SUCCESS FACTORS FOR BUMIPUTRA CONTRACTORS IN MALAYSIA:
JOHOR STATE

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This thesis is dedicated to my parents,

Rahmat Bin Ambon and Idiana Binti Ibrahim,
for their love, endless support and encouragement.
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ABSTRACT

Several parties which include client, consultant, contractor, supplier and local authorities are involved in ensuring the success of a construction project. Among these parties, contractor plays the most important role in making the project success within stipulated time, cost and quality. In reality, studies reported that construction projects often encountered delays or late deliveries, sub-standard workmanship and materials, poor safety management on sites and cost over-run of construction due to problems encountered by contractors in executing the project. Since many of these studies uncovered the contractors’ problems, thus this study was intended to determine success factors for contractors focusing on Bumiputra contractors. This is a quantitative study where data was collected using questionnaire survey and analysed using descriptive and multivariate approach. Pilot study was carried out to assess contents validity of the questionnaire on the 33 identified success factors by 10 experienced Bumiputra contractors. After the pilot study, actual survey managed to secure responses of 100 Bumiputra contractors for the state of Johor. Descriptive analysis on the collected data has resulted to five most significant success factors for Bumiputra contractors which are prepare competitive tender pricing for tendering process, maintain good reputation for better chance of getting new project, filling correct terms and condition in tender document, manage risk of not having good and sustainable team of construction workers and manage workers to carry out the given tasks in systematic manner. PLS-SEM path modelling approach was used to develop a model showing the graphical relationships of the success factors. Based on the developed model, it was found that factors in resources group are giving the highest impact load of 0.299 to the success of Bumiputra contractors. Hopefully, the findings from this study will be a constructive guide to Bumiputra contractors to improve their potentials to be successful in the competitive construction business.
ABSTRAK

Beberapa pihak seperti pemaju, perunding, kontraktor, pembekal dan pihak berkuasa tempatan adalah merupakan pihak-pihak yang terlibat untuk memastikan kejayaan projek pembinaan. Di antara pihak-pihak yang terlibat, kontraktor merupakan pihak yang sangat penting untuk menjamin projek itu mengikut tempoh masa, kos dan kualiti yang ditetapkan. Hakikatnya, banyak kajian melaporkan kontraktor yang terlibat dalam projek pembinaan sering menghadapi masalah seperti kelewatan atau penghantaran lewat, mutu kerja dan bahan yang kurang berkualiti, kelemahan pengurusan keselamatan di tapak dan lebihan kos pembinaan. Oleh kerana banyak kajian telah mengenalpasti masalah-masalah yang dihadapi kontraktor maka, kajian ini bertujuan untuk mengenalpasti faktor-faktor kejayaan bagi kontraktor terutama kepada kontraktor Bumiputra. Kajian ini merupakan kajian kuantitatif dimana data dikumpul menggunakan borang kajian selidik dan dianalisis menggunakan pendekatan deskriptif dan multivariat. Kajian rintis telah dijalankan untuk menilai kandungan pengesahan kajian selidik daripada 33 faktor-faktor kejayaan yang telah dikenalpasti melalui 10 kontraktor bumiputera yang berpengalaman. Selepas kajian rintis, kajian sebenar berjaya mendapatkan maklum balas daripada 100 kontraktor Bumiputra bagi negeri Johor. Analisis deskriptif mengenai data yang dikumpul telah menunjukkan lima faktor kejayaan yang paling penting untuk kontraktor Bumiputra di mana faktor kejayaan itu adalah dalam menyediakan harga tender yang kompetitif dalam proses pembidaan, mengekalkan reputasi yang baik untuk berpeluang mendapatkan projek baru, mengisi terma dan keadaan dengan betul dalam dokumen tender, menguruskan risiko bahan yang sukar didapati dan pasukan pekerja pembinaan yang mampuan dan menguruskan pekerja untuk menjalankan tugas-tugas yang diberikan dengan cara yang sistematik.
Analisis ini menggunakan pendekatan pemodelan PLS-SEM untuk membangunkan model dalam mod perwakilan grafik yang menunjukkan hubungan struktur faktor. Berdasarkan kepada model yang terbina, menunjukkan bahawa faktor-faktor dalam kumpulan sumber-sumber telah memberi kesan beban tertinggi 0.299 kepada kejayaan kontraktor Bumiputra. Diharapkan, penemuan daripada kajian ini dapat menjadi panduan yang membina kepada kontraktor Bumiputera untuk meningkatkan potensi mereka untuk berjaya dalam perniagaan pembinaan yang kompetitif.
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$Q^2$ - Predictive Relevance
$q^2$ - Relative impact of predictive relevance
$R^2$ - Explanatory Power
RES - Resources
RISK - Risk
SEM - Structural Equation Modelling
SM - Structural Model
SPM - Sijil Pelajaran Malaysia
SPSS - Statistical Package for the Social Sciences
USA - United States of America
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CHAPTER 1

INTRODUCTION

1.1 Introduction

Construction industry involves several parties such as client, consultant, contractor, supplier and local authorities in ensuring the success of the construction projects. Nevertheless, the construction project is greatly dependent on the contractor’s involvement which plays the most important parts in realising the success of the project (Hanif, 2011). In reality, construction project often encounter delays or late deliveries, sub-standard workmanship and materials, poor safety management on sites and cost over-run of construction projects that have been seriously discussed by the public (Koon, 2015). According to Ayub & Eman (2006), quality of contractors in implementing the projects have often been subjected to questions, criticisms and underrating.

Contracting business is considered as a very difficult business which needs to overcome all the inherent difficulties to become competitive and efficient. The business is fragmented and resources driven in nature which needs proper management to ensure the success of the project interm of time, budget and also quality (Koon, 2005).
A good teamwork amongst the client, consultant and contractor to complete construction projects successfully are being experienced and enjoyed in Malaysia construction industry to transform Malaysia into developed world by 2020 (Abdullah et. al., 2004).

According to Construction Industry Development Board (CIDB) statistic, Malaysia is having amongst the highest ratio of contractor in the world with 1 contractor to 614 person and these has caused more failures and bankruptcies in contracting than in any other business (CIDB, 2015b). Majority of these failures are related to Bumiputra contractors which has been discussed in local newspaper. Failure amongst Bumiputra contractors in delivering the project according specifications has become an issue to the government in elevating the economy of Bumiputra through New Economy Policy that was introduced since 1969 (Hanif, 2011).

According to Ayub & Eman (2006), there are a lot problems faced by Bumiputra contractors in delivering the construction project that was awarded to them which needs to be uncovered and highlighted especially when considering the fact that certain government projects are restricted for the bumiputera contractors. Thus, it is very important to address the problems faced by Bumiputra contractors for achieving the success of construction projects.

Success is defined by Ashley & Jaselskis (1987) as results much better than expected or normally observed in terms of cost, schedule, quality, safety and participant satisfaction. The investigation of the success factors of construction projects has attracted the interest of many researchers and many studies have been conducted with the aim of providing contract parties with valuable insight into how to consistently achieve superior results for their projects. Although, construction projects are by their repetitive activities, each one has its own characteristics and circumstances.

According to Hwang & Lim (2013), success factors are used to support and measure the success of a strategic and tactical approach to project execution with the intent of ensuring the success of the project delivery system and to support the appropriate allocation of limited resources. Thus, this study builds based on the past studies by identified the problems faced by Bumiputra contractors and rephrased into success factors.
1.2 Problem Statement

Issues faced by Bumiputra contractors such as leakages of government’s construction projects awarded to Bumiputra contractors, lack of entrepreneurship knowledge amongst Bumiputra contractors, difficulty of getting building materials at affordable prices, inability to fully understand the construction process and requirements for achieving success are often highlighted in newspapers and also in academic articles (Rosli, 2004; Lim, 2004; Koon, 2005; Ayub & Eman, 2006; Kadir, 2006; Musu, 2008; Rahman, 2009; Zaini et. al., 2010; Othman, 2010; Hanif, 2011; Adam, 2011). Studies on Bumiputra contractors issues has only managed to identify problems encountered by Bumiputra contractors however study on the success factors for Bumiputra contractors was not found. Thus, this study will uncover the factors which will contribute to the success of Bumiputra contractors either in securing project and also in completing the awarded projects. With these success factors, Bumiputra contractors can strategies their company to perform well on the on-going project and also to bid for new construction project.

1.3 Objective of Study

The aim of this study is to uncover success factors for Bumiputra contractors. To achieve this aim, the following objectives are carried out as below:

i. Identifying the Bumiputra contractors’ success factors.

ii. Determining the significant level of Bumiputra contractors success factors.

iii. Developing the Partial Least Squares Structural Equation Modelling (PLS-SEM) model of Bumiputra contractors success factors.
1.4 Scope and Limitation of Study

This study involves quantitative approach using structured questionnaire survey in identifying the factors for Bumiputra contractors success in construction industry. However, the scope of this research is limited to the construction companies located in state of Johor. Targeted respondents for data collection are Bumiputra contractors who are registered with Construction Industry Board Development Malaysia (CIDB) and Bahagian Pembangunan Kontraktor dan Usahawan (BPKU).

1.5 Significant of Study

Since the issues of Bumiputra contractor to survive in competitive construction industry has become national agenda, this study partially address the issues or problems and provides somekinds of means to assess Bumiputra contractor competitiveness. By identifying these success factors, Bumiputra contractors will able to navigate their company successfully in the competitive construction industry.

1.6 Thesis Layout

The thesis layout of this study consists of six chapters as follows:

- Chapter 1: describes the introduction and needs of this study. It includes background of study, problem statement, objectives and scope of this study.
- Chapter 2: focuses on review of published research works related to issues and problem faced by Bumiputra contractors.
- Chapter 3: describes the methodology of study adopted for executing this research. It also contains the explanation about the methods used for data collection and analysis.
• Chapter 4: discusses a process to determine the rank of identified factors based on their average index score of significance in contributing to Bumiputra contractors success.

• Chapter 5: explains the development of PLS-SEM path model and the assessments that are carried out on it to ensure the model is fit for representation.

• Chapter 6: presents the conclusion for the overall study which summarised the important findings related to the objectives of study.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to provide an overview of issues and problems faced by Bumiputra contractors in construction industry. This chapter begins with the general view of construction industry about the issues faced by the construction industry. Then will be followed by reviewing the issues and problems faced by Bumiputra contractors.

2.2 Issues in Construction Industry

Construction industry is considered as a locomotive of physical development which bring substantial and significant impacts to the country’s economy (Kumaraswamy, 2006). However, it also contributes to negative implications especially to the environment and social aspect of a country.
In addition, the industry is always facing chronic problems such as time overrun, cost overrun, poor safety and poor quality (Nahmens & Ikuma, 2009).

Achievement in completing construction project on time is a basic requirement but it seldom completed on time. This has become a worldwide problem including Malaysia where the construction industry is facing the critical problem of time overrun (Alaghbari et. al., 2007; Ibrahim et. al., 2010; Sambasivan & Soon, 2007). Abdullah (2010) reported that more than 90% of large Majlis Amanah Rakyat (MARA) construction projects experienced delay since 1984. Endut et. al., (2009) studied on time performance of 359 projects (301 new constructions while 58 refurbishment projects) in Malaysia. 359 of these projects, 301 were public projects and 51 private projects. The study found that only 18.2% of the public sector projects and 29.45% of private sector projects had 0% time deviation (no delays) while the average percentage of time overrun for other projects was 49.71%. Time delay can be due to one or more reasons including problems of financing and payment for completed works.

Cost is one of the major considerations throughout the lifecycle of a project. Unfortunately, most of the projects failed to achieve project completion with the estimated cost. Besides time overrun, cost overrun is also a serious problem in the constructions industry. This is a major problem both in developed and developing countries. The trend is more several in developing countries where this overrun sometimes exceeds 100% of the anticipated cost of the project (Azhar et. al., 2008). Malaysia construction industry is also facing a lot of challenges in completing the construction projects within the estimated cost (Ibrahim et. al., 2010; Toh et. al., 2011) and more than 50% of projects face cost overrun (Endut et. al., 2009).

Another problem faced by construction industry is poor quality. It is very common and serious problem as the expected quality is not complied in the construction projects (Kometa & Olomolaiye, 1997). Failure in achieving required quality has also significant impact of project cost. Koskela (1992) stated that quality cost (non-conformance) in construction industry in the United States of America (USA) contributed to 12% of total project cost. Marosszeky et. al., (2002) showed that quality failures had resulted in rework which incurred extra cost approximately 2% - 12% of project cost and stated that quality rectification problem contributed to approximately 3.4% - 6.2% of project cost.
Finally, the construction industry is notoriously known for its poor safety record as compared with other industries (Mohamed, 2002). Poor safety resulted to accidents and fatality which effect significantly on efficiency and cost of the projects. Accident data prepared by Department of Occupational Safety and Health (DOSH), Malaysia shows that accident related to fatality rates in the construction industry much worse than all other industry for many years, the accident related to fatality rate are 42 cases till September 2015 higher than other industries. According to Sharif (2015), the causes of accident at construction site are too many, one of it is caused by contractors’ attitude, workers and the environment of construction site. Thus, it can be concluded that construction industry is the most challenging industry where besides generating the country’s economy, it also being engulfed with chronic issues that are difficult to resolve.

2.3 Contractors

Contractor is someone who enters into a binding agreement to perform a certain service or provide a certain product in exchange for valuable consideration, monetary, goods, services, even barter arrangements. In the building trades, a contractor is one who is engaged in the construction or building related services for a client. The construction site is overseen by a “Prime”, General, or Specialty contractor, who may perform the work with employees, subcontractors or any combination (Othman, 2010). According to Act 520, Part 1 (1994), the definition of contractor is someone who undertakes to carry out and complete any construction work (CIDB, 2015a).

Zaini et. al., (2010), defines contractors as the most powerful and carry ultimate responsibility, in both internal and external aspects, for the firm and its investment capital. In this sense, the contractor is a body consisting of company director general and commercial manager of private companies.

According to Ayub & Eman (2006), 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, labour and equipment can be best utilised to achieve the objectives of the project. For this study, the term of contractors is applied to someone who are legally given responsibilities to execute the awarded construction project as in the contract.

2.3.1 Category of Contractor

According to Government of Malaysia (2012) started from 15 October 2012, the limitation of acquisition value for the government work for the building work / civil / mechanical and electrical are shown in the Table 2.1 and Table 2.2 below:

Table 2.1: Limit of building/civil/mechanical work cost (CIDB, 2015a)

<table>
<thead>
<tr>
<th>Registration Grade</th>
<th>Limitation of acquisition work value (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Less than 200,000.00</td>
</tr>
<tr>
<td>G2</td>
<td>200,001.00 to 500,000.00</td>
</tr>
<tr>
<td>G3</td>
<td>500,001.00 to 1,000,000.00</td>
</tr>
<tr>
<td>G4</td>
<td>1,000,001.00 to 3,000,000.00</td>
</tr>
<tr>
<td>G5</td>
<td>3,000,001.00 to 5,000,000.00</td>
</tr>
<tr>
<td>G6</td>
<td>5,000,001.00 to 10,000,000.00</td>
</tr>
<tr>
<td>G7</td>
<td>More than 10,000,000.00</td>
</tr>
</tbody>
</table>

Table 2.2: Limit of electrical work cost (CIDB, 2015a)

<table>
<thead>
<tr>
<th>Registration Grade</th>
<th>Limitation of acquisition work value (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Until 200,000.00</td>
</tr>
<tr>
<td>G2</td>
<td>Until 500,000.00</td>
</tr>
<tr>
<td>G3</td>
<td>Until 1,000,000.00</td>
</tr>
<tr>
<td>G4</td>
<td>200,001.00 to 3,000,000.00</td>
</tr>
<tr>
<td>G5</td>
<td>200,001.00 to 5,000,000.00</td>
</tr>
<tr>
<td>G6</td>
<td>200,001.00 to 10,000,000.00</td>
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<tr>
<td>G7</td>
<td>More than 200,001.00</td>
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</tbody>
</table>
2.3.2 Bumiputra Contractor

Constitution of Malaysia (1957a) mentioned that Bumiputra is a term to describe the Malay race and other indigenous peoples of Malaysia. The concept of a Bumiputra ethnic group in Malaysia was coined by Tun Abdul Razak to recognise the "special position" of the Malays provided in the Federal Constitution of Malaysia, in particular Article 153 (Constitution of Malaysia, 1957b). However, the constitution does not use the term "Bumiputra"; it defines only "Malay" and "indigenous peoples" (Article 160 (2)), "natives" of Sarawak (Article 161A (6) (a)) and "natives" of Sabah (Article 161A (6)) (Constitution of Malaysia, 1957a).

The government has established multiple bodies that work towards planning, acting, monitoring and controlling the operations of the construction industry in Malaysia. There are two (2) bodies that play significant roles on behalf of the Government which is Construction Industry Development Board (CIDB) and Bahagian Pembangunan Kontraktor dan Usahawan (BPKU). According to Malaysia (1995), Ministry of Finance will award Bumiputra status to qualified company in supply and service sector, while BPKU will award Bumiputra status to qualified contractors.

To acquire a status as Bumiputra Company, one has to meet the following criteria, imposed by the Malaysia Ministry of Finance (Malaysia, 1995):

- At least there are 51% of company’s shares belong to Bumiputra whereby the individual shares are more than non-Bumiputra’s individual shares
- At least 51% of Board of Director are owned by Bumiputra
- The CEO, Managing Director or General Manager or any other important roles must be owned by the Bumiputra
- At least 51% of the staffs are Bumiputra
- Financial Manager post are owned by Bumiputra
- The organization chart and its function showed the majority owner by Bumiputra
2.4 Problems Related to Bumiputra Contractors

Since developing and enhancing Bumiputra contractor is part of the government Bumiputra agenda, there are a lot of discussions on the problems of Bumiputra contractors in local newspapers. For this research, 9 newspaper reports and other public sources are referred from 2005 up to 2015 which are deemed relevant to this study. These reports are presented in Table 2.3.

Table 2.3: Newspaper report on Bumiputra contractors’ problems

<table>
<thead>
<tr>
<th>No</th>
<th>References</th>
<th>Descriptions</th>
</tr>
</thead>
</table>
| 1  | Koon (2005) Aliran Montly | Koon Yew Yin pointed out 6 important points to be considered by bumiputera contractors so that they could understand why they have failed and what needs to be done by the government to correct this situation.  
- Over optimistic assumption in open tender bids produce good work at the cheapest price.  
- Experienced contractors will be able to anticipate material price changes/fluctuation  
- Bumiputra contractors should anticipate the difficulty of new site and to retain experienced supervisory staff  
- Bumiputra contractors should have means to finance their projects with considerations of difficulty to acquire loan from the bank  
- Bumiputra contractors should start at apprentice level so as they are able to learn the trade at the bottom especially becoming traders of building materials.  
- Bumiputra contractors are facing difficulty of getting the skilled worker because of the salary and the availability of skilled Bumiputra workers |
| 2  | Mohamed (2011) Harian Metro (refer to appendix C for further detail) | Datuk Nur Jazlan Mohamed highlighted three causes of leakage in government awarded project to Bumiputra contractors are due to:  
- Bumiputra contractors selling the awarded project to third party  
- Mismanaging procurement by civil servant  
- Bumiputra contractors are not able to get a competitive price of materials and equipment as non-Bumiputra contractors |
<p>| 3  | Muhammad (2011) Borneo Post (refer to appendix D for further detail) | Datuk Awang Sham Amit identified the weakness in entrepreneurship skills as a main contributors to the failure faced by Bumiputra contractors |
| 4  | Bernama (2012) Sinar Harian (refer to appendix E for further detail) | Datuk Abd Latif Bandi states that Johor Bumiputra contractors were given less opportunity to participate in the rapid construction growth in Iskandar development. |
| 5  | Samad (2013) New Straits Times (refer to appendix F for further detail) | PM mentioned about problem faced by Bumiputra contractors in getting construction materials at affordable price. Datuk Mokhtar Samad said that the problem was because many of Bumiputra contractors were new to the supply chain system and have yet to build a network. He suggested Prime Minister to revive old system of Pernas trading. |</p>
<table>
<thead>
<tr>
<th>No</th>
<th>References</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Bernama (2013a) Berita Harian</td>
<td>Datuk Seri Zainal Rahim Seman suggested Bumiputra contractors company to collaborate with government agencies at an early stage in order to reduce the risk of delay in completing the projects. Common causes of failure faced by Bumiputra contractors • Bad weather • Unexpected soil structure • Improper construction applied • Changes of specifications during construction process</td>
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<td>7</td>
<td>Bernama (2013b) Utusan Borneo</td>
<td>Mahmood Amir stated that Johor Bumiputra contractors disappointed with less opportunity in mega project. This indicates that Bumiputra contractors are highly dependent on government projects.</td>
</tr>
<tr>
<td>8</td>
<td>Salian (2015) Berita Harian</td>
<td>According to Ahmad Kamal Kasani, failure of Bumiputra contractors to complete the awarded projects are due to 3 common causes which are: • lack of understanding construction process &amp; requirement, • lack of apprenticeship • lack of skills on necessary aspect of project success</td>
</tr>
<tr>
<td>9</td>
<td>Koon (2015) Malaysiakini</td>
<td>Koon Yew Yin pointed out 7 important points to be considered by bumiputera contractors so that they could understand why they have failed and what needs to be done by the government to correct this situation. • Construction activity is rather a teamwork not an individual effort • Experienced contractors will able to anticipate material price changes/fluctuation • Bumiputra contractors should anticipate the difficulty of new site and to retain experienced supervisory staff • Bumiputra contractors should have means to finance their projects with considerations of difficulty to acquire loan from the bank • Bumiputra contractors should start at apprentice level so as they are able to learn the trade at the bottom especially becoming traders of building materials. • Bumiputra contractors are facing difficulty of getting the skilled worker because of the salary and the availability of skilled Bumiputra workers • Records indicate many of the Bumiputra contractors are facing bankruptcy due to their incompetence in handling the project, thus they need to upgrade their knowledge and skills to enhance their competency in contracting business</td>
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</table>

Table 2.3 shows the issues and problems faced by Bumiputra contractors according to the newspaper report. There are 27 problems as displayed in the Table 2.3, from these problems there are similarity in nature. After going through the similarity checking, these problems can be categorised into 5 main group of problems which are related to management, financial, labor/worker, materials and machineries and also procurement.

In management problems, Bumiputra contractor are seem to lack of knowledge and skill related to construction project, lack of understanding
construction process and requirement, lack of skills on necessary aspect of project success, improper construction applied, changes of specifications during construction process and lack of apprenticeship from the bottom level becoming traders of building materials. While, in term of financial problems, Bumiputra contractors are facing bankruptcy due to their incompetence in handling the project, thus they need to upgrade their knowledge and skills to enhance their competency in contracting business. Bumiputra contractors should have means to finance their projects with considerations of difficulty to acquire loan from the bank because of lack of fixed assets (land and buildings) that can be used as collateral.

Problems faced by Bumiputra contractor related to materials and equipments are they are not able to get a competitive price of materials and equipments as non-Bumiputra contractors and they also unable to anticipate material price changes/fluxuation. Besides, Bumiputra contractor also encounter a problems on labour/worker issues. These problems are shortage of technical personnel (skilled labour), high cost of labor and also difficulty of getting the skilled worker because of the salary and the availability of skilled Bumiputra workers. Table 2.3 also mentioned about procurement problems such as over optimistic assumption in open tender bids produce good work at the cheapest price, mismanaging procurement by civil servant and also insufficient understanding of the contract documentation and the preparation and submission of tenders.

Beside the newspaper reports, the problem of Bumiputra contractor are also been studied at the university level. Literature found 10 research studies related to Bumiputra contractor were carried out from 2004 up to 2011. These research studies are summarized in Table 2.4.

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<thead>
<tr>
<th>No</th>
<th>References</th>
<th>Descriptions</th>
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</table>
| 1  | Rosli (2004) | A study in Sabah which involved 52 respondents has identified 4 main problems faced by Bumiputra contractors which are:  
  • Lack of construction material due to supplier not able to provide sufficient materials and raise the prices without control  
  • Insufficient cash flow/capital to carry out a construction project  
  • Lack of managing workers with systematic approach/method  
  • Lack of understanding construction process & requirement |
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<th>No</th>
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<th>Descriptions</th>
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</table>
| 2  | Lim (2004) | A study conducted in Samarahan, Sarawak which involved 30 respondents has found 9 problems faced by Bumiputra contractors in executing their contractual obligations such as:  
- Lack of leadership ability and knowledge necessary to make the business work.  
- Lack of managerial and technical expertise in construction project  
- Poor financial control that cause the company to go bankrupt and resulting poor images to the contractors  
- Lack of inventory control on building materials  
- Problems in Acquiring of Building Materials  
- Lack of systematic planning and scheduling due to the contractor not have qualification and rely mainly on experience  
- Shortage and difficulties in obtaining manpower resources will definitely affect the productivity of a construction company  
- Problems with government departments and agencies is due to poor relationship between two parties  
- Complaints and actions which are unexpected will be taken by the local residents which may result in the construction project being postponed |
| 3  | Ayub & Eman (2006) | A study conducted in Pulau Pinang which involved 20 respondents pointed out 16 main reasons considered to be the reasons for project failures in the public university which are:  
- Insufficient instruction and information in the contract specification, drawing and design  
- Lack of construction materials and machineries  
- Inefficient and ineffective planning and management by the owner, contractor and designer  
- Lack of staff and labours  
- Inexperienced labours  
- Lack of technical knowledge background among the contractor and the owner  
- Changed Conditions/Differing Site Conditions  
- Communication problems  
- Insufficient Funds/Financial Difficulties  
- Wrong focus of project management system  
- Improper or inaccurate project estimation  
- Too much too early of the utilisation of new or latest techniques  
- Overcrowding of staff/Too many staff  
- Lack of awareness on project goals  
- Changes of needs, requirements and specifications by the owner  
- Incompetent Project Manager/Project Management team |
| 4  | Kadir (2006) | A survey conducted among 35 Bumiputra contractors in Johor has identified 11 risks normally faced by contractors during construction process which are:  
- Unable to anticipate risks due to bad weather on their project  
- Unable to anticipate the difficulty of getting material and worker  
- Unable to anticipate risks due to construction site condition  
- Unable to anticipate the risks of equipment / machinery damage  
- Unable to anticipate the risk of accidents and injuries at construction site  
- Unable to anticipate the risk from quality of work  
- Risk of delays in completion of construction work  
- Risk due to financial problems  
- Risk due to management problems  
- Unable to anticipate risks due to economy conditions |
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<tr>
<th>No</th>
<th>References</th>
<th>Descriptions</th>
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</thead>
</table>
| 5  | Musu (2008) | A survey conducted among 30 contractors in Johor has identified 5 common problems faced by Bumiputra contractor which are:  
  - Unable to anticipate risks due to political influence  
  - Lack of construction materials due to materials waste that occur at every project stages and delay in delivery building materials.  
  - Lack of managing workers with systematic approach/method  
  - Lack of expertise due to only possess in general knowledge of construction project  
  - Insufficient cash flow/capital to carry out a construction project  
  - Difficulty in obtaining construction project because the increasing number of contractors and lack of provided contract offer |
| 6  | Rahman (2009) | A survey on Klang Valley among 62 respondents found the common problems faced by Bumiputra contractors and group into five aspect such as:  
  - Problem in General Aspect  
  - Problem in Quality Aspect  
  - Problem in Design Aspect  
  - Problem in Financial Aspect  
  - Problem in Time Aspect |
| 7  | Othman (2010) | A study conducted among 30 contractors pointed out 5 problems faced by Bumiputra contractors in construction industry at Pahang which are:  
  - Raw materials problems  
  - Manpower problems  
  - Lack of expertise  
  - Machinery problems  
  - Financial problems |
| 8  | Zaini et al., (2010) | A survey carried out to determine the types of risk involve during construction phase in Malaysia such as:  
  - Force Majeure (flood, inclement weather, riot, etc.)  
  - Financial (Cash flow, bank loan, price fluctuation, etc.)  
  - Political (Regulation by government, permit and approval, etc.)  
  - Social (Public Complaint, etc.)  
  - Technical/Functional (Availability of material, equipment, labour, changes of design, etc.) |
| 9  | Hanif (2011) | A study conducted among 60 respondents pointed out 6 problems faced by Bumiputra contractors in construction industry at Wilayah Persekutuan Kuala Lumpur which are:  
  - Bumiputra contractors are not able to secure affordable price of contract offered.  
  - Delay in interim or progress payment because the cost of capital of Bumiputra contractors is very limited.  
  - Lack of knowledge and expertise on construction project  
  - Lack of communication/communication breakdown  
  - Unfair evaluation of work progress  
  - Unfair surcharges in term of Non-Compliance Report, Non-Compliance Performance and etc. |
| 10 | Adam (2011) | A survey conducted among 38 Bumiputra contractors in Jeli, Tanah Merah and Machang found 3 factors that causes contractor more interested with government contract compare to private contract which are:  
  - Unable to anticipate risks due to political influence  
  - Lack of construction materials due to materials waste that occur at every project stages and delay in delivery building materials.  
  - Lack of managing workers with systematic approach/method  
  - Lack of expertise due to only possess in general knowledge of construction project  
  - Insufficient cash flow/capital to carry out a construction project  
  - Difficulty in obtaining construction project because the increasing number of contractors and lack of provided contract offer |
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<th>References</th>
<th>Descriptions</th>
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</table>
|    |            | • Difficulty in getting private contract due to only choose qualified contractor and have expertise in implementing construction projects  
|    |            | • Inadequate capital to carry out a construction project  
|    |            | • Comfortable with the construction project that they have |

Table 2.4 shows the problems faced by Bumiputra contractor according to the studied at the university level. There are 69 problems as displayed in the Table 2.4, from these problems there are similarity in nature. After going through the similarity checking, these problems can be categorised into 5 main group of problems which are related to financial, management, resources, risk and also procurement.

Referring to Table 2.4, it shows that Bumiputra contractor seem to have a problems regarding the financial issues such as insufficient cash flow/capital to carry out the construction project, poor financial control that cause the company to go bankrupt and resulting poor images to the contractors and delay in interim or progress payment because the cost of capital of Bumiputra contractors is very limited.

In management issues, Bumiputra contractors have faced a problems on lack of managing workers with systematic approach/method, lack of understanding construction process & requirement, lack of leadership ability and knowledge necessary to make the business work, lack of managerial and technical expertise in construction project, lack of systematic planning and scheduling due to the contractor not have qualification and rely mainly on experience and lack of communication/communication breakdown. Most of the researchers in Table 2.4 mentioned that management is one of the problems faced by Bumiputra contractors in construction industry.

According to related resources issues that have been faced by Bumiputra contractor such as lack of construction material due to supplier not able to provide sufficient materials and raise the prices without control, lack of materials and machineries, shortage and difficulties in obtaining manpower resources will definitely affect the productivity of a construction company, lack of construction materials due to materials waste that occur at every project stages and delay in delivery building materials and overcrowding of staff/too many staff.
While, in procurement issues such as lack of tendering skill in tender pricing, improper or inaccurate project estimation, difficulty in obtaining construction project because the increasing number of contractors and lack of provided contract offer, unable to secure affordable price of contract offered and also difficulty in getting private contract due to only choose qualified contractor and have expertise in implementing construction projects are the problems encountered by Bumiputra contractors.

Problems from Tables 2.3 and Table 2.4 were sorted out and left with only 33 problems. The sorting involved identification of duplications and also rephrasing and generalising the problems. From these 33 problems faced by Bumiputra contractors, the frequency analysis based on 19 research articles are as in Table 2.5.
Table 2.5: Mapping Previous Studies (Problem faced by Bumiputra contractors)

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<tbody>
<tr>
<td>1</td>
<td>Difficulty to purchase construction material at competitive price lead to extra cost</td>
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<td>2</td>
<td>Lack of entrepreneurial skills in managing construction projects leads to time and cost overruns</td>
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<td>3</td>
<td>Less opportunity to participate in construction project causing less chance of getting new project</td>
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<td>4</td>
<td>Unfavourable site conditions (bad weather/unexpected soil structure) lead to delay</td>
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<td>5</td>
<td>Many changes of requirements and specifications during construction process lead to major problems</td>
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<td>6</td>
<td>Lack of knowledge and experience on construction leads to project failure</td>
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<td>7</td>
<td>Lack of teamwork amongst parties involved which could leads to project failure</td>
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<td>8</td>
<td>Fluctuation of construction material cost affecting estimated cost of the project</td>
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<td>9</td>
<td>Difficult to retain skilled supervisory staff due to financial constrain</td>
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<tr>
<td>10</td>
<td>Insufficient cash flow to run the construction project</td>
<td>✓</td>
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<td>11</td>
<td>Lack of apprenticeship to resolve problems at trade level</td>
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<td>12</td>
<td>Lack and difficulty of getting skilled workers at an affordable wage</td>
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<tr>
<td>13</td>
<td>Lack of tendering skill in tender pricing</td>
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<td>14</td>
<td>Lack of networking to enhance information of project procurement</td>
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<tr>
<td>15</td>
<td>Too dependent on government allocated projects</td>
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<td>16</td>
<td>Lack of good reputation based on the record of the previous works</td>
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<td>17</td>
<td>Lack of financial management resulted to bankruptcy</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>18</td>
<td>Difficulty in securing bank loan due to unable to comply stringent terms and condition such as inability to get guarantor/collateral fixed</td>
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<td>Insufficient instruction and information in the contract specification, drawing and design</td>
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<td>20</td>
<td>Lack of construction materials and machineries</td>
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<td>Inefficient and ineffective planning and management</td>
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<td>22</td>
<td>Lack of communication which leads to dispute in all levels</td>
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<td>23</td>
<td>Improper or inaccurate project estimation</td>
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<td>24</td>
<td>Lack of knowledge and skill on new construction technology approach</td>
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<td>25</td>
<td>Lack of handling workers using systematic approach leads to project failure</td>
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<td>✓</td>
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<td>26</td>
<td>Conflicts between contractor and other parties causing project failure</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>27</td>
<td>Lack of risks management</td>
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<td>28</td>
<td>Late of progress payment</td>
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<td>29</td>
<td>Certain materials are not available locally</td>
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<tr>
<td>30</td>
<td>Mismanagement of cash flow (not able to differentiate between personal and company money)</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>31</td>
<td>Lack of financial capital to start new project</td>
<td>√</td>
<td>√</td>
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<tr>
<td>32</td>
<td>Difficulty to hire equipment at affordable price</td>
<td>√</td>
<td>√</td>
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<tr>
<td>33</td>
<td>Lack of local construction workers to form a strong and sustainable construction team</td>
<td>√</td>
<td>√</td>
<td>√</td>
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</table>
Table 2.5 indicates the problems faced by Bumiputra contractors were extracted from 19 sources of references from the previous studies. From Table 2.5, it shows 10 of 33 problems faced by Bumiputra contractors are having frequency more than 5 researchers. The problems are difficulty to purchase construction material at competitive price lead to extra cost, unfavourable site conditions (bad weather/unexpected soil structure) lead to delay, lack of knowledge and experience on construction leads to project failure, insufficient cash flow to run the construction project, lack of financial management resulted to bankruptcy, difficulty in securing bank loan due to unable to comply stringent terms and condition such as inability to get guarantor/collateral fixed, lack of construction materials and machineries, lack of handling workers using systematic approach leads to project failure, difficulty to hire equipment at affordable price and lastly is lack of local construction workers to form a strong and sustainable construction team. Majority of the problems faced by Bumiputra contractors are from resources issues. It due to the difficulties to get the construction materials, skilled workers, machineries and equipments at competitive price.

The identified 33 problems faced by Bumiputra contractors as in Table 2.5 from the literature review are then compiled as in Table 2.6.

Table 2.6: List of problems faced by Bumiputra contractors

<table>
<thead>
<tr>
<th>Nos</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less opportunity to participate in construction project causing less chance of getting new project</td>
</tr>
<tr>
<td>2</td>
<td>Difficult to retain skilled supervisory staff due to financial constrain</td>
</tr>
<tr>
<td>3</td>
<td>Difficulty to hire equipment at affordable price</td>
</tr>
<tr>
<td>4</td>
<td>Lack of financial management resulted to bankruptcy</td>
</tr>
<tr>
<td>5</td>
<td>Lack of entrepreneurial skills in managing construction projects leads to time and cost overruns</td>
</tr>
<tr>
<td>6</td>
<td>Lack of financial capital to start new project</td>
</tr>
<tr>
<td>7</td>
<td>Insufficient cash flow to run the construction project</td>
</tr>
<tr>
<td>8</td>
<td>Mismanagement of cash flow (not able to differentiate between personal and company money)</td>
</tr>
<tr>
<td>9</td>
<td>Difficulty in securing bank loan due to unable to comply stringent terms and condition such as inability to get guarantor/collateral fixed</td>
</tr>
<tr>
<td>10</td>
<td>Late of progress payment</td>
</tr>
<tr>
<td>11</td>
<td>Lack of teamwork amongst parties involved which could leads to project failure</td>
</tr>
</tbody>
</table>
Table 2.6 shows the list of problems faced by Bumiputra contractors from 19 researches in Malaysia construction industry. If all these problems in Table 2.6 are resolved, then logically the contractors can be considered succeed in their contracting work (securing project or completing the awarded project). Therefore, this study used these problems as a basis to determine success factors for Bumiputra contractors by converting and rephrasing these problems into success factors as Chapter 4.
2.5 Groups for Problems

Problems faced by Bumiputra contractors which had been identified in the section 2.4 were extracted from several sources of references. The previous researchers assigned these problems in groups according to their understanding. Thus, this section presents names of groups related to the problems as given by the previous researchers in Table 2.6.

Table 2.6: Various Groups of Problems

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Groups</th>
<th>No of groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Othman (2010)</td>
<td>Financing, Raw Material, Manpower, Machinery and General or Other</td>
<td>5</td>
</tr>
<tr>
<td>Adam (2011)</td>
<td>Finance, Resources, Procurement</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 2.6 indicates the names of groups that being used by the previous researchers in their studies to categorise problems. Numbers of groups vary from 3 to 6 where some of the groups are having similar name. Based on that, this study sensibly adopted 5 groups namely Financial group, Management group, Risk group, Resources group and Procurement Group.

In financial group, most of the contractors are lacking in financial stability and they will suffer once there are late receive the progress payment on time. Poor financial control will cause the company to go bankrupt and resulting poor images to the contractors.

Besides financial group, a good management become a responsibility of a contractor in the construction industry. The contractor must be good in handling people i.e. the workers, in order to get the job done smoothly. Most of the contractors are poor in managing their financial resources like manpower, materials, plants and equipments and etc.
REFERENCES


Act 520, Pembinaan Malaysia Act (1994), Construction Industry Development Board, 1-16


Constitution of Malaysia (1957a). Constitutional definition of Malay: Article 160

Constitution of Malaysia (1957b). Special Position of Bumiputras and Legitimate Interests of Other Communities: Article 153


