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Debt Crisis Among Bumiputera (Malay) Entrepreneurs in Malaysian Construction Industry

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Abstract: The study aims to assess the burden of debt incurred by construction firms. Several methods of data collection were utilized in this study. Method engages ratio analysis on the financial statements of selected contractors (six large and medium-sized contractors). Annual financial reports for 3 consecutive years (2007, 2008, 2009) of selected construction companies were thoroughly studied. Four types of debt ratios, namely; current liabilities/net asset value, debt/equity ratio, average age of account payable and ratio of accounts payable/income were used to measure the burden of debt incurred by contractors. In this comparative analysis, industry averages were also used to evaluate companies' average ratios. In method, interviews with owners of the firms were conducted. The step verifies the findings from the ratio analyses. Method undertook quantitative surveyto assess the perception on the findings of methods and. The study mailed 250 questionnaires to others of the same category of contractor firms. The analyses indicate that most contractors faced with high debt burden and results from the interview indicate that the situation is caused by eight factors: late reception of progress payment, small initial capital, late reception of advance payment, insufficient advance payment, portions of firm capital in the form of fixed assets the attitude of contractors towards debt, value of projects exceeding the capacity of a firm and insufficient capitaldue to firm expansion. From the survey, factors are significantly positive however factors and were insignificant.

Key words: Debt crisis, debt burden, debt management, construction industry, significantly positive

INTRODUCTION

The study intends to assess the firm's debt burden among Bumiputera contractors. High dependence on debt capital will put firms at risk. The higher the debt burden, the higher the risk confronting the firm. The use of debt capital with high rates causes high outward money flow because of the repayment of loans and interest. If the firm fails to pay, the firm will face serious problems. According to Lasher and Moyer, debt means other people's money being used by the firm to incur benefits. In this context, other people's money refers to loan, trade or other liabilities.

Debt ratio: Debt ratio is used to measure the extent to which firms rely on debt capital to finance their business operations and the amount of loan interest incurred. Meanwhile, according to Edum-Fotwe *et al.* (1996), debt ratios have been analysed to determine the extent of the firm's exposure to credit risk. The higher the debt ratio, the higher the risk encountered by the firm. Furthermore, Peterson introduced four types of financial ratios that explain the firm's level of dependence on debt. These ratios (namely, current liabilities/net asset value (CL/NW), Debt/Equity Ratio (DER), Average Age of Account Payable (AAAP) and the ratio of Accounts Payable/income (APRR)) were introduced as a measure of the level of use of debt capital by a contractor.

Literature review reveals DER as the most frequently listed as a measure of firm's debt position. The high value of DER implies that creditors are at high risk and have a slim chance to redeem their debt. In this support, Balatbat *et al.* (2011) stated that business firms cannot allow themselves to incur a high debt ratio because they may not have the ability to pay. If this situation occurs, the firm will face bankruptcy at any time.

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Further, Peterson has determined that to be in a comfortable position, a contractor should ensure that the DER ratio not exceed 2.7:1. However, Pamulu noted that a position ratio at 3.0:1 or less can be considered the firm being in a comfortable position. The measure has been issued by the Construction Financial Management Association (CFMA) United States. Their findings against a contractor DER in Indonesia showed that the average DER of a contractor firm is 3.66:1. Thus, contractors in Indonesia are also confronted with high debt burdens. These indicate numbers 3.66 times the values of equity owned by the firm, exceeding the maximum level set by the CFMA.

Balatbat *et al*. (2011) also mentioned that contractor in Australia are in the same dilemma. A survey of the average debt ratio (total assets/equity) of contractors for a period of 10 years (1998-2007) was 3.0:1. Thus, for every RM3 value of assets owned by the firm, the equity firm RM1 and RM2 come from the liability (debt) or DER of 2:1 or 200%.

A similar situation was faced by a contractor in the construction industry in Hong Kong. Hung *et al*. (2002) found that the ratio of average DER contractor firm in Hong Kong (1993-2000) was 79% (0-79). Thus, for every RM1 equity, contractors generally comprise Rs 0.79 loan (debt). The above situation has given the impression that the contractor's firm is highly dependent on capital from creditors to finance their business activities. The same has also been previously mentioned by Mcmahon (2001) and Arditi *et al*. (2000). They found that most contractors rely on the firm's capital support from the creditors to finance projects they undertook.

By using correlation analysis, Cheah *et al*. (2004) found that high debt ratio is the result of low liquidity firm capital. Low capital liquidity means that capital firms do not have enough cash to finance their business. Furthermore, Abdul-Nasser mentioned that cash capital is the most important resource for a contractor. Many firms have failed because the contractor did not possess sufficient capital liquidity. Thus, firms are forced to turn to preferred creditors for capital support.

Strischek (1998) found that many contractor firms in the United States have failed because they use credit facilities (bank loans) at the maximum level. As explained by Enshassi *et al*. (2006), using excessive bank loans will compel the contractor firm to pay high interest. The problem of high debt burdens among local contractor firms has also been emphasized by Lin who found a total of Rm 4,681,328 million. These figures represent 17.6% of the total loans of commercial banks channelled into the construction industry in 2005 and is an amount that not been reimbursed by the contractor firm.

As a result, many loan accountshave been classified as Non-Potential (NPL). As a result of this situation, many firms were declared bankrupt. Studies by Jaafar and Abdul-Aziz (2005) as well as Yin (2006) also found that many contractor firms were declared bankrupt because they failed to settle their debts. Meanwhile, Mahmood and Zakaria (2007) stated that most contractors in Malaysia burdened by debt and must be funded with a high amount.

In general, this study assessed the burden of debt incurred by contractor firms using ratio analysis to identify the factors that cause the situation.

MATERIALS AND METHODS

Data collection methods were adopted in this study. Method (1) engages ratio analysis performed on the financial statements of selected contractors (six large and medium-sized contractors). We thoroughly studied the annual financial reports of selected construction companies for 3 years (2007, 2008, 2009). In this study, we used the four types of debt ratios introduced by Peterson such as CL/NW, DER, AAAP and APRR. These ratios were used to measure the burden of debt incurred by a contractor. In this comparative analysis, industry averages were also used to compare companies' average ratios. Industry average represents the best position for a contractor to be in the construction industry. In method 2, we conducted interviews with the owners of the six selected firms. The step verifies the findings from the ratio analyses. Meanwhile, method 3, the quantitative survey, assesses the perception of other contractors on the findings of methods and. The study mailed 250 questionnaires to others of the same category of contractor firms. In general, data collection in this study involved the use of both qualitative and quantitative research methods.

RESULTS AND DISCUSSION

Findings from ratio analysis and interview (method 1 and 2): The debt ratio is a measuring tool for the extent to which firms finance their assets through debt and as guidance on the level of financial risk experiencedby the firm. This shows the level of firm capacity to meet short and long-term obligations. Table 1 shows the group of contractor firms' debt ratio CL/NW, DER, AAAP and APRR.

Table 1: Average debt ratio of the selected construction firms

Financial ratio	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Industry average
CL/NW	6.47:1	9.06:1	7.59:1	14.62:1	2.43:1	3.84:1	1.12:1
DER	6.68:1	9.41:1	8.19:1	37.53:1	2.53:1	3.84:1	1.3:1
AAAP	63 days	94 days	89 days	146 days	38 days	94 days	45 days
APRR	14.1%	21.4%	24.8%	24.3%	8.74%	22.8%	7.9%

Own computation

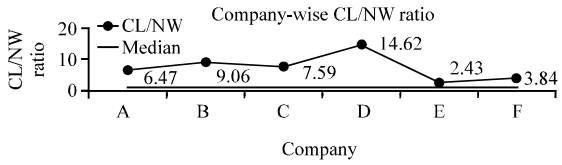

Fig. 1: CL/NW of the six selected firms; own computation

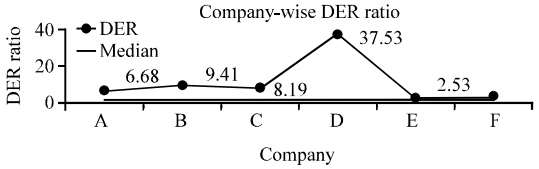

Fig. 2: DER of the six selected firms; own computation

CL/NW ratio is a measure of the risk taken by short-term creditors of the credit given to a contractor. The high ratio of CL/NW shows the intensive use of the firm's debt capital. High CL/NW ratio signals that the contractor firm is at a high risk situation. Figure 1 shows the CL/NW of the six selected firms compared with the industry average point.

The CL/NW of the six selected construction firms are worse than the industry average set of 1.12:1, implying that all firms have intensively relied on the creditors as a key financial resource to fund their projects. The CL/NW of firm D (14.62:1) is the highest among the six contractor firms. The net worth of firm D also showed a decreasing trend because of the loss of a construction project. Acritical level of CL/NW had also been experienced by firms B (9.06:1), C (7.59:1), A (6.47:1), F (3.84:1) and E (2.43:1). Thus, short-term creditors are possibly at high risk because the firm cannot solve the current debt using the equity they have.

The highratios of CL/NW indirectly influence the position of DER firm. DER measures a firm's equity (net worth) funded by borrowing. Figure 2 shows the DERs of the six selected contractor firms. The DER of firm D still shows the highest value compared with those of five other contractor firms. This is followed by firms B (9.41:1), C (8.19:1), A (6.68:1), F (3.84:1) and E (2.53:1). The DER of all contractors is also worse than the industry average. This rank indicates that a contractor cannot pay off the debt using their equity.

According to the interview, the respondents acknowledged that their firms are depending on creditors to supply building materials, primarily influenced by their lack of capital. A small capital base factor was used as an excuse by all respondents as a significant factor that caused them to rely on alternative debt capital to finance their projects. They also indicated that parts of the firm's capital arein the form of fixed assets such as machinery and equipment which hardly to liquidate.

Undertaking numerous construction projects simultaneously coupled with the limited capacity of the firm's capital has prompted firms to owe contractors to meet current capital requirements. This situation was explained by respondent B who acknowledged that they had done so because the chances of getting a project arenot always available. To overcome this problem, they should use the services of creditors to supply building materials on credit. The same concept has been explained by five other respondents. In addition, respondent A explained that their firm's debt position is high because of the increased size of their firm and found that many contractor firms have similarly done so.

To solve the capital problem of the contractor, the government has introduced a scheme of advance payment of 25% of the contract value. The advance payment will be paid at the initial stage of construction after the contractors have fulfilled the client requirements. However, according to respondent C, this situation seems theoretically attractive but is in reality not particularly helpful. Usually, the payment becomes late because of the time taken by the bank to issue a letter of guarantee. The payment is often received a few months after the project has commenced. In addition, the payment also cannot be fully utilized because large percentages (over 30%) are held by the bank as collateral. These factors cause the firms to depend on creditors. Five other respondents have also agreed with respondent C on this matter.

Respondent D, further explained that because the inconveniences in payment they have undertaken several projects without using advance payment. He also explained that position of high debt suffered by his company was because in certain projects in which they were not properly paid. Most bank loans were used to finance the purchase of machinery and equipment. Attitude contractors prefer to use credit and huge amounts of cash for other purposes which are equally

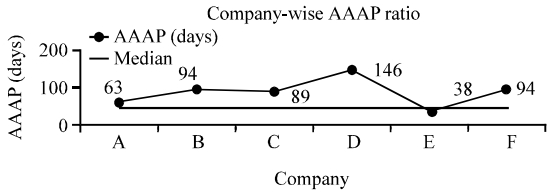

Fig. 3: AAAP ratios of the six selected firms; own computation

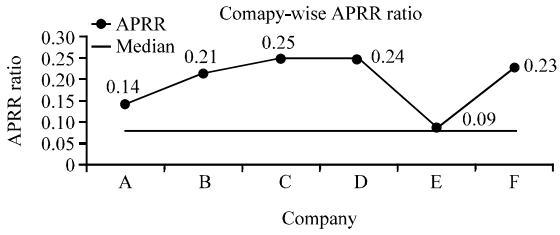

Fig. 4: APRR of the six selected firms; own computation

significant to the debt of the contractor. These ideas were disclosed by respondents E and F. Further, respondent E stated that the situation occurs among many Bumiputera contractors based on his own experiences as a contractor. He emphasized the importance of sum of cash in the account during the bidding process for new contracts. However, respondents A, B, C and D disagreed because they are consistently short of cash.

Next, AAAP ratio measures the average time taken by a contractor to pay creditor claims bills or to measure how intensive a firm uses trade credit. The industry average is set to AAAP for 45 days. Figure 3 shows the AAAP of six selected firms.

The results indicate that AAAP for firm A, B, C, D and F are much worse than the industry average set, thus implying that a contractor is late making payments to creditors. The AAAP of firm E is over an average of 38 days was better than the industry average set. Firm E adopts prudent payments to creditors. AAAP firm D (146 days) is the highest compared with five other contractor firms. This means that on average, firm D takes 146 days to settle the claims of creditors. They are followed by firms B and F (94 days), firm C (89 days) and firm A (63 days).

All respondents agreed on the AAAP results and showed that the intensive use of firms, servicing contractor creditors couldfinance their projects. The creditors will be paid after they receive payment from the project owner. This situation occurs because their firms do not have sufficient capital. Respondents A, B, C, D and F explained that they delay the payment to the creditors because their firms receiving late progress payments from clients. Furthermore, respondent D stated that certain client payments cannot be claimed at all which was corroborated by respondent C. Meanwhile, respondent E explains that their firm's AAAP is rated well because they do not encounter problems related to progress payments.

Next, APRR ratio also measures how much a contractor uses subcontractors and suppliers of building materials as a source of finance. High percentage means that a contractor has been amply funded. The industry average for APRR is 7.9%. Figure 4 shows the APRR ofthe six selected firms.

The analysis shows that the APRR of firm C obtained the highest ranking followed by firm D, F, B, A and E. All the APRRs of contractors were at the higher level than the set industry average, further indicating that a contractor has been intensively using suppliers and subcontractors as their financial resource. The APRRs of firm C (24.8%), D (24.3%), F (22.8%), B (21.4%) and A (14.1%) have exceeded the level of industrial average. Thus, the creditors are in a high risk situation.

Meanwhile, APRR of firm E (8.74%), although indicated as higher than the industry average, it remains within the industrial zone. All respondents agreed that the delay of progress payments had been caused by the need to turn to creditors and subcontractors as financial resources. Overall, the analysis of debt ratio indicated that a contractor has a high level of dependence on capital debt/creditor to finance their construction projects. Hence, firms should bear the burden of their debt.

In general, eight main factors have been identified to have caused the firm to bear the burden of high debt. These factors include late reception of progress payment, small initial capital, late reception of advance payment, insufficient amount of advance payment, portions of the firm's capital in the form of fixed assets, contractors' attitude towards debt, value of projects that might exceed the capacity of a firm and insufficient capital because of firm expansion.

Findings from quantitative survey (Method 3): An analysis of the four debt ratios (CL/NW, DER, AAAP and APRR) was conducted to determine the level of dependence of the firm to the debt capital to finance their projects. The analysis of the four financial ratios indicates the firms' unnecessary reliance on creditors to finance their projects. The survey on the financial resources indicates that the supplier of building materialsis the most important source of capital for the contractor. From the interview, eight factors were identified to have caused this problem. Table 2 below shows the factors are arranged based on the perception of the respondents. The importance of these factors is evaluated based on the mean score obtained.

Table 2: Eight determinant factors of debt burden among contractors

Determinant factors	Mean	Rank	SD	Significance
Late reception of progress payment	3.11	1	0.964	Medium
Small initial capital	2.96	2	0.751	Medium
Late reception of advance payment	2.76	3	1.045	Medium
Insufficient amount of advance payment	2.70	4	1.253	Medium
Portions of firm's capital in the form of fixed assets	2.68	5	0.865	Medium
Attitude of contractors towards debt	2.61	6	1.089	Medium
Value of projects exceeding the capacity of a firm	2.37	7	1.137	Low
Insufficient capital because of the firms' expansion	2.35	8	1.084	Low

Mean; 3.5-5.0 = high, mean; 2.5-3.49 = medium, mean; 1.0-2.49 = low; own computation

Table 2 indicates eight factors that cause debt firms, based on respondents ranking the importance of these factors. The first six factors comprise the majority and are classified in the moderate group whereas the last two factors are not considered significant. First, late reception of progress payment is most prominent among the factors listed. This factor ranked first and obtained the highest mean score of 3:11. These factors were classified as a medium important factor, based on the interpretation by Oxford. Thus, this factor is considered significant because any delay in progress payments of the firm's cash flows will be interrupted, subsequently increasing the burden of debt.

Second, the small capital base when starting a business was selected as the second most important factor, obtaining a mean score of 2.96 which is also categorized as of moderate importance. Deregulation legislation in the Malaysian construction industry has attracted contractor firms that are less capable in terms of capital to participate in the construction industry; these contractors rely on creditors as a source of financial support. Interview sources indicate that contractors are compelled to conduct projects work in a time exceeding the capacity of their capital. Thus, this factor is considered a significant stimulus for borrowing.

Third, the advance payment scheme was introduced for government projects to help reduce firm dependence on creditors. A contractor is eligible to receive an advance payment of 25% of the total contract value. Payment will be made by the project owner upon receipt of an acceptable bank guarantee from the contractors. Interviews revealed that the advance payment not as helpful as it seems. Often, delays in payment occur owing to the extended period taken by the bank to issue letters of guarantee. This delay forces firms to earn credits for goods from the supplier. The payment delay factor is the third most significant reason for contractor debt, obtaining a mean score of 2.76 and is classified as a medium important factor.

For this another drawback associated with advance payments previously identified via qualitative research. Contractor firms claim that they cannot utilize the advances provided. A considerable amount has been held by the bank as collateral. According to respondent D, the amount sometimes exceeds 30% of the total progress payments provided. He added, for certain projects they do not take advance payment to avoid additional costs such as interest and legal fee. Therefore, they prefer to buy building materials on credit. The validity of qualitative findings on this factor has been confirmed by the majority of the respondents. This factor ranked fourth, obtained a mean score of 2.70 and is classified as a moderately important factor which is significant. Most firms use a package of bank guarantee for an advance payment.

Fifth, another contributing factor that has been identified was that part of the firm's capital is not liquid. Two possibilities to this situation were identified. First, a contractor uses non-cash assets such as land, buildings and machinery and equipment as paid-up capital of the company which reduced firm liquidity. Second, most of the firm's capital was used to finance the purchase of machinery and equipment as explained by respondents B and D. To meet capital requirements, most firms use the services of creditors to supply goods on credit and sub-contractors to perform construction work. They are paid when the firm receives a progress payment from the client. The results of the questionnaire showed that the majority of respondents agreed with this phenomenon. This factor obtained a mean score of 2.68 and is also considered moderately significant.

Sixth, the attitude of contractors towards debt was noted by the interview respondents as another contributing factor towards high debt. This factor is seen to be significant given the numerous credit facilities provided to a contractor in construction. This factor was indicated by the majority of the respondents, obtaining a mean score of 2.61. It is classified as a moderate significant factor. Finally, the insignificant factors deemed not significant are projects undertaken that exceed a firm's financial capacity and insufficient capital due to expansion. These factors have mean scores of 2.37 and 2.35, respectively.

The results of the above questionnaire demonstrate different perceptions of respondents towards the eight factors that cause firm debt (Table 2). The majority of respondents showed positive perceptions of the six

factors listed, thus indicating their significance. All these factors have been classified as moderately significant in the interpretation by Oxford. Furthermore, the last two factors were classified as less important.

CONCLUSION

The aforementioned results clearly indicate that with high dependence on debt capital and without proper debt management, firms will be burdened by high debt. The results of ratio analysis indicate that the debt level of the majority of contractors was at a critical level. Furthermore, through the interview, eight factors were identified as causes of such condition: late reception of progress payment, small initial capital, late reception of advance payment, insufficient advance payment, portions of capital in the form of fixed assets contractors' attitude towards debt, value of projects exceeding the financial capacity of a firm and insufficient capital due to firm expansion. Meanwhile, a quantitative survey indicates that only six of these eight factors are considered significant; factors 7 and 8 have been categorized as insignificant.

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