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Determining the Financial Performance Factors Among Bumiputera Entrepreneurs in Malaysian Construction Industry

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ABSTRACT

This study aims to identify the financial factors determining the success or failure of contracting firms in the Malaysian construction industry. Researchers in the construction industry have addressed three main factors that have caused the failure of contracting firms in their operations, namely, shortage of funds, low profits, and debt. Previous literature indicates that the rate of failure among construction firms is higher than that in other sectors. The methodology employs the quantitative approach to achieve its objective. The study mailed 250 questionnaires to selected contracting firms. The results showed that the negative reputation of failed contracting firms are influenced by ten factors, including increased prices of raw materials during construction, low contract price, projects not completed within the agreed time, small capital, delayed deposit from clients, relying on creditors to fund projects, difficulty in acquiring loans, delay in receiving progress payments, exorbitant financial costs, and small capital. These ten main factors are drawn from three main categories, namely, small profit, shortage of capital, and debt burden.

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INTRODUCTION

In any country, the construction industry plays an important role in enhancing economic performance as well as contributes to economic activities. On average, the construction industry helps boost the GDP of developing countries by 5% to 9% (Abu-Bakar, 2002). The construction industry in Malaysia also generates an economic growth similar to other countries, accounting for 3% of the annual GDP on average. Despite having a small share in the GDP compared with other economic sectors (see Table 1.1), the significant contribution of the construction industry should be given attention for its indispensable role in developing the Malaysian economy and activities of other economic sectors (Abdullah, 2004). The Malaysian government actively promotes the construction industry by providing various facilities that enhance the competitiveness of the industry. Furthermore, the Construction Industry Development Board Malaysia (CIDB) has been established in 1994 to determine the direction of the construction industry in Malaysia. On 20 July 1995, the Malaysian government mandated that all contracting firms, whether local or foreign, that want to operate in Malaysia must register with the CIDB before declaring and completing any construction project. However, contractors who want to implement public sector projects must be *bumiputera* (indigenous people) and should register with the Contractor Services Center (CSC), a government institution established in 1981 under the Ministry of Entrepreneur and Cooperative Development.

Table 1.1: GDP per sector.

Economic Sectors	2006	2007	2008	2009	2010
Services	51.8	53.2	54.3	55.1	58.5
Manufacturing	31.1	30.3	29.6	29.5	26.2
Agricultures	7.9	7.7	7.5	7.4	7.6
Mining and Quarrying	8.8	8.6	8.4	8.1	7.9
Construction	3.1	3.0	3.0	2.9	3.2

Source: Malaysian Economic Statistics (2006–2010).

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The CSC aims to lead and train *bumiputera* entrepreneurs who intend to engage in the construction industry. The CSC is also responsible for validating the status of *bumiputera*. On the basis of Bill 7/74 treasury circulars, the Malaysian Financial Planning Council stated that at least 51% of the shares must be possessed by *bumiputera* and at least 51% of the workers must be *bumiputera.* Contractors avail themselves of numerous financial allocations and facilities to develop the national construction industry. The Ninth Malaysian Planning (RMK-9) is a new move toward the development of the construction industry in Malaysia. Overall, the government has allocated RM200 billion to spend on RMK-9, which is RM30 billion greater compared with RMK-8. Furthermore, RM20 billion projects will be implemented for public projects that have been privatized through Private Financing Initiatives. Substantial financial stimuli from the public sector toward the construction sector induce an increase in the number of contractors in the industry. Table 1.2 shows the number of registered contractors on the basis of its grades from 2006 to 2010.

Table 1.2: Total number of contractors registered according to grade.

Grade/Year	2006	2007	2008	2009	2010
G1	37,067	34,947	34,060	33,633	33,388
G2	7,076	7,183	7,516	8,095	8,092
G3	9,760	10,534	10,963	10,981	10,909
G4	2,017	2,302	2,420	2,613	2,619
G5	2,762	3,008	3,363	3,673	3,739
G6	1,033	1,053	1,206	1,437	1,467
G7	3,472	4,123	4,285	4,326	4,333
Total	62,632	63,150	63,813	64,758	64,547

Source: LPIPM 2010.

On the basis of the grades given by CIDB registered local contracting firms have been categorized into seven main categories according to paid up capital, experience, and firm capability. Table 1.3 lists the contractor categories according to capital paid and value of contracts allowed.

Table1.3: Contractor categories according to registration grade with LPIPM.

Registration Grade (LPIPM)	Minimum Capital Paid(RM)	Total minimum Project Price (RM)	Contractor Category
G1	5,000.00	Not more than 100,000.00	Small
G2	25,000.00	Not more than 500,000.00	Small
G3	50,000.00	Not more than 1,000,000.00	Small
G4	150,000.00	Not more than 3,000,000.00	Medium
G5	250,000.00	Not more than 5,000,000.00	Medium
G6	500,000.00	Not more than 10,000,000.00	Large
G7	750,000.00	Infinity	Large

Source: LPIPM (2010).

The emergence of numerous contracting firms in the construction industry has negatively influenced the industry. The imbalance in work supply results in fierce competition among firms to acquire contracts. Moreover, the current practice of employing an open tender system in bidding for contracts has lowered the contract price considerably. As a result, the firms in the industry perform poorly, thus resulting in business failure.

Failure of contractor firms:

Several studies have investigated the failure of contracting firms through many angles. For instance, Hung *et al*. (2008) state that firms fail in situations when firms cannot pay their debts and cannot return the money they owed to shareholders. From a financial perspective, Karels and Prakash (1987) regard failure of firms as a topic that has been widely addressed by most researchers; firms are considered to fail if the net asset value is negative and firms cannot afford to settle their debt. Russell (1991) believes that firms are more likely to fail if contractors cannot complete their projects on time and causing project owners to take legal action against the firms. In another study, Altman (1968) suggests the economic reason behind the failure of firms; that is, firms have more chances of failing if their income is insufficient to recoup construction cost and if the return on invested capital is smaller than the capital cost. On the basis of previous research, the tendency to fail depends on various contexts. Numerous studies concerning failure of firms have been conducted in different perspectives, thus making this topic a global issue (Edum-Fotwe *et al*., 1996). Strischek andMclntyre (2008), Yen (2006), and Langford *et al*. (1993) have found that the percentage of failure among contracting firms in the construction industry is more prominent than in other industries. For instance, in the United States, the number of contracting firms that operated from 2004 to 2005 decreased by 24%, particularly from 850,029 firms to 649,602 firms. Langford *et al*. (1993) and Edum-Fotwee *et al*. (1996) obtain the same results in the United Kingdom. This issue has been discussed by many other researchers, such as Assaf *et al*. (1995), Osama (1997), Frimpong *et al*. (2002) in Ghana, Aibinu, and Jagboro (2002) in Negaria, Assaf and al-Hejji (2006) in Saudi

Arabia, Swies *et al*. (2007) in Jordan, and Ka Kui (2009) in Hong Kong. The construction industry in Malaysia has also demonstrated a similar phenomenon, in which a high number of contracting firms have failed. Yin (2006) states that few firms are listed as successful in Malaysia, whereas a substantial number of firms have declared bankruptcy. Among industries, the construction industry has the largest number of firms that have declared bankruptcy. According to the statistics released by LPIPM, 6,031 contracting firms have been recorded as inactive or dormant from June 2005 to December 2009. Table 1.4 shows the list of inactive contracting firms released by CIDB (June 2005 to December 2009) by registered grade.

Table 1.4: Inactive and dormant contractor firms according to registered grade.

States	Grade/size							Total
	G1	G2	G3	G4	G5	G6	G7	
Johor	75	52	48	23	17	7	15	237
Kedah	84	26	54	12	22	10	13	221
Kelantan	327	55	123	25	55	9	37	631
Labuan	8	3	4	0	2	0	0	17
Melaka	51	26	29	17	7	5	5	157
Negeri Sembilan	285	56	64	9	9	4	7	434
Pahang	87	34	66	17	13	3	12	232
Perak	118	71	80	18	25	10	12	334
Perlis	34	11	17	3	6	1	7	79
Pulau Pinang	88	34	61	7	14	6	17	227
Sabah	452	125	127	15	31	8	28	786
Serawak	81	29	30	9	9	4	16	178
Selangor	488	165	278	59	97	34	63	1184
Terengganu	60	24	60	24	43	8	20	239
Wilayah Persekutuan	232	137	322	57	145	47	152	1092
Total	2,470	848	1,363	295	495	156	404	6,031

Source: LPIPM 2010

Yin's (2006) study on the performance of contracting firms in Malaysia suggests that many construction firms fail to complete their work within the agreed time. These findings are supported by Basir (2000), who shows that several factors can influence the delay in construction work and that this delay can be considered as "*over-run in cost and time.*" According to the statistics released by Public Works Department (PWD) on March 2008, 857 delayed projects, and 787 contracts have experienced a delay of one month to three months. Moreover, 70 contracts have been delayed for more than three months. As a result, numerous construction firms are blacklisted and are prohibited from participating in tender for public projects. According to the statistics published by the CSC retrieved from (www.pkk.gov.my) on14 May 2010, 476 construction firms from various grades have been blacklisted, most of which have failed to complete projects on the allotted time.

Problem statement:

The failure of construction firms in the construction industry is common. Several studies, such as that of Kangari (1998), have been conducted to determine the performance of contracting firms in the industry. According to these studies, financial factors influence the failure of contracting firms significantly**.** Kangari denotes that the failure of contracting firms is primarily caused by two financial factors: shortage of capital and poor financial management. These findings are supported by Noven (1996), who tried to relate both factors to the failure of construction firms. Osama (1997) investigates the failure of the contracting firms in Saudi Arabia, focusing on two financial factors, namely, the shortage of capital rolling to fund business operations and the low profit margin. In addition, other factors such as difficulty in finding jobs, making unwise decisions, scant experience, and inefficient management are considered to have an adverse influence on firm performance.

In the United States, Arditi *et al*. (2000) find that budget and macroeconomic factors are the main roots of failure among contracting firms. From the study, more than 80% of the contracting firms have been found to fail because of the following five other factors: low profit (27%), weak industry (23%), huge expenditure on firm management (18%), insufficient capital (8%), and large debt (6%). All sectors mentioned are connected with shortage in capital and inefficient financial management, except for the second factor, which contributes to 23% of firm failure. The findings also show that low profit margin takes up the highest percentage at 27%. Some studies have been conducted in Malaysia regarding factors affecting the failure of contracting firms show that the failure of these firms can be associated with financial problems. Yin (2006) explains that most of the contracting firms in Malaysia fail because of shortage in capital that can used to spend on projects. Moreover, the firms fail to acquire loans for capital because they do not have any fixed assets, such as buildings and lands, unlike firms in other industries.

Firms in the construction industry normally own fixed assets that are not accepted by banks as collateral, such as generator and construction machines. Thus, these firms are confronted by financial problems because of their low profit margin. Through an open tender system, firms are forced to accomplish projects at a low price,

thus placing the contracting firms in a quandary, which will finally compel them to close their businesses. Therefore, a small number of contracting firms, which are also known as surviving firms, remains in Malaysia. Many other firms are forced to shut down their operations. The bankruptcy rate among firms in the construction industry is higher than that of other industries, as affirmed by Munaain (2006) and Ang (2006). According to them, the shortage in cash flow is of utmost importance because this shortage a force contracting firms, especially the *bumiputera* to quit the construction industry. As a result, many projects are not completed on time and some projects are even abandoned, thus tarnishing the image of the Malaysian construction industry. Jaafaf *et al*. (2005) states that the shortage of capital is not a significant factor in failure among contracting firms because contracting firms in Malaysia require a small capital to start their business, unlike other industries. The reasons that "shortage of capital" is not a factor influencing failure of firms are as follows:

i. Suppliers of raw materials for construction and sub-contractors are important sources of credit capital.
ii. For government projects, contractors are eligible for a 15% deposit of the entire project;
Currently, the deposit has increased to 25%.
iii. Securing loans to fund government projects are not difficult for firms.

The results of their study show that the inefficient management of capital debt is a more significant cause of failure among contracting firms compared with shortage of fund. Laser (2003) defines "capital debt "as resources owned by other people that firms use to gain profit. The money owned by other people comprises loans and commercial debt. Lin (2008) also concludes that the failure of firms depends on capital debt or on the bank loan used by firms to fund their construction projects. The study on roles of commercial banks in Malaysia in providing capital debt to contracting firms shows that a huge amount of cash flow has been allocated to contraction firms in the form of capital loan. This high dependence on capital debt has an adverse effect on firm performance. Furthermore, the study reveals that many loans known as non-performing loans (NPL) are channeled to the construction industry (NPL refers to uncollectible account).Table 1.5 shows the total loans and NPL account from contracting firms from 2004 to 2005.

Table 1.5: Total NPL accounts of contracting firms from 2004 to 2005.

Commercial Bank	2004			2005		
	Loan (RM'000)	NPL (RM'000)	%	Loan (RM'000)	NPL (RM'000)	%
Total	24,698,854	2,703,285		26,586,508	4,681,328	73.17%

Source: Lin (2008).

The total NPL in 2005 exhibits an increase of 73.17% from RM 2,703,285,000.00 in 2004 to RM 4,681,328,000.00 in the subsequent year. On the basis of several past studies on the failure of contracting firms, the financial problems encountered by the contracting firms are understood to be the primary reason that firms fail in their businesses. "Shortage in capital needed to cover construction cost, "minimal profit among firms," and "loss by incurring inexorable debt because of high dependence on capital loan" is among the factors that cause contracting firms to fail not only in Malaysia but also around the globe.

Considering the critical financial situation among local contractor firms, this study aims to identify the general factors that lead firms to unfortunate situations. Although these factors are determined, a contractor should gain more knowledge and be more prepared for such situations in the future. Apart from that, the government can introduce new strategies to solve the problem.

Research methodology:

A total of 21 probability factors causing the failure of a contractor have been identified through investigating literature related to this study (Assaf *et al*. 1995, Noven 1996, Osama 1997, Arditi *et al*. 2000, Yin 2005, Enshassi *et al*.2006, Munaain 2006, Ang 2006, Strischek & McIntyre 2008, and Abdullah *et al*. 2010). Factors of the same type are grouped together, forming three main groups, namely,1) lack of capital, 2) small profit, and 3) debt burden. These factors are used in formulating the questionnaire that will be distributed among large- and medium-size *bumiputera* contractor firms. A total of 250 questionnaires have been distributed to firm owners. Non-parametric analysis has been performed to measure the agreement of respondents with the factors incorporated in the questionnaire. The level of significance for the factors presented are graded on the basis of a modified interpretation of Oxford (1990), which denotes that a mean score between 3.5 to 5.0 can be classified as very important, between 2.5 to 3:49 as moderately important, and between 1.0 to 2:49 as least important. After a series of obstacles encountered, which include difficulty of achieving the cooperation of the contractor, only 64 questionnaires have been successfully returned. Nevertheless, after screening, only 54 questionnaires have been answered thoroughly and have been used for this research.

RESULTS AND DISCUSSIONS

Lack of Cash Capital Factors:

Table 1.6 shows the mean score and rank for each factor in descending order. Descriptive analysis of the results shows that "small paid-up capital (capital base)" is the most significant factor contributing to the inability of a firm to finance projects. A problem ensues when a contractor implements a construction project exceeds its capital. The factor "small paid-up capital" obtains a mean score of 3.26, followed closely by the second factor "late progress payments of clients." The two factors show a difference of 0.01 in their mean score. Most contractors also expect the client's progress payment to pay for their creditors. By contrast, the factor regarding difficulty to obtain capital loans from banks because of lack of collateral obtained a mean score of 3.11. Subsequently, "Cash management "is also considered a significant contributor to firm incompetence, receiving a score of 2.94. An incompetent firm that cannot correctly estimate the cash requirements of a project also experiences difficulty in moving the cash flow for project implementation. The factors "final payment delays" and "small amount of paid-up capital" obtained mean scores of 2.91 and 2.83, respectively. Final payment delays cause huge amounts of money belonging to a contractor to be retained. Fixed assets such as machinery and construction machinery are difficult to convert into cash immediately. All the six factors described above are classified as medium contributing factors according to the Oxford interpretation (1990). The factor "firms not being paid according to their work "has attained a mean score of 2.19; thus, this factor is judged as less significant compared with other factors.

Table 1.6: Seven factors that contribute to the lack of capital of contractor firms.

Cause of factors	Mean	Rank
Contractor firm starts business with a small paid-up capital.	3.26	1
Delayed progress payments from the client.	3.25	2
Difficulty in acquiring bank loans because of lack of fixed assets (land and buildings) that can be used as collateral.	3.11	3
Weakness in management of cash.	2.94	4
Slow final accounts payable by the client.	2.91	5
Small amount of paid-up capital in the form of cash.	2.83	6
Firms are not paid according to their work	2.19	7

Factors Contributing to Unrealistic Profit Firms:

Table 1.7 lists in descending order the mean and rank of each factor causing unrealistic profits. The factors "increase in construction materials during construction" and "low contract prices" are two factors that have been classified as very important according to the Oxford interpretation (1990). These two factors have received means of 3.62 and 3.56, respectively. The price of construction materials during construction lead to the escalation of construction costs. Although a clause in the contract exists that allows a firm to make a claim against increase, this clause does not cover all types of building materials. Low contract price arises from the high competition among contractors to acquire a project. The following factors have been classified as moderately important: "the project cannot be completed on schedule (mean = 3.38),""contractors are too dependent on creditors to finance their projects (mean = 3.15),""high financing costs (mean = 3.09)," and "weakness in construction cost control (mean = 2.75)."

Non-completion of projects on schedule results in increased construction costs. Construction firms rely on creditors to finance their projects because materials supplied on credit have high prices. Financial costs will increase as a contractor uses a bank loan and pays only the interest of the loan because of delayed progress payments. Weaknesses in construction cost control, such as wasted building materials, machinery, and equipment, cause shrinkage of firm profits.

Table 1.7: Factors causing small profit or loss of firms.

Factors	Min	Rank
High prices of building materials during construction	3.62	1
Low contract price.	3.56	2
Project cannot be completed on schedule.	3.38	3
Firms dependent on creditors to finance the project.	3.15	4
High financing costs.	3.09	5
Weakness on construction cost control.	2.75	6

Factors Causing Debt Burden among Firms:

Seven factors are listed under this category, as shown on Table 1.8. "Delayed progress payments "are the main reason that contractor firms have to rely on creditors to finance their projects. This factor has received the highest mean score (mean = 3.11) among the listed factors. Most of the contractor firms do not have enough capital. "Small capital base" also affects the ability of firms to start a business as a contractor. "Small capital base" has been also chosen as the cause of debt among contractors and has shown to be the factor with the second highest mean score (2.96). The government has implemented a scheme in which contractors receive 25%

advance payment when building government-owned projects; nevertheless, the client can delay their payment. This issue may occur because of the longer period required by banks to deliver the payment of the client, thus making this factor the third highest factor with a mean score of 2.76. A part from the delay in the approval of letters, the bank will also with stand a certain amount (30%) of the total payment as security against issued letters of guarantee. For this reason, the amount of received advance payments is not sufficient to meet the needs of the current capital. Therefore, the contractor firm will inevitably owe this amount; this factor obtained a mean score of 2.70. "Fixed assets (machinery and machine)" and the "attitude of contractors toward debt" are also considered significant contributing factors. These two factors obtained mean scores of 2.68 and 2.61, respectively. Fixed assets, which are also known as long-term assets, are usually difficult to convert into cash, thus requiring firms to gather their own capital. Many credit facilities are available, particularly credit facilities that offer services to contractors of government projects. These credit facilities influence contractors to incur debt and use cash for other purposes. The factor "value of projects exceeds capabilities of firms" is not considered a significant factor. This factor has a mean score of 2.37, which can be classified as having low significance.

Table 1.8: Factors causing debt among firms.

Factors	Mean	Rank
Delayed progress payments.	3.11	1
Small initial capital	2.96	2
Late received of advance payment.	2.76	3
Total initial payment is not enough.	2.70	4
Fixed assets (machinery and machine).	2.68	5
Attitude of contractors toward debt.	2.61	6
Value of projects exceeds capabilities of firms.	2.37	7

Overall Ranking Factor:

Table 1.9 shows the top ten factors causing failure of contractor firms. As shown in Table 1.9, the top three factors, namely, "high prices of building materials during construction, "low contract price," and "inability to complete the project on schedule, "are associated with the small profit received by a contractor. The poor performance and failure of *bumiputera* contractor firms in the construction industry are evidently caused by unrealistic profits. Small profit or loss prevents a contractor from meeting the cost of construction; thus, contractors eventually have to close their businesses. Five out of ten factors with the highest mean score are part of the "small profit" category. These results also prove that profit is significant in determining the success and failure of a contractor in Malaysia, followed by "small capital base" and "late progress payments paid by clients," which rank fourth and fifth, respectively. "Debt burden, "which is caused by delays in progress payments, and "small capital base" are ranked seventh and ninth, respectively.

Table 1.9: Top ten factors causing failure of contractor firms.

Factors	Category	Mean	Rank
High prices of building materials during construction.	small profit	3.62	1
Low contract price.	small profit	3.56	2
Project cannot be completed on schedule.	small profit	3.38	3
Contractor firm starts a business with small capital.	lack of capital	3.26	4
Late progress payments.	lack of capital	3.25	5
Dependence on creditors to finance their project.	small profit	3.15	6
Difficulty in securing a bank loan	lack of capital	3.11	7
Delayed progress payments by client.	debt burden	3.11	8
High financing costs.	small profit	3.09	9
Capital base of small firms.	debt burden	2.96	10

Conclusions:

This study aims to identify the financial factors causing failure of contractor firms and focuses on large- and medium-size *bumiputera* contractor firms. A total of 20 probable causative factors related to finance are listed under three categories: (1) lack of capital, (2) small profit, (3) debt burden. Questionnaires are distributed among respondents with the intention of obtaining their opinions regarding the factors listed. Assessments are based on the mean scores of the factors. The results show that "small profit" is the main cause of failure in contractor firms, followed by "lack of capital" and "debt burden."

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