegazy and Menesi 2008; Doloi et al. 2012; Mohamid et al. 2012; Alsehaimi et al. 2013; Gündüz et al. 2013). Malaysian construction industry has not escaped from the plague of delay problems. About 17.3% out of 417 government projects in public sector were categorized as “sick” projects, which are defined as projects were having more than a 3-month of delay or are abandoned (Murali and Yau 2006). A fair allocation of contact risks is one of the simple rules to avoid delayed projects (Steen 1994). Unfortunately, it is found out that none of Malaysian contract forms provides a clear guidance for the delay and disruption issues. The forms state only the general procedures and entitlement for EOT, for example, under the Clause 23.0 and 24.0 in Pertubuhan Arkitek Malaysia (PAM) Contract 2006, Clause 24.0 and 31.0 in Construction Industry Development Board (CIDB), Clause 43.0 and 44.0 Public Works Department (PWD)
203A form (Rev.2007), Clause 43 and 44 in Institution of Engineers, Malaysia Form of Contract for Civil Engineering Works (IEM.CE) 2011. It will cause the parties certain contractual disagreements, especially in applying different approaches in dealing with the delay and disruption issues, because the contract forms are the existing references and information that are commonly referred to by the parties. A comprehensive guidance is necessary as a means to minimize the effects of delay from the current practice. However, there are no universally agreed-upon methods in administering the issues (Ward 2005). Yet, the Protocol has been revisited and adopted in this research as it is recognized as a preferred method in tackling the problems (Gorse et al. 2006).

Therefore, the research objectives are (a) to identify the distinguished features of the Protocol by comparing with the existing references, namely the local contract forms, and (b) to determine the feasible use of the distinguished features into Malaysian construction industry. The outcome of the research can be formed as guidance by incorporating the features into local contract forms, which is a novel contractual approach in dealing with the delay and disruption issues in Malaysia. As a result, it would prevent or reduce the conflicts because of the delay and disruption issues by complying with the procedures and guidelines as provided in the contract form. To international context, the revisiting of the Protocol would render a new insight in terms of its suitability and practicality from a broader end-users perspective, which is different from the previous feasibility study in Australia using qualitative analysis and “top-down” approach from the perspectives of contract drafters or legal professions (Ward, 2005). Subsequently, it creates awareness about the possibility of applying the important features of the Protocol into their standard contract form. This is particularly applicable to commonwealth countries, which are practicing common law jurisdictions.

The Local Contract Forms and the Protocol

Construction projects are required to complete tasks on time, within a specific budget and quality (Olawale and Sun 2013). Extension of time (EOT) is an important contractual feature for both contractor and employer. It is because a successful claim of EOT would discharge the contractor from paying liquidated damages; whereas to the employer, it would prevent time from being rendered “at large” (Chong and Leong 2012). Furthermore, delay will result in additional cost.
Hence compensation is another disputed area, where the granting of an EOT does not automatically lead to an entitlement of compensation.

The literature review proceeds with the existing references and common tool in dealing on the delay and disruption issues. The local standard forms of contracts were investigated. Four professional institutions produce standard forms of construction contracts in Malaysia, such as:

(a) The Institution of Engineers, Malaysia (“IEM.CE 2011”).
(b) Malaysian Institute of Architects or Pertubuhan Arkitek Malaysia (“PAM 2006”).
(c) Construction Industry Development Board (“CIDB 2000”).
(d) Public Works Department (“PWD 203A 2010”).

The selection of the standard form of contract depends on the categories of work and types of clients. The contract forms have quite a number of clauses providing for delay and disruption issues. However, most of them have quite similar provisions such as application of EOT, requirements of notices and documentation, claimable delay events for EOT, loss and/or expense or cost incurred, and other related clauses governing delay and disruption issues like valuation of variations and work program.

On the other hand, Delay and Disruption Protocol has four main sections. Guidance Section I has a comprehensive analysis and explanations relating to the matters of delay and compensation. The main section of the Protocol is referred to in this research. Subsequently, the features of the Protocol have been clarified in a more understandable sentence that is used as the contents in the questionnaire survey. The features were compared with the contract provisions in the contract form to identify the distinguished features of the Protocol. Table 1 shows the result of comparison between the core features of the Protocol with the Malaysian standard forms of contracts.

**Research Approach**

The primary data of this research were collected through interviews and questionnaire surveys. The semi-structured interviews were undertaken using a one-to-one basis to validate the contents and structure of the questionnaire before sending it out to respondents who were involved in contract administration. The questionnaire survey was adopted using the inductive reasoning
approach because the principles of the Protocol have been well developed in UK by experts from various backgrounds and recognized as useful guidance in the United States and Australia. Therefore, the ‘bottom-up’ approach was applied to obtain a broader view from the end-users’ perspective, instead of re-examining the principles again by the contract drafters or legal experts. It would attain a more generalized conclusion as required in the research.

Close-ended questions were designed with a logical sequence for having a proper discussion flow. Open-ended questions were not applied in this research because they were validated and verified by local experts and to avoid confusion in data analysis. The questionnaire surveys were divided into two sections. The first section focused on the background of the respondent, such as organization of employment, position, years of experience handling contract matters, and education qualification.

On the other hand, the second section of the questionnaire focused on the questions regarding the feasible use of the Protocol in the Malaysian construction industry. Seventeen (17) questions were set in this section, where the questions were derived from the comparison between the Protocol’s principles with the local contract forms. They were the distinguished features that indentified from the comparison. However, the methods of delay analysis were not included as one of the questions because the methods were applied only on a case-by-case basis and time impact analysis was not well used in practice (Scott et al. 2004). So, this section was excluded from the questionnaire in order to avoid confusion.

A five-point Likert scale ranging from -2 (Strongly disagree) to 2 (Strongly agree) was adopted to assess the seventeen features. Subsequently, the analyzed results were separated into three categories (Chong and Rosli 2010), such as:

- The average scores of -2.0 to -0.5 are categorized as ‘Disagree’
- The average scores of -0.5 to 0.5 are categorized as ‘Undecided/Neutral’
- The average scores of 0.5 to 2.0 are categorized as ‘Agree’
Results and Analysis

Semi-Structured Interview

A semi-structured interview was conducted before distributing the questionnaire. The interview was mainly to verify the contents and completeness of the questionnaire. Two experts were interviewed, namely Expert A and Expert B. Their names were not revealed to preserve confidentiality. Expert A has been working in the construction industry more than twenty-five years. He was a contract manager in a well-known public-listed company. He is very familiar with the Malaysia standard contract forms, and currently he also serves as an arbitrator in the Malaysian Institute of Arbitrators. On the other hand, Expert B is a professional engineer and also a practicing lawyer. He has more than twenty years working experience in the construction industry. He is an expert in construction law.

As a result, minor changes were carried out after the interview with regard to the language used and structure of the sentences. No addition or omission was made to the seventeen questions. Overall, the interview with the two experts achieved the followings:

1. The questions were set based on the research aim and objectives.
2. The questions were clarified into a more understandable manner for the construction personnel involved in contract administration.

Questionnaire Survey

More than seven hundred sets of questionnaires were sent out to three types of organizations: developers, contractors and consultant firms. The questionnaires were posted in numerous rounds to different locations in Malaysia from October 2011 until April 2012. The research targeted at least thirty sets of valid questionnaires from each organization as to the statistical analysis concerned. Because of expected low response rates, some questionnaires were distributed by hand especially at the end of the data-collection process. Eventually, ninety valid questionnaires were collected, and each organization was represented by thirty respondents. The thirty sets of respondents were sufficient to carry out a statistical analysis based on central limit theorem (Mann 2005), as the sample size was considered sufficiently large to model the sample mean.
Forty one respondents, the majority of the participants, were quantity surveyors or contract executives. The rest of respondents consisted of sixteen architects, fourteen engineers, eleven project managers and eight contract managers. The majority group (62 respondents) have more than five years working experience in contract administration.

**Statistical and Variance Analyses**

Two statistical tests, the reliability test and the normality test, were carried out at the beginning of the analysis. The reliability test analyzes the internal coefficient of the seventeen dependent variables (the features) based on Cronbach’s Alpha test. The intercorrelation among the variables scores 0.712, which is above 0.7 of the acceptable threshold value. It can be concluded that the variables are acceptable in terms of internal consistency. Second, because the 5-point Likert scale was used in this research, the data may not satisfy the normality assumption. The normality test was carried out using the Kolmogorov-Smirnov and Shapiro-Wilk analyses. The significant values show 0.000 or 0.001 for all the variables, which indicates a deviation from normality (significant value of p <0.05). Therefore, non-parametric tests were conducted for the subsequent statistical tests.

To analyze the agreed-upon features of the Protocol, mean and standard deviations were adopted to calculate the average scores of agreement, whereas the non-parametric test of Kruskal Wallis was carried out to determine any different views among the organizations as shown in Table 2. This combined analysis categorizes and assesses the agreed-upon features from different background of the end-users. The p-value was used as an indicator. If the value is less than 0.05, it shows there is a different view among the organizations (Morgan et al. 2007).

The agreed-upon features that the mean score fall within 0.5–2.0 are as follow:

1. Float in contract: The contracting parties should ensure the float issue is addressed in their contracts.
2. Float identification: Accurate identification of float is only possible with the benefit of a proper program that has properly updated.
3. Concurrency analysis: Separate analysis should be carried out for the concurrent delay events. Analyses should be carried out for each event separately and strictly in the sequence in which they arose but the Employer Risk Event should be analyzed first.

4. Concurrency identification: Accurate identification of concurrency is possible only with the benefit of an updated program.

5. Valuation of variation: The contracting parties need to agree in advance for compensation on prolongation (cost) and disruption (time) before the execution of the variation.

6. Concurrency prolongation: The Contractor is only able to recover compensation if it could separate the additional costs caused by the Employer's Risk Events from those caused by the Contractor’s Risk Events.

7. Interest: Interest pursuant to contract, the rate of interest can be agreed to in the contract and the circumstances in which it will be payable.

8. Acceleration payment: Payment for the acceleration should be based on the term of the contract. Otherwise, the basis of payment should be agreed-upon before the acceleration is commenced.

9. Form program: The form of the work program should be taken; it should be prepared using a critical path network.

10. Method statement: Interaction with the method statement, it should describe how to construct the works and the resources to be use.

11. Draft program: The time within which the Contractor should submit a draft program for acceptance; there should be a reasonable time for the Contractor to plan how the contract works properly.

12. Acceptance program: A mechanism for obtaining the acceptance of the Contract Administrator of the draft program; for example, providing the Contractor complies with the contract, he may construct the work in the manner he/she thinks appropriate.

13. Update Program: Requirements for updating and saving of the accepted program, the Contractor should update the actual progress on the accepted program, for example, of the actual start and finish dates of activities.

Meanwhile, the remaining features are fall within the neutral category, such as:
1. EOT application: The construction contract should contain a provision entitling the Contract Administrator on his/her own initiative to determine an EOT, even if the Contractor has not applied for one or has applied with insufficient information.

2. Float ownership: Ownership of float should be used up based on a first-come, first-served basis because no one actually owns it.

3. Compensation prolongation: The contract should contain an agreed-upon amount per day that can be applied to each day of prolongation by the Contractor. This is the reverse of the normal Employer’s liquidated damages provisions.

4. Acceleration compensation: Where the acceleration is instructed and/or agreed, the Contractor is not entitled to claim compensation.

Based on these results, thirteen agreed-upon features are suitable for adoption and use in Malaysian construction industry. The features were rated with high agreement by the organizations probably because of the practicality and appropriateness of the features towards the delay and disruption issues in the local construction industry. On the other hand, four features were rated under the neutral category and none was categorized in the disagree category. This situation is not surprising as all the features were referred to the established and recognized guidance of the Protocol. In reality, some of the principles have already incorporated part and parcel into the local contract forms such as valuation of variations, mitigation of loss, delay analysis using work program and so on.

Subsequently, the Kruskal–Wallis test shows two agreed-upon features with p-values smaller than the critical value of significance 0.05. They were under different group means, which had a different view among the three organizations. The features are (a) the form the program should be taken; it should be prepared using a critical path network and (b) the time within which the Contractor should submit a draft program for acceptance, meaning there should be a reasonable time for the Contractor to plan for the contract to work properly. Subsequently, there is a need to apply Mann-Whitney U test because the Kruskal-Wallis test is unable to determine which group against with another as to the features. Table 3 shows the result of the test. It reveals that the consultants and developers have different views. This scenario can be understood from the perspective that some of the consultants or developers have their own format and style for the
work program. On the other hand, the contractor usually complies with the requirements of the
cprogram as determined by the consultant or developer, especially during the tendering
stage.

Discussion

The research has answered some doubts over the feasibility of the Protocol in the Malaysian
construction industry. Most of the distinguished features of the Protocol could be applied by
referring to the data collected from the local practitioners. The work program features consider
the most practical guidance to the Malaysian construction industry. It can be traced from the
contract provisions that applied to the local contract forms, where different approaches and
requirements have been used in different contract forms, for example, the purpose of preparing
the work program, the requirements of the updated program, and other subsequent manners
governing the work program. On the other hand, the neutral features should not be ignored
because they are not rejected by the respondents. Probably, the respondents find the neutral
features rather difficult to apply in the industry, for example, float ownership, which is required a
clear definition as it will confuse the parties (Ward 2011). Nevertheless, the remaining neutral
features require further investigations or fine-tuning before incorporating them into the contract.

Apart from that, the questions were designed in a generic manner in the questionnaire, which are
features that could be used in any delay and disruption issues of a construction project. Some of
the specific features from the Protocol are targeted for certain situations of the program used in
the project, for instance, the delay analysis methods. There is none of the delay-analysis methods
that could be acceptable for any given claim situations (Braimah and Ndekugri, 2009). The
situations are difficult to predict as many uncertain variables affect activity durations (San
Cristobal 2013). Therefore, the delay analysis methods were excluded from this questionnaire
survey, namely collapse as-built, impacted as-planned, as-planned versus as-built and time-
impact analysis. The delay analysis methods are not the scope of this research and subjected to
further research and development. This is particularly true as the Protocol’s retrospective time-
impact analysis does not refer to as-built data in determining the alleged delaying event that is
fundamentally different with the Americans’ practices in deciding the entitlement to a time
extension, and also the impacted as-planned has been rejected almost unanimously by American courts and commentators (Lowe et al. 2006).

Conclusion
Standard form of contract is the common method to be referred to in solving contractual-related issues in the Malaysian construction industry. However, the contract form has limited information to the contracting parties, particularly on delay and disruption issues. There is a need to learn from other codes of practice or guidance to cope with the issues. Delay and Disruption Protocol was selected in this research. A comparative study was carried out between the local contract forms and the Protocol. Seventeen distinguished features were identified and used in the questionnaire survey to determine their feasibility of use in the industry using the inductive approach. The research has demonstrated that thirteen out of seventeen features of the Protocol were agreed upon by the construction personnel. The remaining features were categorized under a neutral category, and none was rejected by the respondents. In conclusion, the research renders an important insight to incorporate the agreed-upon features of the Protocol into the local standard form of contract as a practical and fair guidance in dealing with most of the delay and disruption issues.

References


