

IDENTIFICATION OF COMMON PROBLEMS FACED BY BUMIPUTRA CONTRACTORS IN GOVERNMENT'S PROJECTS

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ABSTRACT: A quality project is defined as a project that meets the requirements or satisfies the customer, on time completion and meets the required quality as stated in the contract documents. Hence, Extension of Time (EOT) or delays in completing a project should be avoided as much as possible by a contractor. Some common causes of delay in a project are the lack of commitment by the contractor, poor management and ineffective project planning and lack of manpower, equipment and materials on the project. These are some of the challenges faced by Bumiputera contractors in handling government projects. These challenges need to be highlighted due to certain government projects are restricted for Bumiputera contractors. Therefore, selecting a competent Bumiputera contractor is a crucial step in the tendering and awarding process. This paper identifies and presents the common problems faced by Bumiputera contractors in government projects based on a case study. This paper also offers recommendations and suggestions on how to overcome these problems.

Keywords: Bumiputera Contractors, Malaysia Construction Industry

1. INTRODUCTION

Under the 9th. Malaysian Plan (RMK9) just announced by the government, the total development spending will go up to RM200 Billion and the Construction Sector will be the direct beneficiary of the RMK9. However, as reported by Utusan Malaysia on 8th. February 2006, almost 40 % of the 34,241 registered Class F Contractors are not competent enough to undertake the government's projects.

Delays or late deliveries, sub-standard workmanship and materials, poor safety management on sites and cost over-run of government's projects are some the issues that have been seriously discussed by the construction industry players. Several options can be taken by the government in ensuring a quality construction project such as improving the contractors selection process whereby only competent contractors should be allowed to participate in government projects, all design calculations and construction plan must be approved by professional engineers and subject to audit process by the Public Works Department and lastly more training in design, monitoring and supervising skills should be given to all personnel involved in the process.

Failure to perform to the quality expectations is a common cause of problem among the bumiputera contractors in government projects. The quality of contractors in implementing the government projects have often been subject to questions, criticisms and underrating by the industry critiques. Improving the contractors selection process should be taken as one of the preventive action plan to overcome the quality problems in government projects.

Project failures is not only about delays, cost over-run or shoddy workmanship but it also include, among innumerable others, environmental degradation and physical eye-sores, lack of green fields or playgrounds, deforestation of all kind of pollution, pervasive soil erosion, flash floods, ozone depletion and mediocre building designs.

Projects failures create a lot problem directly or indirectly to all parties involved in the project such as the government or its agencies, the community where the project is implemented and the project's contractor whose reputation and opportunity to secure future contracts will be at stake.

Project failures are due to variety of factors but the more important thing is to search for the solutions and ways to prevent future occurrence of the problems. The reasons for project failures especially among the bumiputera contractors should be looked as challenges that need to be highlighted especially when considering the fact that certain government projects are restricted for the bumiputera contractors. Therefore, to ensure a successful completion of a project, the procedures for award of contracts need to be evaluated and appraised to ensure that only the best contractor for the job will be selected.

2. RESEARCH OBJECTIVES

It is the aim of this paper to identify the common problems faced by the Bumiputera contractors in dealing with government projects. By referring to a case study and based on the responses through interview with parties involved in the construction industry, the common problems and dilemma of bumiputera contractors in government projects will be analysed and identified. From the responses, questionnaires and data analysis in the two case studies, we will identify the common problems faced by the Bumiputera contractors in dealing with the government projects. The common problems will be arranged in ranking order.

3. LITERATURE REVIEW

Managing projects within time, cost and performance is easier said than done. As shown in Figure 3.0, time, cost and performance are the main constraints of a project. If the project is executed for an outside customer, then the project has a fourth constraint which is good customer relation or customer friendly. The definition of project success also has been extended or modified to include completion :

- Within the allocated time period
- Within the budgeted cost
- At the proper performance or specification level
- With acceptance by the customer/user
- When you can use your customer's name as a reference
- With minimum or mutually agreed upon scope changes
- Without disturbing the main work flow of the organization
- Without changing the corporate culture

(Harold Kerzner, 2001)

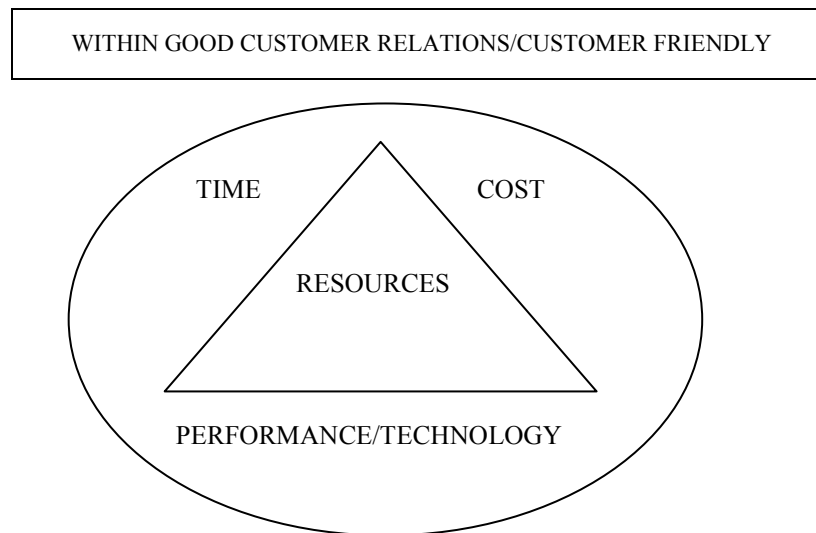


Figure 3.0 : Main Constraint of A Project

There are several factors that are important in ensuring a successful completion of a project. Those factors are :

- i. A good field construction representative must be present to represent the interest of the owner and designer
- ii. Availability of good and detailed construction schedule that is developed by the contractor of the project
- iii. A good project control system must be developed to monitor, measure and evaluate the cost, schedule, labor-hours and quality of works.
- iv. Good communication among all parties in a project

(Oberlender, 1993)

There are many things commonly called barriers to the successful completion of a project. Some of the barriers are listed as follow:

- i. Poor communication
Many project will fail because the project team does not know exactly what to get done out of the project or what already been done on the project
- ii. Disagreement between customer and project manager
- iii. Failure to comply with standards and regulations
- iv. Inclement weather
- v. Labor strikes
- vi. Personality conflicts
- vii. Poor management
- viii. Poorly defined project goals

As mentioned above, a good successful completion depends very much on the ability of the owner representative or project manager to direct and supervise the project from beginning to the end. Some important roles of a project manager are listed below:

- i. The project manager must define the project, reduce the project to a set of manageable task
- ii. The project manager must set the final goal of a project and must motivate the project team members to complete the project on time
- iii. A project manager must be equipped with technical skills. These should include financial planning, contract management, creative thinking and problem solving techniques
- iv. Project manager must learn to adapt to changes

In other words, there are three main points that are most important to a successful project:

- i. A project must meet customer requirement
- ii. A project must be under budget
- iii. A project must be on time

Contractors are independent business organizations and are awarded the projects to produce the required end product as stipulated in the contract documents. In the case of the owner and the contractor may disagree on certain things, the achievement of the end product must always be the top priority of both parties. A good relationship between owner and the project contractor must be maintained so that the contractor's expertise, labor and equipment can be best utilised to achieve the objectives of the project. The contractor is also required to produce a quality control plan to maintain a job surveillance of its own, to perform tests and keep records to ensure the works conform to the contract requirements. The owner should monitor and supervise the contractor's quality plan and make a sport checks inspection from time to time during the construction process (Oberlender, 1993)

Therefore, Project failure can be defined as project that does not meet the contract deadline, exceed the project contract cost, does not meet the required contract specification and quality and does not fulfil the customer friendly requirements. The following are eight (8) main reasons considered to be the reasons for project failures in the case study which involved a bumiputera contractor:

- i. Insufficient instruction and information in the contract specification, drawing and design
- ii. Lack of construction materials and machineries
- iii. Inefficient and ineffective planning and management by the owner, contractor and designer
- iv. Lack of staff and labours
- v. Inexperienced labors
- vi. Lack of technical knowledge background among the contractor and the owner
- vii. Changed Conditions/Differing Site Conditions
- viii. Communication problems

There are thirteen common problems of bumiputera contractors which have been identified through the literature review :

- i. Poor Project Management skill
- ii. Lack of technical skill and experience
- iii. Low capital and financial background
- iv. Lack of exposure to the latest technology
- v. Lack of skilled workers and labor problems
- vi. Unavailability of necessary equipment and machineries
- vii. Site facilities problems

- viii. Poor relationship with suppliers and lack of networking
- ix. Less number of government tenders
- x. Globalization challenges
- xi. Stiff competition
- xii. Unstable economy
- xiii. Inflation and increase of construction materials

5.0 METHODOLOGY

The guidelines for identifying the challenges and common problems faced by the bumiputera contractors as outlined in this paper, is based on two sets of data from a case study and interviews with bumiputera contractors involved in government projects. These include:

- i. Literature reviews on the main causes of project failures
- ii. Interview with parties involved in the case study project
- iii. Interviews with contractors involved in government project
- iv. Data gathered through questionnaires with professionals.

6.0 CASE STUDY

There were two set of data were analysed in this study. One set data was gathered from a project awarded to a bumiputera contractor which had exceeded the completion time as stipulated in the contract documents. The project was the construction of a lecture and examination hall for a public university. The project contract value was RM1,994,000.00 and was categorised as a Fast Track Project. Eventhough the actual duration of the project was 6 months, the project completion was delayed with two stages of extension due to acceptable and excusable reasons. First extension lasted for 63 days and second one lasted for 50 days. After the extension time was exhausted,

the project was declared late and Certificate of Non-Completion was issued. The penalty was imposed at RM505.00 per day for 57 days. The project was finally completed and handed over to the owner 87 days after the Certificate of Non-Completion or 200 days after the actual contract completion time. Questionnaires related to the causes of delay for the project were distributed among the parties involved in the construction such as engineers, site supervisors, technicians and the owner's project manager.

Second set of data was gathered through interviews with 70 bumiputera contractors in the northern region of Malaysia. In this exercise, questions related to the common problems identified through the literature review were distributed to the bumiputera contractors. Participants were asked about the significant of the common problems based on their experiences in dealing with government jobs.

7.0 DATA AND RESULTS

7.1 Data Analysis On The Case Study

In the case study, interviews and questionnaires are conducted and distributed to 20 team members of the projects. A total of 14 responses were returned back and analysed. The questionnaires listed the probable causes of delay for the project. Respondents were requested to mark the degree of contribution for each cause of delay based on the range or scale 1 to 8.

- Scale 8 represents the most likely factor for the delay
- Scale 1 represents the least likely factor for the delay.
- Scale 2,3,4,5,6,7 are the intermediate ranges of contribution to delay

Table 7.1A describes the probable cause of delay for the project.

Causes of Delay	Descriptions
A	Insufficient instruction and information in the contract specification, drawing and design
B	Lack of construction materials and machineries
C	Inefficient and ineffective planning and management by the owner, contractor and designer
D	Lack of staff and labours
E	Changed Conditions/Differing Site Conditions
F	Inexperienced labors
G	Lack of technical knowledge background among the contractor and the owner
H	Communication problems

Table 7.1A : Probable Causes of Delay For The Case Study Project

Causes of Delay	Degree of Weightage Contributions Toward Delay								Total Weightage
	8	7	6	5	4	3	2	1	
A	0(0)	2(14)	0(0)	1(5)	0(0)	3(9)	5(10)	3(3)	41
B	0(0)	0(0)	4(24)	1(5)	1(4)	1(3)	3(6)	4(4)	46
C	8(64)	2(14)	2(12)	2(10)	0(0)	0(0)	0(0)	0(0)	100
D	4(32)	4(28)	2(12)	2(10)	2(8)	0(0)	0(0)	0(0)	90
E	0(0)	1(7)	0(0)	1(5)	0(0)	2(6)	5(10)	5(5)	33
F	0(0)	0(0)	4(24)	2(10)	2(8)	1(3)	4(8)	1(1)	54
G	4(32)	3(21)	2(12)	3(15)	1(4)	1(3)	0(0)	0(0)	87
H	4(32)	2(14)	0(0)	4(20)	2(8)	1(3)	1(2)	0(0)	79

Table 7.1B : Causes of Project Delay Based On Contribution Weightage

A simple analysis was conducted using Total Contribution Weightage Method. Based on Table 7.1B, the first column in the table represents the degree of contribution to the causes of delay of project (A, B, C, D, E, F, G, H). The numbers outside bracket represent the number of respondents who had chosen the specific cause of delay with a certain degree of contribution towards delay.

Total Contribution Weightage is summation of number of respondents multiplied by the degree of contribution for that specific cause of Delay.

$$\text{Contribution Weightage} = \sum [(\text{Number of Respondents}) \times (\text{DCTD})]$$

where DCTD = Degree of Contribution Toward Delay

The last column in the Table 7.1B shows the total overall contribution weightage toward causes of delay.

Total overall contribution weightage shown in Table 7.1B shows the cause of delay with maximum contribution weightage which is cause of delay C which is “Inefficient and ineffective planning and management by the owner, contractor and designer” with a weightage of 100. The lowest weightage is the cause of delay E which is “Changed Conditions/Differing Site Conditions”

From the results of the questionnaires, the majority of the respondents were in the opinion that the main cause of delay for the project is “Inefficient and ineffective planning and management by the owner, contractor and designer”. The majority of the respondents also think that “Changed conditions/Differing Site Conditions” was the least cause of delay in the project.

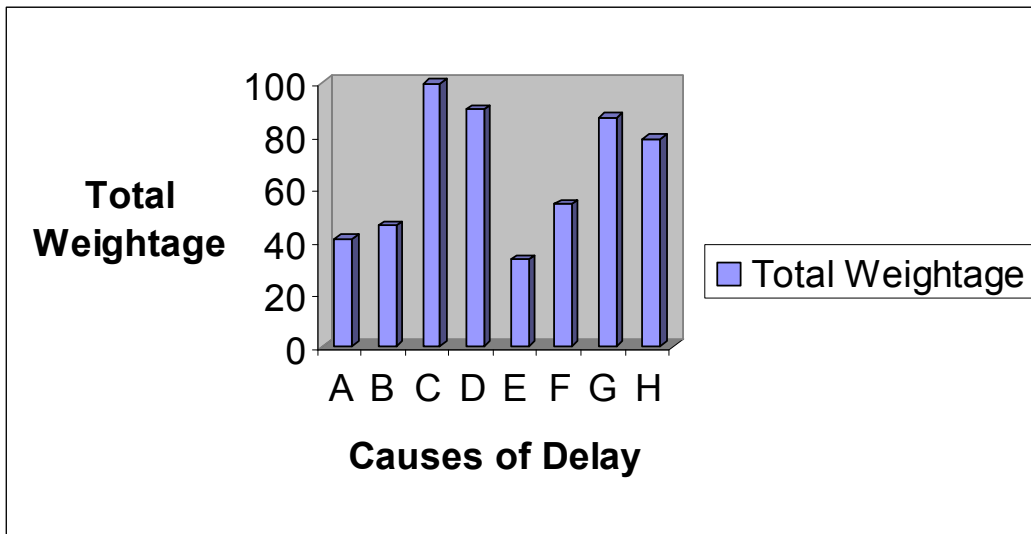


Figure 7.1C : Total Contribution Weightage For Each Cause of Delay

Ranking of the causes of delay based on the contribution weightage is shown in Table 7.1D below.

Ranking	Cause of Delay	Description
1	C	Inefficient and ineffective project planning and management by the owner, contractor and designer
2	D	Lack of staff and labours
3	G	Lack of technical knowledge background among the contractor and the owner
4	H	Communication problems
5	F	Inexperienced labors
6	B	Lack of construction materials and machineries
7	A	Insufficient instruction and information in the contract specification, drawing and design
8	E	Changed Conditions/Differing Site Conditions

Table 7.1D : Ranking of Causes of Delay Based On Contribution Weightage

7.2 Data Analysis On The Interviews Conducted With The Bumiputera Contractors In The Northern Region

In the second set data, a study was conducted among the bumiputera contractors located within the northern region of Malaysia. Interviews were conducted with 70 bumiputera contractors who had experiences dealing with government projects. Their opinions on the significance of common problems identified through the literature review were recorded and analysed.

7.2.1 Data Analysis

The data was analysed using the frequency and crosstab analysis method. There were 70 respondents involved in the study. The distribution of the contractors based on their class is shown in Figure 7.2A. The respondent position in the contractors' firm is shown in Figure 7.2B. The contractors' experiences in construction is shown in Figure 7.2C and Table 7.2G. Value of government projects implemented by the contractors for the last three years are shown in Figure 7.2F. Relationship between Classes of Contractor with experiences of the company in construction industry is shown in Table 7.2G. Lastly, the distribution of the number of government projects implemented by the contractors within the last 3 years is shown in Table 7.2H.

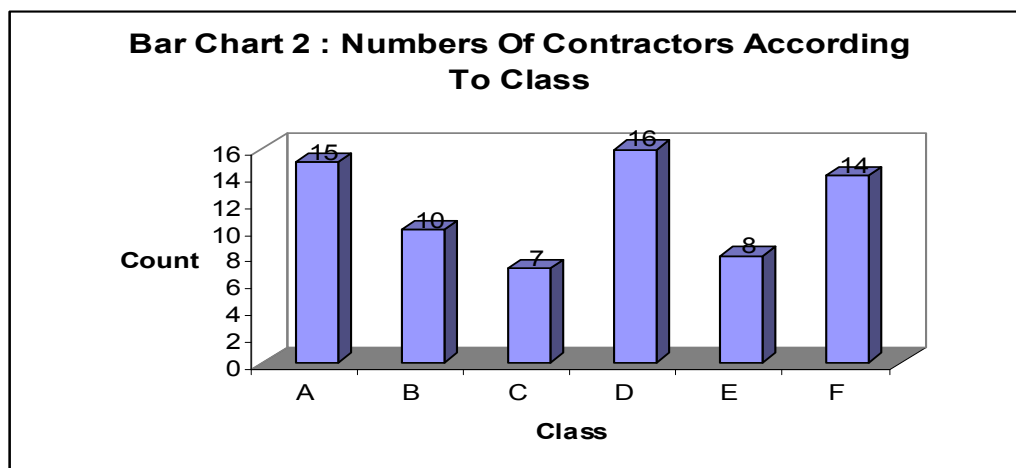


Figure 7.2A : Distribution of Contractors According To Class

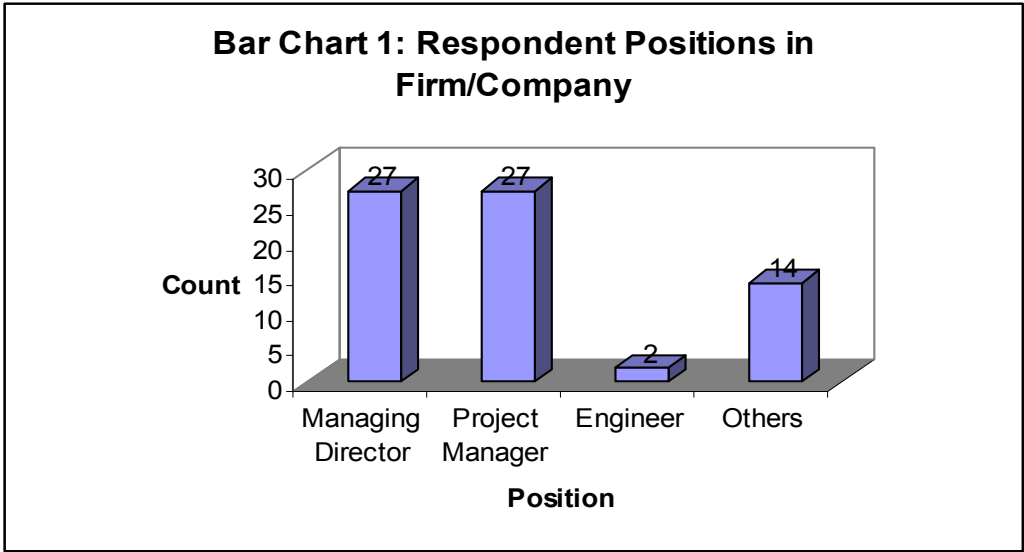


Figure 7.2B : Respondents Position In The Construction Firms

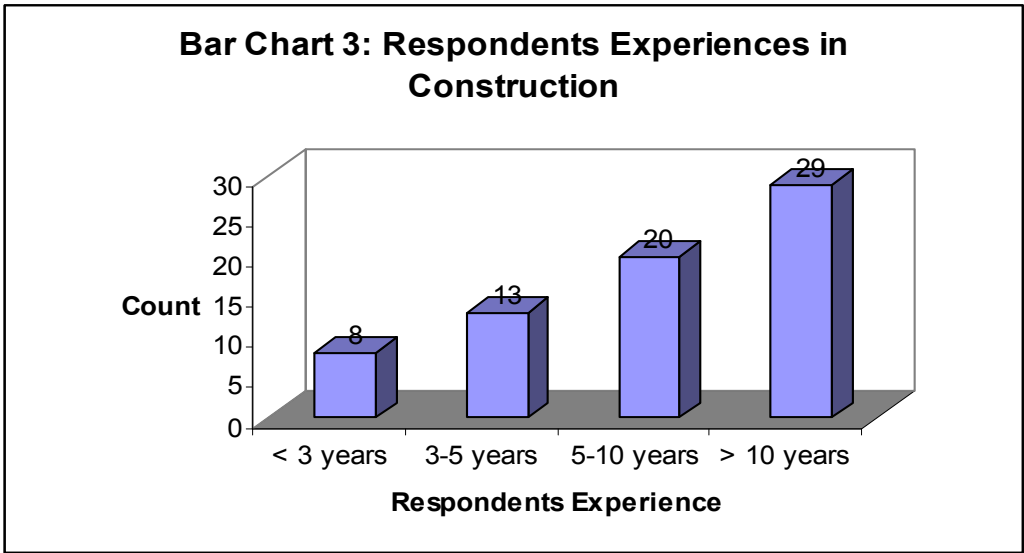


Figure 7.2C : Respondents Experiences In Contruction Industry

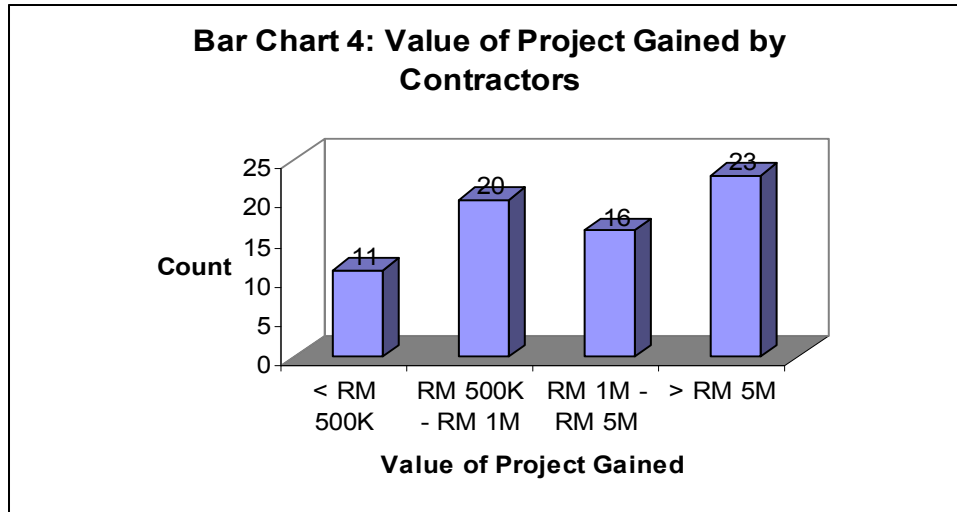


Figure 7.2F : Value of The Contractors Government Projects

		Experience				Total
		<3 years	3-5 years	5-10 years	>10 years	
Class	A	1	2	3	9	15
	B	1	3	3	3	10
	C	0	3	3	1	7
	D	1	6	6	3	16
	E	0	4	3	1	8
	F	2	2	5	5	14
Total		5	20	23	22	70

Table 7.2G : Relationship between Classes of Contractor With Experiences Of Company in Construction Industry

		Project				Total
		<5 nos	5-10 nos	11-12 nos	>20 nos	
Class	A	8	5	1	1	15
	B	5	3	2	0	10
	C	4	2	0	1	7
	D	7	5	2	2	16
	E	2	4	1	1	8
	F	3	4	3	4	14
Total		29	23	9	9	70

Table 7.2H: Relationship between Classes of Contractor with Government Projects Gained in 3 years

7.2.2 Results of The Data Analysis

The result of the analysis using the frequency analysis is shown in Table 7.2E below.

Respondents were requested to mark the degree of contribution for each cause of delay based on the range or scale 1 to 5.

- Scale 5 represents the most significant common problem
- Scale 1 represents the least significant common problem.
- Scale 2,3,4 are the intermediate ranges of common problem

The common problems are arranged in ranking order based on the mean value of every problem.

Table 7.2I : Ranking of The Bumiputera Contractors Common Problems

No	Problem	1	2	3	4	5	Mean	Standard Deviation
1	Insuficient Number of Government Jobs	1	1	0	32	36	4.46	0.674
2	Highly Competitive Market	3	2	1	29	35	4.30	0.968
3	Economy and Political Stability	1	1	3	41	24	4.23	0.726
4	Inflation/ Construction Material Cost Increase	3	3	1	39	24	4.11	0.956
5	Capital and Financial Background	2	6	6	35	21	3.96	0.999
6	Globalization Challenge	2	10	23	23	12	3.47	1.032
7	Skilled Labor	1	18	9	36	6	3.40	1.013
8	Latest Construction Technology	3	18	9	29	11	3.39	1.158
9	Poor Project Management	2	22	5	35	6	3.3	1.095
10	Poor Relationship with Supplier	3	27	7	24	9	3.13	1.191
11	Availability of Equipment and Machinerics	1	28	12	23	6	3.07	1.068
12	Lack of Site Facilities	6	29	6	21	8	2.94	1.238
13	Lack of Technical Skill and Experiences	5	32	5	23	5	2.87	1.166

From the results of the respondent analysis, the majority of the respondents with a mean value of 4.46 were in the opinion that the main common problem of the bumiputera contractors was “Insufficient Number of Government Jobs”. The majority of the respondents with a mean value of 2.87 also think that “Lack Technical Skill and Experience” was the least common problem faced by the bumiputera contractors in government projects.

8.0 DISCUSSION, RECOMMENDATIONS AND CONCLUSION

8.1 DISCUSSION

The causes of delay as shown in Table 7.1D are some of the major challenges and issues faced by Bumiputera Contractors in the Construction Industry. From the study, it is shown that with contribution weightage of 100, the main cause of the project delay is due to inefficient and ineffective project planning and management by the owner, contractor and designer.

The study also shows that with contributing weightage of 33, the least cause of delay in the project was due to the changed conditions or differing site conditions. The second cause of delay was due to lack of staff and labors followed by lack of technical knowledge background among the contractor and the owner. Other causes of delay in there ranking are due to communication problems, inexperienced labor, lack of construction materials and machineries and lastly insufficient instruction and information in the contract specification, drawing and design.

It is also shown in the second study that the most significant common problem of Bumiputera contractors, with a mean value of 4.46, is “Insufficient number of government jobs available for the contractors” . While the least significant common problem, with a mean value of 2.87, is “Lack of technical skill and experiences”

The causes of delay in a project are not limited to the list of causes of delay in the ranking. There are some other major causes of delay not included in the list. The other major causes of delay or challenges in project are shown in Table 8.1 below :

No.	Description of Delay Causes
1	Insufficient Funds/Financial Difficulties
2	Wrong focus of project management system
3	Improper or inaccurate project estimation
4	Too much too early of the utilisation of new or latest techniques
5	Overcrowding of staff/Too many staff
6	Lack of awareness on project goals
7	Changes of needs, requirements and specifications by the owner
8	Incompetent Project Manager/Project Management team

Table 8.1 : Other Major Causes of Delay for On-Going Projects

The list of causes of delay and challenges in ensuring a successful project is actually endless. What is more important in ensuring a successful project is by taking necessary preventive actions so that to prevent those problems from happening. In fact, the biggest challenge of Bumiputera Contractors in ensuring a successful project is the effort of putting in place necessary preventive actions so that any cause of delay will not affect or hamper the progress rate of their project.

8.2 RECOMMENDATIONS

The government agencies as the owner or the end-user of any government project may have certain disagreements with the project's contractor during the implementation process of a project. Nevertheless, the achievement of the end product must always be the top priority of both parties. As far as possible, a good relationship between the government agencies and the project contractor must be well maintained so that the bumiputera contractor's expertise, labor and and equipment can be best utilised to achieve the objectives of the project. Apart from that, the bumiputera contractors should be required to produce a quality control plan to maintain a job surveillance of its own, to perform tests and keep records to ensure that their works will conform to the contract requirements. The government representatives should monitor and supervise the contractor's quality plan and make a sport checks inspection from time to time during the construction process.

In addition to that, the procedures for award and contracts need to be evaluated and appraised so that only the best qualified, credible and competent contractors will be selected for the jobs. It is no longer wise and practical to select a contractor based on the lowest bid. Some other factors such as the possibility of hidden cost due to misinterpretation of contract documents, variation orders or manipulation of contract clauses need to be taken into consideration. The process and procedures for the selection of contractors must be performance-based. Table 8.2 shows some the recommended criterias that can be used by the government agencies during the pre-qualification process of bumiputera contractors.

No.	Criteria For Pre-Qualification of Contractors
1	Contractors experiences and past performances
2	Organizational Chart and Team Members
3	Qualification and experiences of key personnel
4	Technical and ICT expertise
5	Authorised and paid-up capital (number of share-holders)
6	Financial Credibility
7	Availability of machineries, materials and plant related to project
8	List of sub-contractors and company profiles
9	Availability of skilled and semi-skilled workers
10	Certified to ISO 9001:2000 Quality Management System or ISO 14000 Environmental Management
11	Availability of Written Method of Construction and Quality Plan
12	Availability of CPM Scheduling and Planning/Integrated S-Curves

Table 8.2 : Some Criteria For Pre-Qualification of Contractors

8.3 CONCLUSIONS

Based on the results of the data analysis for the causes of delay in the case study and the common problems faced by the bumiputera contractors in government projects, following conclusion can be made :

- i. The main challenge in ensuring a successful project is to ensure a proper planning and a comprehensive, thorough, in-depth and detailed feasibility studies is done by the contractor at the beginning of the project.

- ii. The most significant common problem of bumiputera contractors is insufficient number of government jobs available for them. While the least significant common problem is lack of technical skill and experiences.

Therefore, based on the study, bumiputera contractors must ensure that a proper planning and comprehensive study must be in-place at the beginning of any government project awarded to them. Apart from that, based on the study it can concluded that the most significant common problem of the bumiputera contractors is an external factor rather than an internal factor caused by the contractors themselves.

However, in the author's opinion, the biggest challenge for Bumiputera Contractors in ensuring a successful project is putting in place the necessary preventive action plans so that the unnecessary delay will not affect the progress rate of their project.

In addition to that, the government representatives also should ensure that the procedures for award and contracts need to be evaluated and appraised so that only the best qualified, credible and competent contractors will be selected for the jobs. Lastly, since the most significant common problems faced by the contractors is lack of jobs available to them, the government should take necessary actions to increase the number of construction jobs for the bumiputera contractors.

9.0 FUTURE RESEARCH

Plans for further researches should include a study on the past performances of bumiputera contractors and establishment of preventive action plans and development of forecasting model for bumiputera contractors in ensuring a successful project.

10.0 ACKNOWLEDGEMENT

The permission granted by the Director of UiTM Pulau Pinang to undertake this study is gratefully acknowledged. This study was also made possible through the sponsorship under the CIDB Grant. Deep appreciation also goes to Secretariat of ICBEDC HBP-USM 2007 for giving the opportunity for this paper to be presented in the International Conference of Built Environment 2007. Any opinion expressed is solely the writer's and do not necessarily reflect the view of the UiTM Pulau Pinang and of the CIDB Malaysia.

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